ATTACHMENT B

REGULATORY AUTHORITY

REGULATORY AUTHORITY

This attachment summarizes the regulatory authority of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) over activities that have potential to impact jurisdictional resources.

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "waters of the U.S." where the material (1) replaces any portion of "waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these waters.

Waters of the United States

"Waters of the U.S." can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term "waters of the U.S." is defined by the *Code of Federal Regulations*[1] (CFR) and includes:

1. All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide (i.e., Traditional Navigable Waters [TNWs]).
2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, or streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds where the use, degradation, or destruction of which could affect interstate or foreign commerce.
4. All impoundments of waters otherwise defined as "waters of the U.S." under the definition.
5. All tributaries of waters identified above.
6. The territorial seas.
7. All wetlands adjacent to waters (other than waters that are themselves wetlands) identified above.

The U.S. Supreme Court has issued three decisions that provide context and guidance in determining the appropriate scope of "waters of the U.S.". In *United States v. Riverside Bayview Homes*, the Court upheld the inclusion of adjacent wetlands in the regulatory definition of "waters of the U.S.". In *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC), the Court held that the use of "isolated" non-navigable intrastate ponds by migratory birds was not, by itself, sufficient basis for the exercise of federal regulatory authority under the CWA. In *Rapanos v. United States* (Rapanos),[2] a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions, finding that certain wetlands constituted "waters of the U.S." under the CWA. In his plurality opinion, Justice Scalia argued that "waters of the U.S." should not include channels through which water flows intermittently or ephemerally or channels

[1] Specifically, Title 33, Navigation and Navigable Waters; Part 328, Definition of waters of the United States; §328.3, Definitions.

[2] Consolidated cases: *Rapanos v. United States* and *Carabell v. United States* refer to the U.S. Supreme Court's decision concerning USACE jurisdiction over "waters of the U.S." under the CWA.

that periodically provide drainage for rainfall. He also stated that a wetland may not be considered "adjacent to" remote "waters of the U.S." based on a mere hydrologic connection. Justice Kennedy authored a separate concurring opinion concluding that wetlands are "waters of the U.S." if they, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable". Lacking a majority opinion, regulatory jurisdiction under the CWA exists over a water body if either the plurality's or Justice Kennedy's "significant nexus" standard is satisfied.

In summary, the USACE and the U.S. Environmental Protection Agency (USEPA) will assert jurisdiction over the following waters: (1) TNWs; (2) wetlands adjacent to a TNW; (3) relatively permanent, non-navigable tributaries of a TNW that typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and (4) wetlands that directly abut such tributaries.

The USACE and the USEPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent; and (3) wetlands adjacent to, but that do not directly abut, a relatively permanent, non-navigable tributary.

The USACE and the USEPA will apply the significant nexus standard defined as follows:

1. A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs.
2. A significant nexus includes consideration of hydrologic and ecological factors.

The USACE and the USEPA generally will not assert jurisdiction over the following features: (1) swales or erosional features (e.g., gullies or small washes characterized by low volume, infrequent, or short duration flow) and (2) ditches (including roadside ditches) excavated wholly within and draining only uplands and that do not carry a relatively permanent flow of water.

Ordinary High Water Mark

The landward limit of tidal "waters of the U.S." is the high-tide line. In non-tidal waters where adjacent wetlands are absent, the lateral limits of USACE jurisdiction extend to the ordinary high water mark (OHWM).[3] The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas".[4] When wetlands are present, the lateral limits of USACE jurisdiction extend beyond the OHWM to the limits of the adjacent wetlands.[5]

[3] U.S. Army Corps of Engineers (USACE). 2005 (December 7). Regulatory Guidance Letter. Ordinary High Water Mark Identification. Washington, D.C.: USACE.

[4] *Code of Federal Regulations* (CFR), Title 33, §328.3(e)

[5] USACE 2005

Wetlands

A wetland is a subset of jurisdictional waters and is defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions".[6] Wetlands generally include swamps, marshes, bogs, and areas containing similar features.

The definition and methods for identifying wetland resources can be found in the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*,[7] a supplement to the 1987 *Corps of Engineers Wetlands Delineation Manual*.[8] Both the 1987 Wetlands Manual and the 2008 Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of wetland "waters of the U.S.". Pursuant to these manuals, a three-parameter approach is used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. In order to be considered a wetland, an area must exhibit one or more indicators of all three of these parameters. However, problem areas may periodically or permanently lack certain indicators for reasons such as seasonal or annual variability of rainfall, vegetation, and other factors. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement.

Section 404 Permit

Except as specified in Section 323.4 of the CFR, impacts to "waters of the U.S." require a Section 404 Permit. Permit authorization may be in the form of (1) a "general permit" authorizing a category of activities in a specific geographical region or nationwide or (2) an "individual permit" (IP) following a review of an individual application form (to be obtained from the district office having jurisdiction over the waters in which the activity is proposed to be located).

Regulatory authorization in the form of a Nationwide Permit (NWP) is provided for certain categories of activities such as repair, rehabilitation, or replacement of a structure or fill which was previously authorized; utility line placement; or bank stabilization. The current set of NWPs became effective on March 19, 2012, and will expire in on March 18, 2017. NWPs authorize only those activities with minimal adverse effects on the aquatic environment and are valid only if the conditions applicable to the permits are met or waivers to these conditions are provided in writing from the USACE. Please note that waivers may require consultation with affected federal and State agencies, which can be a lengthy process with no mandated processing time frames. Certain activities do not require submission of an application form, but may require a separate notification. If the NWP conditions cannot be met, an IP will be required. "Waters of the U.S." temporarily filled, flooded, excavated, or drained but restored to pre-construction contours and elevations after construction are not included in the measurement of loss of "waters of the U.S.". The appropriate permit authorization will be based on the amount of impacts to "waters of the U.S.", as determined by the USACE. There is no filing fee for the Section 404 Permit.

Approximately three or four months are typically required to process a routine permit application; large or complex activities may take longer to process. When a permit application is received, it will be assigned an identification number and reviewed for completeness by the District Engineer. If an application is incomplete, additional information will be requested within 15 days of receipt

6 33 CFR §328.3(b)

7 USACE. 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. (J.S. Wakeley, R.W. Lichvar, and C.V. Noble, Eds.). Vicksburg, MS: U.S. Army Engineer Research and Development Center.

8 Environmental Laboratory. 1987. Cor*ps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1)*. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

of the application. If an application is complete, the District Engineer will issue a public notice within 15 days unless specifically exempted by provisions of the CFR. Public comments will be accepted no more than 30 days but not less than 15 days from the date of public notice; these will become part of the administrative record of the application. Generally, the District Engineer will decide on the application no later than 60 days after receipt of the completed application. Additional permit situations may increase the permit processing time (e.g., projects involving a Section 401 Water Quality Certification, a coastal zone management consistency analysis, historic properties, a federal agency, and/or Endangered species). The Project Applicant will be given time, not to exceed 30 days, to respond to requests of the District Engineer.

On January 31, 2007, the USACE published a memorandum clarifying the Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) implementing regulations.[9] The Interim Guidance applies to all Department of the Army requests for authorization/verification, including Individual Permits (IPs, i.e., standard permits and letters of permission) and all Regional General Permits (RGPs) and Nationwide Permits (NWPs). The State or Tribal Historic Preservation Officer (SHPO/THPO) has 30 days to respond to a determination that a proposed activity, which otherwise qualifies for an NWP or an RGP, has no effect or no adverse effect on a historic property. If the SHPO/THPO does not respond within 30 days of notification, the Los Angeles District may proceed with verification. If the SHPO/THPO disagrees with the District's determination, the District may work with the SHPO/THPO to resolve the disagreement or request an opinion from the ACHP. The USACE will submit the Draft Jurisdictional Delineation Report to the SHPO/THPO for review prior to initiating the actual regulatory process.

Please note that, if the USACE determines that the drainages/waterbodies are jurisdictional and would be impacted by project implementation, the Applicant will be required to obtain a CWA Section 401 Water Quality Certification from the RWQCB before the USACE will issue the Section 404 Permit. If the USACE determines that the impacted drainage/waterbody is not jurisdictional, the Applicant will be required to obtain RWQCB authorization under the provisions of a Report of Waste Discharge (ROWD).

Jurisdictional Determinations

Pursuant to USACE Regulatory Guidance Letter (RGL) 08-02 (dated June 26, 2008), the USACE can issue two types of jurisdictional determinations to implement Section 404 of the CWA: Approved Jurisdictional Determinations and Preliminary Jurisdictional Determinations.[10] An Approved Jurisdictional Determination is an official USACE determination that jurisdictional "waters of the U.S.", "Navigable Waters of the U.S.", or both are either present or absent on a site. An Approved Jurisdictional Determination also identifies the precise limits of jurisdictional waters on a project site.

The USACE will provide an Approved Jurisdictional Determination when (1) an Applicant requests an official jurisdictional determination; (2) an Applicant contests jurisdiction over a particular water body or wetland; or (3) when the USACE determines that jurisdiction does not exist over a particular water body or wetland. The Approved Jurisdictional Determination then becomes the USACE's official determination that can then be relied upon over a five-year period to request regulatory authorization as part of the permit application.

[9] USACE. 2007 (January 31). Memorandum: Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) Implementing Regulations. Washington, D.C.: USACE.

[10] USACE. 2008b (June 26). Regulatory Guidance Letter. Jurisdictional Determinations. Washington, D.C.: USACE.

In addition, an Applicant may decline to request an Approved Jurisdictional Determination and instead obtain a USACE IP or General Permit Authorization based on a Preliminary Jurisdictional Determination or, in certain circumstances (e.g., authorizations by non-reporting nationwide general permits), with no Jurisdictional Determination.

Preliminary Jurisdictional Determinations are non-binding, advisory in nature, and may not be appealed. They indicate that there may be "waters of the U.S." on a project site. An Applicant may elect to use a Preliminary Jurisdictional Determination to voluntarily waive or set aside questions regarding CWA jurisdiction over a site, usually in the interest of expediting the permitting process. The USACE will determine what form of Jurisdictional Determination is appropriate for a particular project site.

The USACE Regulatory Branch Offices will coordinate with the USEPA Regional Office and USACE Headquarters (HQ), as outlined in its January 28, 2008, memorandum entitled "Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the *Rapanos* and *SWANCC* Supreme Court Decisions".[11] The guidance provided in this memorandum is quoted as follows:

1. Effective immediately, unless and until paragraph 5(b) of the June 5, 2007, Rapanos guidance coordination memorandum is modified by a joint memorandum from Army and EPA, we will follow these procedures:
    a. For jurisdictional determinations involving significant nexus determinations, USACE districts will send copies of draft jurisdictional delineations via e-mail to appropriate EPA regional offices. The EPA regional office will have 15 calendar days to decide whether to take the draft jurisdictional delineation as a special case under the January 19, 1989, "Memorandum of Agreement Between the Department of the Army and the USEPA Concerning the Determination of the Section 404 Program and the Application of the Exceptions under Section 404(f) of the Clean Water Act." If the EPA regional office does not respond to the district within 15 days, the district will finalize the jurisdictional determination.
    b. For jurisdictional determinations involving isolated waters determinations, the agencies will continue to follow the procedure in paragraph 5(b) of June 5, 2007, coordination memorandum, until a new coordination memorandum is signed by USACE and EPA. (In accordance with paragraph 6 of the June 5, 2007, coordination memorandum, this is a 21-day timeline that can only be changed through a joint memorandum between agencies).
2. Approved JDs are not required for non-reporting NWPs, unless the project proponent specifically requests an approved JD. For proposed activities that may qualify for authorization under a State Programmatic General Permit (SPGP) or RGP, an approved JD is not required unless requested by the project proponent.
3. The USACE will continue to work with EPA to resolve the JDs involving significant nexus and isolated waters determinations that are currently in the elevation process.

[11] USACE. 2008c (January 28). *Memorandum for Commander, Major Subordinate Commands and District Commands. Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the Rapanos and SWANCC Supreme Court Decisions.* Washington, D.C.: USACE.

4. USACE districts will continue posting completed Approved JD Forms on their web pages.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "waters of the State" and to all "waters of the U.S.", including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide certification that there is reasonable assurance that an activity which may result in discharge to navigable waters will not violate water quality standards. Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine RWQCBs' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate "waters of the State" (which are defined as any surface water or groundwater, including saline waters). The Porter-Cologne Act has become an important tool in the post-SWANCC (Solid Waste Agency of Northern Cook Counties vs. Unites States Army Corps of Engineers) and Rapanos era with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file an ROWD when there is no federal nexus, such as under Section 404(b)(1) of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

Section 401 Water Quality Certification

Issuance of the USACE Section 404 Permit would be contingent upon the approval of a Section 401 Water Quality Certification from the RWQCB. Also, the RWQCB requires certification of the project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification or ROWD. The RWQCB, as a responsible agency, will use the project's CEQA document to satisfy its own CEQA-compliance requirements.

Upon acceptance of a complete permit application, the RWQCB has between 60 days and 1 year to make a decision regarding the permit request. This is compliant with USACE regulations, which indicate that the RWQCB has 60 days from the date of receipt of a completed application that requests water quality certification to make a decision.[12] The RWQCB has the option of issuing a "Denial Without Prejudice", which does not mean that the request is denied, but that it requires more information in order to make a decision. This effectively stops the processing clock until this information is provided.

The RWQCB is required under the *California Code of Regulations* (CCR) to have a "minimum 21 day public comment period" before any action can be taken on the Section 401 application.[13] This period closes when the RWQCB acts on the application. Since projects often change or are revised during the Section 401 permit process, the comment period can remain open. The public comment period starts as soon as an application has been received. Generally, the RWQCB Section 401, USACE Section 404, and CDFW Section 1602 permit applications are submitted at

[12] 33 CFR §325.2(b)(1)(ii)
[13] 23 CCR §3858(a)

the same time. However, the RWQCB Section 401 Water Quality Certification may take longer to process than the other two applications.

The RWQCB requires the Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. The notification/application for a CWA Section 401 Water Quality Certification must also address compliance with the Basin Plan. Please note that filing an application would also require the payment of an application fee which would be based on project impacts. The fee schedule calculator is available at http://www.waterboards.ca.gov/santaana/water_issues/programs/401_certification/index.shtml.

California Department of Fish and Wildlife

The CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes pursuant to the *California Fish and Game Code*.[14] Activities of State and local agencies as well as public utilities that are project proponents are regulated by the CDFW under Section 1602 of the *California Fish and Game Code.* This section regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Section 1602 of the *California Fish and Game Code* applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State.

The CDFW jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFW takes jurisdiction from the top of a stream bank or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or in the vicinity of a river, stream, lake or within or in the vicinity of tributaries to a river, stream, or lake. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish and other aquatic plant and/or wildlife species. It also includes watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 Lake or Streambed Alteration Agreement

The CDFW enters into a Lake or Streambed Alteration (LSA) Agreement with a project proponent in order to ensure protection of wildlife and habitat values and acreages.

Prior to construction, a Notification of an LSA must be submitted to the CDFW that describes any proposed lake or streambed alteration that would occur with implementation of a project. The Notification of an LSA must address the initial construction and long-term operation and maintenance of any structures (such as a culvert or a desilting basin) included in the project design that are located within any river, stream, or lake and that may require periodic maintenance. In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., a Mitigated Negative Declaration) should be included in the submittal, consistent with CEQA requirements. The complete notification package must be submitted to the CDFW regional office that services the county where the activity will take place. This notification will serve as the basis for the CDFW's issuance of a Section 1602 LSA

[14] See §§1600–1616.

Agreement. Note that notification is not required before beginning emergency work, but the CDFW must be notified in writing within 14 days after beginning the work.

After receiving Notification of an LSA Agreement, the CDFW will determine whether an LSA Agreement will be required for the proposed activity. An LSA Agreement will be required if the activity could substantially adversely affect an existing fish and wildlife resource. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

If the CDFW does not respond in writing concerning the completeness of the Notification within 30 days of its submittal, the Notification automatically becomes complete. If the CDFW does not submit a draft LSA Agreement to the Applicant within 60 days of the determination of a completed Notification package, the CDFW will issue a letter that either (1) identifies the final date to transmit a draft LSA Agreement or (2) indicates that an LSA Agreement was not required. The CDFW will also indicate that it was unable to meet this mandated compliance date and that, by law, the Applicant is authorized to complete the project without an LSA Agreement as long as the Applicant constructs the project as proposed and complies with all avoidance, minimization, and mitigation measures described in the submitted Notification package. Please note that, if the project requires revisions to the design or project construction, the CDFW may require submittal of a new Notification/application with an additional 90-day permit process.

If determined to be necessary, the CDFW will prepare a draft LSA Agreement, which will include standard measures to protect fish and wildlife resources during project construction and during ongoing operation and maintenance of any project element that occurs within a CDFW jurisdictional area. The draft Agreement must be transmitted to the Applicant within 60 calendar days of the CDFW's determination that the notification is complete. It should be noted that the 60-day timeframe might not apply to long-range agreements.

Following receipt of a draft LSA Agreement from the CDFW, the Applicant has 30 calendar days to notify the CDFW concerning the acceptability of the proposed terms, conditions, and measures. If the Applicant agrees with these terms, conditions and measures, the Agreement must be signed and returned to the CDFW. The Agreement becomes final once the CDFW executes it and an LSA Agreement is issued. Please note that all application fees must be paid and the final certified CEQA documentation must be provided prior to the CDFW's execution of the Agreement.

ATTACHMENT C

SUMMARY OF POTENTIAL JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

SUMMARY OF POTENTIAL JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	Total Length (ft)	Ultimate Discharge Point	"waters of the U.S." (ac)	Isolated Waters (ac)	CDFW Jurisdiction (ac)	MTRS[a]	USGS 7.5-Minute Topographic Quadrangle	Soil Type[b]
1A-1	173	Mojave River	0.039	–	0.055	S07N03W28	Turtle Valley	Sparkhule-rock outcrop complex, 15 to 50 percent slopes
1B-1	76	Mojave River	0.017	–	0.034	S07N03W27	Turtle Valley	Cajon-arizo complex, 2 to 15 percent slopes
1B-2	811	Mojave River	0.120	–	0.244	S07N03W27	Turtle Valley	Cajon-arizo complex, 2 to 15 percent slopes
1C-1	83	Mojave River	0.004	–	0.008	S07N03W13	Turtle Valley	Sparkhule-rock outcrop complex, 15 to 50 percent slopes
1C-2	99	Mojave River	0.005	–	0.010	S07N03W13	Turtle Valley	Sparkhule-rock outcrop complex, 15 to 50 percent slopes
1C-3	198	Mojave River	0.007	–	0.013	S07N03W13	Turtle Valley	Sparkhule-rock outcrop complex, 15 to 50 percent slopes
1C-4	98	Mojave River	0.007	–	0.013	S07N03W13	Turtle Valley	Sparkhule-rock outcrop complex, 15 to 50 percent slopes
1D-1	275	Mojave River	0.019	–	0.038	S07N02W07	Turtle Valley	Mirage sandy loam, 2 to 5 percent slopes; Sparkhule-rock outcrop complex, 15 to 50 percent slopes
1E-1	503	Mojave River	0.038	–	0.079	S07N02W07	Turtle Valley	Mirage sandy loam, 2 to 5 percent slopes
1E-2	197	Mojave River	0.035	–	0.071	S07N02W07	Turtle Valley	Mirage sandy loam, 2 to 5 percent slopes
1E-3	97	Mojave River	0.005	–	0.010	S07N02W07	Turtle Valley	Sparkhule-rock outcrop complex, 15 to 50 percent slopes
1E-4	154	Mojave River	0.010	–	0.021	S07N02W07	Turtle Valley	Mirage sandy loam, 2 to 5 percent slopes; Sparkhule-rock outcrop complex, 15 to 50 percent slopes
2A-1	193	Mojave River	0.040	–	0.054	S08N01W21	Daggett	Cajon-arizo complex, 2 to 15 percent slopes
2A-2	375	Mojave River	1.034	–	1.045	S08N01W21	Daggett	Cajon-arizo complex, 2 to 15 percent slopes
2A-3	295	Mojave River	0.101	–	0.129	S08N01W21	Daggett	Cajon-arizo complex, 2 to 15 percent slopes
2B-1	358	Mojave River	0.100	–	0.202	S08N01W21	Daggett	Cajon-arizo complex, 2 to 15 percent slopes
2B-2	490	Mojave River	0.054	–	0.107	S08N01W21	Daggett	Cajon-arizo complex, 2 to 15 percent slopes
2C-1	119	Mojave River	0.005	–	0.011	S08N01W01; S08N01W12	Daggett	**Yermo-kimberlina, cool, association, sloping**
2C-2	93	Mojave River	0.006	–	0.013	S08N01W01	Daggett	**Yermo-kimberlina, cool, association, sloping**
2C-3	939	Mojave River	0.157	–	0.316	S08N01W01; S08N01W12	Daggett	**Yermo-kimberlina, cool, association, sloping**
2D-1	249	Mojave River	0.037	–	0.075	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2D-2	443	Mojave River	0.054	–	0.105	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2D-3	169	Mojave River	0.025	–	0.051	S09N01E27	Minneola	**Nebona-cuddeback complex, 2 to 9 percent slopes**
2D-4	294	Mojave River	0.041	–	0.081	S09N01E27	Minneola	**Nebona-cuddeback complex, 2 to 9 percent slopes**
2D-5	334	Mojave River	0.033	–	0.066	S09N01E27	Minneola	**Nebona-cuddeback complex, 2 to 9 percent slopes**
2D-6	171	Mojave River	0.030	–	0.064	S09N01E27	Minneola	**Nebona-cuddeback complex, 2 to 9 percent slopes**
2E-1	85	Mojave River	0.004	–	0.008	S09N01E27	Minneola	**Nebona-cuddeback complex, 2 to 9 percent slopes**
2E-2	206	Mojave River	0.041	–	0.078	S09N01E27	Minneola	**Nebona-cuddeback complex, 2 to 9 percent slopes**
2E-3	485	Mojave River	0.054	–	0.107	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes; **Nebona-cuddeback complex, 2 to 9 percent slopes**
2E-4	428	Mojave River	0.079	–	0.154	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes; **Nebona-cuddeback complex, 2 to 9 percent slopes**
2E-5	95	Mojave River	0.005	–	0.010	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2E-6	496	Mojave River	0.063	–	0.116	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2E-7	691	Mojave River	0.122	–	0.239	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2E-8	192	Mojave River	0.014	–	0.028	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2E-9	118	Mojave River	0.081	–	0.162	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2E-10	351	Mojave River	0.172	–	0.343	S09N01E27	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2F-1	91	Mojave River	0.006	–	0.012	S09N01E26	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2F-2	77	Mojave River	0.004	–	0.007	S09N01E26	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2F-3	115	Mojave River	0.019	–	0.037	S09N01E26	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2F-4	68	Mojave River	0.002	–	0.005	S09N01E26	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2F-5	311	Mojave River	0.472	–	0.519	S09N01E26	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
2F-6	1,058	Mojave River	0.339	–	0.373	S09N01E26	Minneola	Cajon gravelly sand, 2 to 15 percent slopes
3C-1	89	dissipates at I-15	–	0.006	0.012	S10N02E26	Harvard Hill	Badland
3C-2	200	dissipates at I-15	–	0.164	0.225	S10N02E26	Harvard Hill	Badland

SUMMARY OF POTENTIAL JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	Total Length (ft)	Ultimate Discharge Point	"waters of the U.S." (ac)	Isolated Waters (ac)	CDFW Jurisdiction (ac)	MTRS[a]	USGS 7.5-Minute Topographic Quadrangle	Soil Type[b]
3C-3	687	dissipates at I-15	–	0.252	0.526	S10N02E26	Harvard Hill	Badland; **Nebona-cuddeback complex, 2 to 9 percent slopes**
3C-4	704	dry lake bed or dissipates	–	0.226	0.347	S10N02E26	Harvard Hill	**Nebona-cuddeback complex, 2 to 9 percent slopes**
3C-5	752	dissipates at I-15	–	0.098	0.198	S10N02E26	Harvard Hill	**Nebona-cuddeback complex, 2 to 9 percent slopes**
4A-1	1,233	Mojave River	0.913	–	1.053	S11N04E17; S11N04E20	Alvord Mountain East	No digital data available
4A-2	205	Mojave River	0.139	–	0.139	S11N04E20	Alvord Mountain East	No digital data available
4A-3	346	dissipates at access road	–	0.048	0.095	S11N04E20	Alvord Mountain East	No digital data available
4A-4	366	dissipates at access road	–	0.037	0.074	S11N04E20	Alvord Mountain East	No digital data available
4A-5	166	dissipates at access road	–	0.020	0.039	S11N04E20	Alvord Mountain East	No digital data available
4A-6	25	dissipates at access road	–	0.003	0.005	S11N04E20	Alvord Mountain East	No digital data available
4A-7	207	dissipates at access road	–	0.021	0.041	S11N04E20	Alvord Mountain East	No digital data available
4A-8	68	dissipates at access road	–	0.006	0.012	S11N04E20	Alvord Mountain East	No digital data available
4B-1	174	Mojave River	0.102	–	0.102	S11N04E10	Alvord Mountain East	No digital data available
4B-2	1,311	Mojave River	0.182	–	0.346	S11N04E10	Alvord Mountain East	No digital data available
4B-3	112	Mojave River	0.018	–	0.036	S11N04E10	Alvord Mountain East	No digital data available
4C-1	95	dissipates	–	0.012	0.025	S11N04E02	Alvord Mountain East	No digital data available
4C-2	101	dissipates	–	0.020	0.040	S11N04E02	Alvord Mountain East	No digital data available
4C-3	554	Mojave River	0.124	–	0.245	S11N04E02	Alvord Mountain East	No digital data available
4D-1	137	dry lake bed or dissipates	–	0.114	0.114	S12N05E30	Dunn	No digital data available
4D-2	105	dry lake bed or dissipates	–	0.024	0.026	S12N05E30	Dunn	No digital data available
4D-3	107	dry lake bed or dissipates	–	0.008	0.017	S12N05E30	Dunn	No digital data available
4D-4	62	dry lake bed or dissipates	–	0.005	0.010	S12N05E30	Dunn	No digital data available
4D-5	131	dry lake bed or dissipates	–	0.006	0.012	S12N05E30	Dunn	No digital data available
4D-6	442	dry lake bed or dissipates	–	0.446	0.484	S12N05E30	Dunn	No digital data available
4D-7	338	dry lake bed or dissipates	–	0.200	0.200	S12N05E30	Dunn	No digital data available
4D-8	388	dry lake bed or dissipates	–	0.573	0.573	S12N05E30	Dunn	No digital data available
4E-1	105	dry lake bed or dissipates	–	0.038	0.075	S12N05E16	Bitter Spring	No digital data available
4E-2	502	dry lake bed or dissipates	–	0.093	0.185	S12N05E16	Bitter Spring	No digital data available
4E-3	569	dry lake bed or dissipates	–	1.085	1.085	S12N05E09; S12N05E16	Bitter Spring	No digital data available
4E-4	296	dry lake bed or dissipates	–	0.021	0.047	S12N05E16	Bitter Spring	No digital data available
4E-5	559	dry lake bed or dissipates	–	0.040	0.079	S12N05E16	Bitter Spring	No digital data available
4F-1	953	dry lake bed or dissipates	–	1.710	1.710	S12N05E09	Bitter Spring	No digital data available
4F-2	117	dry lake bed or dissipates	–	0.133	0.133	S12N05E09	Bitter Spring	No digital data available
4F-3	218	dry lake bed or dissipates	–	0.013	0.026	S12N05E09	Bitter Spring	No digital data available
4G-1	926	dry lake bed or dissipates	–	0.995	0.995	S13N05E26	Bitter Spring	No digital data available
4G-2	98	dry lake bed or dissipates	–	0.033	0.033	S13N05E26	Bitter Spring	No digital data available
4G-3	226	dry lake bed or dissipates	–	0.015	0.030	S13N05E26	Bitter Spring	No digital data available
4G-4	280	dry lake bed or dissipates	–	0.061	0.079	S13N05E26	Bitter Spring	No digital data available
4H-1	1,520	dry lake bed or dissipates	–	0.627	0.770	S13N05E24	Bitter Spring	No digital data available
4J-1	577	dry lake bed or dissipates	–	0.028	0.056	S13N06E08	Bitter Spring; Cronese Lakes	No digital data available
4J-2	164	dry lake bed or dissipates	–	0.014	0.029	S13N06E08	Cronese Lakes	No digital data available
4K-1	47	dry lake bed or dissipates	–	0.005	0.011	S13N06E05	Cronese Lakes	No digital data available
4K-2	233	dry lake bed or dissipates	–	0.031	0.063	S13N06E05	Cronese Lakes	No digital data available
4K-3	171	dry lake bed or dissipates	–	0.010	0.021	S13N06E05	Cronese Lakes	No digital data available
4K-4	396	dry lake bed or dissipates	–	0.138	0.250	S13N06E05	Cronese Lakes	No digital data available

SUMMARY OF POTENTIAL JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

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4K-5	469	dry lake bed or dissipates	–	0.026	0.052	S13N06E05	Cronese Lakes	No digital data available
5B-1	57	dry lake bed or dissipates	–	0.651	0.651	S13N06E04	Red Pass Lake	No digital data available
5B-2	460	dry lake bed or dissipates	–	0.290	0.343	S13N06E04	Red Pass Lake	No digital data available
5B-3	319	dry lake bed or dissipates	–	0.415	0.425	S13N06E04	Red Pass Lake	No digital data available
5B-4	133	dry lake bed or dissipates	–	0.293	0.317	S13N06E04; S14N06E33	Red Pass Lake	No digital data available
5C-1	337	dry lake bed or dissipates	–	0.072	0.140	S14N06E33	Red Pass Lake	No digital data available
5C-2	574	dry lake bed or dissipates	–	2.757	2.757	S14N06E33	Red Pass Lake	No digital data available
5D-1	587	dry lake bed or dissipates	–	2.384	2.384	S14N06E33	Red Pass Lake	No digital data available
5D-2	432	dry lake bed or dissipates	–	0.850	0.850	S14N06E33	Red Pass Lake	No digital data available
5D-3	252	dry lake bed or dissipates	–	0.036	0.073	S14N06E33	Red Pass Lake	No digital data available
5D-4	83	dry lake bed or dissipates	–	0.094	0.094	S14N06E33	Red Pass Lake	No digital data available
5D-5	347	dry lake bed or dissipates	–	0.137	0.157	S14N06E33	Red Pass Lake	No digital data available
5E-1	909	dry lake bed or dissipates	–	1.312	1.312	S14N06E34	Red Pass Lake	No digital data available
5E-2	689	dry lake bed or dissipates	–	0.084	0.163	S14N06E34	Red Pass Lake	No digital data available
5E-3	107	dry lake bed or dissipates	–	1.003	1.003	S14N06E34	Red Pass Lake	No digital data available
5E-4	153	dry lake bed or dissipates	–	0.369	0.369	S14N06E34	Red Pass Lake	No digital data available
5E-5	191	dry lake bed or dissipates	–	0.313	0.313	S14N06E34	Red Pass Lake	No digital data available
5E-6	227	dry lake bed or dissipates	–	0.036	0.070	S14N06E34	Red Pass Lake	No digital data available
5E-7	105	dry lake bed or dissipates	–	0.042	0.042	S14N06E34	Red Pass Lake	No digital data available
5E-8	266	dry lake bed or dissipates	–	0.766	0.766	S14N06E34	Red Pass Lake	No digital data available
5E-9	117	dry lake bed or dissipates	–	0.011	0.021	S14N06E34	Red Pass Lake	No digital data available
5E-10	760	dry lake bed or dissipates	–	0.060	0.119	S14N06E34	Red Pass Lake	No digital data available
5E-11	171	dry lake bed or dissipates	–	0.124	0.135	S14N06E34	Red Pass Lake	No digital data available
5F-1	1,349	dry lake bed or dissipates	–	0.317	0.317	S14N06E34	Red Pass Lake	No digital data available
5F-2	591	dry lake bed or dissipates	–	0.098	0.098	S14N06E34	Red Pass Lake	No digital data available
5F-3	170	dry lake bed or dissipates	–	0.010	0.020	S14N06E34	Red Pass Lake	No digital data available
5F-4	76	dry lake bed or dissipates	–	0.005	0.010	S14N06E34	Red Pass Lake	No digital data available
5F-5	426	dry lake bed or dissipates	–	0.124	0.124	S14N06E34	Red Pass Lake	No digital data available
5F-6	392	dry lake bed or dissipates	–	0.057	0.057	S14N06E34	Red Pass Lake	No digital data available
5F-7	104	dry lake bed or dissipates	–	0.024	0.024	S14N06E34	Red Pass Lake	No digital data available
5F-8	369	dry lake bed or dissipates	–	0.102	0.102	S14N06E34	Red Pass Lake	No digital data available
5F-9	688	dry lake bed or dissipates	–	0.167	0.173	S14N06E34	Red Pass Lake	No digital data available
5F-10	319	dry lake bed or dissipates	–	0.054	0.059	S14N06E34	Red Pass Lake	No digital data available
5F-11	136	dry lake bed or dissipates	–	0.016	0.025	S14N06E34	Red Pass Lake	No digital data available
5G-1	333	dry lake bed or dissipates	–	0.040	0.080	S14N06E35	Red Pass Lake	No digital data available
5G-2	466	dry lake bed or dissipates	–	0.248	0.247	S14N06E35	Red Pass Lake	No digital data available
5G-3	235	dry lake bed or dissipates	–	0.040	0.082	S14N06E35	Red Pass Lake	No digital data available
5G-4	124	dry lake bed or dissipates	–	0.011	0.022	S14N06E35	Red Pass Lake	No digital data available
5G-5	242	dry lake bed or dissipates	–	0.021	0.041	S14N06E35	Red Pass Lake	No digital data available
5G-6	232	dry lake bed or dissipates	–	0.022	0.043	S14N06E35	Red Pass Lake	No digital data available
5G-7	255	dry lake bed or dissipates	–	0.026	0.052	S14N06E34	Red Pass Lake	No digital data available
5G-8	119	dry lake bed or dissipates	–	0.009	0.018	S14N06E34	Red Pass Lake	No digital data available
5G-9	816	dry lake bed or dissipates	–	0.235	0.235	S14N06E34	Red Pass Lake	No digital data available
5G-10	560	dry lake bed or dissipates	–	0.205	0.205	S14N06E34	Red Pass Lake	No digital data available

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5H-1	356	dry lake bed or dissipates	–	0.108	0.145	S14N06E35	Red Pass Lake	No digital data available
5H-A	148	dry lake bed or dissipates	–	0.020	0.040	S14N06E35	Red Pass Lake	No digital data available
5H-B	425	dry lake bed or dissipates	–	0.041	0.082	S14N06E35	Red Pass Lake	No digital data available
5H-C	115	dry lake bed or dissipates	–	0.220	0.220	S14N06E35	Red Pass Lake	No digital data available
5H-D	122	dry lake bed or dissipates	–	0.278	0.278	S14N06E35	Red Pass Lake	No digital data available
5H-E	187	dry lake bed or dissipates	–	0.033	0.066	S14N06E35	Red Pass Lake	No digital data available
5I-1	69	dry lake bed or dissipates	–	0.005	0.009	S14N06E35	Red Pass Lake	No digital data available
5I-2	276	dry lake bed or dissipates	–	0.067	0.076	S14N06E35	Red Pass Lake	No digital data available
5I-3	437	dry lake bed or dissipates	–	0.109	0.109	S14N06E35	Red Pass Lake	No digital data available
5I-4	378	dry lake bed or dissipates	–	0.147	0.147	S14N06E35	Red Pass Lake	No digital data available
5J-1	506	dry lake bed or dissipates	–	0.045	0.089	S14N06E35	Red Pass Lake	No digital data available
5J-2	109	dry lake bed or dissipates	–	0.059	0.065	S14N06E36	Red Pass Lake	No digital data available
5K-1	413	dry lake bed or dissipates	–	0.039	0.070	S14N06E25	Red Pass Lake	No digital data available
5K-2	442	dry lake bed or dissipates	–	0.449	0.449	S14N06E25	Red Pass Lake	No digital data available
5K-3	104	dry lake bed or dissipates	–	0.033	0.065	S14N06E36	Red Pass Lake	No digital data available
5K-4	107	dry lake bed or dissipates	–	0.196	0.196	S14N06E36	Red Pass Lake	No digital data available
5K-5	120	dry lake bed or dissipates	–	0.034	0.069	S14N06E36	Red Pass Lake	No digital data available
5L-1	155	dry lake bed or dissipates	–	0.027	0.056	S14N06E25	Red Pass Lake	No digital data available
5M-1	100	dry lake bed or dissipates	–	0.015	0.015	S14N06E25	Red Pass Lake	No digital data available
5N-1	2,357	Amargosa River	1.475	–	1.475	S14N07E17	Red Pass Lake	No digital data available
5N-2	505	Amargosa River	0.233	–	0.233	S14N07E17	Red Pass Lake	No digital data available
5O-1	3,126	Amargosa River	3.092	–	3.092	S14N07E03; S15N07E34	West Of Baker	No digital data available
5Q-1	256	Amargosa River	0.470	–	0.470	S15N07E35	West Of Baker	No digital data available
5Q-2	236	Amargosa River	0.147	–	0.147	S15N07E35	West Of Baker	No digital data available
5Q-3	135	Amargosa River	0.080	–	0.080	S15N07E35	West Of Baker	No digital data available
5Q-4	517	Amargosa River	0.219	–	0.232	S15N07E35	West Of Baker	No digital data available
5Q-5	424	Amargosa River	0.663	–	0.663	S15N07E35	West Of Baker	No digital data available
5Q-6	1,167	Amargosa River	1.818	–	1.818	S15N07E35	West Of Baker	No digital data available
5Q-7	1,094	Amargosa River	4.790	–	4.790	S15N07E35	West Of Baker	No digital data available
5R-1	433	Amargosa River	0.129	–	0.129	S15N07E35; S15N07E36	West Of Baker	No digital data available
5R-2	305	Amargosa River	0.082	–	0.082	S15N07E35	West Of Baker	No digital data available
5T-1	295	Amargosa River	0.113	–	0.113	S15N08E30	West Of Baker	No digital data available
5T-2	359	Amargosa River	0.308	–	0.308	S15N08E30	West Of Baker	No digital data available
5U-1	148	dry lake bed or dissipates	–	0.010	0.020	S15N08E20	West Of Baker	No digital data available
5U-2	34	dry lake bed or dissipates	–	0.002	0.003	S15N08E20	West Of Baker	No digital data available
5U-3	271	dry lake bed or dissipates	–	0.052	0.067	S15N08E20	West Of Baker	No digital data available
5V-1	258	dry lake bed or dissipates	–	0.135	0.135	S15N09E04	North Of Baker	No digital data available
5V-2	393	dry lake bed or dissipates	–	0.119	0.119	S15N09E04	North Of Baker	No digital data available
5V-3	348	dry lake bed or dissipates	–	0.039	0.076	S15N09E04	North Of Baker	No digital data available
5V-4	466	dry lake bed or dissipates	–	0.036	0.073	S15N09E05	North Of Baker	No digital data available
5V-5	269	dry lake bed or dissipates	–	0.027	0.035	S15N09E05	North Of Baker	No digital data available
5V-6	220	dry lake bed or dissipates	–	0.018	0.037	S15N09E05	North Of Baker	No digital data available
5V-7	127	dry lake bed or dissipates	–	0.006	0.011	S15N09E05	North Of Baker	No digital data available
6A-1	528	Amargosa River	0.368	–	0.368	S16N09E23; S16N09E24	Turquoise Mountain	No digital data available

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6A-2	119	Amargosa River	0.007	–	0.014	S16N09E23	Turquoise Mountain	No digital data available
6A-3	125	Amargosa River	0.003	–	0.006	S16N09E23	Turquoise Mountain	No digital data available
6A-4	1,663	Amargosa River	1.650	–	1.650	S16N09E23; S16N09E24	Turquoise Mountain	No digital data available
6A-5	269	Amargosa River	0.027	–	0.055	S16N09E23; S16N09E24	Turquoise Mountain	No digital data available
6A-6	68	Amargosa River	0.006	–	0.009	S16N09E24	Turquoise Mountain	No digital data available
6B-1	490	Amargosa River	0.426	–	0.426	S16N09E24	Turquoise Mountain	No digital data available
6B-1B	182	Amargosa River	0.015	–	0.031	S16N09E24	Turquoise Mountain	No digital data available
6B-2	974	Amargosa River	0.059	–	0.113	S16N09E24; S16N10E19	Turquoise Mountain	No digital data available
6B-3	232	Amargosa River	0.005	–	0.010	S16N10E19	Turquoise Mountain	No digital data available
6B-4	76	Amargosa River	0.003	–	0.005	S16N10E19	Turquoise Mountain	No digital data available
6B-5	167	Amargosa River	0.005	–	0.009	S16N10E19	Turquoise Mountain	No digital data available
6B-6	513	Amargosa River	0.439	–	0.439	S16N10E19	Turquoise Mountain	No digital data available
6C-1	106	Amargosa River	0.003	–	0.007	S16N10E18; S16N10E19	Turquoise Mountain	No digital data available
6C-2	2,306	Amargosa River	5.833	–	5.833	S16N10E18	Turquoise Mountain	No digital data available
6D-1	2,560	Amargosa River	2.701	–	2.928	S16N10E17	Turquoise Mountain	No digital data available
6D-2	129	Amargosa River	0.060	–	0.060	S16N10E17	Turquoise Mountain	No digital data available
6D-3	217	Amargosa River	0.013	–	0.026	S16N10E17	Turquoise Mountain	No digital data available
6E-1	703	Amargosa River	0.194	–	0.211	S16N10E04; S16N10E09	Turquoise Mountain	No digital data available
6E-2	597	Amargosa River	0.142	–	0.164	S16N10E09	Turquoise Mountain	No digital data available
6F-1	359	Amargosa River	0.166	–	0.166	S16N10E03	Kingston Spring	No digital data available
6F-2	85	Amargosa River	0.012	–	0.023	S16N10E03	Kingston Spring	No digital data available
6F-3	522	Amargosa River	0.230	–	0.230	S16N10E03	Kingston Spring	No digital data available
6F-4	233	Amargosa River	0.039	–	0.056	S16N10E03	Kingston Spring	No digital data available
6F-5	283	Amargosa River	0.054	–	0.111	S16N10E03	Kingston Spring	No digital data available
6G-1	273	Amargosa River	0.045	–	0.095	S16N10E01	East Of Kingston Springs	No digital data available
6G-2	129	Amargosa River	0.014	–	0.029	S16N10E01	East Of Kingston Springs	No digital data available
6G-3	233	Amargosa River	0.014	–	0.028	S16N10E01	East Of Kingston Springs	No digital data available
6G-4	61	dissipates	–	0.010	0.021	S16N10E02	East Of Kingston Springs	No digital data available
7A-1	298	dry lake bed or dissipates	–	0.052	0.108	S17N13E05	Clark Mountain	Owlshead loam, 2 to 30 percent slopes
7A-2	51	dry lake bed or dissipates	–	0.002	0.005	S17N13E05	Clark Mountain	Owlshead loam, 2 to 30 percent slopes
7B-1	247	dry lake bed or dissipates	–	0.309	0.309	S17N13E05	Clark Mountain	Owlshead loam, 2 to 30 percent slopes
7B-2	199	dry lake bed or dissipates	–	0.207	0.207	S17N13E05	Clark Mountain	Owlshead loam, 2 to 30 percent slopes
7C-1	395	dry lake bed or dissipates	–	0.056	0.115	S17N13E04	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7C-2	1,864	dry lake bed or dissipates	–	0.655	0.963	S17N13E04	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7C-3	410	dry lake bed or dissipates	–	0.037	0.075	S17N13E04	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7E-1	619	dry lake bed or dissipates	–	0.212	0.212	S17N13E03	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7E-2	686	dry lake bed or dissipates	–	0.123	0.144	S17N13E03	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7E-3	1,192	dry lake bed or dissipates	–	0.378	0.467	S17N13E03; S17N13E04	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7F-1	1,544	dry lake bed or dissipates	–	0.610	0.680	S17N13E03	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7F-2	296	dry lake bed or dissipates	–	0.028	0.058	S17N13E03	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7F-3	158	dry lake bed or dissipates	–	0.007	0.015	S17N13E03	Clark Mountain	Copperworld association, 30 to 60 percent slopes

SUMMARY OF POTENTIAL JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	Total Length (ft)	Ultimate Discharge Point	"waters of the U.S." (ac)	Isolated Waters (ac)	CDFW Jurisdiction (ac)	MTRS[a]	USGS 7.5-Minute Topographic Quadrangle	Soil Type[b]
7F-4	111	dry lake bed or dissipates	–	0.005	0.010	S17N13E03	Clark Mountain	Copperworld association, 30 to 60 percent slopes
7G-1	448	dry lake bed or dissipates	–	0.208	0.208	S17N13E02	Clark Mountain	Copperworld association, 30 to 60 percent slopes
Total	**85,994**		**31.130**	**26.603**	**63.529**			

ft: feet; ac: acre; CDFW: California Department of Fish and Wildlife; MTRS: Meridian, Township, Range, Section; USGS: U.S. Geological Survey; I: Interstate; "–" indicates the mapped drainage does not include this jurisdictional water; RWQCB: Regional Water Quality Control Board; USACE: U.S. Army Corps of Engineers.

RWQCB jurisdictional boundaries are defined as those determined for the USACE under "waters of the U.S."; however, the RWQCB also takes jurisdiction over isolated waters.

[a] The MTRS alphanumeric code provides the Meridian, Township, Range, and Section. The first character (S) represents the San Bernardino meridian; the next three characters (e.g., 01N or 01S) represent the Township and either north or south; the next three characters (e.g., 01E or 01W) represent the Range and either east or west; and the last two digits represent the Section.

[b] Soil types in **bold** are listed as hydric on the National Hydric Soils List (USDA NRCS 2015). "No digital data available" indicates that soil data is not available for the area.

ATTACHMENT D

DATASHEETS

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: ~~3MCM~~ 3MBC000100
Stream: 1A-1
Investigator(s):

Date: 9/7/16 **Time:** 0800
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

off road vehicles; road crossing

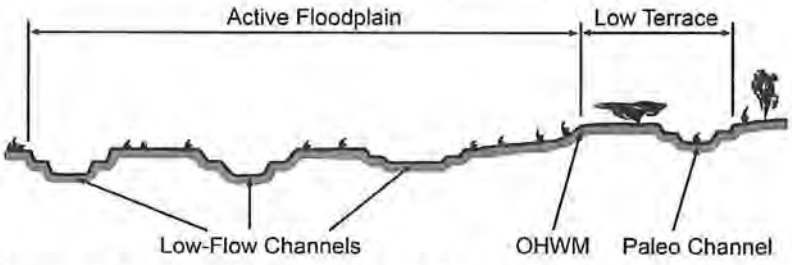
Brief site description:

dry desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

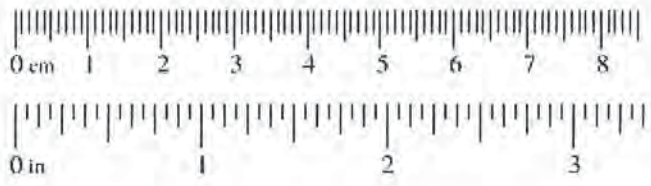


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

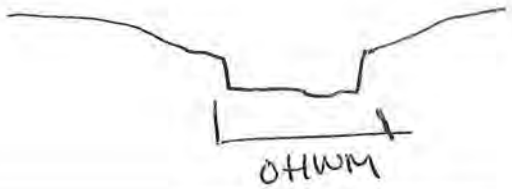
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
1/64 0.00031	0.0078	Fine silt	
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3mbc000100 **Cross section ID:** 1A-1 **Date:** 9/7/16 **Time:** 0800

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: very coarse sand

Total veg cover: 2 % Tree: 0 % Shrub: <1 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ veg cover
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3mBC000100 **Cross section ID:** 1A-1 **Date:** 9/7/16 **Time:** 0800

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 4 % Tree: 0 % Shrub: <1 % Herb: 4 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
3MBC000100	00300
Field Staff: ARudalevige, I Cain, C Renfrew, C Conlogue	Date: 9/7/16

Feature ID	1A-1
Preliminary Jurisdictional Status[1]	RWQCB, CDFW
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	bed/bank; Δ sediment texture
Wetland Plant Indicators	none
Preliminary Hydrologic Regime[3]	ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	4-6'
CDFW Width(s)	4-6'
Side Slope Estimate[4]	Vertical banks
Characteristic Vegetation[5]	Unvegetated in channel; surrounding by shrub/NNG (creosote)
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing and banks broken down by off road vehicles; trash
Surrounding Load Use	open space w/ transmission lines
Other Notes	upstream of road water spreads out and possibly pools - surface soil cracks

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/7/16 **Time:** 900
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 1B-1 **Photo begin file#:** **Photo end file#:**
Investigator(s): CR IC

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

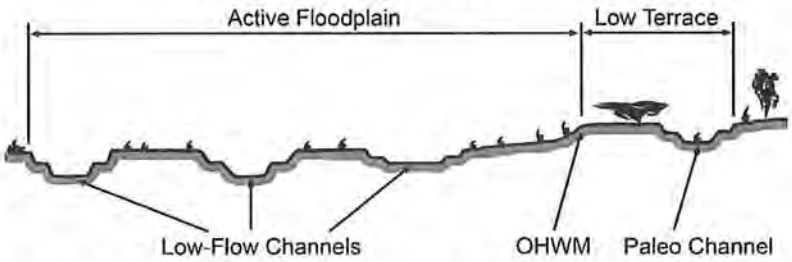
Potential anthropogenic influences on the channel system:

Brief site description:
Desert drainage

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

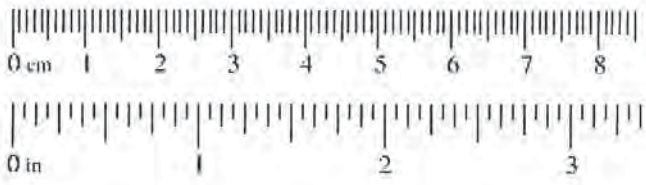


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

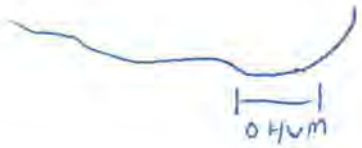
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3mBC000100 **Cross section ID:** 1B-1 **Date:** 9/7/16 **Time:** 900

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MB200100 **Cross section ID:** 1B-1 **Date:** 9/7/16 **Time:** 900

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: ____ % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff IC CR	Date 9/7/16

Feature ID	IB-1
Preliminary Jurisdictional Status[1]	CeR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	N
Wetland Plant Indicators	N
Preliminary Hydrologic Regime[3]	ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3ft
CDFW Width(s)	10ft
Side Slope Estimate[4]	Shallow South 45° North
Characteristic Vegetation[5]	Scattered grasses
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	Nearby trailer camp Creosote Bush Scrub - mixed cactus

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Project Number:** 3MBC000100 **Stream:** 1B-2 **Investigator(s):** CR IC	**Date:** 9/7/16 **Town:** SB County **Photo begin file#:**	**Time:** **State:** CA **Photo end file#:**
Y ☒ / N ☐ Do normal circumstances exist on the site? Y ☒ / N ☐ Is the site significantly disturbed?	**Location Details:** Mojave Desert **Projection:** **Datum:** **Coordinates:**	

Potential anthropogenic influences on the channel system:

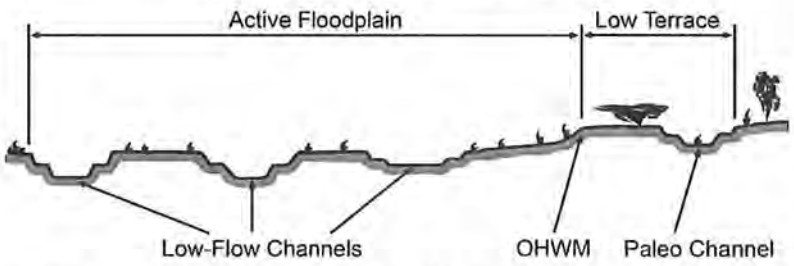
Tire trail

Brief site description:

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

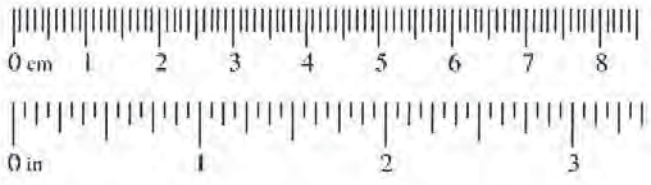


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 1B-2 **Date:** 9/7/16 **Time:**

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 3-4 % Tree: 0 % Shrub: 1 % Herb: 2-3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MBC002102 **Cross section ID:** 1B-2 **Date:** 9/7/16 **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace
Void

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: _____
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: _____
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff CR IC	Date 9/7/16

Feature ID	IB-2
Preliminary Jurisdictional Status[1]	RPC
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	variable
CDFW Width(s)	variable
Side Slope Estimate[4]	slight - 45°
Characteristic Vegetation[5]	intermittent grasses, rare cheesebush
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Tires Road cut southern 10% of stream
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 | **Date:** 9/7/16 | **Time:** 0900
Project Number: 3MBC000100 | **Town:** SB County | **State:** CA
Stream: ~~test~~ C1-1 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

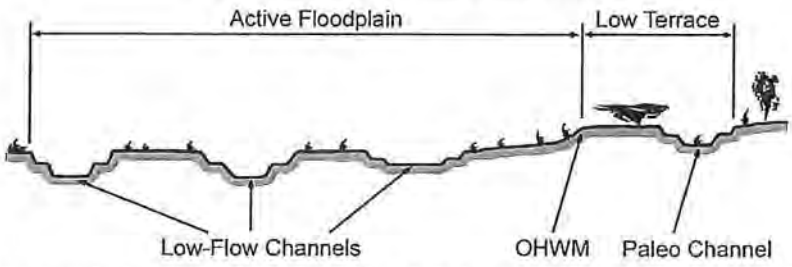
Potential anthropogenic influences on the channel system:
Off-road vehicles + Road crossings

Brief site description:
Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

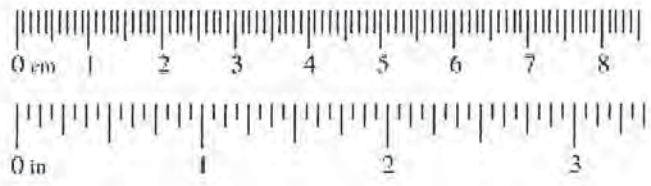


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3mBC000100 **Cross section ID:** C1-1 **Date:** 9/7/16 **Time:** 0900

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

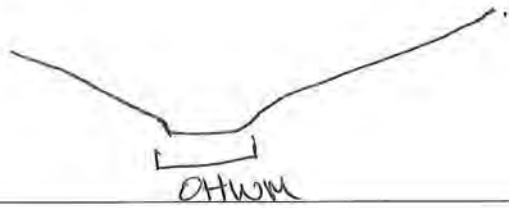
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: 3MBC000100 **Cross section ID:** C1-1 **Date:** 9/7/16 **Time:** 0900

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

bed

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR + CC	Date 9/7/16

Feature ID	~~HC-1~~ C1-1
Preliminary Jurisdictional Status[1]	RWQCB, CDFW
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank Slope, Δ sediment texture,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'
CDFW Width(s)	2'
Side Slope Estimate[4]	gently sloping
Characteristic Vegetation[5]	unveget in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing + trash
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/7/16 **Time:** 0920
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: C1-2 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossings

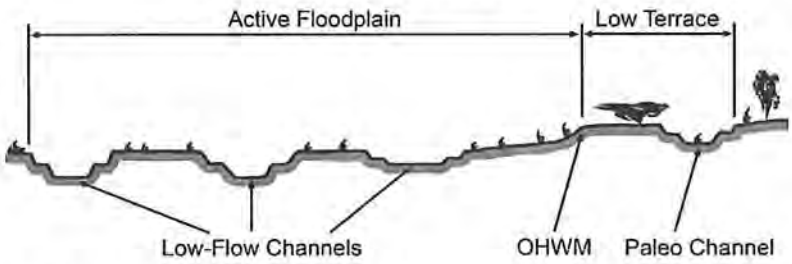
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

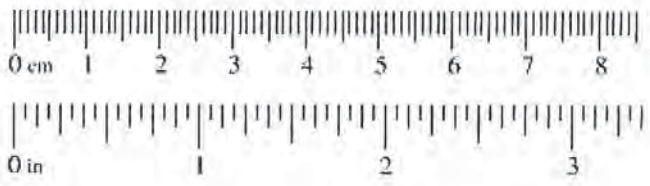


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

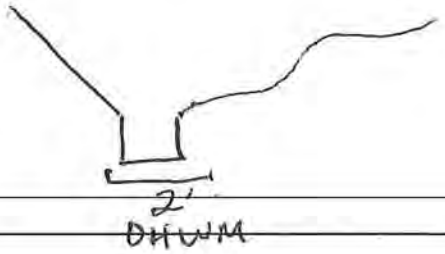
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** C1-2 **Date:** 9/7/16 **Time:** 0920

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** C1-2 **Date:** 9/7/16 **Time:** 0920

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR+CC	Date 9/7/16

Feature ID	C1-2
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank Slope, Δ sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'
CDFW Width(s)	2'
Side Slope Estimate[4]	Steep
Characteristic Vegetation[5]	unvegetation in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 | **Date:** 9/7/16 | **Time:** 0930
Project Number: 3MBC000100 | **Town:** SB County | **State:** CA
Stream: C1-3 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossings

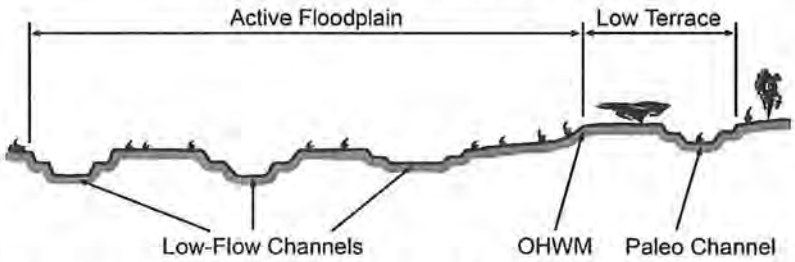
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

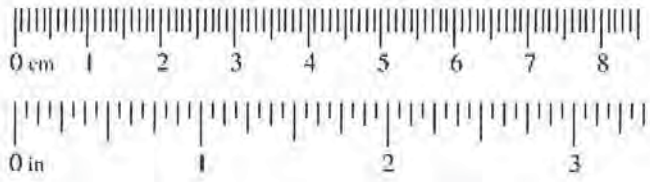


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



3MBC000100

Project ID: C1-3 **Cross section ID:** C1-3 **Date:** 9/7/16 **Time:** 0930

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand w/ cobble

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** C-3 **Date:** 9/7/16 **Time:** 0930

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC00D100	Task No. 00300
Field Staff AR + CC	Date 9/7/16

Feature ID	C1-3
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank Slope, A sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	~~2'~~ 1'-2'
CDFW Width(s)	~~2'~~ 1'-2'
Side Slope Estimate[4]	Steep
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	Unk
Anthropogenic Modifications[7]	Road crossing
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/7/16 **Time:** 0948
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: C1-4 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossing

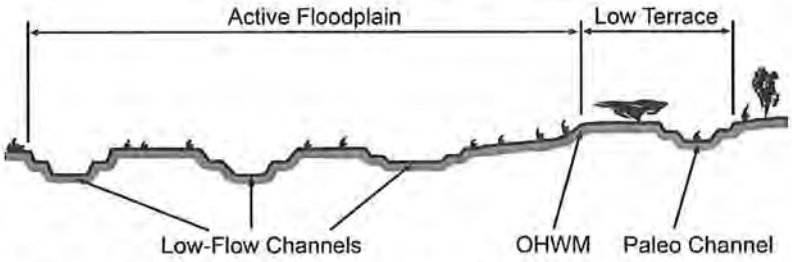
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

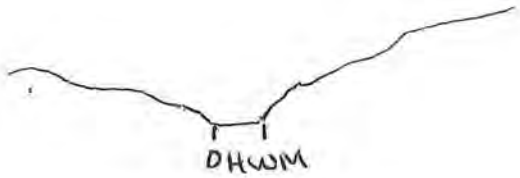
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud

3MBC000100

Project ID: C1-4 **Cross section ID:** C1-4 **Date:** 9/7/16 **Time:** 0940

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MNRC000102 **Cross section ID:** C1-4 **Date:** 9/7/16 **Time:** 0940

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR+CC	Date 9/7/16

Feature ID	C1-4
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank Slope, Δ sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3'
CDFW Width(s)	3'
Side Slope Estimate[4]	moderate to steep
Characteristic Vegetation[5]	~~vegetation~~ weeds in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing
Surrounding Load Use	open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 | **Date:** 9/7/16 | **Time:** 1020
Project Number: 3MBC000100 | **Town:** SB County | **State:** CA
Stream: ID-1 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): IC CR

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

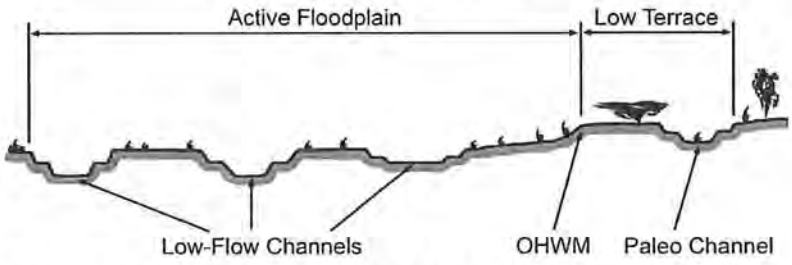
Brief site description:

Narrow channel partially buried under Sulsola

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

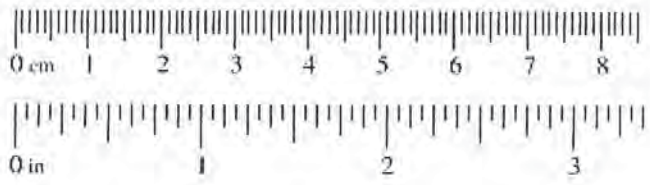


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: **Cross section ID:** **Date:** 9/7/16 **Time:** 1020

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☒ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** 9/7/16 **Time:** 1020

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff IC CR	Date 9/7/16

Feature ID	ID-1
Preliminary Jurisdictional Status[1]	R e C
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	0.5 ~~11~~ mostly
CDFW Width(s)	2.5
Side Slope Estimate[4]	near vertical
Characteristic Vegetation[5]	Dead Salsola
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	Sheet flow from road to start Partial burial under Salsola

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100
Stream: 1E-1
Investigator(s): AR, CC

Date: 9/7/16
Town: SD County
Photo begin file#:

Time: 1005
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection:
Datum:
Coordinates:

Potential anthropogenic influences on the channel system:

ORV & Road crossing

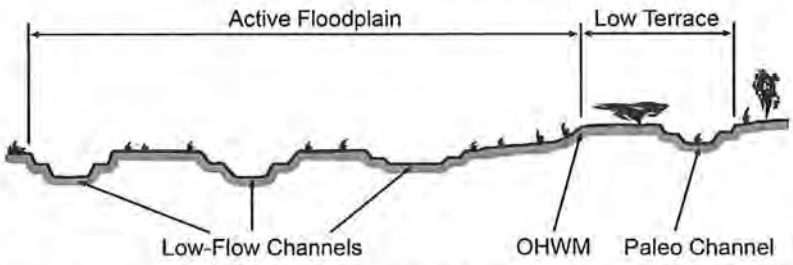
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

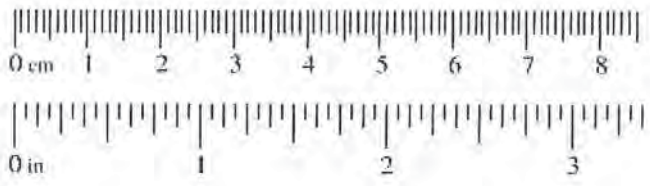


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 1E-1 **Date:** 9/7/16 **Time:** 1005

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 1E-1 **Date:** 9/7/16 **Time:** 1005

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ ~~Drift and/or debris~~
- ☑ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	1E-1
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Soil cracks, Bed/Bank slope + Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2.5'
CDFW Width(s)	2.5'
Side Slope Estimate[4]	gently sloping
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing
Surrounding Load Use	open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 | **Date:** 9/7/16 | **Time:** 1025
Project Number: 3MBC000100 | **Town:** SB County | **State:** CA
Stream: 1E-2 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

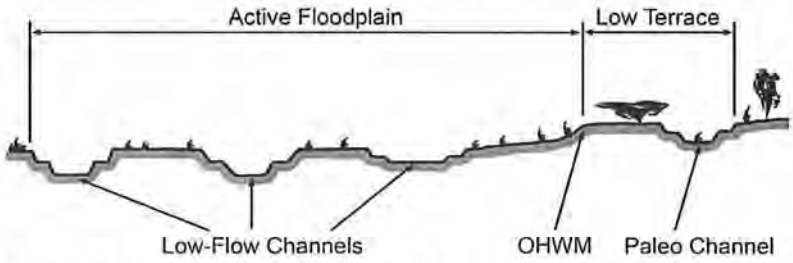
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

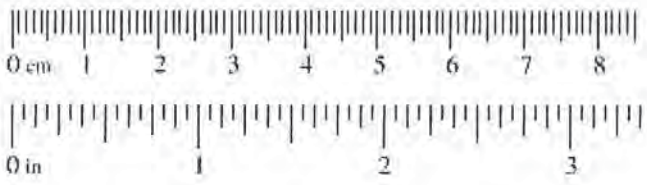


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

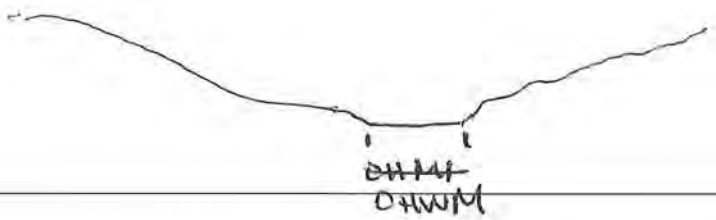
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



3MBC000100

Project ID: 1E-2 **Cross section ID:** 1E-2 **Date:** 9/7/16 **Time:** 1025

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt

Total veg cover: ____ % Tree: 0 % Shrub: 2 % Herb: <1 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBCA00100 **Cross section ID:** 1E-2 **Date:** 9/7/16 **Time:** 1025

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: ≤1 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARICC	Date 9/7/16

Feature ID	IE-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank slope, fine sediment, soil cracks, texture,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3'-11'
CDFW Width(s)	3'-11'
Side Slope Estimate[4]	gently sloping
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing + trash
Surrounding Load Use	open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path46 | **Date:** 9/7/16 | **Time:** 1040
Project Number: 3MBC000100 | **Town:** SBCounty | **State:** CA
Stream: 1E-3 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): ARiCe

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossings

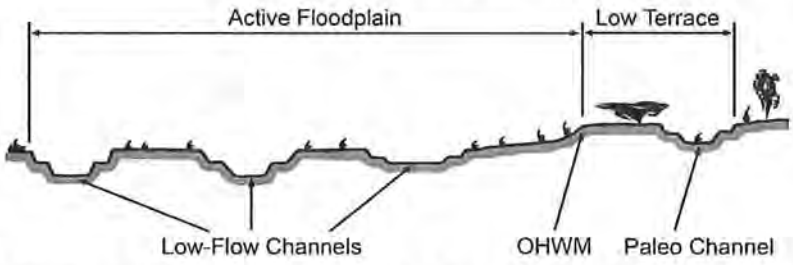
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

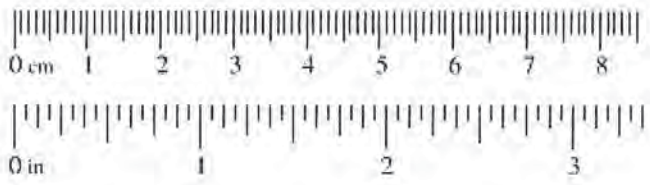


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



3MBC000100

Project ID: 1E-3 **Cross section ID:** 1E-3 **Date:** 9/7/16 **Time:** 1040

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MRC000100 **Cross section ID:** 1E-3 **Date:** 9/7/16 **Time:** 1040

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	1E-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank slope, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'
CDFW Width(s)	2-3'
Side Slope Estimate[4]	moderate to steep
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing & trash
Surrounding Load Use	open space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100
Stream: 1E-4
Investigator(s): AR, CC

Date: 9/7/16
Town: SB County
Photo begin file#:

Time: 1050
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection:
Datum:
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossings

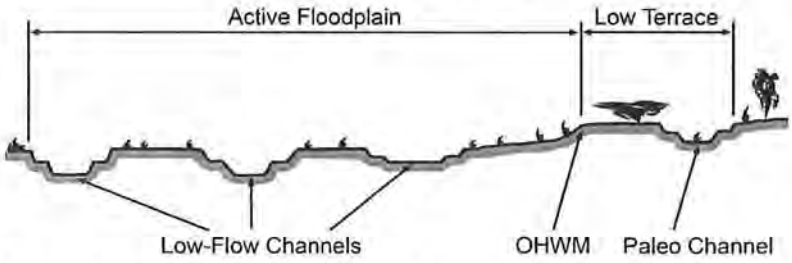
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

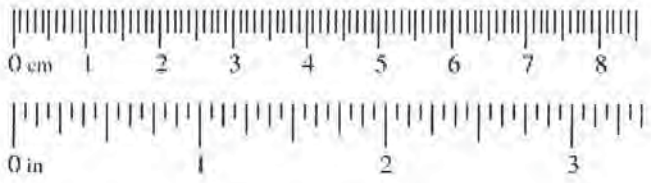


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

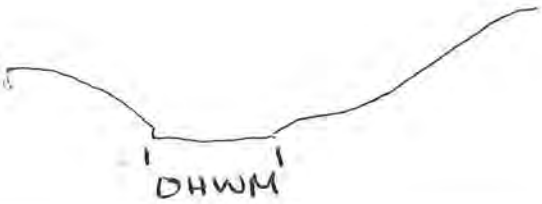
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
0.0098 (1/2)	0.25	Medium sand	Sand
0.005 (1/4)	0.125	Fine sand	
0.0025 (1/8)	0.0625	Very fine sand	
0.0012 (1/16)	0.031	Coarse silt	
0.00061 (1/32)	0.0156	Medium silt	Silt
0.00031 (1/64)	0.0078	Fine silt	
0.00015 (1/128)	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MRC000100 **Cross section ID:** 1E-4 **Date:** 9/7/16 **Time:** 1050

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 0 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

3MBL000100

Project ID: ~~LE-4~~ **Cross section ID:** LE-4 **Date:** 9/7/16 **Time:** 1050

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/7/16

Feature ID	1E-4
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank slope, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3'-5'
CDFW Width(s)	3'-5'
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	UNVeg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road crossing + trash
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Rock46
Project Number: 3MBC000100
Stream: 2A-1
Investigator(s): AR, CC

Date: 9/7/16 **Time:** 1256
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossings

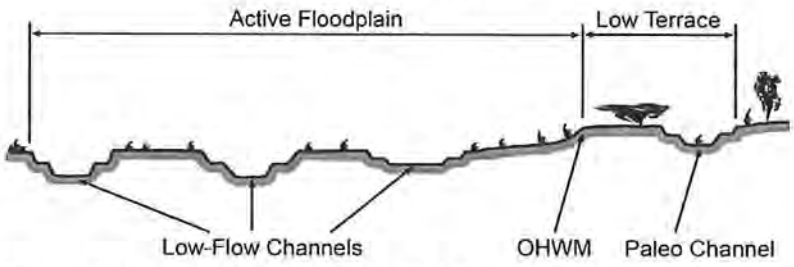
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

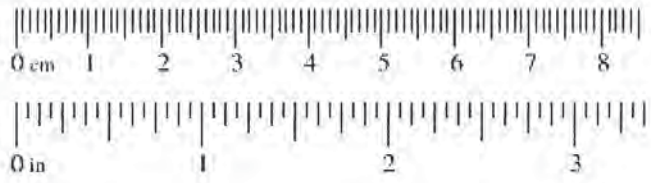


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

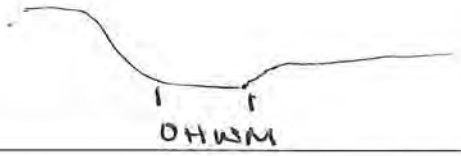
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



3MBC000100

Project ID: 2A-1 **Cross section ID:** 2A-1 **Date:** 9/7/16 **Time:** 1250

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: <1 % Tree: Ø % Shrub: Ø % Herb: <1 %

Community successional stage:

- [x] NA
- [x] ~~Early (herbaceous & seedlings)~~
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

3MBC000100

Project ID: 2A-1 **Cross section ID:** 2A-1 **Date:** 8/7/16 **Time:** ~~1240~~ 1250

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~Medium~~ Pebble

Total veg cover: 3 % Tree: 1 % Shrub: 1 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☑ ~~Mid (herbaceous, shrubs, saplings)~~
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	2A-1
Preliminary Jurisdictional Status[1]	CDFW,
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'
CDFW Width(s)	2'
Side Slope Estimate[4]	gentle to moderate steep
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossings
Surrounding Load Use	open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC00100
Stream: 2A-2
Investigator(s): AR, CC

Date: 9/7/16
Town: SB County
Photo begin file#:

Time: 1255
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

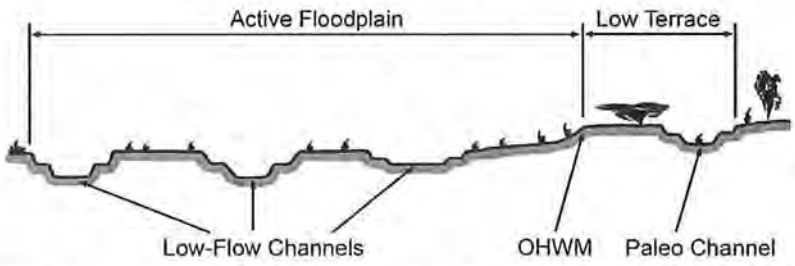
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

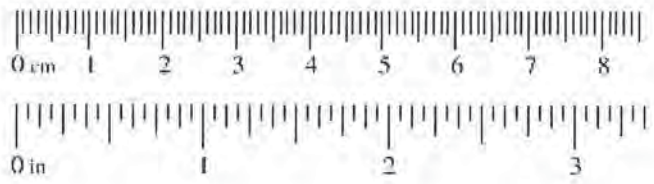


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000160 **Cross section ID:** 2A-2 **Date:** 9/7/16 **Time:** 1255

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: 61 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

3mbc000100

Project ID: 2A-2 **Cross section ID:** 2A-2 **Date:** 9/7/16 **Time:** 1255

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand w/ pebble & cobble

Total veg cover: ~~20~~ 6 % Tree: ~~0~~ % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ ~~Early (herbaceous & seedlings)~~
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: Course sand w/ pebble & cobble

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 4 % Tree: ~~0~~ % Shrub: 3 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	2A-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Soil Cracks, Drainage Patterns, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	~~1.1~~
CDFW Width(s)	
Side Slope Estimate[4]	moderate slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road crossings
Surrounding Load Use	open space + transmission lines
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000103
Stream: 2A-3
Investigator(s): ARCL

Date: 9/7/16
Town: SB County
Photo begin file#:

Time: 1330
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection:
Datum:
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

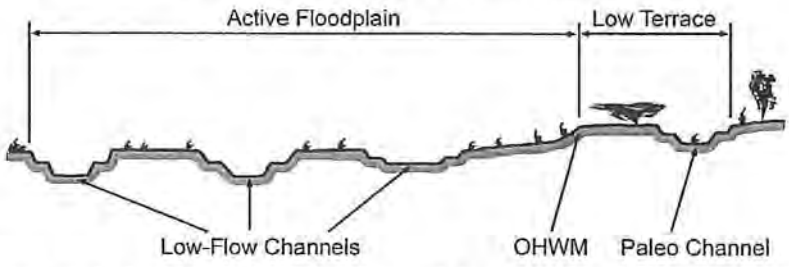
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

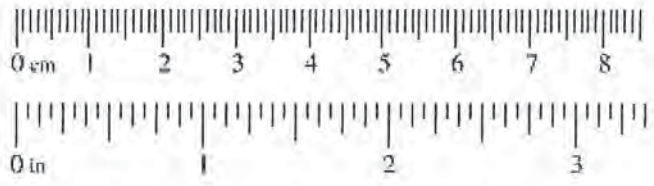


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

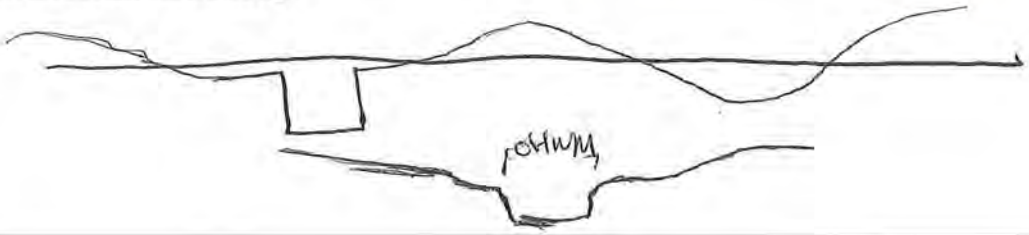
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



3MBC050100

Project ID: 2A-3 **Cross section ID:** 2A-3 **Date:** 9/7/16 **Time:** 1330

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: <1 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 24-3 **Date:** 9/7/16 **Time:** 1330

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	2A-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Soil cracks, Bed/Bank, Δ in sediment
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1.5'
CDFW Width(s)	1.5'
Side Slope Estimate[4]	Steep
Characteristic Vegetation[5]	unveg in channel, veg around bottom
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossings + trash
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC00100
Stream: 2B-1
Investigator(s): AR, CC

Date: 9/7/16
Town: SB County
Photo begin file#:

Time: 1405
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

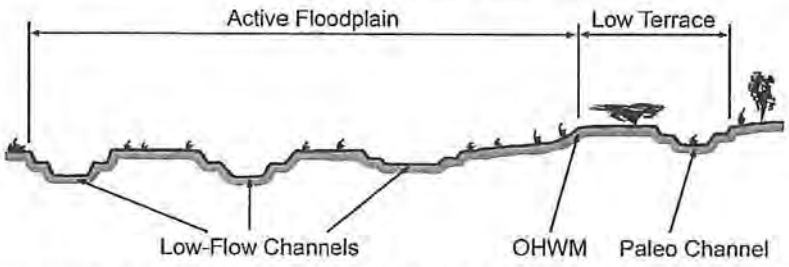
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

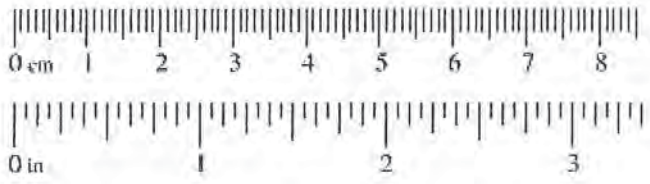


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

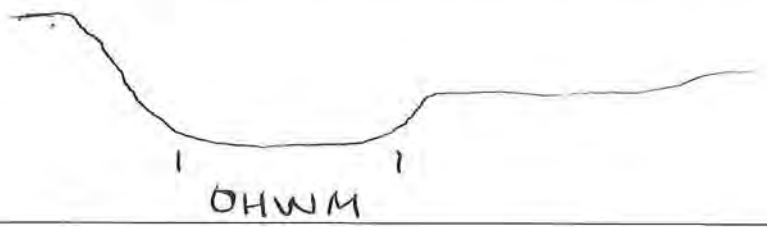
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



3MBC000100

Project ID: 2B-1 **Cross section ID:** 2B-1 **Date:** 9/7/16 **Time:** 1405

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: <1 % Tree: 0 % Shrub: <1 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

3MBC000100

Project ID: 2B-1 **Cross section ID:** 2B-1 **Date:** 9/7/16 **Time:** 1405

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course sand

Total veg cover: 1 % Tree: Ø % Shrub: 1 % Herb: Ø %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	2B-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	22.0
CDFW Width(s)	14.5'
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	Unk
Anthropogenic Modifications[7]	Road crossing
Surrounding Load Use	Open space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/7/16 **Time:** 1355
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 2B-2 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

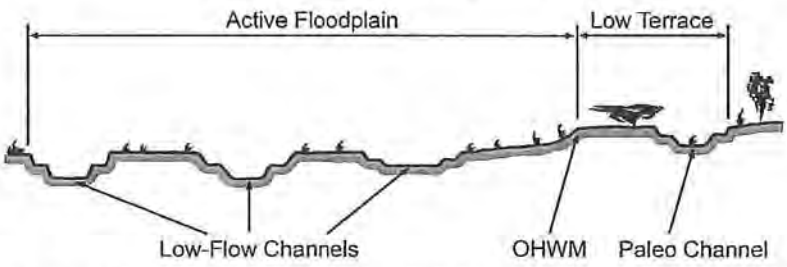
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

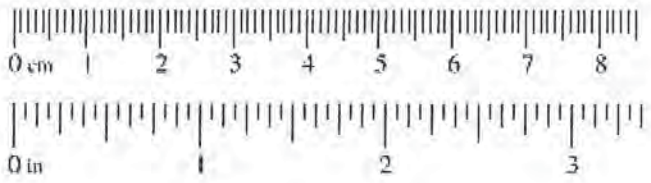


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

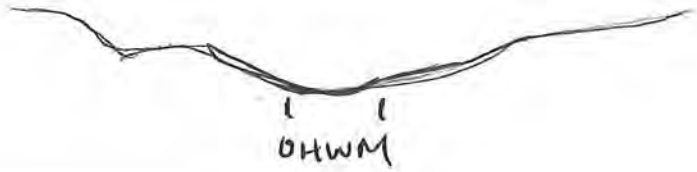
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



3MBCOSD100

Project ID: 2B-2 **Cross section ID:** 2B-2 **Date:** 9/7/16 **Time:** 1355

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

3MBC000100

Project ID: 2B-2 **Cross section ID:** 2B-2 **Date:** 9/7/16 **Time:** 1355

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARICC	Date 9/7/16

Feature ID	2B-2
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1.5'
CDFW Width(s)	1.5'
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Openspace & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/7/16 **Time:** 1445
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 2C-1 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossing

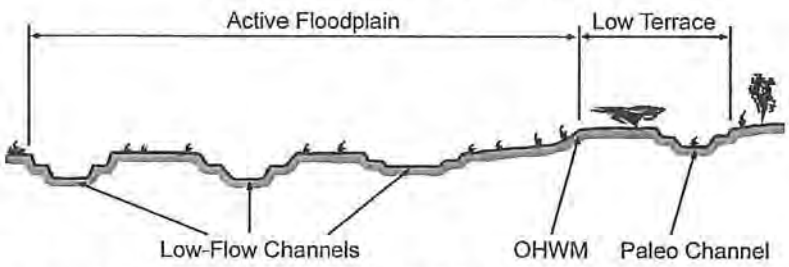
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

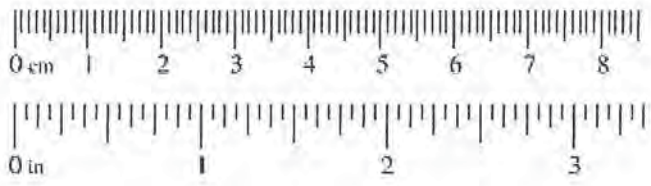


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: BMBC000100 **Cross section ID:** 2C-1 **Date:** 9/7/16 **Time:** 1445

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble - cobble

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3mBC100100 **Cross section ID:** 2C-1 **Date:** 9/7/16 **Time:** 1445

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/7/16

Feature ID	2C-1
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'
CDFW Width(s)	2'
Side Slope Estimate[4]	vertical
Characteristic Vegetation[5]	none
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	openspace & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/7/16 **Time:** 1450
Project Number: 3MP000100 **Town:** SB County **State:** CA
Stream: 2C-2 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

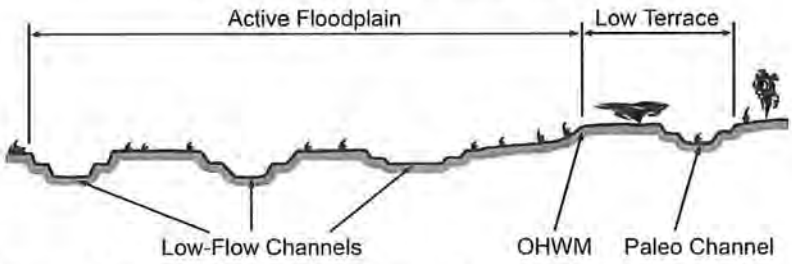
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

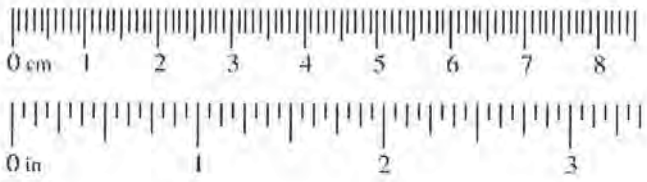


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBCU0100 **Cross section ID:** 2C-2 **Date:** 9/7/16 **Time:** 1450

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 2C-2 **Date:** 9/7/16 **Time:** 1450

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	2C-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3'
CDFW Width(s)	3'
Side Slope Estimate[4]	moderate to steep slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	Unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/7/16 **Time:** 1455
Project Number: 3M8C000100 **Town:** SB County **State:** CA
Stream: 2C-3 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

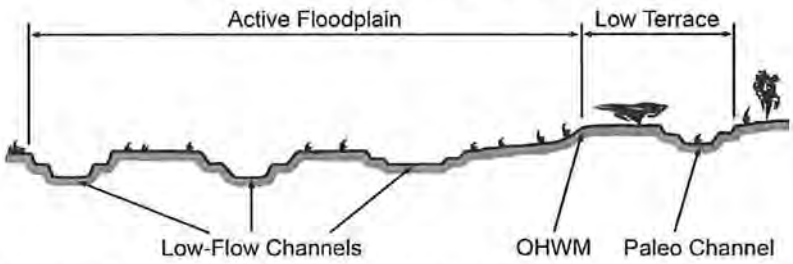
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

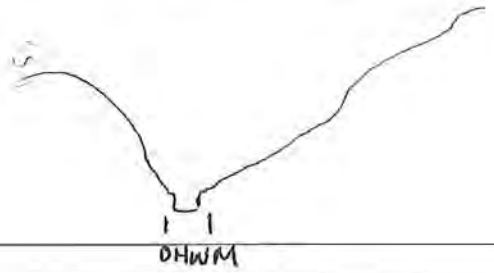
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBCU00100 **Cross section ID:** 2C-3 **Date:** 9/7/16 **Time:** 1455

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Course Sand w/Cobble

Total veg cover: 3 % Tree: 0 % Shrub: 1 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 2C-3 **Date:** 9/7/16 **Time:** 1455

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/7/16

Feature ID	2C-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1.5' - ~~13'~~ 12.5'
CDFW Width(s)	2' - 12.5'
Side Slope Estimate[4]	moderate to steep slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Load Use	open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: | **Date:** 9/7/16 | **Time:** 1300
Project Number: | **Town:** | **State:**
Stream: 2D-1 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): JC CR

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

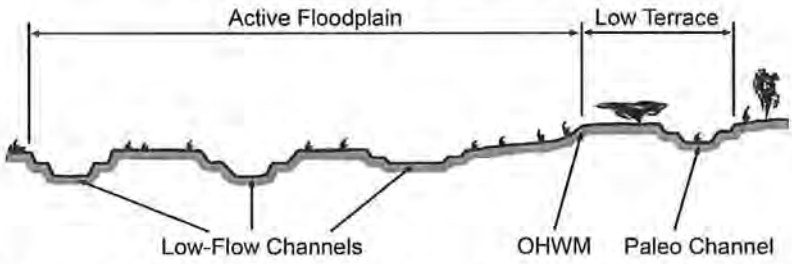
Brief site description:

Active floodplain in desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

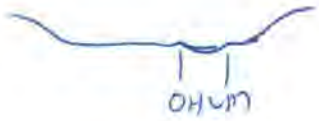
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud

Project ID: **Cross section ID:** 2D-1 **Date:** 9.7.16 **Time:** 1300

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2D-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Gravel

Total veg cover: <1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/7/16

Feature ID	2D-1
Preliminary Jurisdictional Status[1]	E RoC
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	~~Varied~~ 1 ft
CDFW Width(s)	10.5 ft
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	~~N/P~~ None
Chemical Indicators[6]	No
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	(Creosote - White bursage scrub)

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 2D-2
Investigator(s): IC CR

Date: 9/7/16 **Time:** 1320
Town: **State:**
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

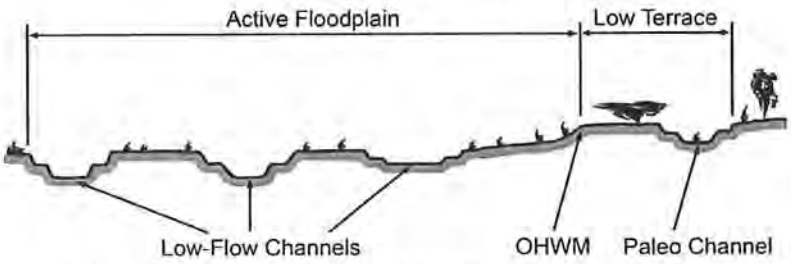
Brief site description:

Braided active floodplain, desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

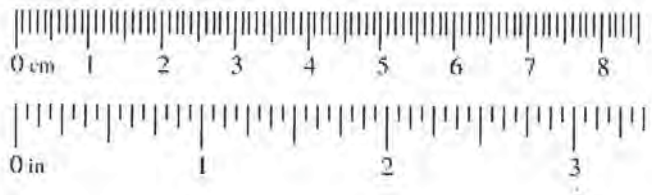


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 2D-2 **Date:** 9.7.16 **Time:** 1320

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2D-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Coarse Sand / Granule

Total veg cover: <1 % Tree: 0 % Shrub: <1 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/7/16

Feature ID	2D-2
Preliminary Jurisdictional Status[1]	D C9R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	"
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Occasional Grass
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: **Project Number:** **Stream:** **Investigator(s):** Cl JC	**Date:** 9/7/16 **Town:** **Photo begin file#:**	**Time:** 1345 **State:** **Photo end file#:**
Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**	
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Coordinates:**	**Datum:**

Potential anthropogenic influences on the channel system:

Road

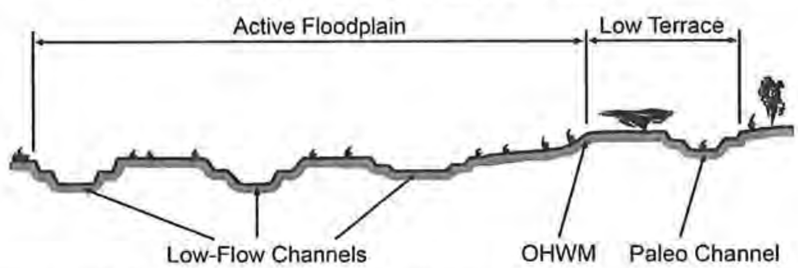
Brief site description:

Desert wash in Larrea/Am dumosa scrub

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

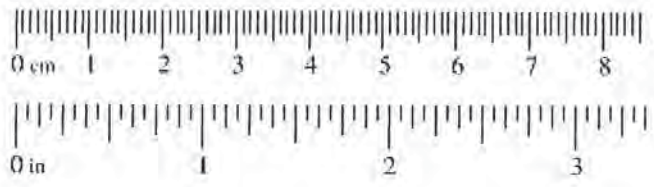


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 2D-3 **Date:** 9.7.16 **Time:** 1345

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/7/16

Feature ID	2D-3
Preliminary Jurisdictional Status[1]	C+R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2.0
CDFW Width(s)	5.0
Side Slope Estimate[4]	Vertical to slight
Characteristic Vegetation[5]	None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 2D-4
Investigator(s): EC CR

Date: 9/7/16 **Time:** 1400
Town: **State:**
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

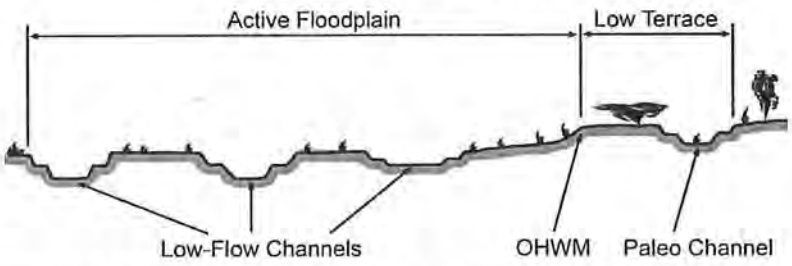
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

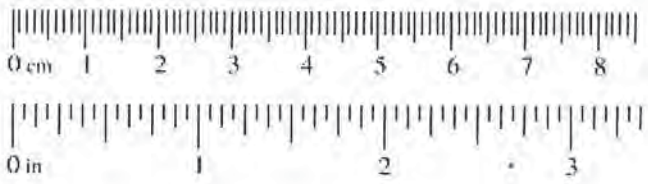


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 2D-4 **Date:** 9.7.16 **Time:** 1400

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2D-4 **Date:** 9.7.16 **Time:** 1400

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR IC	Date 9/7/16

Feature ID	2D-4
Preliminary Jurisdictional Status[1]	C o R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2.0
CDFW Width(s)	7.0
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Intermittent grass
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/27/16	**Time:** 1410
Project Number:	**Town:**	**State:**
Stream: 2D-S	**Photo begin file#:**	**Photo end file#:**
Investigator(s): CR IC		

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**

Coordinates:

Potential anthropogenic influences on the channel system:

Road blocks downstream flow

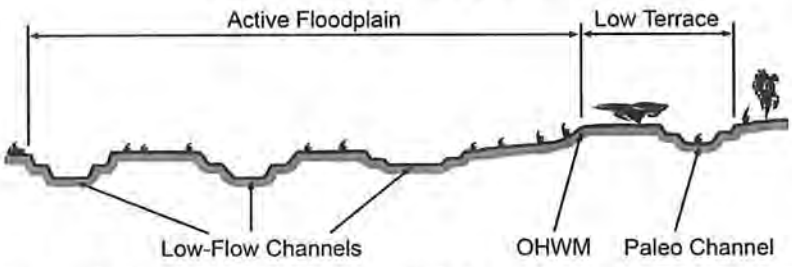
Brief site description:

Braided desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

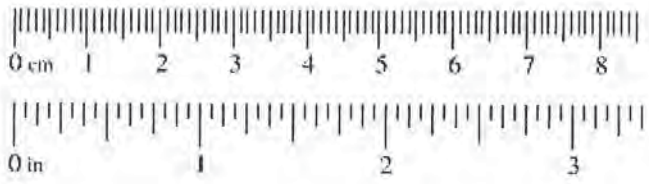


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 2D-5 **Date:** 9.7.16 **Time:** 1410

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: <1 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 2D-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/19/16

Feature ID	2D-5
Preliminary Jurisdictional Status[1]	EOR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Slight to ~~45~~ 45 %
Characteristic Vegetation[5]	None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road stops drainage downstream
Surrounding Load Use	OS
Other Notes	Sheet flow upstream of drainage

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 20-6
Investigator(s): IC CR

Date: 9/7/16
Time: 1440
Town:
State:
Photo begin file#:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

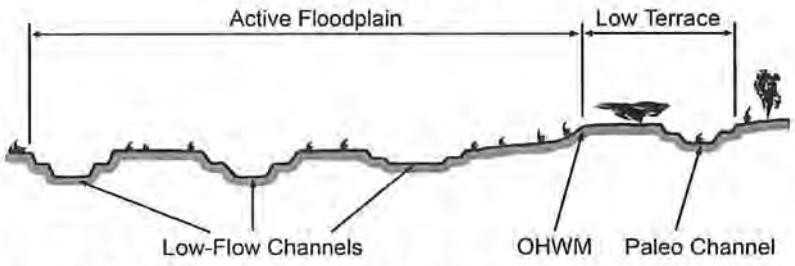
Brief site description:

Braided desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

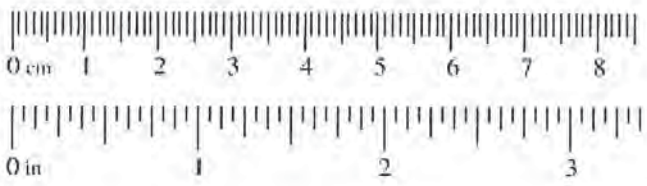


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 2D-6 **Date:** 9.7.16 **Time:** 1440

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** ZD-6 **Date:** 9.7.16 **Time:** 1440

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/7/16

Feature ID	2D-6
Preliminary Jurisdictional Status[1]	C or R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	"
Side Slope Estimate[4]	Vertical to slight
Characteristic Vegetation[5]	~~General~~ None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/7/16	**Time:** 1540
Project Number:	**Town:**	**State:**
Stream: 2E-1	**Photo begin file#:**	**Photo end file#:**
Investigator(s): JC CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**

Potential anthropogenic influences on the channel system:

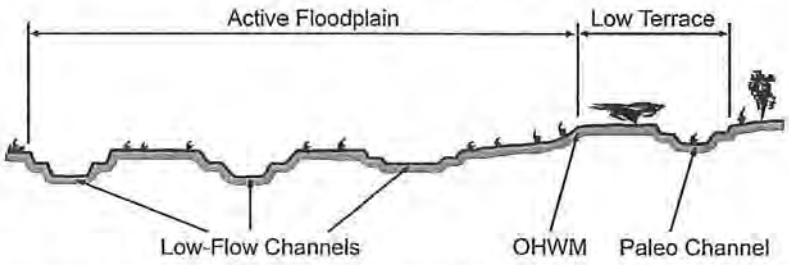
Road

Brief site description:

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

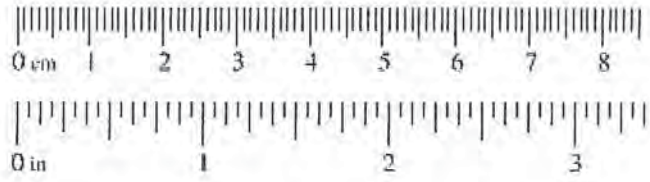


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** 2E-1 **Date:** 9.7.16 **Time:** 1510

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: <1 % Tree: 0 % Shrub: <1 % Herb: 0 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2E-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff CR IC	Date 9/7/16

Feature ID	2E-1
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1.0
CDFW Width(s)	2.5
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Scattered chaparral
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Rural
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/7/16	**Time:** ~~1320~~ 1520
Project Number:	**Town:**	**State:**
Stream: 2E-2	**Photo begin file#:**	**Photo end file#:**
Investigator(s): JC CR		
Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**	
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**	

Potential anthropogenic influences on the channel system:

Road

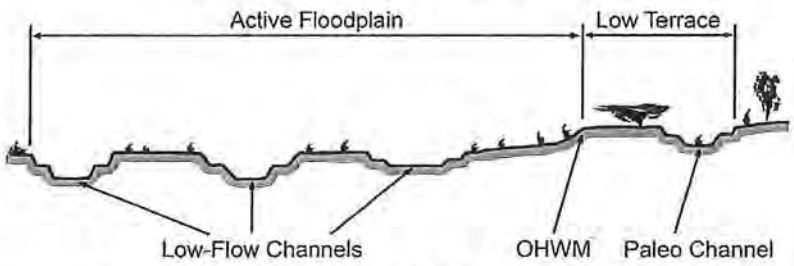
Brief site description:

Braided desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

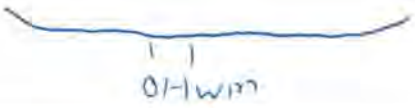
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud

Project ID: **Cross section ID:** 2E-2 **Date:** 9.7.16 **Time:** 1520

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2E-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Gravel

Total veg cover: 1 % Tree: 0 % Shrub: 10 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff IC CR	Date 9/7/16

Feature ID	2E-2
Preliminary Jurisdictional Status[1]	CoR
Potential Wetland (y/n)[2]	
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 2E-3
Investigator(s):

Date: 9/8/16
Town:
Photo begin file#:

Time: 745
State:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road Transmission tower

Brief site description:

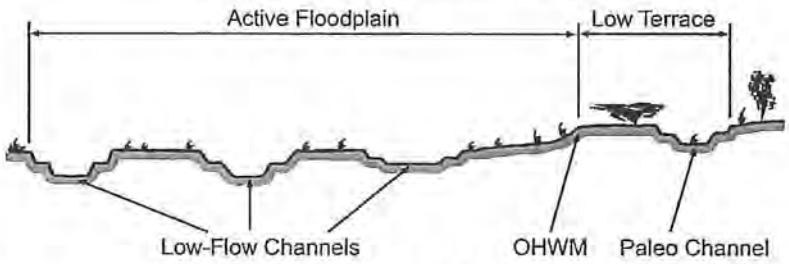
Brush/ desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

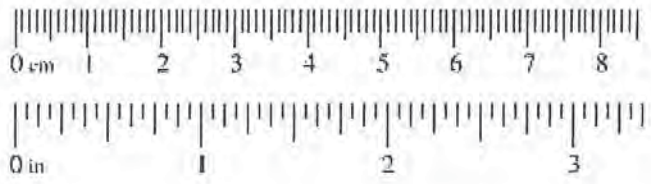


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 2E-3 **Date:** 9.8.16 **Time:** 0745

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/8/16

Feature ID	2E-3
Preliminary Jurisdictional Status[1]	COR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road, ~~Tower~~ Transmission Tower
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 2E-5
Investigator(s): IC CR

Date: 4/8/16
Town:
Photo begin file#:

Time: ~~730~~ 800
State:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

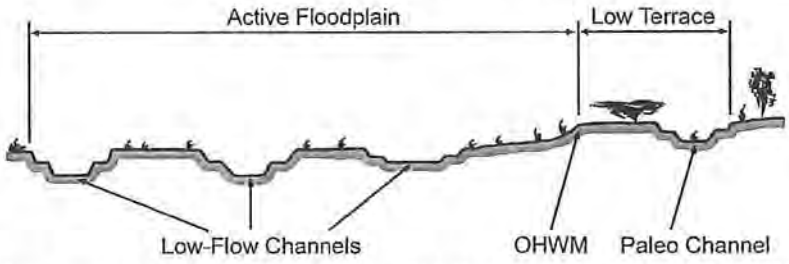
Brief site description:

Braided desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

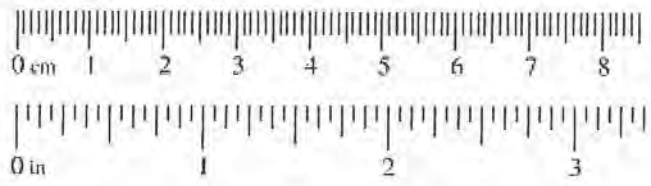


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

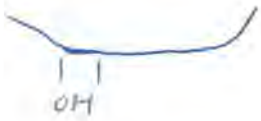
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 2E-4 **Date:** 9.8.16 **Time:** 0800

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course Sand

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2E-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR IC	Date 9/8/16

Feature ID	2E-4
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	~~Vomit~~ 3.0
CDFW Width(s)	" 9.5
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Occasional shrub
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 2E-5
Investigator(s): IC CR

Date: 4/18/16
Time: 815
Town:
State:
Photo begin file#:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

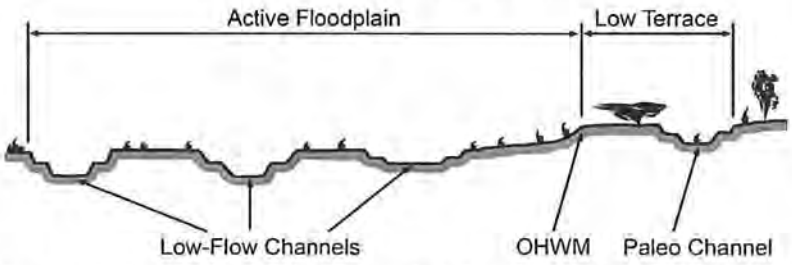
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

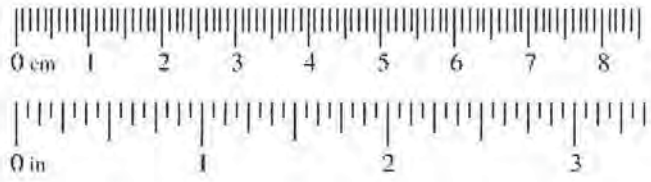


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

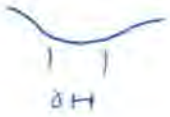
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 2E-5 **Date:** 9.8.16 **Time:** 0815

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 26-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff JC CR	Date 9/8.16

Feature ID	2E-05
Preliminary Jurisdictional Status[1]	COR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	V
CDFW Width(s)	V
Side Slope Estimate[4]	Moderate
Characteristic Vegetation[5]	None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road stops down stream flow
Surrounding Load Use	OS
Other Notes Photos 2E-6	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 2E-7
Investigator(s): IC CIC

Date: 9/8/16
Time: 830
Town:
State:
Photo begin file#:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Roads

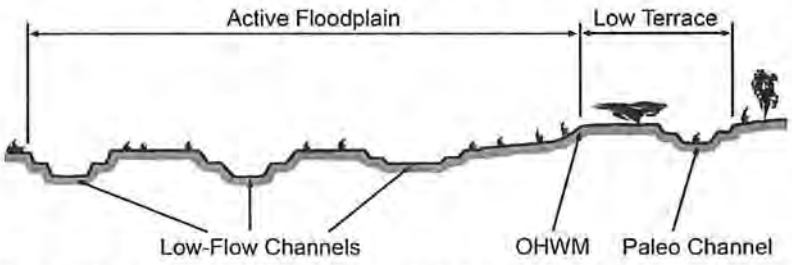
Brief site description:

Braided desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

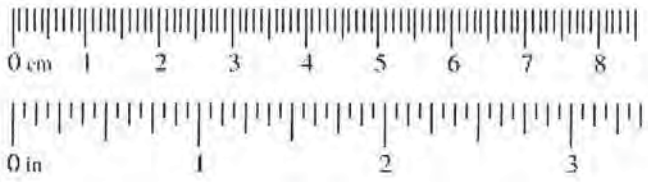


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

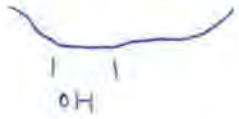
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 2E-6 **Date:** 9.9.16 **Time:** 0830

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 2E-6 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/8/16

Feature ID	~~CR~~ 2F-06
Preliminary Jurisdictional Status[1]	CJR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	V
Side Slope Estimate[4]	Slight to steep
Characteristic Vegetation[5]	Occasional shrub
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Roads
Surrounding Load Use	OS
Other Notes Photo says 2F-7	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 25-7
Investigator(s): IC CR

Date: 9/13/16 **Time:** ~~9:55~~ 9:50
Town: **State:**
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Roads

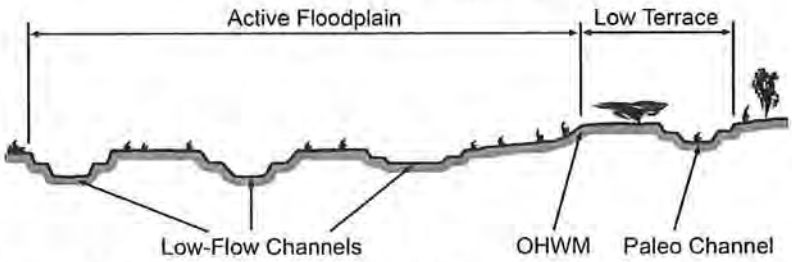
Brief site description:

Braided desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

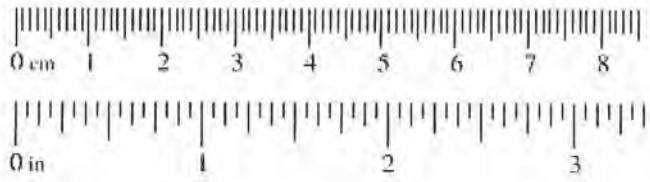


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
0.0098 (1/2)	0.25	Medium sand	Sand
0.005 (1/4)	0.125	Fine sand	
0.0025 (1/8)	0.0625	Very fine sand	
0.0012 (1/16)	0.031	Coarse silt	
0.00061 (1/32)	0.0156	Medium silt	Silt
0.00031 (1/64)	0.0078	Fine silt	
0.00015 (1/128)	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 2E-7 **Date:** 9.8.16 **Time:** 0850

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 6

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** ZE-7 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble / Granule

Total veg cover: 0 % Tree: 0 % Shrub: 2 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR IC	Date 9/8/16

Feature ID	2E-7
Preliminary Jurisdictional Status[1]	COR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Va
CDFW Width(s)	V
Side Slope Estimate[4]	Slight to steep
Characteristic Vegetation[5]	Lorrea / Annual scrub
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Roads
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/8/16	**Time:** 915
Project Number:	**Town:**	**State:**
Stream: 25-8	**Photo begin file#:**	**Photo end file#:**
Investigator(s): TC CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**

Coordinates:

Potential anthropogenic influences on the channel system:

Road

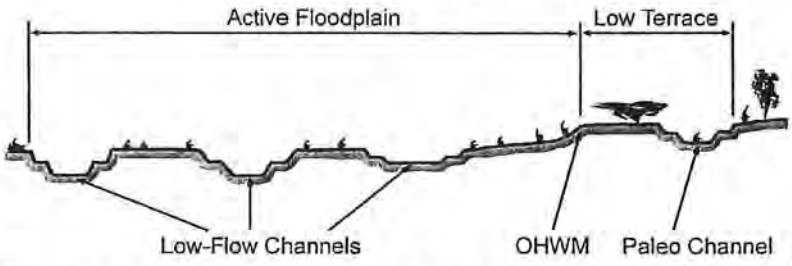
Brief site description:

Braided desert stream

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

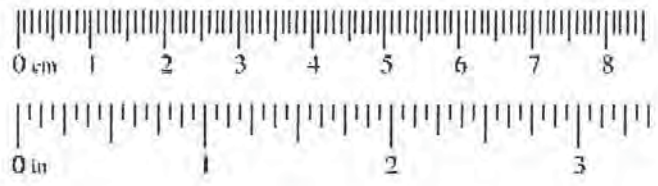


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 2E-3 **Date:** 9.8.16 **Time:** 0915

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

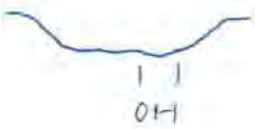
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 2E-8 **Date:** **Time:**

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/8/16

Feature ID	2E-8
Preliminary Jurisdictional Status[1]	CoR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	F
Surface Water Present (y/n), Depth	N
OHWM Width(s)	V
CDFW Width(s)	V
Side Slope Estimate[4]	Slight to ~~45°~~ 45°
Characteristic Vegetation[5]	N
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road stops down stream flow
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: **Project Number:** **Stream:** 2E-9 **Investigator(s):** JC CR	**Date:** 9/8/16 **Town:** **Photo begin file#:**	**Time:** ~~10~~ 920 **State:** **Photo end file#:**
Y ☒ / N ☐ Do normal circumstances exist on the site? Y ☒ / N ☐ Is the site significantly disturbed?	**Location Details:** **Projection:** **Datum:** **Coordinates:**	

Potential anthropogenic influences on the channel system:

Road

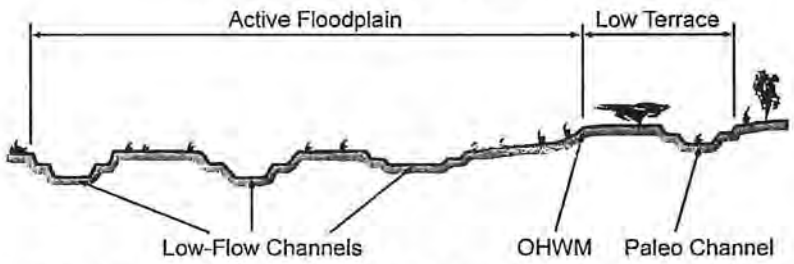
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

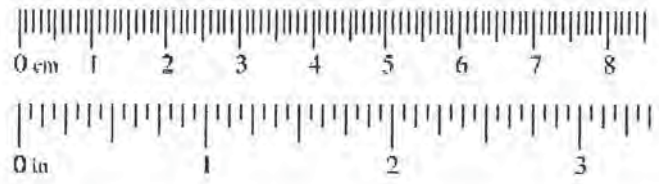


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

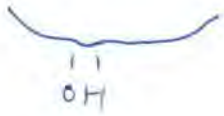
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 2E-9 **Date:** 9.8.16 **Time:** 0920

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2E-9 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebbl

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/8/16

Feature ID	2E-9
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	4.0
CDFW Width(s)	30.0
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	N
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road stops upstream flow
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/8/16	**Time:** 935
Project Number:	**Town:**	**State:**
Stream: 2E-10	**Photo begin file#:**	**Photo end file#:**
Investigator(s): CE JC		

Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**

Potential anthropogenic influences on the channel system:

Road

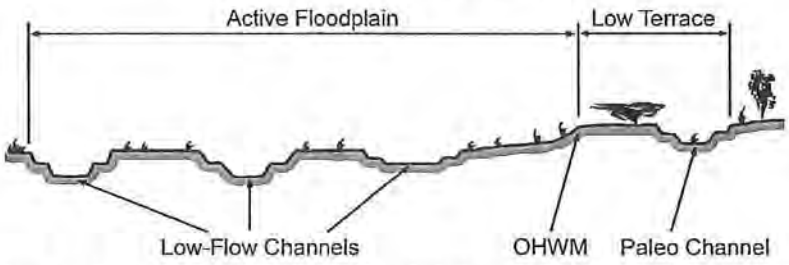
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

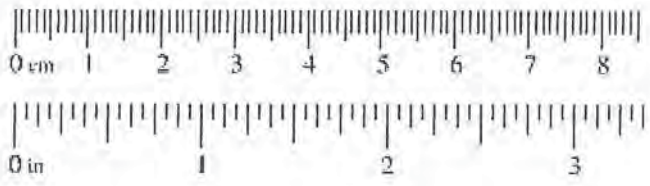


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

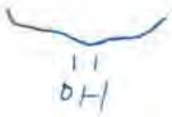
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 2E-10 **Date:** 09.08.16 **Time:** 0935

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~Mud~~ Coarse sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 2E-1D **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Gravel

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR IC	Date 9/8/16

Feature ID	2E-10
Preliminary Jurisdictional Status[1]	C?R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	N
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 | **Date:** 9/8/16 | **Time:** 0740
Project Number: 3MB0000100 | **Town:** SB County | **State:** CA
Stream: 2F-1 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

OHV + Road Crossings

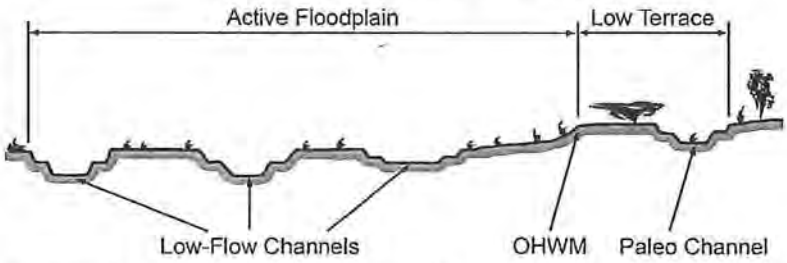
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

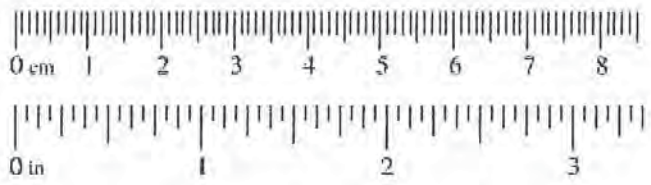


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
		Fine sand	
1/4 0.005	0.125		
1/8 0.0025	0.0625	Very fine sand	
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156		Silt
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MRC00108 **Cross section ID:** 2F-1 **Date:** 9/8/16 **Time:** 0740

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Course Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 2F-1 **Date:** 9/8/16 **Time:** 0746

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARICC	Date 9/8/16

Feature ID	~~2C-4~~ 2F-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1.5'-4'
CDFW Width(s)	1.5'-4'
Side Slope Estimate[4]	gently sloping
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: BMBC00100
Stream: 2F-2
Investigator(s):

Date: 9/8/16
Town: SB County
Photo begin file#:

Time: 0745
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

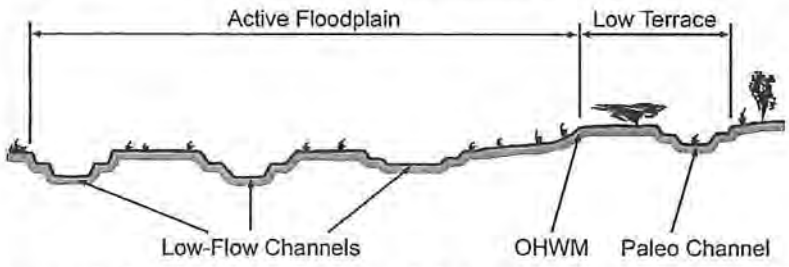
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

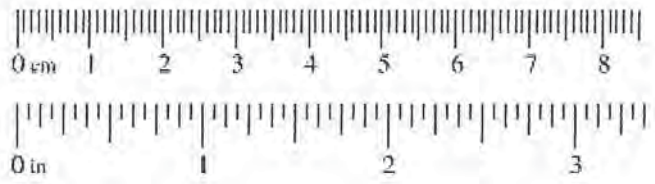


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3mbc000100 **Cross section ID:** 2F-2 **Date:** 9/8/16 **Time:** 0745

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: 3MBXC000100 **Cross section ID:** 2F-2 **Date:** 9/8/16 **Time:** 0745

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Coarse

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- ☑ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARice	Date 9/8/16

Feature ID	2F-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'
CDFW Width(s)	2'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
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[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 | **Date:** 9/8/16 | **Time:** 0750
Project Number: 3MBC000100 | **Town:** SB County | **State:** CA
Stream: 2F-3 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road crossings

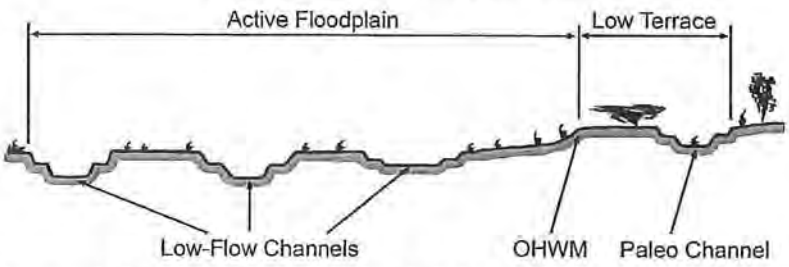
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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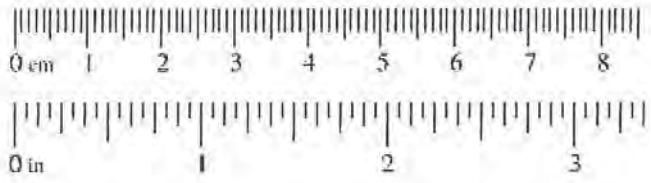
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 2F-3 **Date:** 9/8/16 **Time:** 0750

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MOC000100 **Cross section ID:** 2F-3 **Date:** 9/8/16 **Time:** 0750

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Gravel

Total veg cover: <1 % Tree: 0 % Shrub: <1 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: △
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: △ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/8/16

Feature ID	2F-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1'-9'
CDFW Width(s)	1'-9'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100
Stream: 2F-4
Investigator(s): AR, EC
Date: 9/8/16
Town: SB County
Photo begin file#:
Time: 0805
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

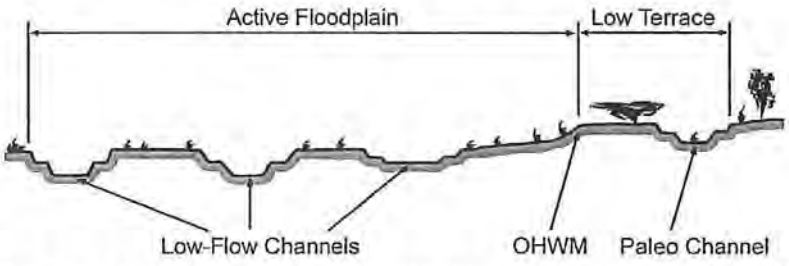
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

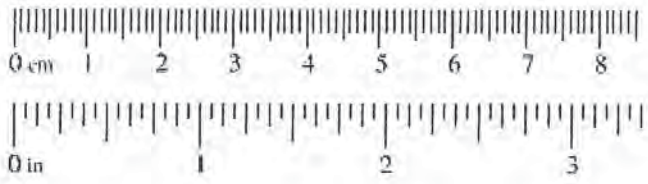


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

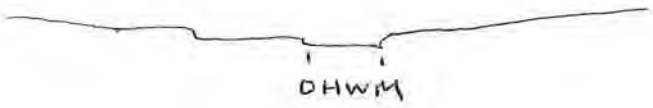
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 2F-4 **Date:** 9/8/16 **Time:** 0805

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3mpc000100 **Cross section ID:** 2F-4 **Date:** 9/8/16 **Time:** 0805

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/8/16

Feature ID	~~2H~~ 2F-4
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, ~~Ain~~
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1.5'
CDFW Width(s)	1.5'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC00010
Stream: 2F-5
Investigator(s): AR, CC
Date: 9/8/16
Town: SB County
Photo begin file#: 0
Time: 0825
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

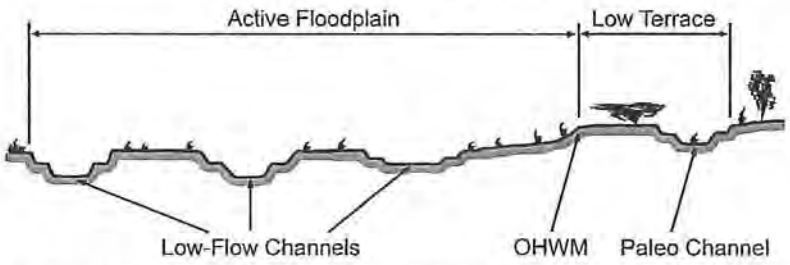
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

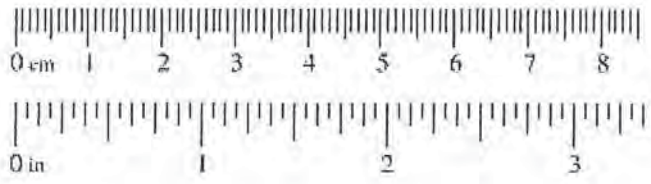


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

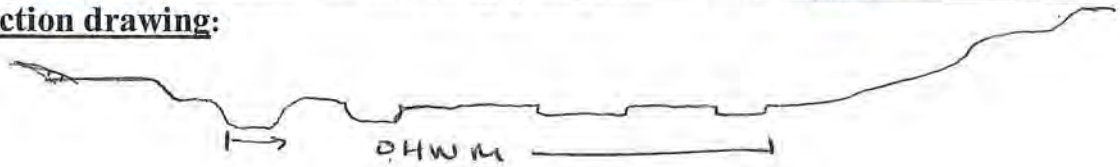
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 2F-5 **Date:** 9/8/16 **Time:** 0825

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course Sand w/ Some Silt

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 2F-5 **Date:** 9/8/16 **Time:** 0825

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 60 % Tree: 0 % Shrub: 5 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble + Cobble

Total veg cover: 10 % Tree: 0 % Shrub: 8 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARICC	Date 9/8/16

Feature ID	2F-5
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	~~Ephemeral~~ → Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	veg in channels
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossings
Surrounding Load Use	Open Space + transmission lines
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/8/16 **Time:** 0840
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 2F-6 **Photo begin file#:** **Photo end file#:**
Investigator(s):

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

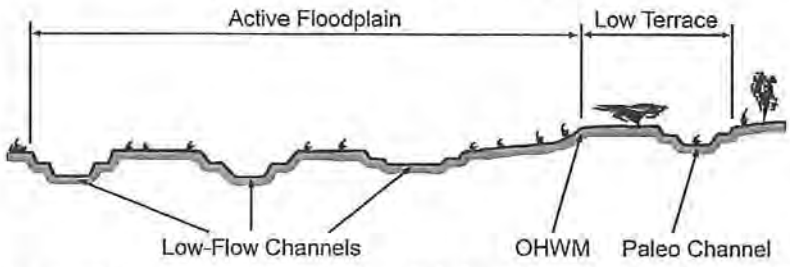
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

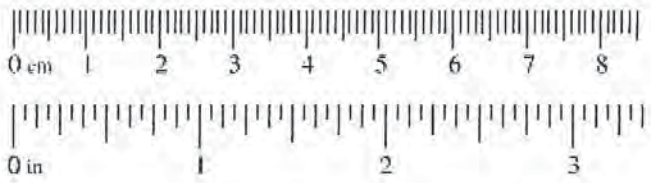


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

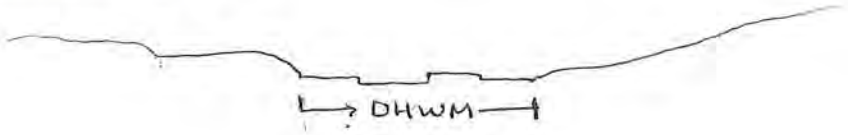
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC00010 **Cross section ID:** 2F-6 **Date:** 9/8/16 **Time:** 0840

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium + Course sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 2F-6 **Date:** 9/8/16 **Time:** 0840

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble & Cob Granule

Total veg cover: 6 % Tree: Ø % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/8/16

Feature ID	2F-6
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3M[illegible]000100
Stream: 3C-1
Investigator(s): ARice

Date: 9/8/16 **Time:** 1015
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

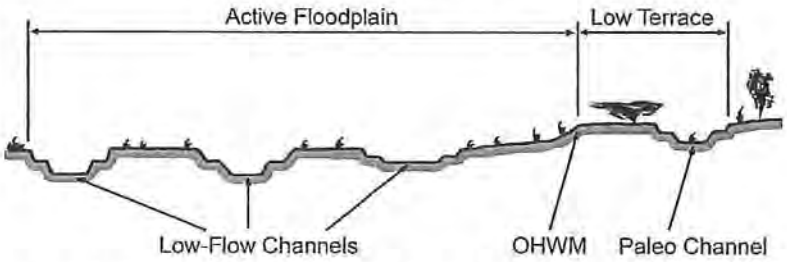
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

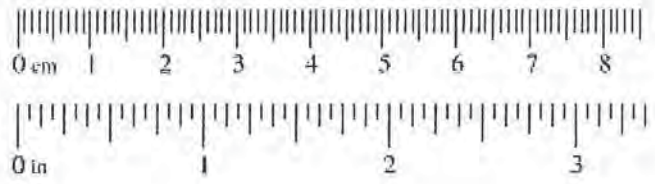


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 3C-1 **Date:** 9/8/16 **Time:** 1015

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

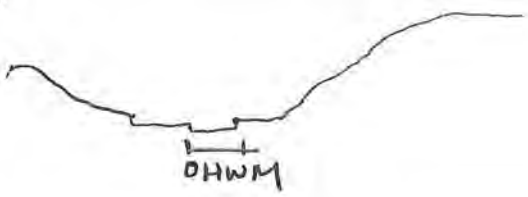
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: 3MACO00100 **Cross section ID:** 3C-1 **Date:** 9/8/16 **Time:** 1015

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt

Total veg cover: 0 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/8/16

Feature ID	3C-1
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Soil Cracks
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'-5'
CDFW Width(s)	2'-5'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Load Use	Open space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100
Stream: BC-2
Investigator(s): AR, CC
Date: 9/8/16 **Time:** 1025
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

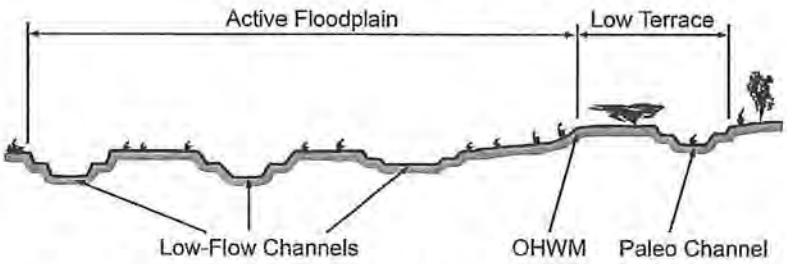
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

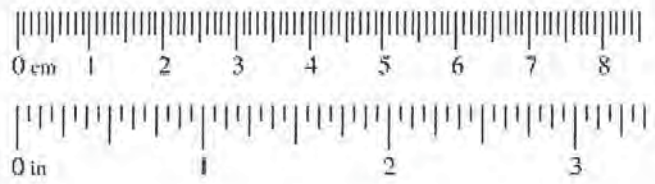


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MPC000100 **Cross section ID:** 3C-2 **Date:** 9/8/16 **Time:** 1025

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cobble

Total veg cover: 5 % Tree: 0 % Shrub: 4 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** BC-2 **Date:** 9/6/16 **Time:** 1025

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/8/16

Feature ID	3C-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank & Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	moderate
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossings & trash ← ~~debris~~ ORV driven onto drainage
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 | **Date:** 9/8/16 | **Time:** 1100
Project Number: 3MBC000100 | **Town:** SB County | **State:** CA
Stream: 3C-3 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): AR, CC

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

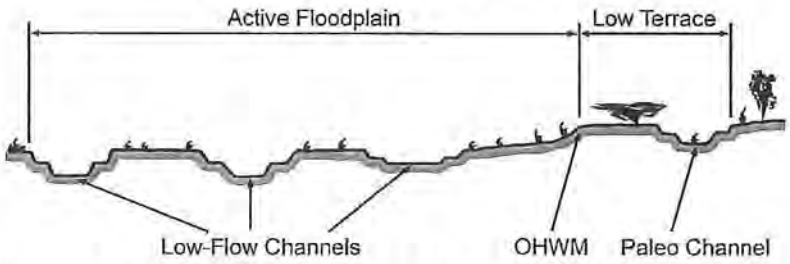
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- [ ] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

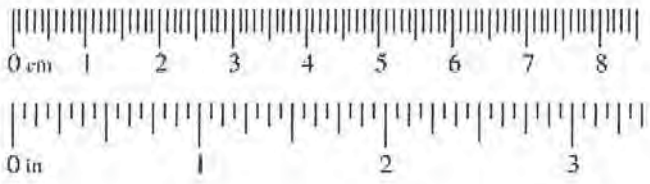


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

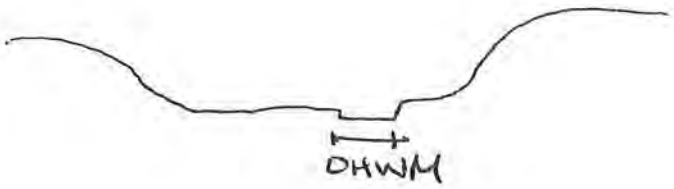
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 3C-3 **Date:** 9/8/16 **Time:** 1100

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine to Medium Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 3C-3 **Date:** 9/8/16 **Time:** 1100

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course to Granule

Total veg cover: 8 % Tree: Ø % Shrub: 8 % Herb: Ø %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000102	Task No. 00300
Field Staff ARCC	Date 9/8/16

Feature ID	3C-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment Sediment build-up texture,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road Crossing + Trash
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 3C-4
Investigator(s): CR, IC

Date: 9/8/16 **Time:** 1040
Town: **State:**
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

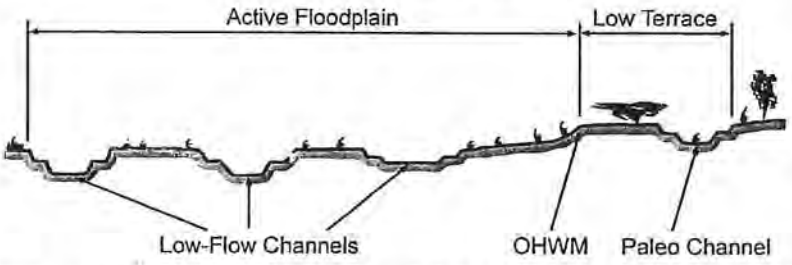
Brief site description:

Cobbly desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

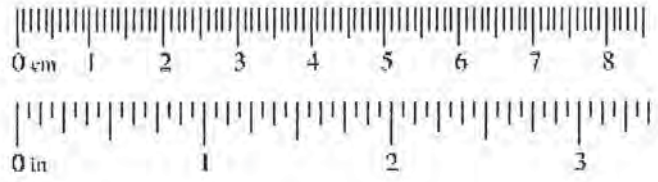


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** **Date:** **Time:**

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: ~~10~~ 5 % Tree: Ø % Shrub: ~~5~~ % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cobble

Total veg cover: ~~10~~ 5 % Tree: Ø % Shrub: ~~5~~ % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/8/16

Feature ID	3C-4
Preliminary Jurisdictional Status[1]	CoR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Slight to vertical
Characteristic Vegetation[5]	Larrea & Amaranthus scrub
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/8/14	**Time:** 1105
Project Number:	**Town:**	**State:**
Stream: 3G-5	**Photo begin file#:**	**Photo end file#:**
Investigator(s): CR, IC		

Y ☐ / N ☐ Do normal circumstances exist on the site?	**Location Details:**
Y ☐ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**

Potential anthropogenic influences on the channel system:

Road

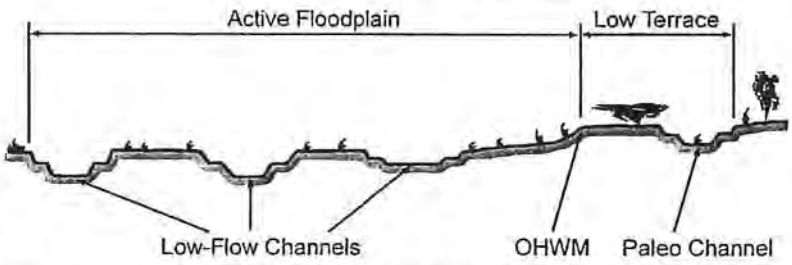
Brief site description:

Cobble dominated reach

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

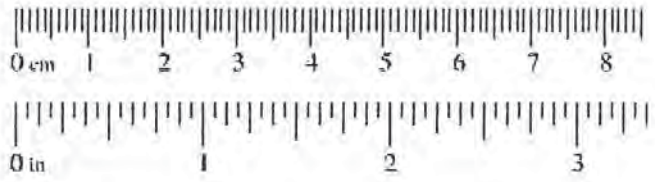


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

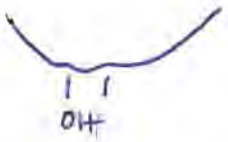
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 3C-5 **Date:** 09.08.16 **Time:** 1105

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cobble

Total veg cover: 5 % Tree: 0 % Shrub: 5 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC, CR	Date 9/8/16

Feature ID	3C-05
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Moderate
Characteristic Vegetation[5]	Lemna + Azolla
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	CS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MB00010 0
Stream: 4A-1
Investigator(s): AR, CC

Date: 9/8/16 **Time:** 1250
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

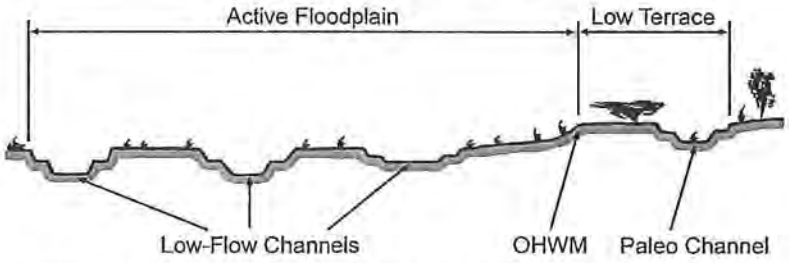
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

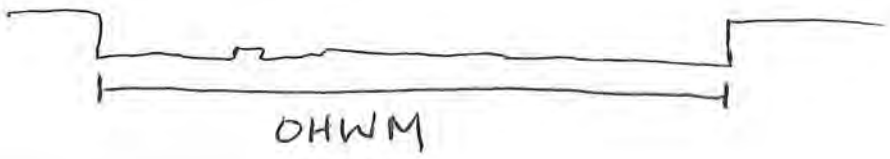
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
		Fine sand	
1/4 0.005	0.125		
1/8 0.0025	0.0625	Very fine sand	
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156		Silt
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud

Project ID: 3MBC000100 **Cross section ID:** 4A-1 **Date:** 9/8/16 **Time:** 1250

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine to coarse sand

Total veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 4A-1 **Date:** 9/8/16 **Time:** 1250

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Coarse to Granule

Total veg cover: 7 % Tree: ~~2~~ 2 % Shrub: 1 % Herb: 4 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/8/16

Feature ID	4A-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Drainage Patterns, Δ in sediment texture, Sediment deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	moderate slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC00D100
Stream: 4A-2
Investigator(s): AR, CC

Date: 9/8/16
Town: SB County
Photo begin file#: 0

Time: 1315
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection:
Datum:
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

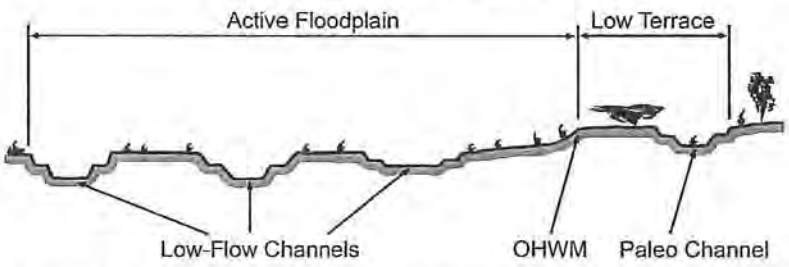
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

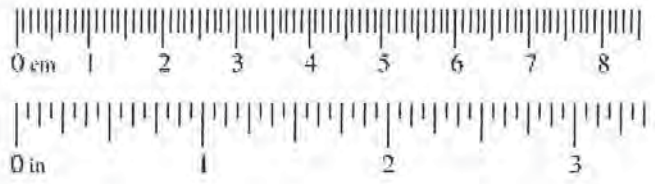


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3mrbc00010 **Cross section ID:** 4A-2 **Date:** 9/8/16 **Time:** 1315

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: 20 % Tree: 10 % Shrub: 10 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 4A-2 **Date:** 9/8/16 **Time:** 1315

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: very fine sand
Total veg cover: 9 % Tree: 0 % Shrub: 5 % Herb: 4 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: _____
Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/8/16

Feature ID	4A-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, drainage patterns
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle to moderate
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC00100
Stream: 4A-3
Investigator(s): AR, CC

Date: 9/8/16
Town: SB County
Photo begin file#:

Time: 1345
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

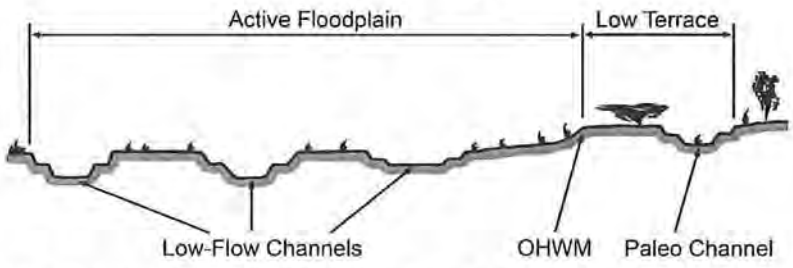
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

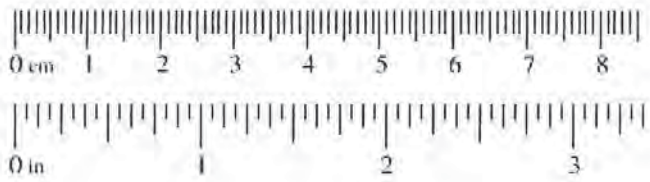


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156		Silt
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 4A-3 **Date:** 9/8/16 **Time:** 1345

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☑ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: 3MBC000100 **Cross section ID:** 4A-3 **Date:** 9/8/16 **Time:** 1345

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARCC	Date 9/8/16

Feature ID	4A-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road crossing + trash
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/8/16 **Time:** 1345
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 4A-4 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

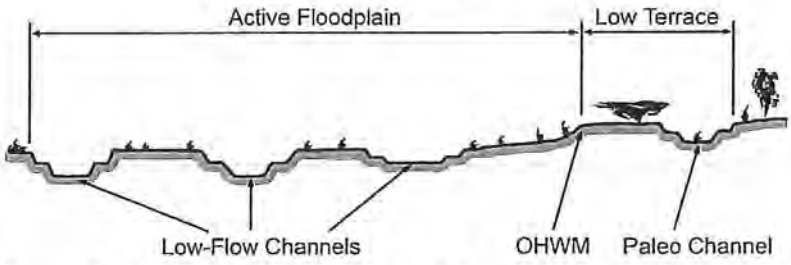
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

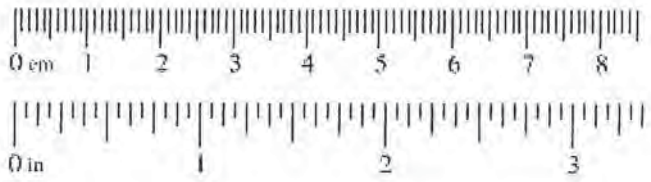


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 4A-4 **Date:** 9/8/16 **Time:** 1345

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: very fine sand

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

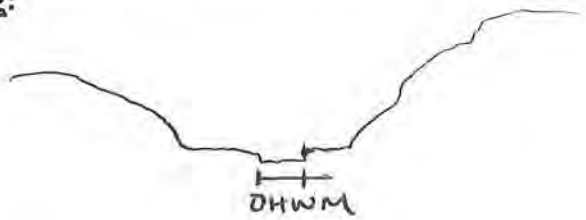
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: 3MBC000100 **Cross section ID:** 4A-4 **Date:** 9/8/16 **Time:** 1345

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/8/16

Feature ID	4A-4
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	~~AAAA~~
CDFW Width(s)	~~AAAA~~
Side Slope Estimate[4]	gentle slope w/ some steep slopes
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossings
Surrounding Load Use	Open Space + Transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/8/16 **Time:** 1355
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: HA-5 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

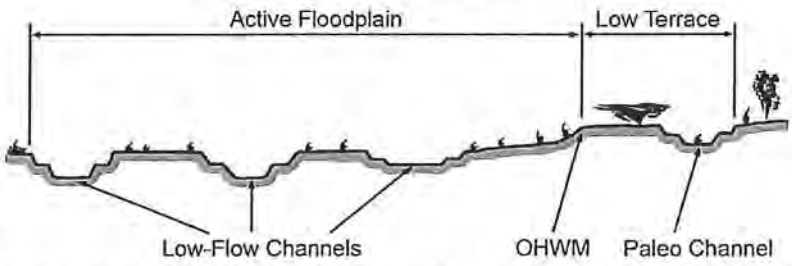
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

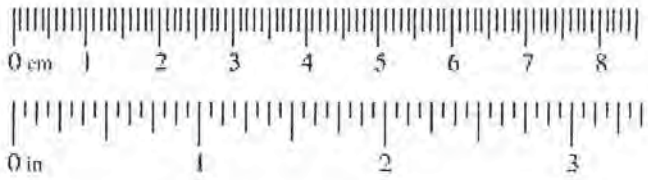


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	Silt
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000105 **Cross section ID:** 4A-5 **Date:** 9/8/16 **Time:** 1355

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 41 % Tree: Ø % Shrub: Ø % Herb: 41 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: 3mbc000100 **Cross section ID:** 4A-5 **Date:** 9/8/16 **Time:** 1355

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: 0 % / Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/8/16

Feature ID	4A-5
Preliminary Jurisdictional Status[1]	CDFW
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2'
CDFW Width(s)	2'
Side Slope Estimate[4]	moderate to steep slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path46
Project Number: 3MRCA00100
Stream: 4A-6
Investigator(s): AR, CC

Date: 9/8/16
Town: SB County
Photo begin file#:

Time: 1400
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

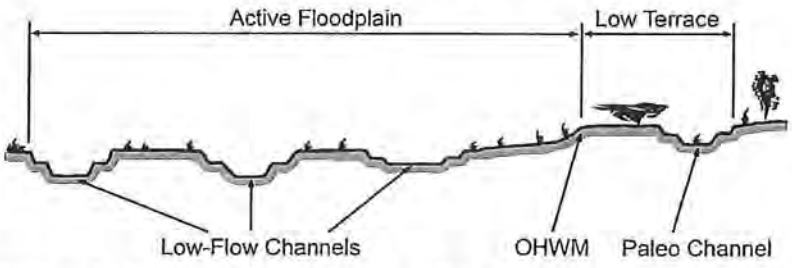
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

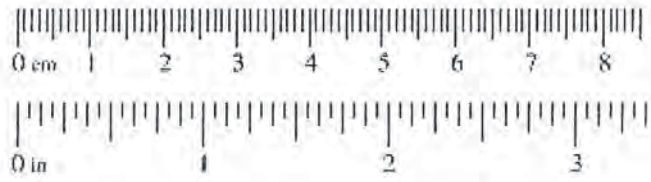


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

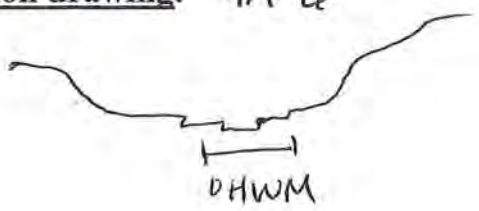
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

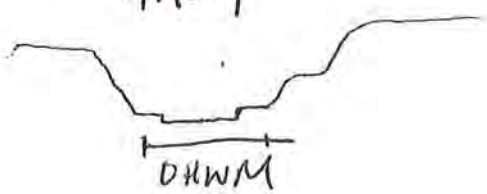


Project ID: 3MBC000100 **Cross section ID:** 4A-Le **Date:** 9/6/16 **Time:** 1400

Cross section drawing: 4A-Le



4A-M



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand w/cobble

Total veg cover: 0 % / Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** ~~4B~~ 4A-6 **Date:** 9/8/16 **Time:** 1400

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course sand + cobble

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CL	Date 9/8/16

Feature ID	4A-6	4A-7
Preliminary Jurisdictional Status[1]	CDFW, RWQB	
Potential Wetland (y/n)[2]	N	N
Hydrologic Indicators	Bed/Bank, Δ in sediment tex.	Same
Wetland Plant Indicators	N/A	N/A
Preliminary Hydrologic Regime[3]	Ephemeral	
Surface Water Present (y/n), Depth	N	N
OHWM Width(s)	2.5'	1'-5.5'
CDFW Width(s)	4.5'	2'-7'
Side Slope Estimate[4]	moderate slope	gentle to moderate
Characteristic Vegetation[5]	unveg in channel	unveg in channel
Chemical Indicators[6]	unk	
Anthropogenic Modifications[7]	Road Crossing	
Surrounding Load Use	Open Space + transmission line	
Other Notes		

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 09.08.16	**Time:** 1415
Project Number:	**Town:**	**State:**
Stream: 4A-6	**Photo begin file#:**	**Photo end file#:**
Investigator(s): ARr CC		
Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**	
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**	

Potential anthropogenic influences on the channel system:

Road

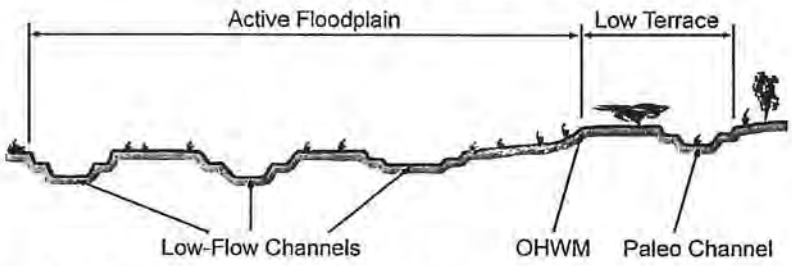
Brief site description:

Dry desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

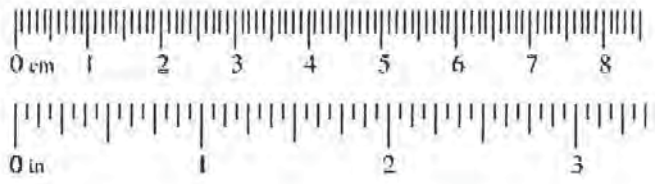


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

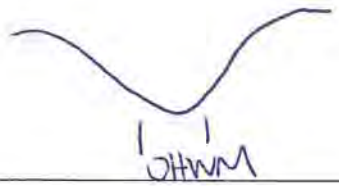
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** 4A-B **Date:** 09.08.16 **Time:** 14.15

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

straw wattles in place up channel
D.S. end disturbed by grading for pylon.

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand
Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %
Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4A-B **Date:** 9.8.16 **Time:** 1415

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/8/16	**Time:** 1310
Project Number:	**Town:**	**State:**
Stream: 4B-1	**Photo begin file#:**	**Photo end file#:**
Investigator(s): TC CR		
Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**	
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**	

Potential anthropogenic influences on the channel system:

Road

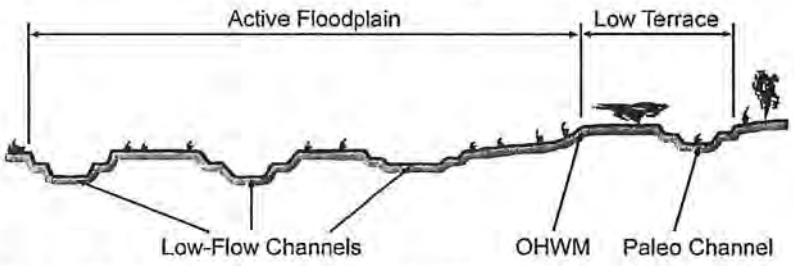
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

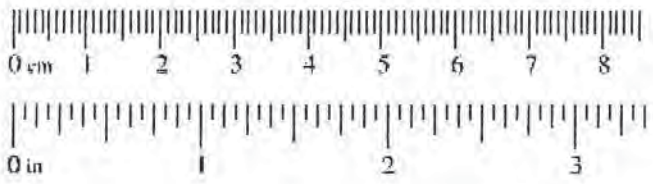


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** 4B-1 **Date:** 9.8.16 **Time:** 1310

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4B-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 6 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC, CR	Date 9/8/16

Feature ID	4B-1
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Saltbush, Atriplex lyn
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/6/16	**Time:**
Project Number:	**Town:**	**State:**
Stream: 4B-2	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**

Coordinates:

Potential anthropogenic influences on the channel system:

Road

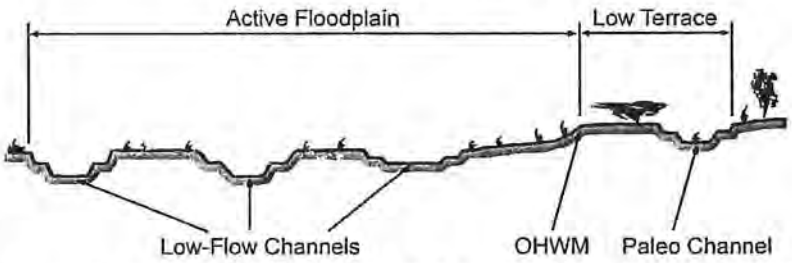
Brief site description:

desert wash, medium sand

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

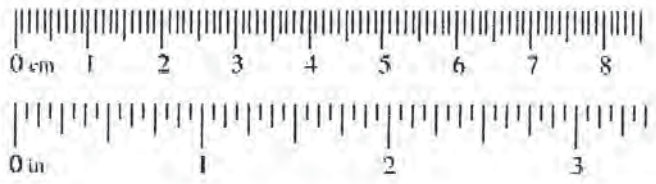


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

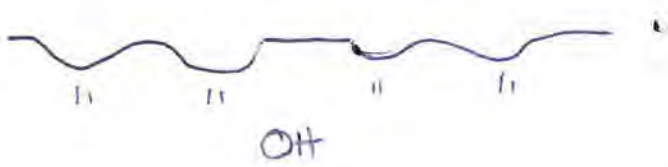
Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Project ID: **Cross section ID:** 4B-2 **Date:** 9/3/16 **Time:** 1320

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [ ] Break in bank slope
- [x] Other: active bank ripple
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4B-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff C CR	Date 9/4/3

Feature ID	4B-2
Preliminary Jurisdictional Status[1]	C R
Potential Wetland (y/n) [2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Am chm / Atriplex
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes OI-1	Normal, Dist, 1320, ~~Lowe~~ Low flow Atexture medium coarse Active bank ripple in veg

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 9/8/16	**Time:** 1340
Project Number:	**Town:**	**State:**
Stream: 4B-3	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**

Potential anthropogenic influences on the channel system:

~~Dirt~~ Road

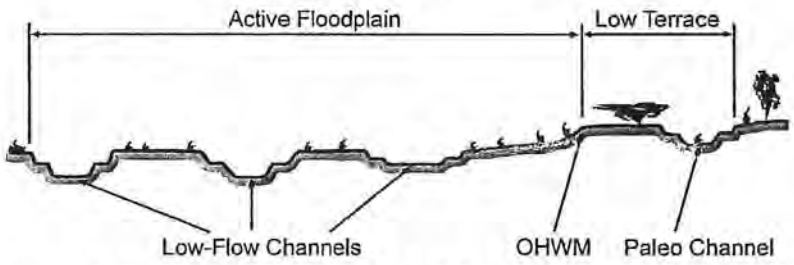
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

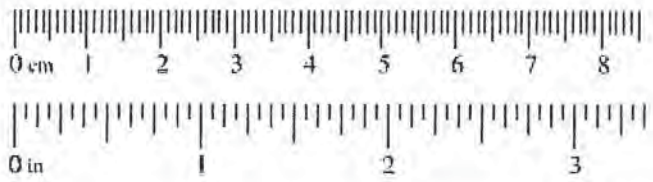


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 4B-3 **Date:** 9/8/16 **Time:** 1340

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4B-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC, CR	Date 9/8/16

Feature ID	4B-3
Preliminary Jurisdictional Status[1]	CoR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	4
CDFW Width(s)	7
Side Slope Estimate[4]	Moderate
Characteristic Vegetation[5]	Arundo
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes 	Desert wash 1340 normal flow OA textured cover Low flow bank ripple debris no veg

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: | **Date:** 09.08.16 | **Time:** 1400
Project Number: | **Town:** | **State:**
Stream: 4C-1 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): IC, CR

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road blocks upstream

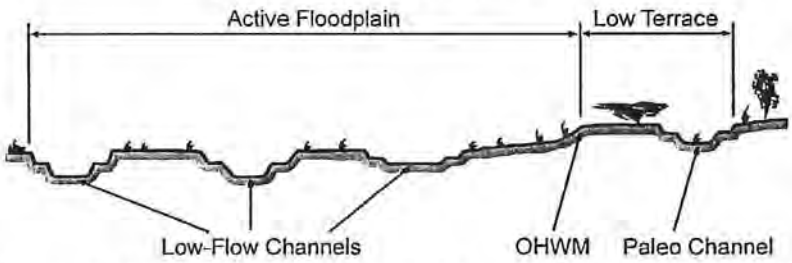
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
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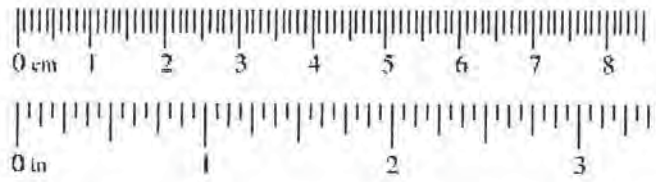
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 4C-1 **Date:** 09.08.16 **Time:** 1400

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4C-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/8

Feature ID	4C-1
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3
CDFW Width(s)	3
Side Slope Estimate[4]	Vertical
Characteristic Vegetation[5]	None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road blocks upstream
Surrounding Load Use	OS
Other Notes 	Normal Dist 1406 O.H Δ texture e slope Low medium sand debris ripple bank no veg

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: | **Date:** 09.08.16 | **Time:** 1410
Project Number: | **Town:** | **State:**
Stream: 4C-2 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): IC, CR

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road cuts upstream

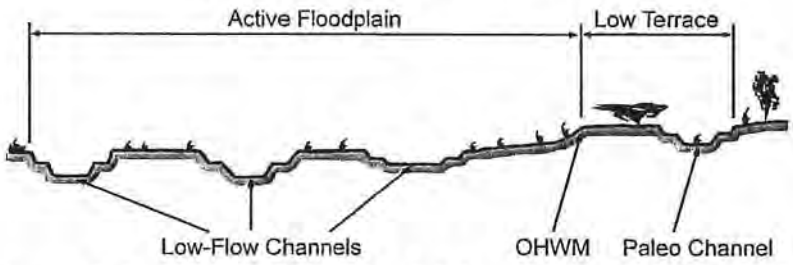
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

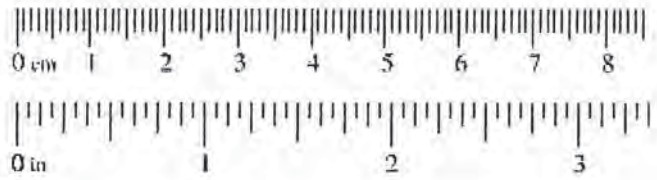


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** 4C-2 **Date:** 09.08.16 **Time:** 1410

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: normal distribution

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4C-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR IC	Date 9/8/16

Feature ID	4C-2
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	7.5
CDFW Width(s)	8.5
Side Slope Estimate[4]	Vertical to steep
Characteristic Vegetation[5]	None
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road cuts upstream
Surrounding Load Use	OS
Other Notes 	OH Δ ~~sed~~ texture, slope no veg Desert wash normal Dist 9410 Low flow Medium sand debris, bank

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 4C-3
Investigator(s): IC, CR

Date: 09.08.16 **Time:** 1420
Town: **State:**
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road dissection

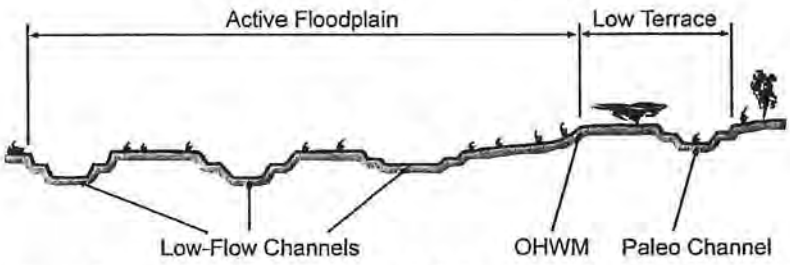
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

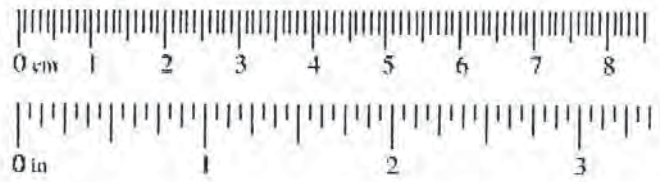


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 4C-3 **Date:** 09.08.16 **Time:** 1420

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4C-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/8/16

Feature ID	Q4C-3
Preliminary Jurisdictional Status[1]	CoR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	~~1~~
Wetland Plant Indicators	~~1~~
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	11.5
CDFW Width(s)	14.5
Side Slope Estimate[4]	45° to vertical
Characteristic Vegetation[5]	Occasional shrub
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes 	1420 Normal Dist OHI texture, slope Low Mechanical ripple, bank debris 1% shrub

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path46 **Date:** 9/9/16 **Time:** 0600
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 410-1 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y [x] / N [ ] Do normal circumstances exist on the site?

Location Details: Mojave Desert

Y [ ] / N [x] Is the site significantly disturbed?

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

DRV + Road Crossing

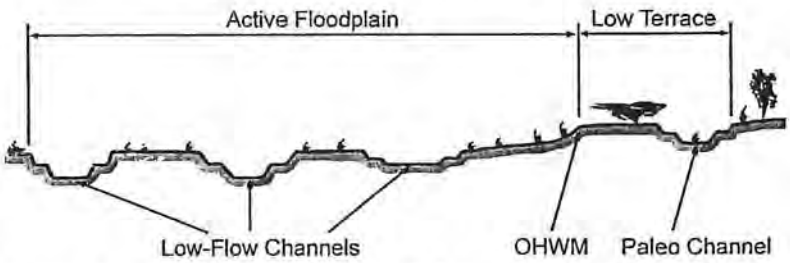
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- [ ] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

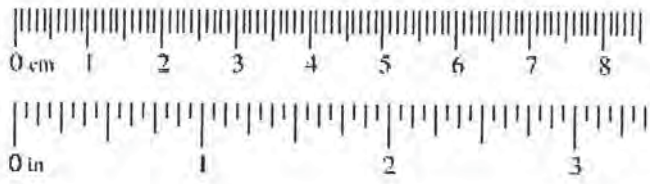


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

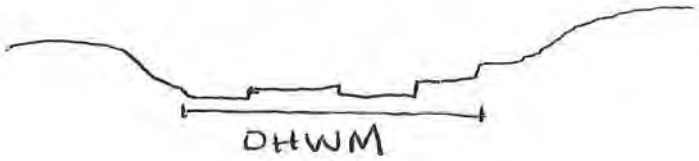
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 4P-1 **Date:** 9/9/16 **Time:** 0800

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 4PD-1 **Date:** 9/9/16 **Time:** 0800

Floodplain unit: ~~☑ Low-Flow Channel~~ ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: ~~40~~ 60 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ~~☑ Active Floodplain~~ ~~☒ Low Terrace~~

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 10 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARCC	Date 9/9/16

Feature ID	410-1
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	~~De~~ Bed/Bank, Δ in sediment texture, Drainage patterns
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle to moderate slop
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	Unk
Anthropogenic Modifications[7]	Road Crossing, ORV driven onto Drainage
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100
Stream: 4D-2
Investigator(s): AR, CL

Date: 9/9/16
Town: SB County
Photo begin file#:

Time: 0805
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

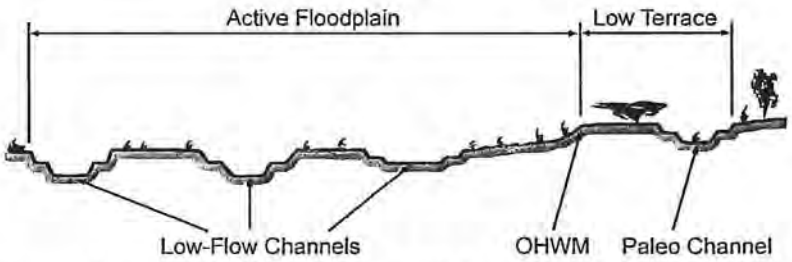
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

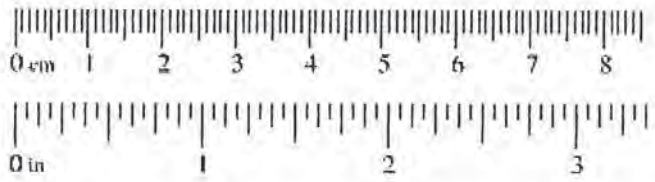


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Project ID: 3mec000100 **Cross section ID:** 4D-2 **Date:** 9/9/16 **Time:** 0805

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt @ downstream w/ Fine sand

Total veg cover: 3 % Tree: Ø % Shrub: Ø % Herb: 3 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000108 **Cross section ID:** 4D-2 **Date:** 9/9/16 **Time:** 0805

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course sand w/Pebble

Total veg cover: 22 % Tree: 0 % Shrub: 20 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AK, CC	Date 9/9/16

Feature ID	410-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Soil Cracks, Drainage Patterns, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossings, Cement @ beginning of drainage
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100
Stream: AD-37
Investigator(s): AR, CC

Date: 9/9/16
Town: SB County
Time: 0810
State: CA
Photo begin file#:
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection:
Datum:
Coordinates:

Potential anthropogenic influences on the channel system:

ORV & Road Crossing

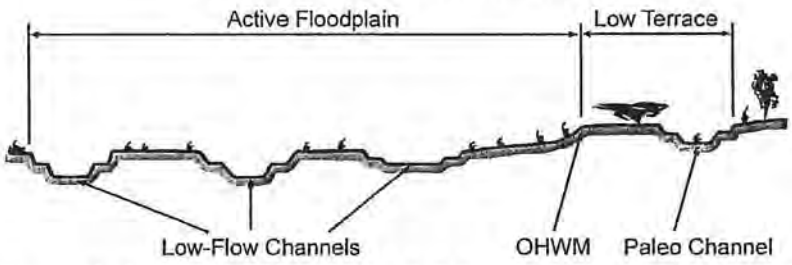
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud

Project ID: 3MPC0001100 **Cross section ID:** 40-3 **Date:** 9/9/16 **Time:** 0810

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 4D-3 **Date:** 9/9/16 **Time:** 0810

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARICC	Date 9/9/16

Feature ID	4W-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1'-5'
CDFW Width(s)	1'-5'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Peth 46 **Date:** 9/9/16 **Time:** 0815
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: HO-4 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

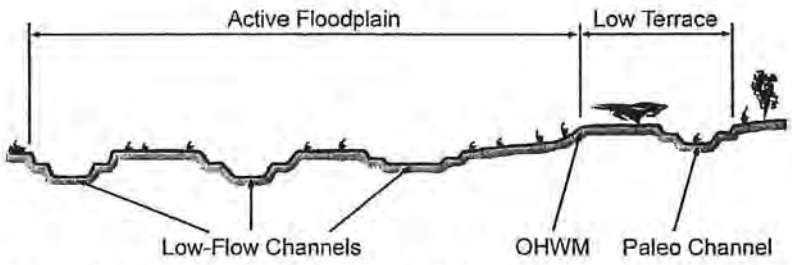
Brief site description:

Dry Deser + Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

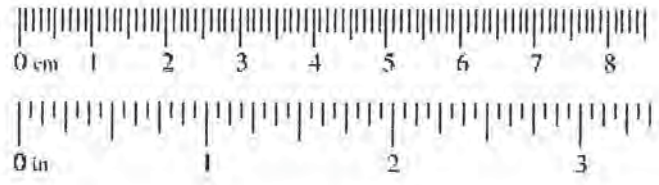


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000102 **Cross section ID:** 4D-4 **Date:** 9/9/16 **Time:** 0815

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 40-4 **Date:** 9/9/16 **Time:** 0815

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course sand to Pebble

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/9/16

Feature ID	4D-4
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	~~Bed/Bank, Δ in sediment texture~~ N/A
Preliminary Hydrologic Regime[3]	~~N~~ Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1'-4'
CDFW Width(s)	1'-4'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/9/16 **Time:** 0825
Project Number: 3MB000100 **Town:** SB County **State:** CA
Stream: 40-15 **Photo begin file#:** 0 **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

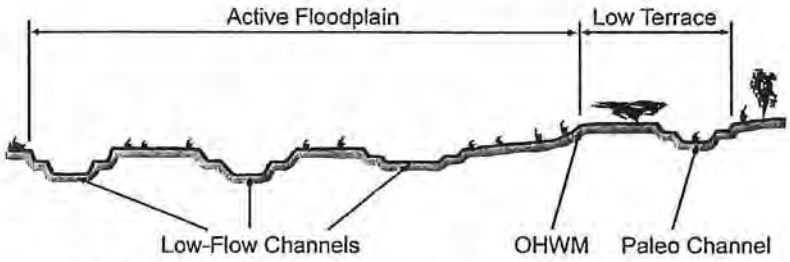
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

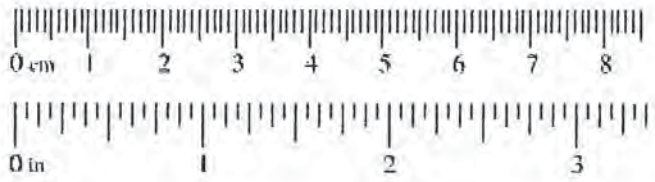


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MSC00010 **Cross section ID:** 40-5 **Date:** 9/9/16 **Time:** 0825

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble to Cobble

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: 3MPC000100 **Cross section ID:** 40-5 **Date:** 9/9/16 **Time:** 0825

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 21 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MPC000100	Task No. 00300
Field Staff AR.CC	Date 9/9/16

Feature ID	HD-5
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, D in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	1'-4'
CDFW Width(s)	1'-4'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + Trash
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MP1000100
Stream: 40-4
Investigator(s): AR, CC

Date: 9/9/16 **Time:** 0835
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

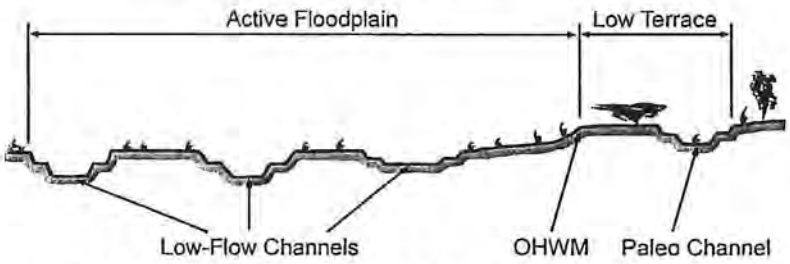
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

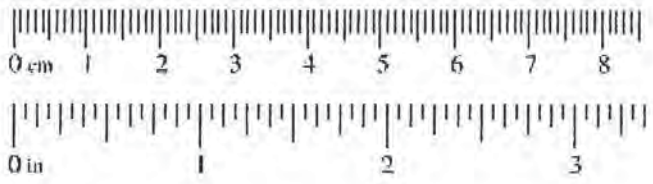


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 410-LP **Date:** 9/9/16 **Time:** 0835

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine to Course Sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [x] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MPCA00100 **Cross section ID:** 40-6 **Date:** 9/9/16 **Time:** 0835

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine to Course Sand

Total veg cover: 60 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebbles

Total veg cover: 10 % Tree: 0 % Shrub: 7 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/9/16

Feature ID	4D-6
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Benches, Surface Relief
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + Road goes through drainage
Surrounding Load Use	Open Space + transmission line (to transmissio
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/9/16 **Time:** 0900
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 40-M **Photo begin file#:** **Photo end file#:**
Investigator(s): ARCL

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

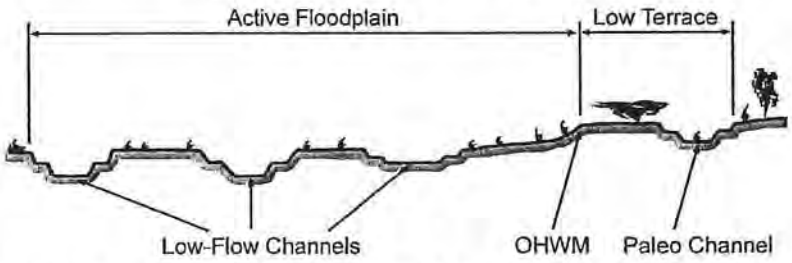
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

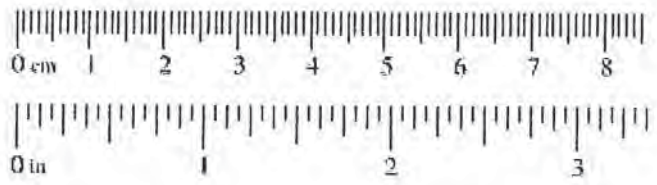


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** HD-4 **Date:** 9/9/16 **Time:** 0900

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand w/Silt downstream

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [x] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000100 **Cross section ID:** 4M-7 **Date:** 9/9/16 **Time:** 0900

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule to Pebble

Total veg cover: 8 % Tree: 0 % Shrub: 5 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment relief
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cobble

Total veg cover: 6 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR.CC	Date 9/9/16

Feature ID	4D-7
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Soil Crack, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + Road goes through drainage
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBLOOD100
Stream: 40-8
Investigator(s): AR, CC

Date: 9/9/16 **Time:** 0915
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

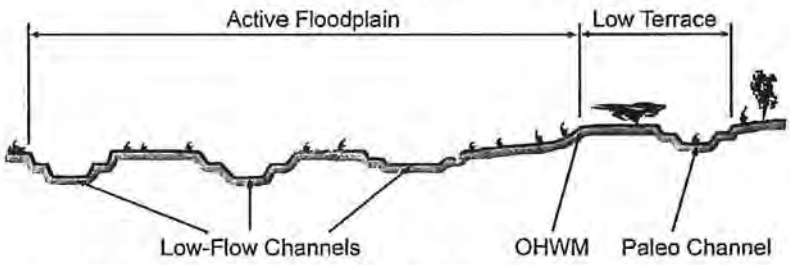
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

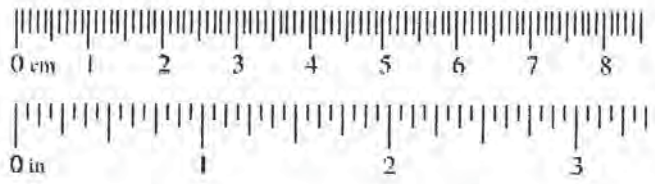


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

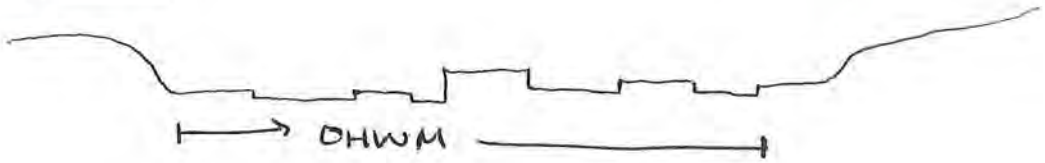
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBCW00100 **Cross section ID:** 4D-8 **Date:** 9/9/16 **Time:** 0915

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine to Fine Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: A in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000010 **Cross section ID:** 4V0-8 **Date:** 9/9/16 **Time:** 0915

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand to Pebble

Total veg cover: 6 % Tree: 0 % Shrub: 7 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble to Cobble

Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☑ ~~Early (herbaceous & seedlings)~~
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/9/16

Feature ID	4D-8
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + Road (turn around) to in drainage
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 09.09.16	**Time:** 0810
Project Number:	**Town:**	**State:**
Stream: 4E-1	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**

Coordinates:

Potential anthropogenic influences on the channel system:

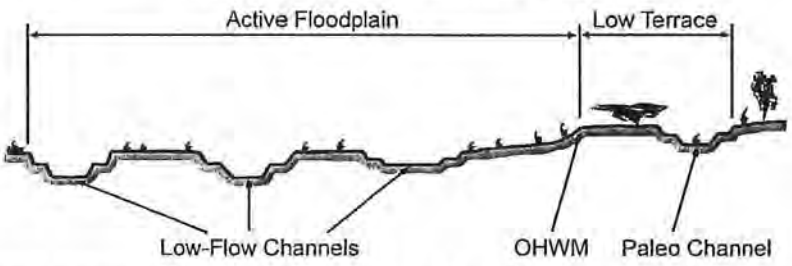
Road stops downstream flow

Brief site description:

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

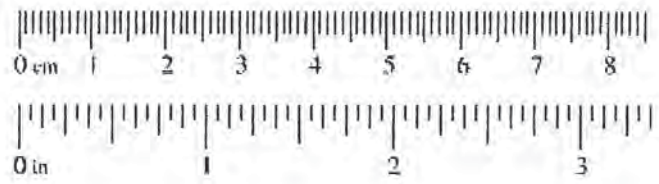


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** 4E-1 **Date:** 09.09.16 **Time:** 0810

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4E-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~Medium Sand~~ cobble

Total veg cover: 5 % Tree: ____% Shrub: 5 % Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

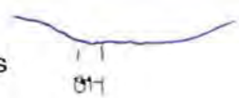
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff JC CR	Date ~~4/3~~ 9/9

Feature ID	4E-7
Preliminary Jurisdictional Status[1]	C SR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	E
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3.0
CDFW Width(s)	16.0
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Larrea, Am dum, Ephedra
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road stops downstream flow
Surrounding Load Use	OS
Other Notes 	Norm, Pit 810 Δ texture o rover Low Mech soil surface bed no veg Active 5% shrub, cobble bench bank

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: | **Date:** 09.09.16 | **Time:** 0830
Project Number: | **Town:** | **State:**
Stream: 4E-2 | **Photo begin file#:** | **Photo end file#:**
Investigator(s): IC, CR

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

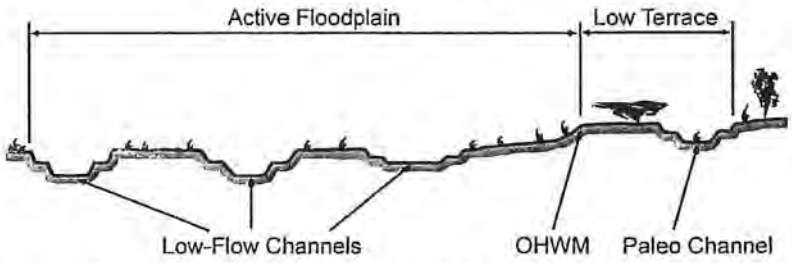
Brief site description:

desert-wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

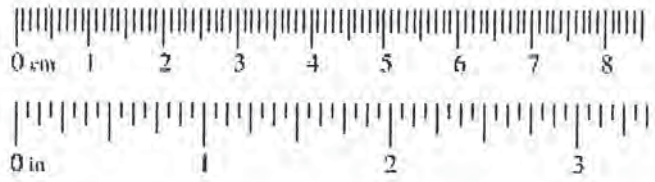


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 4E-2 **Date:** 09.09.16 **Time:** 0830

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: 1 % Tree: ____% Shrub: 1 % Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 4E-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/9

Feature ID	4E-2
Preliminary Jurisdictional Status[1]	CWR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Moderate
Characteristic Vegetation[5]	Larrea & Ambrosia
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes 	Norm, Pist, 830 OH Δ texture erosion Low Fine soil, Blank, bank, debris, ripple

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 09.09.16	**Time:** 0850
Project Number:	**Town:**	**State:**
Stream: HE-3	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**

Coordinates:

Potential anthropogenic influences on the channel system:

Road reduces lateral flow

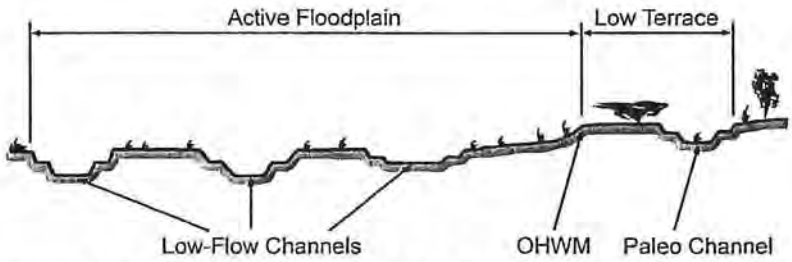
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

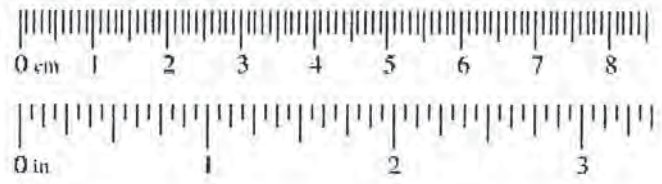


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
			Cobble	Gravel
	2.56	64	Pebble	
	0.157	4	Granule	
	0.079	2.00	Very coarse sand	
	0.039	1.00	Coarse sand	
	0.020	0.50	Medium sand	Sand
1/2	0.0098	0.25	Fine sand	
1/4	0.005	0.125	Very fine sand	
1/8	0.0025	0.0625	Coarse silt	
1/16	0.0012	0.031	Medium silt	
1/32	0.00061	0.0156	Fine silt	Silt
1/64	0.00031	0.0078	Very fine silt	
1/128	0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 4E-3 **Date:** 09.09.16 **Time:** 0950

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4E-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 10 % Tree: ____% Shrub: 10 % Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR JC	Date 9/9/16

Feature ID	4E-3
Preliminary Jurisdictional Status[1]	CDR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Moderate
Characteristic Vegetation[5]	Larrea, Ambrosia, Ephedra
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road [crossed out] reduces lateral flow
Surrounding Load Use	OS
Other Notes 	OH Δ texture cover Break, [crossed out] sed Dist, 850 Low medium sand moving, ripple debris, bank Active 10% shrub, Granule, break, bank

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 09.09.16	**Time:** 0900
Project Number:	**Town:**	**State:**
Stream: 4E-4	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		

Y ☐ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**

Coordinates:

Potential anthropogenic influences on the channel system:

Road

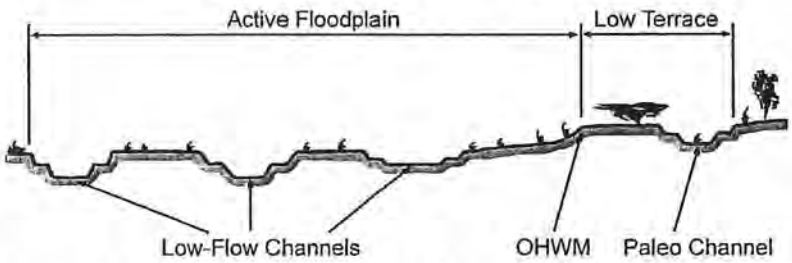
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

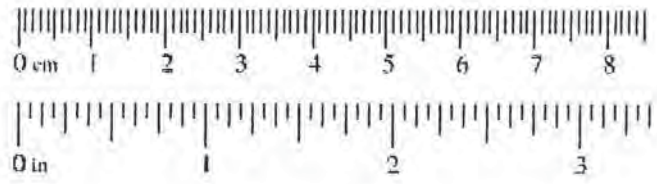


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 4E-4 **Date:** 09.09.16 **Time:** 0900

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: _____ % Tree: _____ % Shrub: 2 % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 4E-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit; ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR IC	Date 9/9/16

Feature ID	4E-4
Preliminary Jurisdictional Status[1]	CDFW
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Larrea : Am dum
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes 	Norm, Dist, 900 OH(Δ texture, cover Low Medium sand 2% shrub hunk, ripple

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: **Project Number:** **Stream:** 4E-5 **Investigator(s):** IC, CR	**Date:** 09.09.16 **Town:** **Photo begin file#:**	**Time:** 0910 **State:** **Photo end file#:**
Y ☒ / N ☐ Do normal circumstances exist on the site? Y ☒ / N ☐ Is the site significantly disturbed?	**Location Details:** **Projection:** **Datum:** **Coordinates:**	

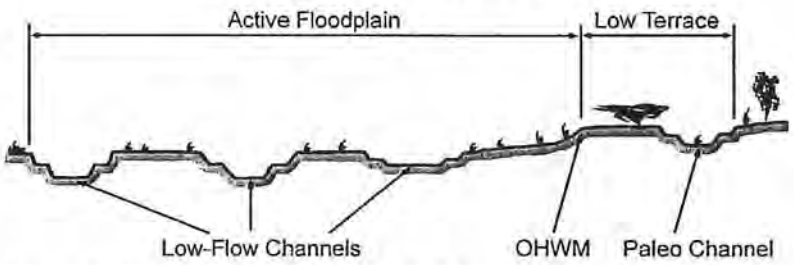
Potential anthropogenic influences on the channel system:

Brief site description:

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

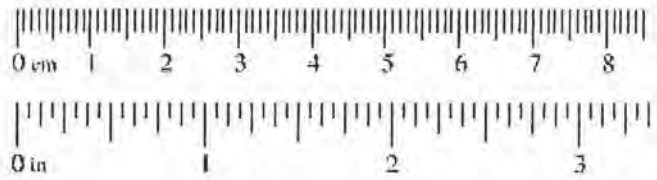


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

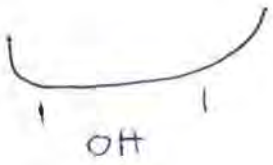
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** 4E-5 **Date:** 09.09.16 **Time:** 0910

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 0 % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 4E-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff CR IC	Date 9/9/16

Feature ID	4E-5
Preliminary Jurisdictional Status[1]	C9R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Slight - Moderate
Characteristic Vegetation[5]	Am cham Atri hym & Euphorbiaceae?
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes 	OH Atexture change, Norm, Drift, 9/10 Low Mech soil moving ripple, bank

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46 **Date:** 9/9/16 **Time:** 0945
Project Number: 3MBC000100 **Town:** SB County **State:** CA
Stream: 4F-1 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CC

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

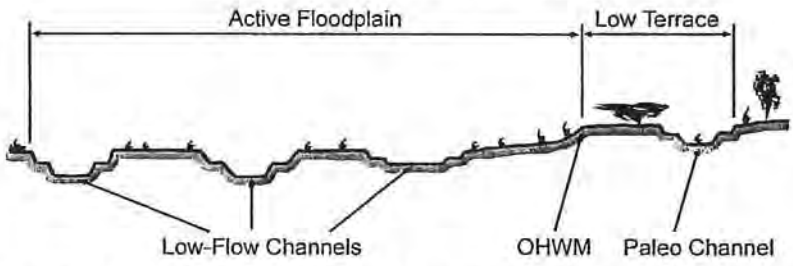
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

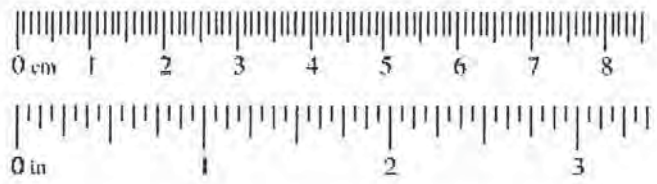


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MPC0001000 **Cross section ID:** 4F-1 **Date:** 9/9/16 **Time:** 0945

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cover Course Sand w/Pebble

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] ~~Other:~~ _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

* Grated to rock for road, covered w/course sand + pebble

Project ID: 3MBC000100 **Cross section ID:** 4F-1 **Date:** 9/9/16 **Time:** 0945

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBE000100	Task No. 00300
Field Staff AR.CC	Date 9/9/16

Feature ID	4F-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, sediment deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	←
CDFW Width(s)	—
Side Slope Estimate[4]	gentle ~~to~~ moderate slope
Characteristic Vegetation[5]	Unveg in Channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7] *	Heavy Road Crossing directly in drainage
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

* Grated road on drainage, grated to rock

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path46 **Date:** 9/9/16 **Time:** 1000
Project Number: 3MBC000100 **Town:** SBCounty **State:** CA
Stream: 4F-2 **Photo begin file#:** **Photo end file#:**
Investigator(s): AR, CL

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

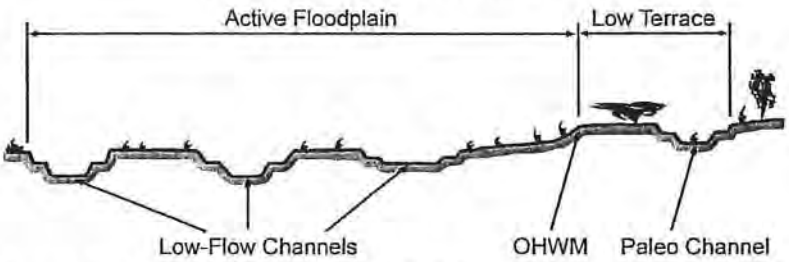
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

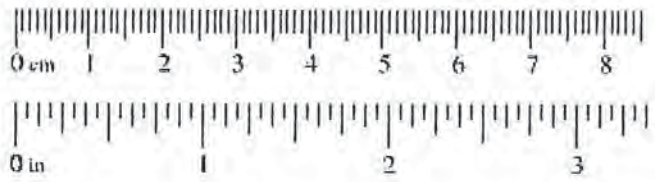


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000100 **Cross section ID:** 4F-2 **Date:** 9/9/16 **Time:** 1000

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3mbc000100 **Cross section ID:** 4F-2 **Date:** 9/9/16 **Time:** 1000

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand to Course

Total veg cover: ____ % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~Very Fine~~ Course Sand

Total veg cover: 13-15% Tree: ____ % Shrub: 10-15% Herb: 3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff AR, CC	Date 9/9/16

Feature ID	4F-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	moderate to vertical
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 09.09.16	**Time:** 1000
Project Number:	**Town:**	**State:**
Stream: 4F-3A	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**

Potential anthropogenic influences on the channel system:

Road

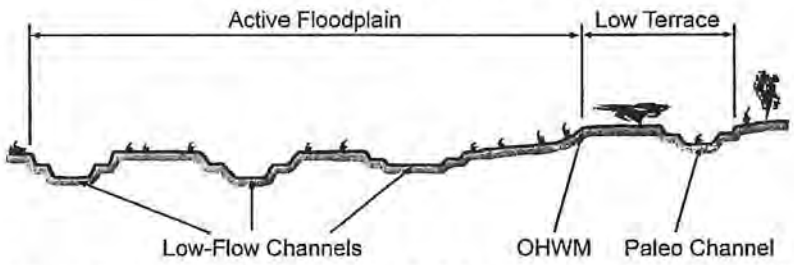
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

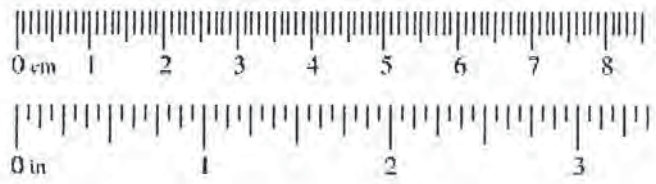


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

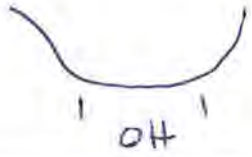
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 4F-3A **Date:** 09.09.16 **Time:** 1000

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse sand

Total veg cover: ∅ % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** 4F-3A **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC, CR	Date 9/9/16

Feature ID	4F-3A
Preliminary Jurisdictional Status[1]	CWR
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Modrt
Characteristic Vegetation[5]	An den
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes 	OH Δ texture & lower mean dist 1000 Low coarse sand no veg bank

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:
Project Number:
Stream: 49-1
Investigator(s): IC, CR

Date: 09.09.16 **Time:** 1030
Town: **State:**
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road blocks lateral flow

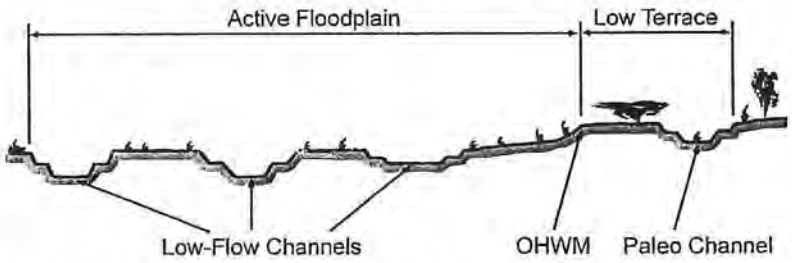
Brief site description:

desert wash - braided

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

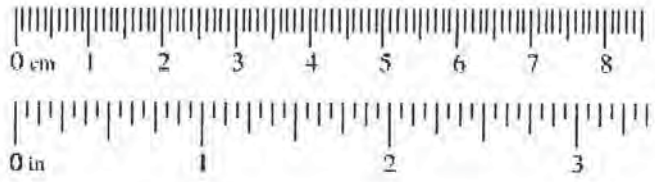


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

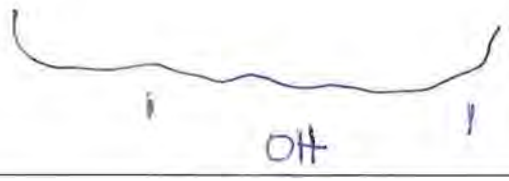
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 49-1 **Date:** 09.09.16 **Time:** 1030

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium sand

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 49-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: Ø % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff JC CR	Date 9/9/16

Feature ID	4G-1
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Slight
Characteristic Vegetation[5]	Larr, Epheda, Petal~~...~~ Oryx, Ansul
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road block lateral flow
Surrounding Load Use	OS
Other Notes 	Pnt, 12cm, 1030 Braided wash OHA texture cover Low Melin sand ripple, ~~slope~~ bank Active gravel bank bench

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100
Stream: 4Gr-2
Investigator(s): AR, CL

Date: 9/9/16
Town: SB County
Photo begin file#:

Time: 1030
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV & Road Crossing

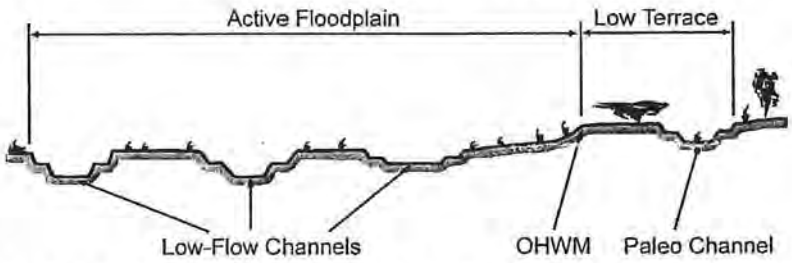
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

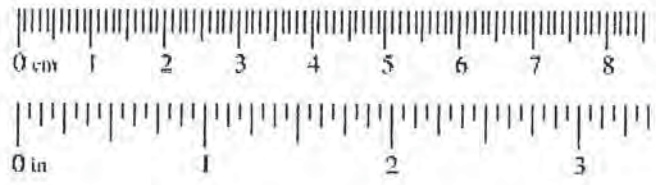


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
		Fine sand	
1/4 0.005	0.125		
1/8 0.0025	0.0625	Very fine sand	
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
1/64 0.00031	0.0078	Fine silt	
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC00010 **Cross section ID:** 4Cr-2 **Date:** 9/9/16 **Time:** 1030

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine w/ Pebbles Sand

Total veg cover: 5 % Tree: 0 % Shrub: 4 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 10 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MPCOOR100 **Cross section ID:** 4Gr-2 **Date:** 9/9/16 **Time:** 1030

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very fine sand to Course Sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff ARCC	Date 9/9/16

Feature ID	4G-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Banks, Oinsediment Sediment deposit texture,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle to moderate
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + Road in part of drainage
Surrounding Load Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 09.09.16	**Time:** 1050
Project Number:	**Town:**	**State:**
Stream: 49-3	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		

Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**

Potential anthropogenic influences on the channel system:

Road cuts downstream flow

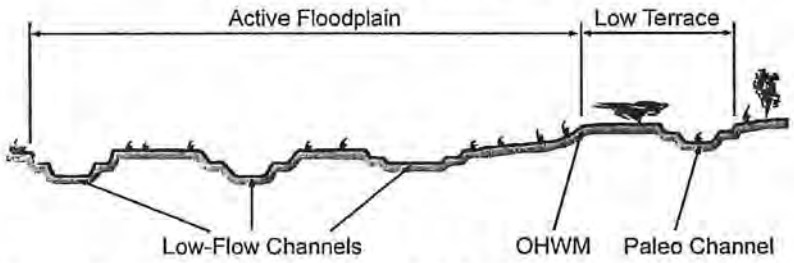
Brief site description:

desert-wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

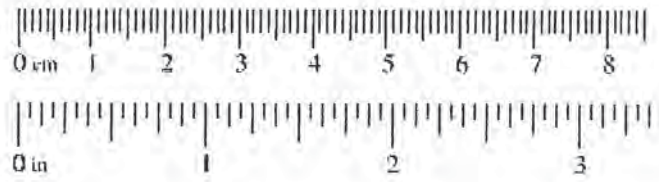


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Project ID: **Cross section ID:** 49-3 **Date:** 09.09.16 **Time:** 1050

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 0 % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 49-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No.	Task No.
Field Staff IC CR	Date 9/9/16

Feature ID	46-3
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	Moderate
Characteristic Vegetation[5]	Larrea
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road cuts downstream flow
Surrounding Load Use	OS
Other Notes 	OH Sts texture change Dirt, Norm, 1050 Low no veg debris bank medium sand

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: BPath46
Project Number: 3MBC000100
Stream: 4Gr-4
Investigator(s): ARice

Date: 9/9/16 **Time:** 1050
Town: SB County **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

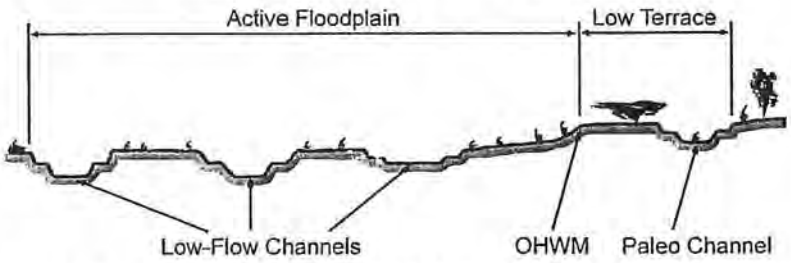
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

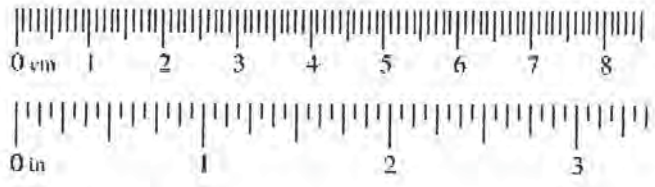


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

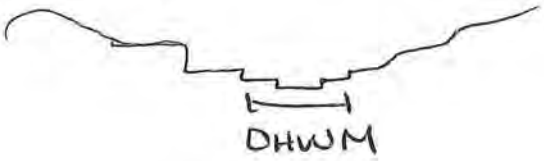
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3mBC000106 **Cross section ID:** 46-4 **Date:** 9/9/16 **Time:** 1050

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand w/Cobble

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBCA00100 **Cross section ID:** 4G-A **Date:** 9/9/16 **Time:** 1050

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebbles → Cobble

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC00000	Task No. 00300
Field Staff AR, CC	Date 9/9/16

Feature ID	~~4G-5~~ 4G-4
Preliminary Jurisdictional Status[1]	~~C~~ CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	—
CDFW Width(s)	—
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Load Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 09.09.16	**Time:** 1110
Project Number:	**Town:**	**State:**
Stream: 4H-1	**Photo begin file#:**	**Photo end file#:**
Investigator(s): IC, CR		
Y ☒ / N ☐ Do normal circumstances exist on the site?	**Location Details:**	
Y ☒ / N ☐ Is the site significantly disturbed?	**Projection:** **Datum:** **Coordinates:**	

Potential anthropogenic influences on the channel system:

Road

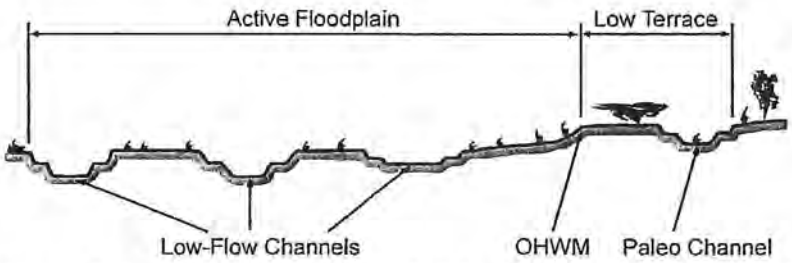
Brief site description:

desert- wash

Checklist of resources (if available):

- ☒ Aerial photography
  - Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

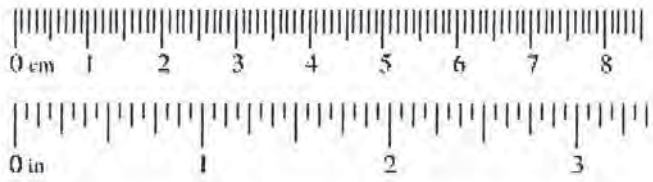


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** 4H-1 **Date:** 09.09.16 **Time:** 1110

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: Ø % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 4H-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: _____% Tree: _____% Shrub: 2-3% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

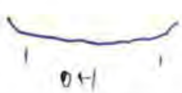
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project No. 3MBC000100	Task No. 00300
Field Staff IC, CR	Date 9/9/16

Feature ID	4H-1
Preliminary Jurisdictional Status[1]	C&R
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	
Wetland Plant Indicators	
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	Variable
CDFW Width(s)	Variable
Side Slope Estimate[4]	45°
Characteristic Vegetation[5]	Atri can, Am dun
Chemical Indicators[6]	N
Anthropogenic Modifications[7]	Road
Surrounding Load Use	OS
Other Notes 	OH Δ texture case Norm Dist 1110 Low Coarse sand debris bank very Active Pebble bank brush 2-3% scrubs

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: ~~4F 2 4S 2~~ 4J-1
Investigator(s): CDC, AR

Date: 9/19/14
Town: Mojave Desert
Photo begin file#:

Time: 0845
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

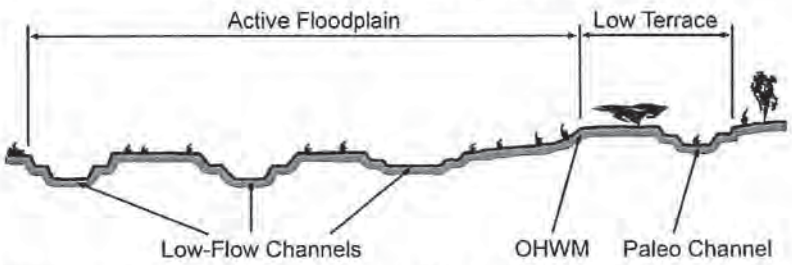
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

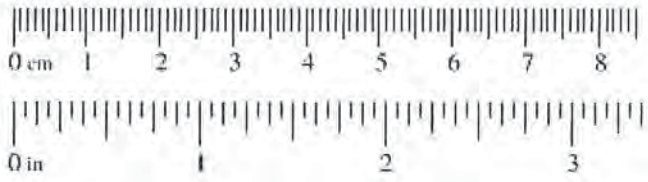


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** ~~HF-2~~ 4J-1 **Date:** 9/19/16 **Time:** 0845

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 11 % Tree: 0 % Shrub: 1 % Herb: 10 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** ~~4F-2~~ 4J-1 **Date:** 9/19/16 **Time:** 0845

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff CDC, AR	Date 19 Sep 16

Feature ID	~~HF-1~~ 4J-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	~~UPVeg~~ veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission lines
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 4J-2
Investigator(s): CMC, AR

Date: 9/19/14
Town: Mojave Desert
Photo begin file#:

Time: 0900
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV & Road Crossing

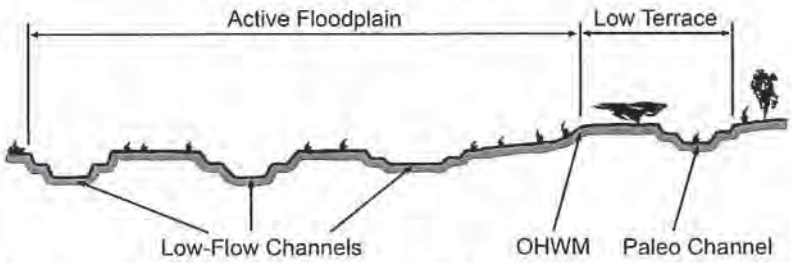
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

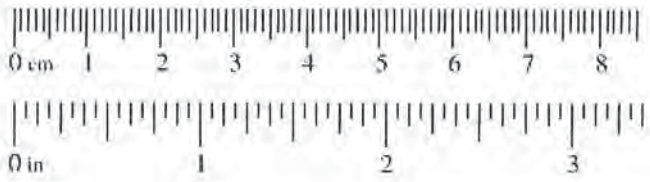


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

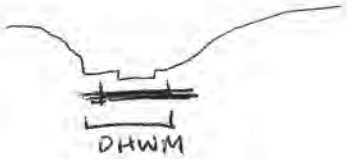
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 4J-2 **Date:** 9/19/14 **Time:** 0950

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 4 % Tree: 0 % Shrub: 1 % Herb: 5 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 4J-2 **Date:** 9/19/16 **Time:**

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46	
Field Staff AR, CDC		Date 19 Sep 16

Feature ID	4J-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
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[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 4K-1
Investigator(s): AR, CRC

Date: 9/19/14 **Time:** 0920
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

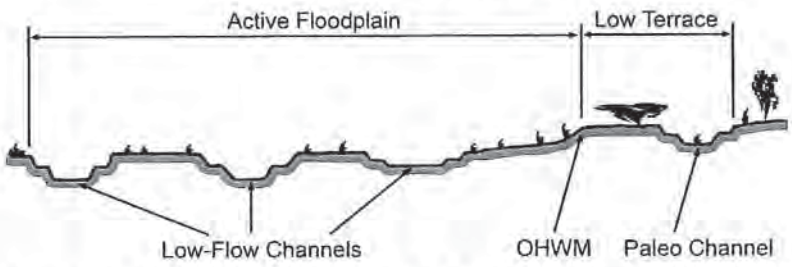
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

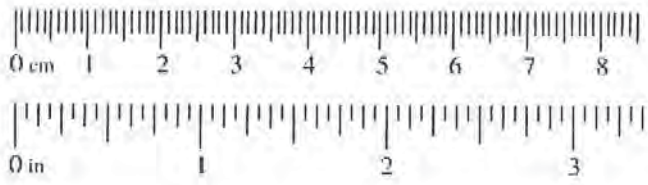


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

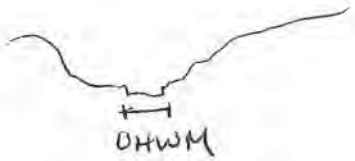
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 4K-1 **Date:** 09/19/16 **Time:** 0920

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 10 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 4K-1 **Date:** 09/19/16 **Time:** 0920

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 19 Sep 16

Feature ID	4K-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	A in sediment texture, B.ed/Bank
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	3'
CDFW Width(s)	3'
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Veg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road Crossing & trash
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 4K-2
Investigator(s): ARC

Date: 9/19/14 **Time:** 0927
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Mojave Desert

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

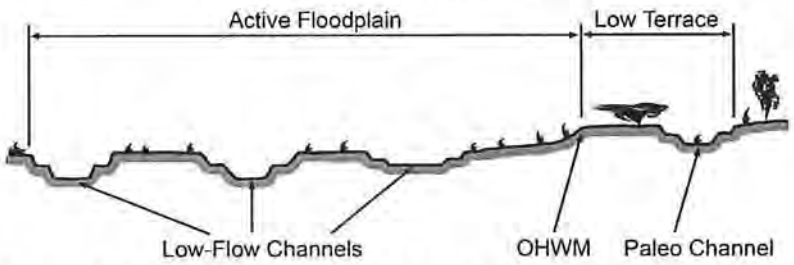
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

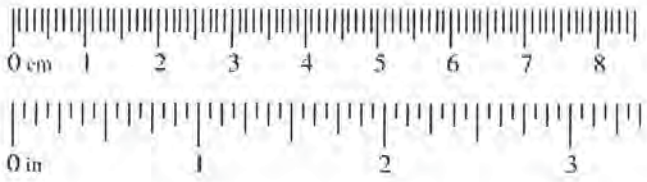


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

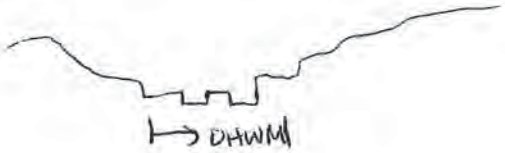
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 4K-2 **Date:** 9/19/16 **Time:** 0927

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand w/ Cobble

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [x] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 4IL-2 **Date:** 9/19/16 **Time:** 0927

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand w/Cobble

Total veg cover: 10 % Tree: 0 % Shrub: <1 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/Cobble

Total veg cover: 3 % Tree: 0 % Shrub: 1 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/19/11

Feature ID	HL-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 4K3
Investigator(s): AR, CC

Date: 9/19/14
Town: Mojave Desert
Time: 0943
State: CA
Photo begin file#:
Photo end file#:

Y [x] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [x] Is the site significantly disturbed?

Location Details: Mojave Desert

Projection:
Datum:
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

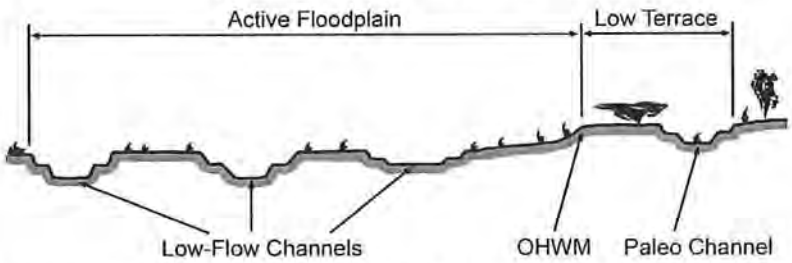
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- [ ] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

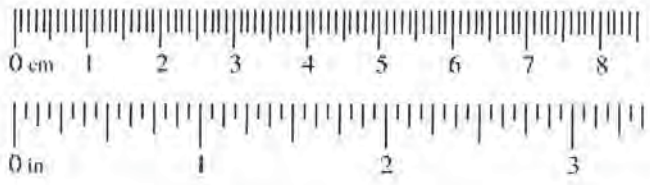


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

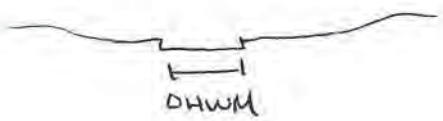
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 4K-3 **Date:** 9/19/14 **Time:** 0943

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt to Fine Sand

Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 4K-3 **Date:** 9/19/16 **Time:** 0943

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CC	Date 9/19/16

Feature ID	4K-3
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Δ in sediment texture, Bed/Bank
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	~~na~~
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 4K-4
Investigator(s): AR, CDC

Date: 7/19/14 **Time:** 0951
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV & Road Crossing

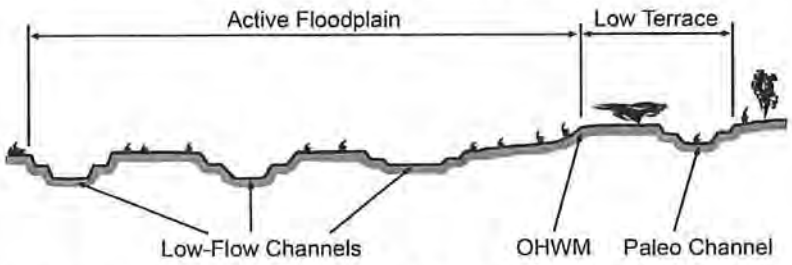
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

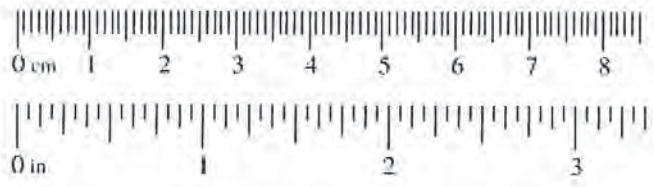


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

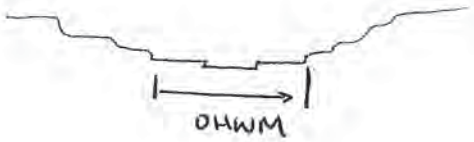
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 4K-4 **Date:** 9/19/16 **Time:** 0951

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 2 % Tree: ~~0~~ % Shrub: ~~0~~ % Herb: ~~0~~ 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 4K-4 **Date:** 9/19/16 **Time:** 0951

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/Pebble

Total veg cover: 12 % Tree: 0 % Shrub: 2 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/19/14

Feature ID	4K-4
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Δ in sediment texture, Bed/Bank, Soil Cracks
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: HL-5
Investigator(s): CDC, AR

Date: 9/12/14
Town: Mojave Desert
Photo begin file#:

Time: 1008
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

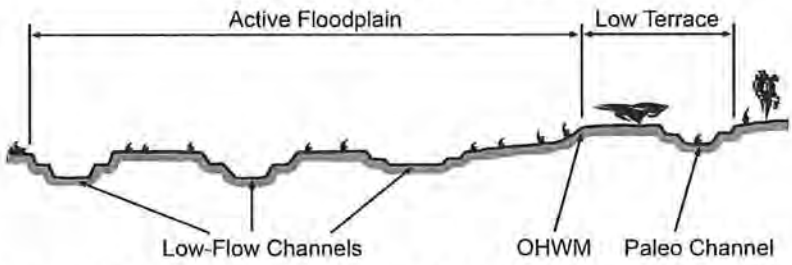
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

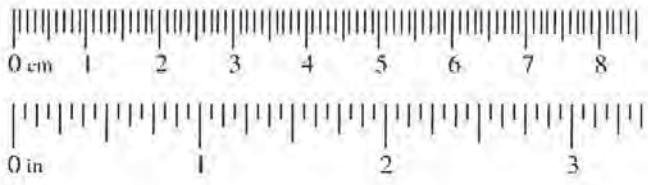


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

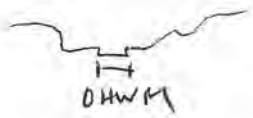
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
		Medium silt	
1/32 0.00061	0.0156		Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 4L-5 **Date:** 9/12/14 **Time:** 1006

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 2 % Tree: 0 % Shrub: 01 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 4L-5 **Date:** 9/19/16 **Time:** 1008

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CC	Date 9/19/16

Feature ID	ik-5
Preliminary Jurisdictional Status[1]	CDFW, ~~&~~ RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
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[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SB-1
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 0900
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

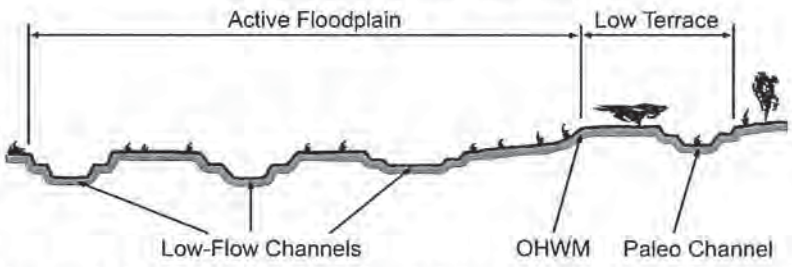
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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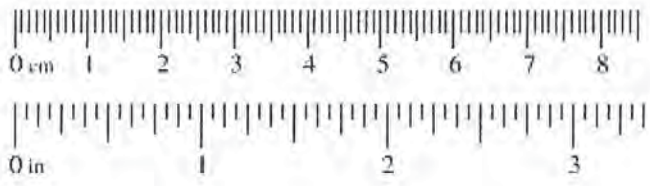
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

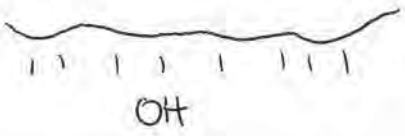
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SB-1 **Date:** 09.26.16 **Time:** 0900

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: _____ % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SB-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 10 % Tree: 0 % Shrub: 5 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

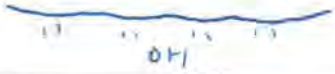
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 900	Upstream Photo	X	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/22/2016	Feature ID: SB-1	Location: Mojave Desert			Braided X
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved
		Significant Disturbance?		X	Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
		Hydrology			Bowl Shaped
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow X
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Planar					0-20 X
Veg Type(s) in Drainage: Larrea Ambrosia					20-40
					40-60
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80
	Culvert Channel Riprap		Downstream Blocked		80-100
	Other:		Lateral Flow Blocked		Stream Type:
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel
	Roads Utility Lines Other:				Desert Wash X
Stream Cross Section Drawing:					Flowing River/Stream
					Dry Streambed



Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 5 Herb % Cover 5

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

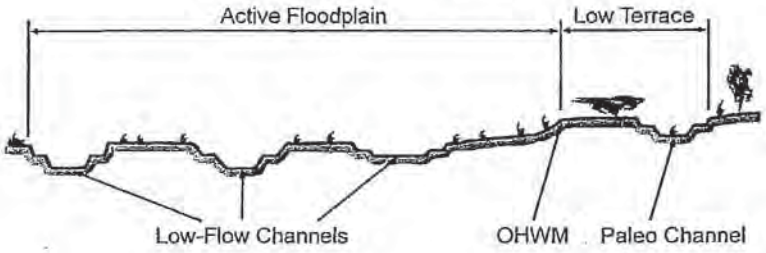
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

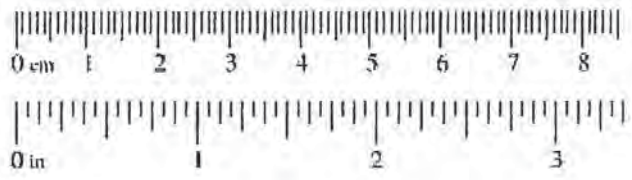
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
2.56		64	Cobble	Gravel
0.157		4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5B-2
Investigator(s):

Date: 09.26.16 **Time:** 0910
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

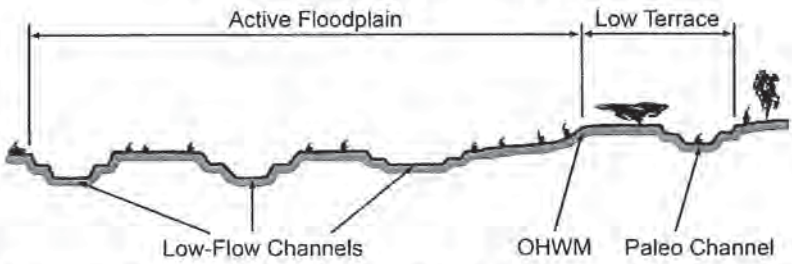
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
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0.020	0.50	Medium sand	Sand
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1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
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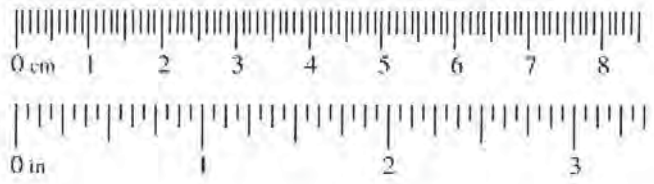
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SB-2 **Date:** 09.26.16 **Time:** 0910

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SB-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 10 % Tree: 0 % Shrub: 5 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 910
Path 46

Date: 9/26/2016 Feature ID: SB-2 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Planar

Veg Type(s) in Drainage: Larrea Ambrosia

Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Grazing Channel Channelized Riprap Other:

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

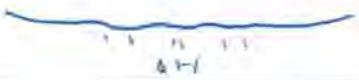
Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA X
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover Shrub % Cover 5 Herb % Cover 5

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings) X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

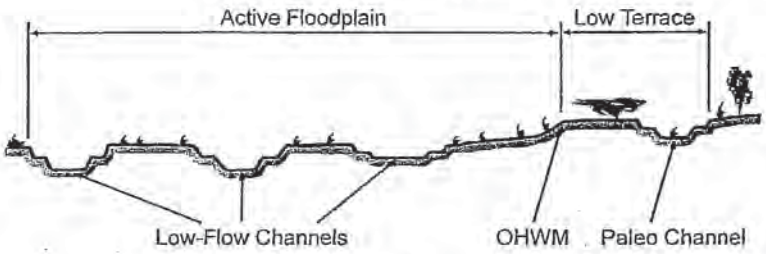
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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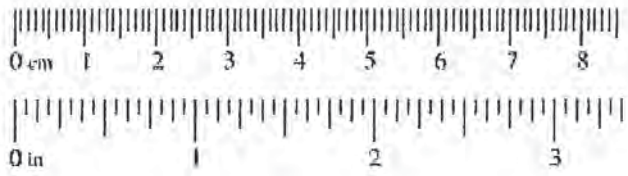


Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SB-3
Investigator(s): ICain, CRenfrew

Date: 09.26.16 **Time:** 0920
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☐ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

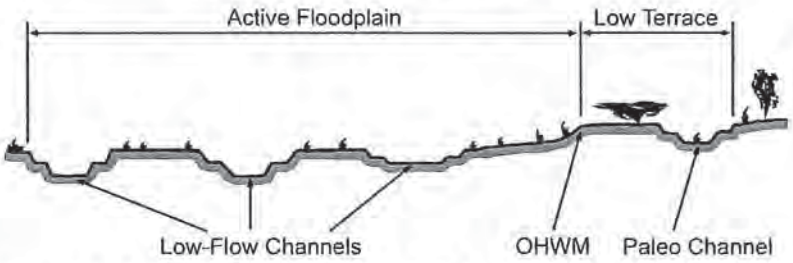
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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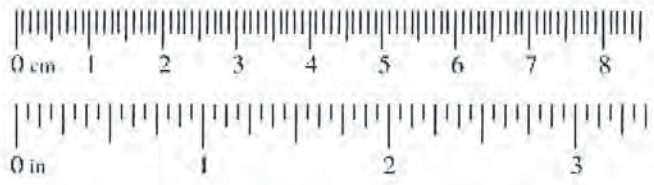
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5B-3 **Date:** 09.26.16 **Time:** 0920

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium Sand

Total veg cover: ____ % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SB-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: ____ % Tree: 0 % Shrub: 5 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 920
Path 46

Date: 9/26/2016 Feature ID: SB-3 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: Larrea Ambrosia

Upstream Photo		
Downstream Photo		
Do Normal Conditions Exist?	X	
Significant Disturbance?	X	
Potential Wetland?		
Hydrology		
Wetland Plants		
Surface Water/Depth:		

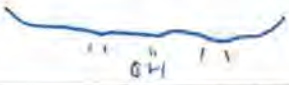
Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:	
NA	
Early (herbs/seedlings)	X
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 5 Herb % Cover 3
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:	
NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	X
Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:	
NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Site Description:
Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	

Vegetation % In Stream:

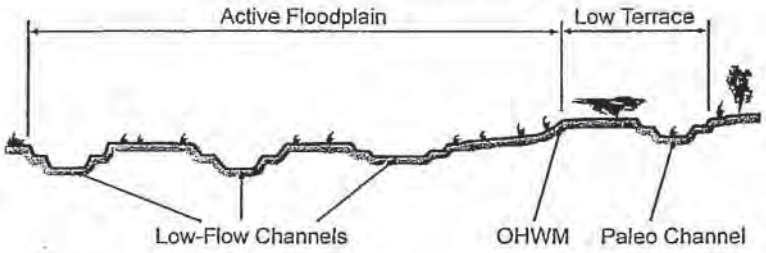
0-20	X
20-40	
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Hydrogeomorphic Floodplain Units



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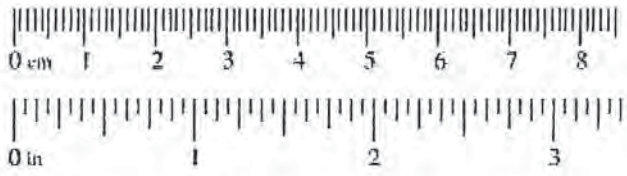


Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5B-4
Investigator(s): ICain, CRenfrew

Date: 09.26.16 **Time:** 0930
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

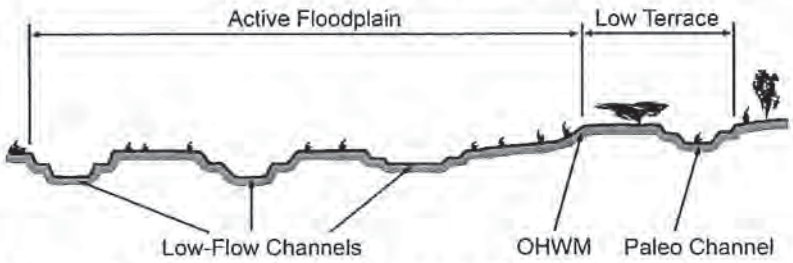
Brief site description:

desert wash

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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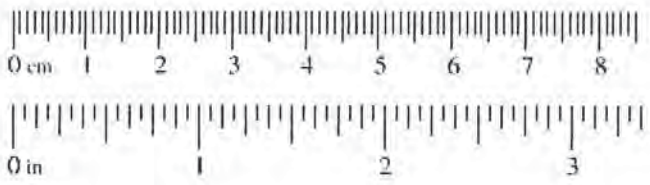
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SB-4 **Date:** 09.26.16 **Time:** 0930

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SB-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 15 % Tree: 0 % Shrub: 5 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46 | Staff: CR and IC | Time: 930 | Upstream Photo | Downstream Photo: X

Date: 9/26/2016 | Feature ID: SB-4 | Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? X

Significant Disturbance? X

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?

OHWM Recorded by: Field Map GPS GIS Digitizing

Hydrology

Wetland Plants

Surface Water/Depth:

Side Slope Estimate: Planar

Veg Type(s) in Drainage: Creosote Amaranth

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road, Culvert, Other: | Grazing, Channel | Channelized, Riprap

Upstream Blocked

Downstream Blocked: X

Lateral Flow Blocked

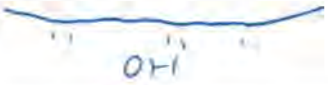
Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Cross Section Drawing:



Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X | Tree % Cover 0 | Shrub % Cover 0 | Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse | Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris Presence of bed and bank

Benches Soil development Surface relief

Other:

Community succession:

NA	X
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: X | Tree % Cover 0 | Shrub % Cover 5 | Herb % Cover 10

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris Presence of bed and bank

Benches Soil development Surface relief

Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	X
Late (herbs/shrubs/trees)	

Comments:

Low Terrace: | Tree % Cover | Shrub % Cover | Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris Presence of bed and bank

Benches Soil development Surface relief

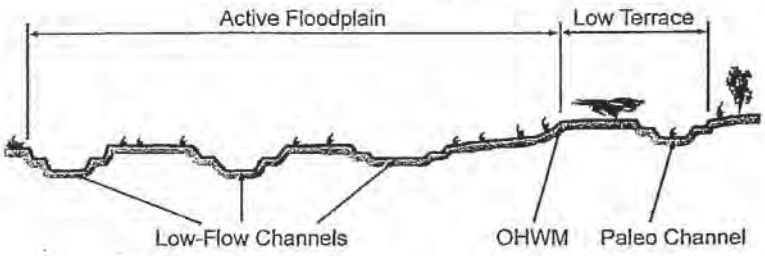
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
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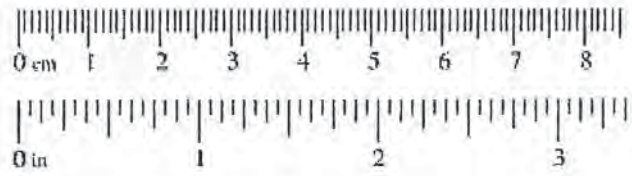
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SC-1
Investigator(s): ICain, CRenfrew

Date: 09.26.16 **Time:** 0935
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☐ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

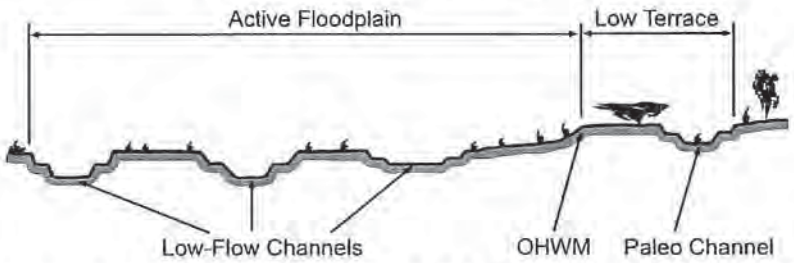
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
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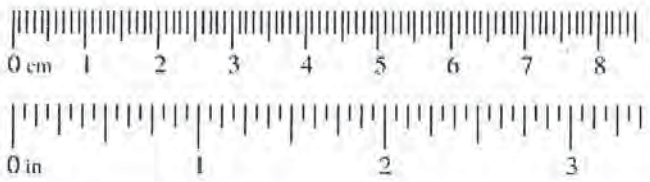
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SC-1 **Date:** 09.26.16 **Time:** 0935

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: ____ % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SC-1 **Date:** **Time:**

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: 0 % Shrub: 5 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 935
Path 46

Date: 9/26/2016 Feature ID: SC-1 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: Larrea

Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	X
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 5 Herb % Cover 10

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	X
Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

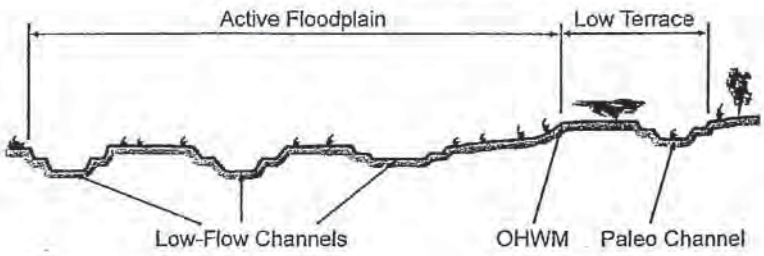
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

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1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SC-2
Investigator(s): ICain, CRenfrew

Date: 09.26.16 **Time:** 0945
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

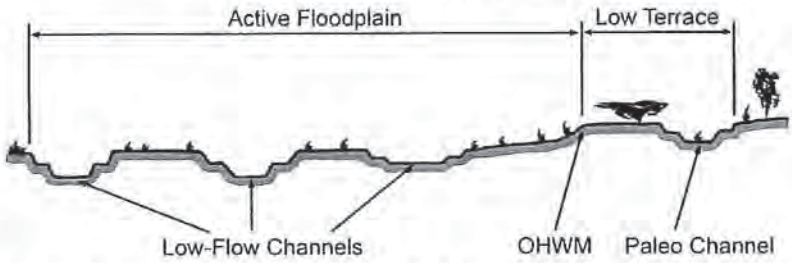
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
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   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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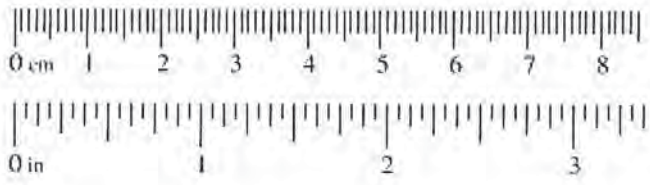
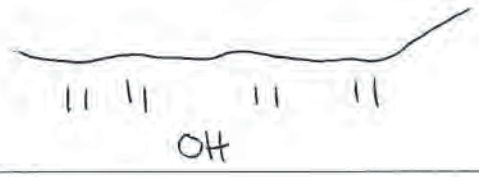
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SC-2 **Date:** 09.26.16 **Time:** 0945

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SC-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 25 % Tree: 0 % Shrub: 15 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

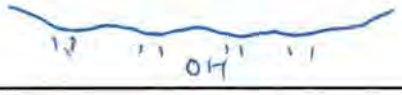
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 945	Upstream Photo		**Site Description:**	
			Downstream Photo	X	Stream is:	
Date: 9/26/2016	Feature ID: SC-2	Location: Mojave Desert			Braided	X
					Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
		Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Slight					0-20	
Veg Type(s) in Drainage: Larrea Ambrosia					20-40	X
					40-60	
Anthropogenic Modifications:	Road	Grazing	Channelized		60-80	
	Culvert	Channel	Riprap		80-100	
	Other:				Stream Type:	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	Eroded Channel	
	Roads	Utility Lines	Other:		Desert Wash	X
Stream Cross Section Drawing:					Flowing River/Stream	
					Dry Streambed	



Additional Description:

Road impacts flow within polygon

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 2

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	X
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 15 Herb % Cover 10

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	X
Other:	Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

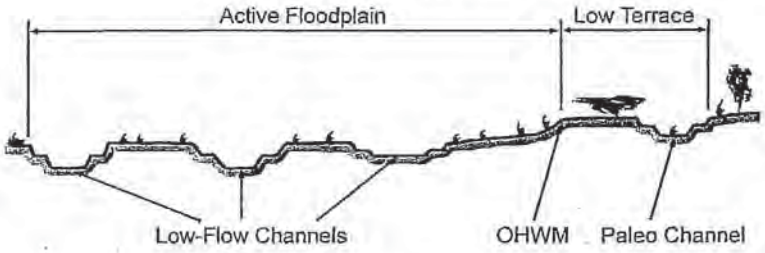
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

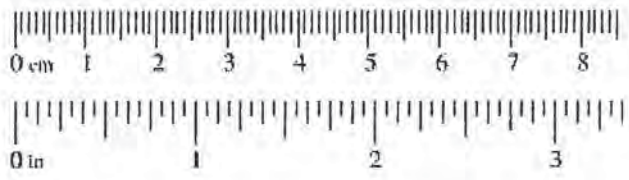
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SD-1
Investigator(s): ICain, CRenfrew

Date: 09.26.16 **Time:** 1000
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

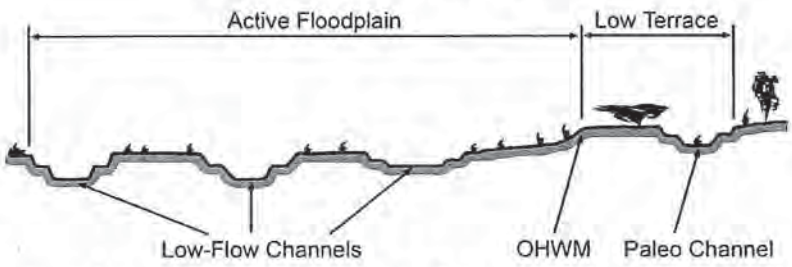
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

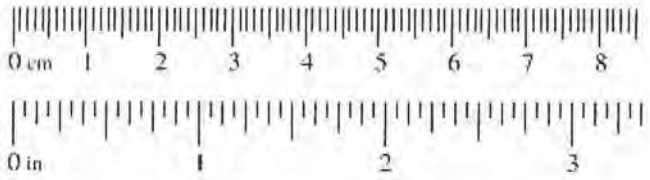


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SD-1 **Date:** 09.26.16 **Time:** 1000

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium Sand

Total veg cover: ____ % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SD-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 7 % Tree: 10 % Shrub: 5 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

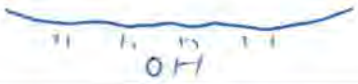
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

					√
Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1000	Upstream Photo		**Site Description:**
			Downstream Photo	>	Stream is:
Date: 9/26/2016	Feature ID: SD-1	Location: Mojave Desert			Braided ✓
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		>	Curved
		Significant Disturbance?		X	Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
		Hydrology			Bowl Shaped
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow ✓
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Planar					0-20 ✓
Veg Type(s) in Drainage: Larrea Ambrosia					20-40
					40-60
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80
	Culvert Channel Riprap		Downstream Blocked		80-100
	Other:		Lateral Flow Blocked		Stream Type:
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel
	Roads Utility Lines Other:				Desert Wash ✓
					Flowing River/Stream
					Dry Streambed

Stream Cross Section Drawing:



Additional Description:

OHWM:

Change in sediment texture	✓	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	✓		

Comment:

Low-Flow Channel: > Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA ✓
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: > Tree % Cover 0 Shrub % Cover 5 Herb % Cover 2

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings ✓
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

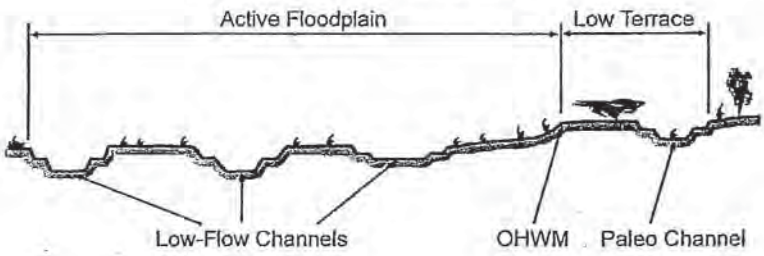
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 50-2
Investigator(s): I Cain, CRenfrew

Date: 09.26.16 **Time:** 1005
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

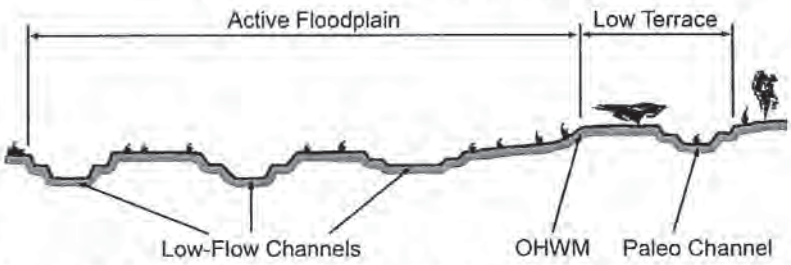
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

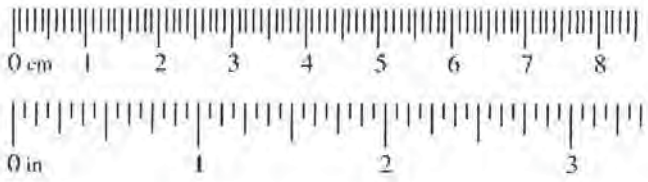


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

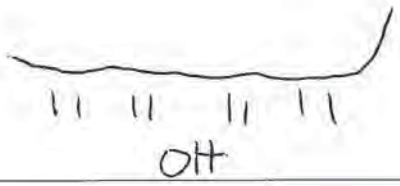
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SD-2 **Date:** 09.26.16 **Time:** 1005

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SD-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule/pebble

Total veg cover: 17 % Tree: 0 % Shrub: 15 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

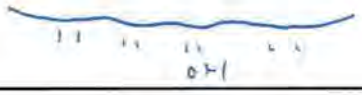
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1005	Upstream Photo	X	**Site Description:**	
			Downstream Photo		Stream is:	
Date: 9/26/2016	Feature ID: SD-2	Location: Mojave Desert			Braided	X
					Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology			Bowl Shaped	
		Wetland Plants			Shallow	X
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Slight					0-20	X
Veg Type(s) in Drainage: Larrea, Lycium					20-40	X
					40-60	
Anthropogenic Modifications: Road Grazing Channelized			Upstream Blocked		60-80	
Culvert Channel Riprap			Downstream Blocked		80-100	
Other:			Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:					V-Ditch w/ Sediment	
Circle Surrounding Land Use: Urban Rural Commercial Agriculture					Eroded Channel	
Roads Utility Lines Other:					Desert Wash	X
Stream Cross Section Drawing:					Flowing River/Stream	
					Dry Streambed	
					Additional Description:	

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover 0 Shrub % Cover 15 Herb % Cover 2

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other: ,	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

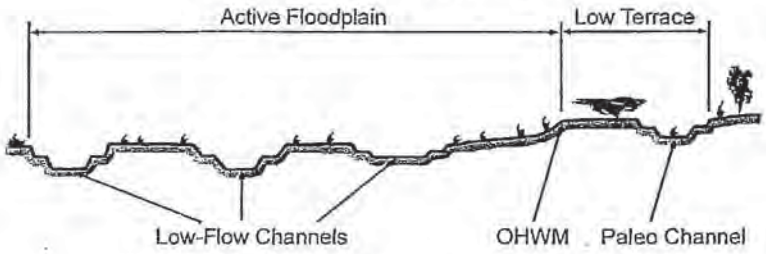
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

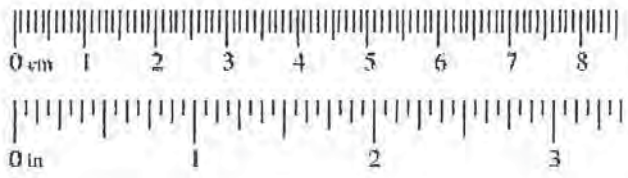
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SD-3
Investigator(s): ICain, CRenfrew

Date: 05.26.16 **Time:** 1010
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

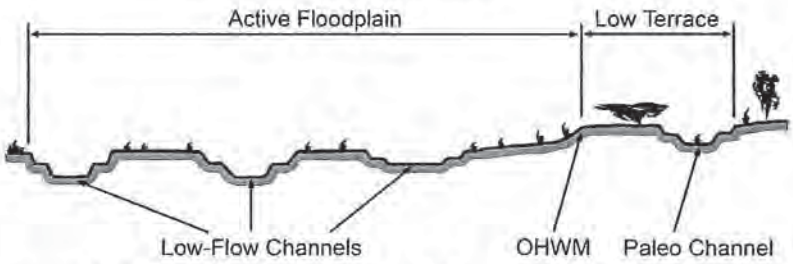
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
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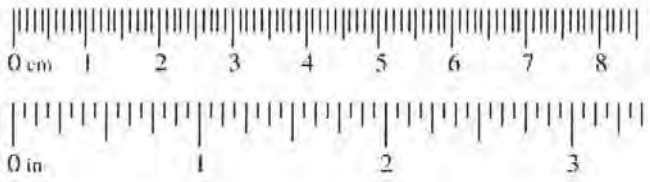
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SD-3 **Date:** 09.26.16 **Time:** 1010

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SD-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1010
Path 46

Date: 9/26/2016 Feature ID: SD-3 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight/Moderate

Veg Type(s) in Drainage:

Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	
Sinuous	X
Curved	
Straight	
Entrenched	
Bowl Shaped	X
Shallow	

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Other: Grazing Channel Channelized Riprap

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA X
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

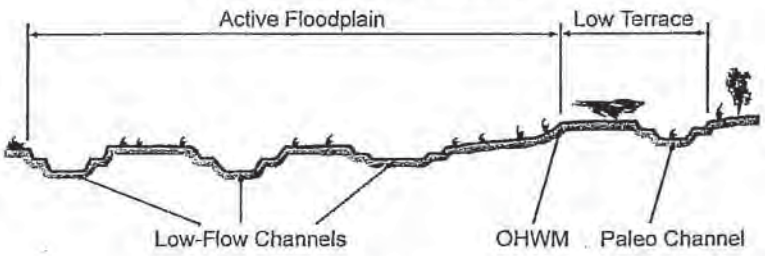
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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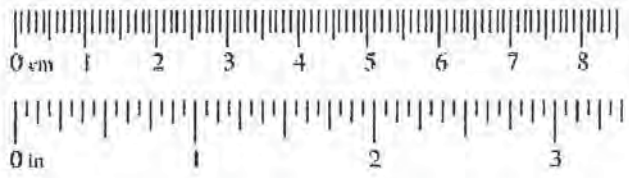
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SD-4
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 1015
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

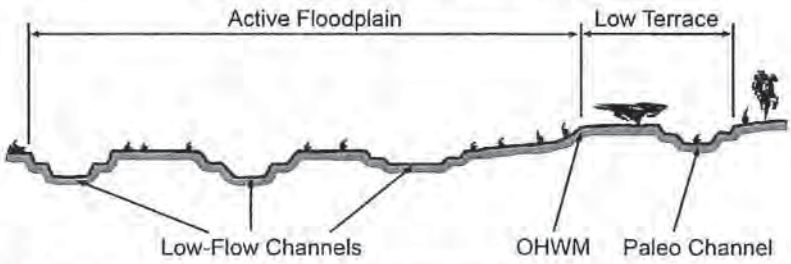
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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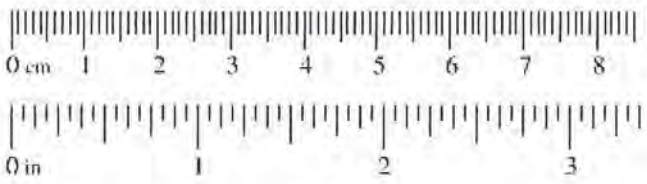
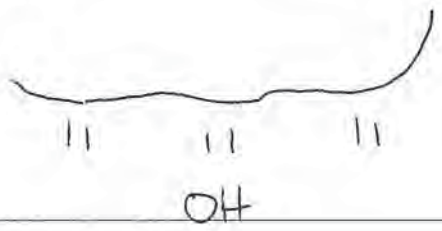
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SD-4 **Date:** 09.20.16 **Time:** 1015

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SD-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 11 % Tree: 0 % Shrub: 10 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

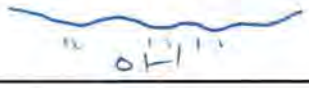
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1015				Upstream Photo		**Site Description:**	
Path 46				Downstream Photo	X	Stream is:	
Date: 9/26/2016 Feature ID: SD-4			Location: Mojave Desert			Braided	X
						Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB			Do Normal Conditions Exist?		X	Curved	
			Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial			Potential Wetland?			Entrenched	
			Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing			Wetland Plants			Shallow	X
			Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Slight						0-20	X
Veg Type(s) in Drainage: Creosote Bush						20-40	
						40-60	
Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked		60-80	
	Culvert	Channel	Riprap	Downstream Blocked	X	80-100	
	Other:			Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication Other:			V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture		Eroded Channel	
	Roads	Utility Lines	Other:			Desert Wash	X
Stream Cross Section Drawing:						Flowing River/Stream	
						Dry Streambed	



Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 10 Herb % Cover 1

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

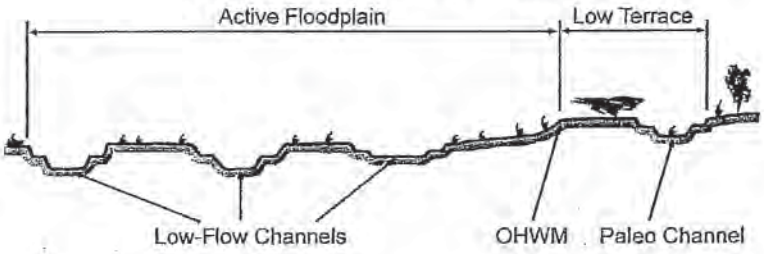
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



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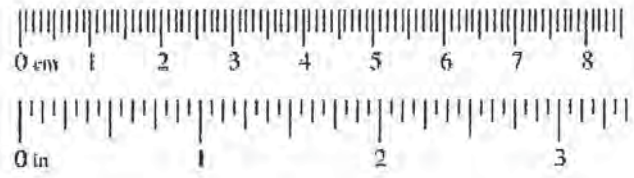
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SD-5
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 1025
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

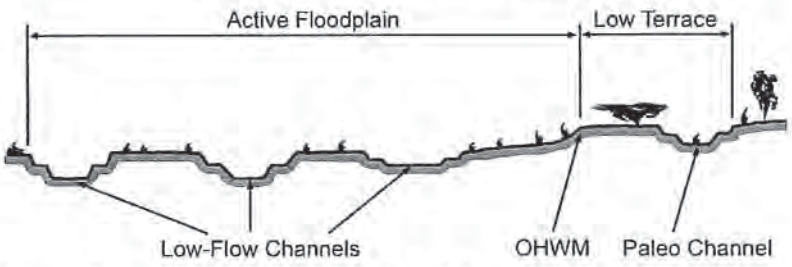
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
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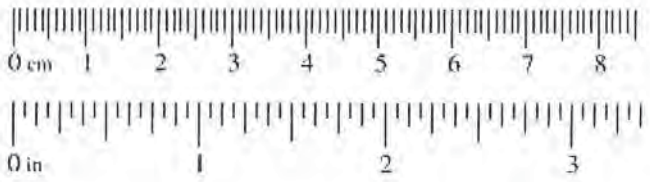
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	Silt
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SD-5 **Date:** 09.26.16 **Time:** 1025

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SD-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1025
Path 46

Date: 9/26/2016 Feature ID: SD-5 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: Larrea Ambrosia

Upstream Photo	
Downstream Photo	X
Do Normal Conditions Exist?	?
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	
Sinuous	X
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Grazing Channel Channelized Riprap Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: 0 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA X
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

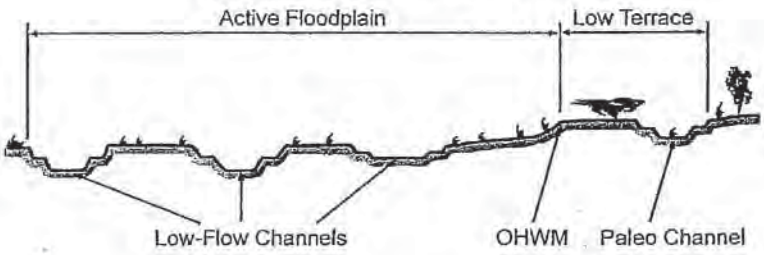
Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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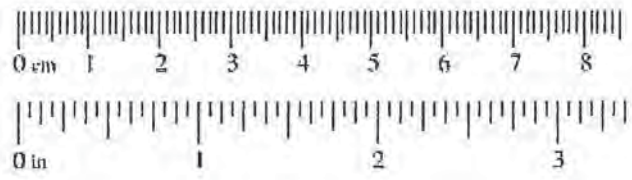
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6E-1
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 1035
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

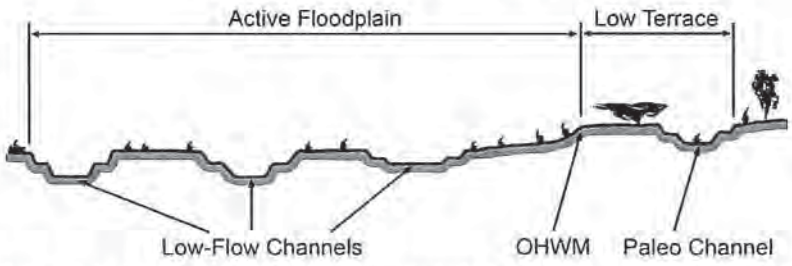
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
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5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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2.56	64	Cobble	Gravel
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0.079	2.00	Granule	
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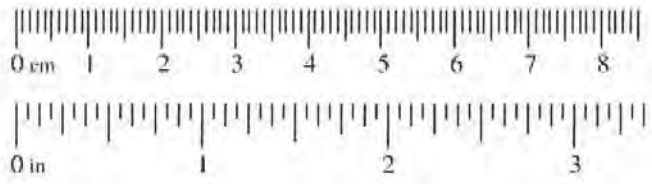
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-1 **Date:** 09.26.16 **Time:** 1035

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SE-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 16 % Tree: 0 % Shrub: 15 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1035	Upstream Photo		**Site Description:**		
			Downstream Photo	X	Stream is:		
Date: 9/26/2016	Feature ID: SE-1	Location: Mojave Desert			Braided	X	
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved		
		Significant Disturbance?		X	Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped		
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X	
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Planar					0-20	X	
Veg Type(s) in Drainage: Larrea Ambrosia					20-40		
					40-60		
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80		
	Culvert Channel Riprap		Downstream Blocked	X	80-100		
	Other:		Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel		
	Roads Utility Lines Other:				Desert Wash	X	
Stream Cross Section Drawing:					Flowing River/Stream		
					Dry Streambed		
					Additional Description:		

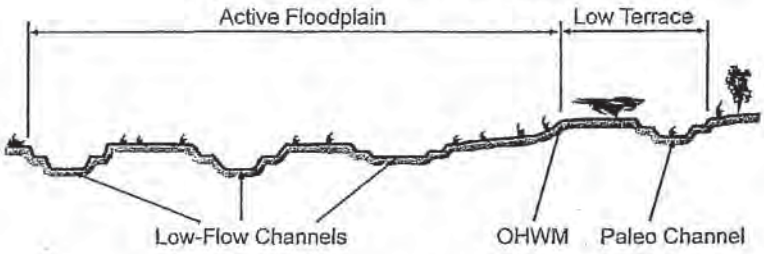
OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 0	Herb % Cover 0			
Circle average sediment texture		Sand: Fine Medium Course Very Coarse					
Silt: Fine Medium Coarse		Other:					
Circle Indicators: Mudcracks Ripples			Community succession:	NA	X		
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)			
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings			
Other:				Late (herbs/shrubs/trees)			
Comments:							
Active Floodplain:	X	Tree % Cover 0	Shrub % Cover 15	Herb % Cover 1			
Circle average sediment texture		Sand: Fine Medium Course Very Coarse					
Granule Pebble Cobble Boulder		Other:					
Circle Indicators: Mudcracks Ripples			Community succession:	NA			
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)			
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	X		
Other:				Late (herbs/shrubs/trees)			
Comments:							
Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover			
Circle average sediment texture		Sand: Fine Medium Course Very Coarse					
Granule Pebble Cobble Boulder		Other:					
Circle Indicators: Mudcracks Ripples			Community succession:	NA			
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)			
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings			
Other:				Late (herbs/shrubs/trees)			
Comments:							

Hydrogeomorphic Floodplain Units



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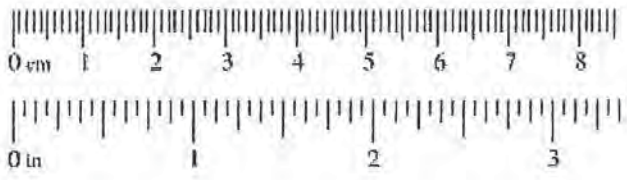


Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SE-2
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 1045
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

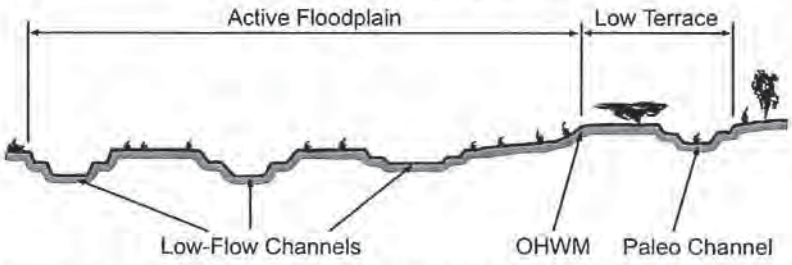
Brief site description:

Desert Wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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   - ☐ GPS
   - ☐ Other:

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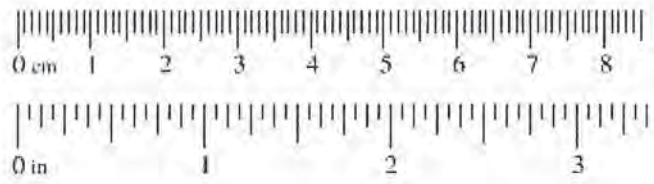
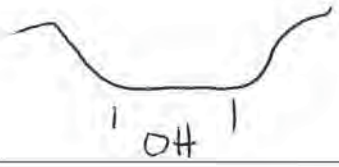
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-2 **Date:** 09.26.16 **Time:** 1045

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
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- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SC-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

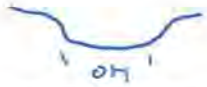
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1045	Upstream Photo	X	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/26/2016	Feature ID: SE-2	Location: Mojave Desert			Braided		
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	X	
		Significant Disturbance?		X	Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	X	
		Hydrology			Bowl Shaped	X	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow		
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Moderate / Steep					0-20	X	
Veg Type(s) in Drainage: –					20-40		
					40-60		
Anthropogenic Modifications:	Road	Grazing	Channelized		Upstream Blocked		60-80		
	Culvert	Channel	Riprap		Downstream Blocked		80-100		
	Other:				Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:			V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture			Eroded Channel		
	Roads	Utility Lines	Other:				Desert Wash	X	
Stream Cross Section Drawing:							Flowing River/Stream		
							Dry Streambed		
							Additional Description: Some entrenching downstream		



OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

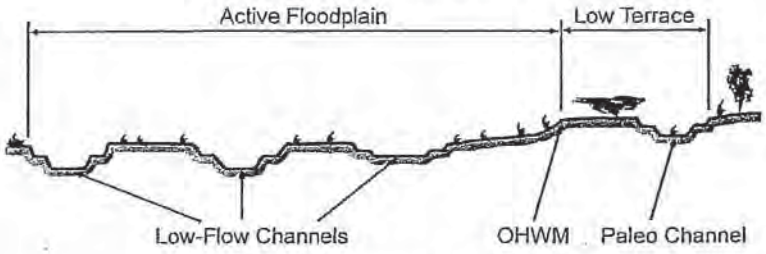
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

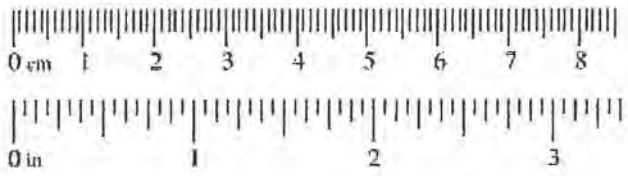
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	Gravel
2.56		64	Cobble	Gravel
0.157		4	Pebble	Gravel
	0.079	2.00	Granule	Gravel
	0.039	1.00	Very coarse sand	Sand
	0.020	0.50	Coarse sand	Sand
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	Sand
1/8	0.0025	0.0625	Very fine sand	Sand
1/16	0.0012	0.031	Coarse silt	Silt
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	Silt
1/128	0.00015	0.0039	Very fine silt	Silt
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5E-3
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 1055
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

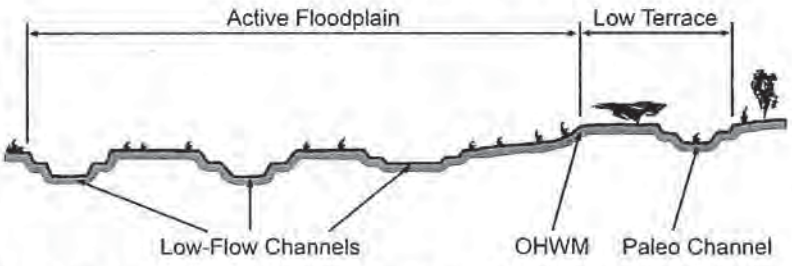
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

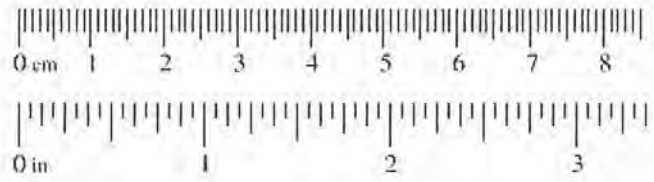


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

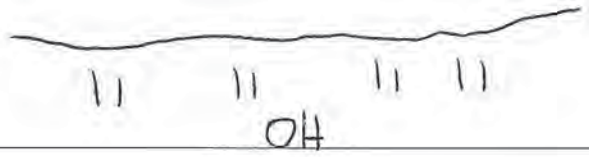
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-3 **Date:** 09.26.16 **Time:** 1055

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SE-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule/pebble

Total veg cover: 16 % Tree: 0 % Shrub: 15 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1055	Upstream Photo	X	**Site Description:**	
			Downstream Photo		Stream is:	
Date: 9/26/2016	Feature ID: SE-3	Location: Mojave Desert			Braided	X
					Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
		Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Planar					0-20	X
Veg Type(s) in Drainage: Larrea / Ambrosia					20-40	
					40-60	
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80	
	Culvert Channel Riprap		Downstream Blocked		80-100	
	Other:		Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel	
	Roads Utility Lines Other:				Desert Wash	X
Stream Cross Section Drawing:					Flowing River/Stream	
					Dry Streambed	
					Additional Description:	

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 15 Herb % Cover 1

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

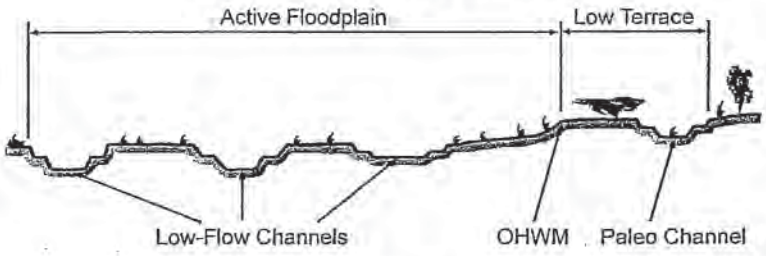
Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

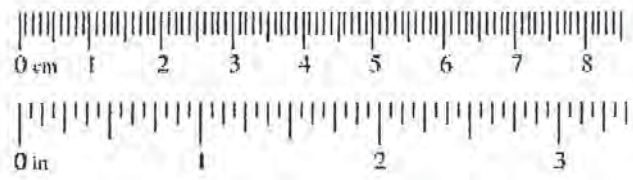
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
2.56		64	Cobble	Gravel
0.157		4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	
1/64	0.00031	0.0078	Fine silt	Silt
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SE-4
Investigator(s): I Cain, C Renfrew

Date: 09.20.16 **Time:** 1058
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

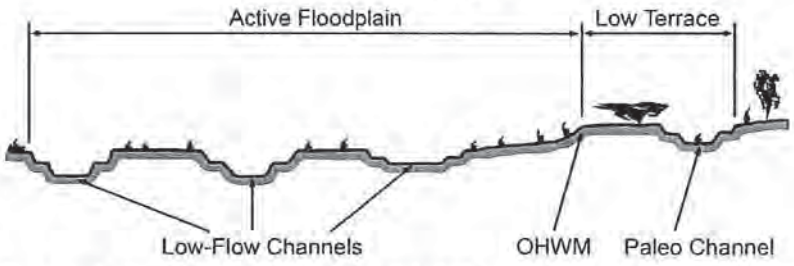
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

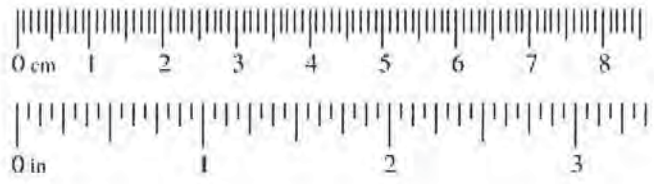


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

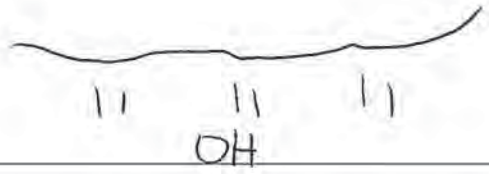
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-4 **Date:** 09.26.16 **Time:** 1058

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SC-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 16 % Tree: 0 % Shrub: 15 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1058	Upstream Photo		**Site Description:**		
			Downstream Photo	X	Stream is:		
Date: 9/26/2016	Feature ID: SE-4	Location: Mojave Desert			Braided	X	
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?			Curved		
		Significant Disturbance?			Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped		
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X	
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Planar					0-20	X	
Veg Type(s) in Drainage: Larrea / Ambrosia					20-40		
					40-60		
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80		
	Culvert Channel Riprap		Downstream Blocked		80-100		
	Other:		Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel		
	Roads Utility Lines Other:				Desert Wash	X	
Stream Cross Section Drawing:					Flowing River/Stream		
					Dry Streambed		
					Additional Description:		

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 6 Herb % Cover 0

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 15 Herb % Cover 1

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

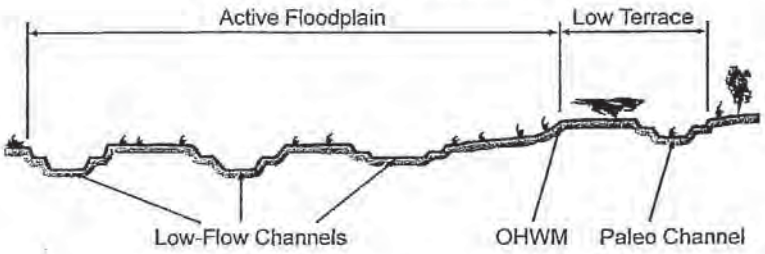
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

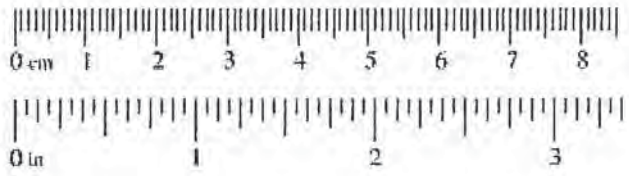
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SE-5
Investigator(s):

Date: 09.26.16 **Time:** 1108
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

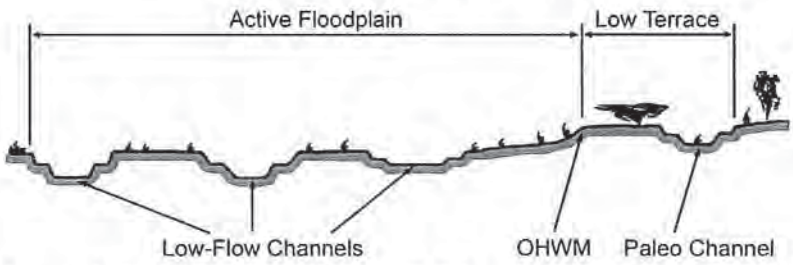
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

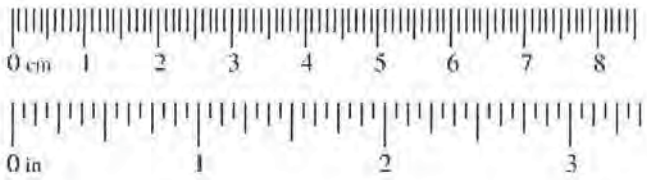


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

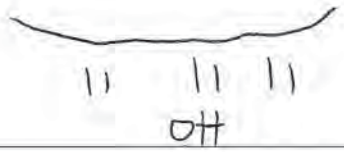
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-5 **Date:** 09.26.16 **Time:** 1108

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SE-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 10 % Tree: 0 % Shrub: 15 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1105
Path 46

Date: 9/26/2016 Feature ID: SE-5 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Plane

Veg Type(s) in Drainage: Larrea/Ambrosia

Upstream Photo	
Downstream Photo	X
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA X
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 15 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

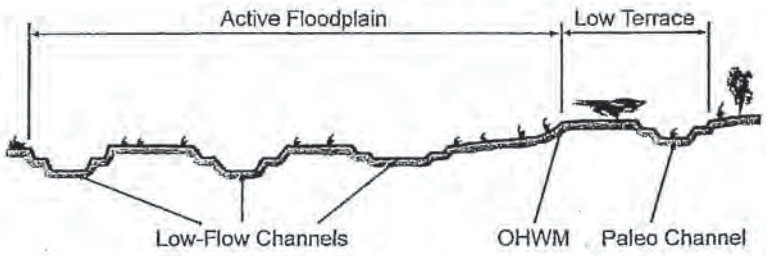
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

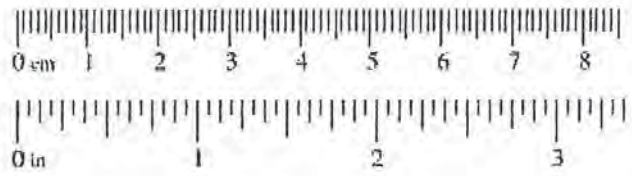
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	
1/64	0.00031	0.0078	Fine silt	Silt
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5E-6
Investigator(s): ICain, CRenfrew

Date: 09.26.16 **Time:** 1104
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

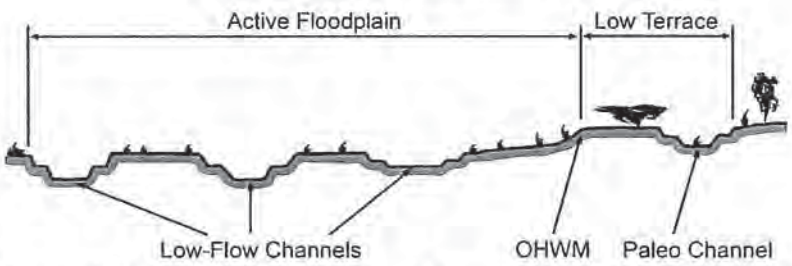
Brief site description:

Desert wash

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

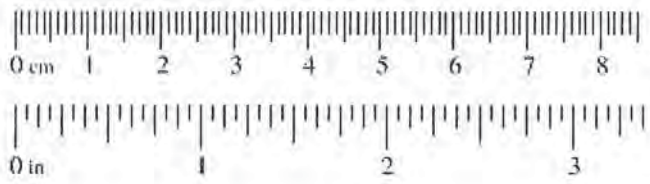


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-6 **Date:** 09.26.16 **Time:** 1104

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Gravel

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SE-6 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 10 % Tree: 0 % Shrub: 15 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1104	Upstream Photo		**Site Description:**
			Downstream Photo	X	Stream is:
Date: 9/26/2016	Feature ID: SE-6	Location: Mojave Desert			Braided X
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved
		Significant Disturbance?		X	Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
		Hydrology			Bowl Shaped
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow X
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Plane					0-20 X
Veg Type(s) in Drainage: Larrea/Ambrosia					20-40
					40-60
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80
	Culvert Channel Riprap		Downstream Blocked		80-100
	Other:		Lateral Flow Blocked		Stream Type:
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel
	Roads Utility Lines Other:				Desert Wash X
					Flowing River/Stream
					Dry Streambed

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 15 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

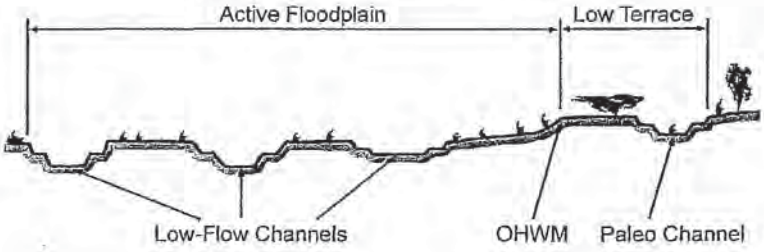
Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

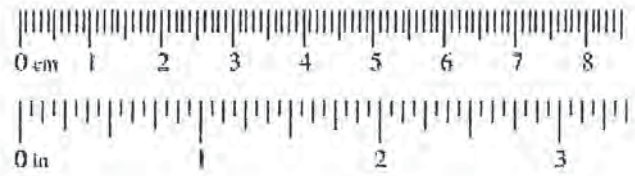
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SE7
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 1111
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

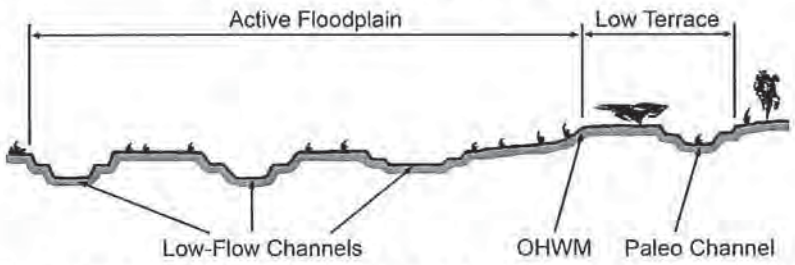
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

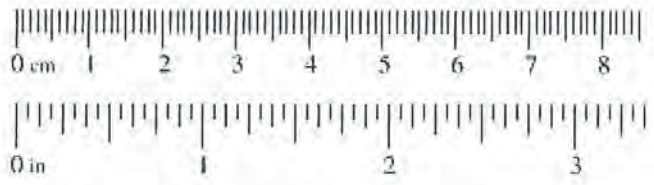


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

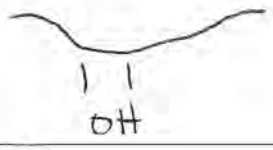
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5E-7 **Date:** 09.26.16 **Time:** 1111

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium Sand

Total veg cover: ____ % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SE-7 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: ____ % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1111	Upstream Photo	X	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/26/2016	Feature ID: SE-7	Location: Mojave Desert			Braided		
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved		
		Significant Disturbance?		X	Straight	X	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped		
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow		
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Slight					0-20	X	
Veg Type(s) in Drainage:					20-40		
					40-60		
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked	X	60-80		
	Culvert Channel Riprap		Downstream Blocked		80-100		
	Other:		Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel		
	Roads Utility Lines Other:				Desert Wash	X	
Stream Cross Section Drawing:					Flowing River/Stream		
					Dry Streambed		
					Additional Description:		

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 5 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

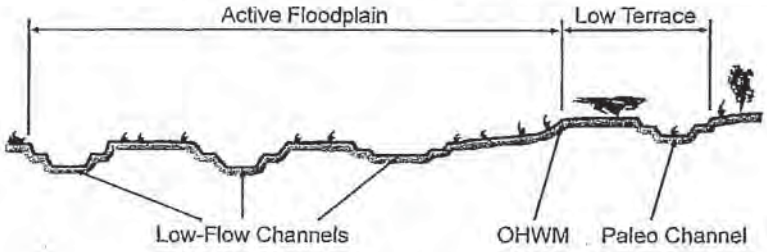
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
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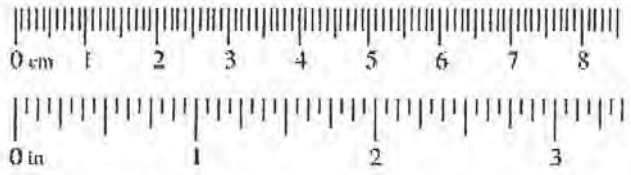
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SE-3
Investigator(s): I Cain, C Renfrew

Date: 09.26.16 **Time:** 1118
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

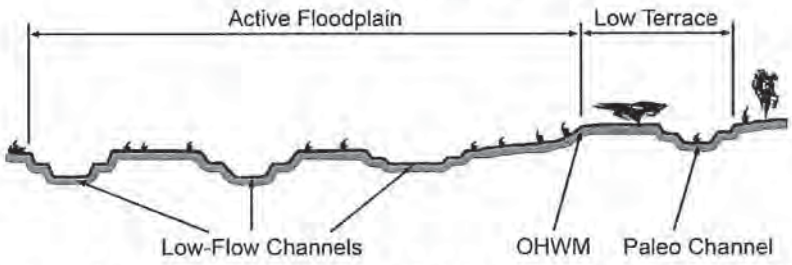
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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0.157	4	Pebble	
		Granule	
0.079	2.00		
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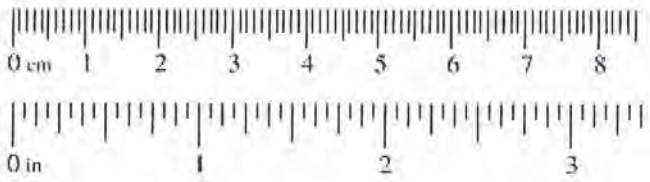
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-3 **Date:** 09.26.16 **Time:** 1118

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5C-8 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 60 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1119
Path 46

Date: 9/26/2016 Feature ID: SE-8 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Planar

Veg Type(s) in Drainage: Creosote / Ambrosia

Upstream Photo	
Downstream Photo	X
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked	
Downstream Blocked	X
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

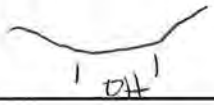
Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA X
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 5 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

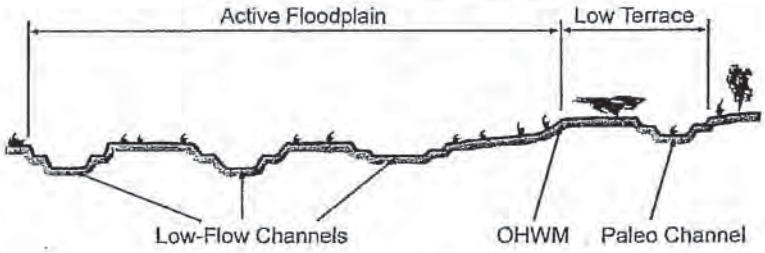
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



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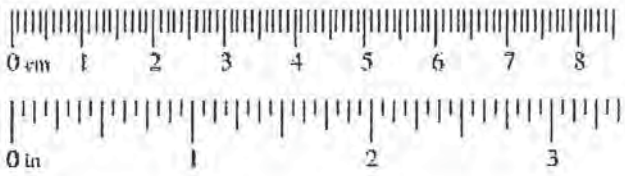


Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SE-9
Investigator(s): ICain, CPenfrew

Date: 09.26.16 **Time:** 1124
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

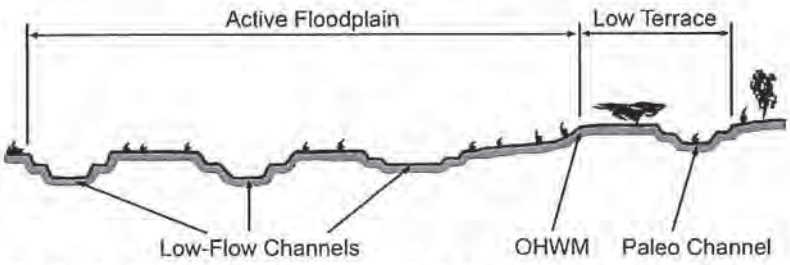
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   c) Identify any indicators present at the location.
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   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

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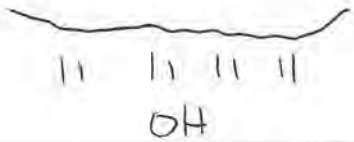
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** SE-9 **Date:** 09.26.16 **Time:** 1124

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** XS-9 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46 | Staff: CR and IC | Time: 1124

Date: 9/20/2016 | Feature ID: SF-9 | Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: 5 1:, 4

Veg Type(s) in Drainage: —

Upstream Photo	
Downstream Photo	X
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	
Sinuous	X
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Anthropogenic Modifications: Road Culvert Other: | Grazing Channel | Channelized Riprap

Upstream Blocked | Downstream Blocked | Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X | Tree % Cover 0 | Shrub % Cover 0 | Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA X | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings | Late (herbs/shrubs/trees)

Comments:

Active Floodplain: | Tree % Cover | Shrub % Cover | Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings | Late (herbs/shrubs/trees)

Comments:

Low Terrace: | Tree % Cover | Shrub % Cover | Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

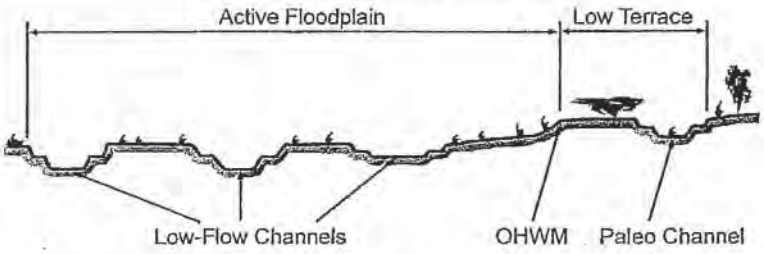
Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings | Late (herbs/shrubs/trees)

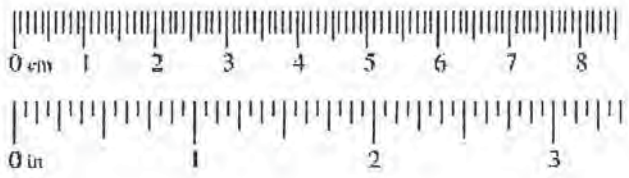
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5E-10
Investigator(s): J Cain, C Renfrew

Date: 09.26.16 **Time:** 1127
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

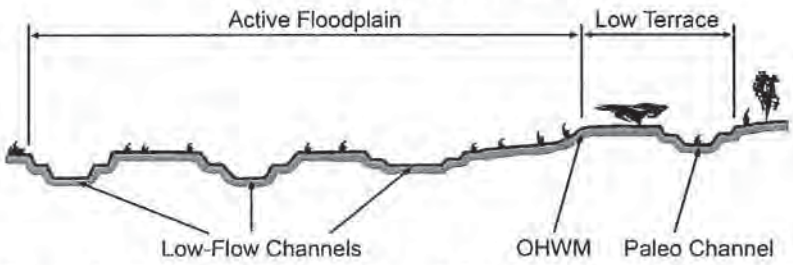
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

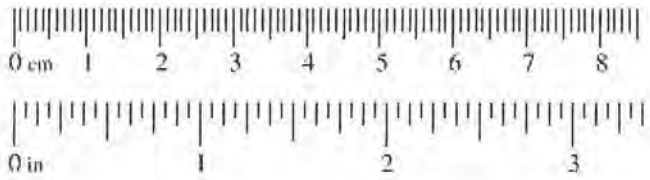


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

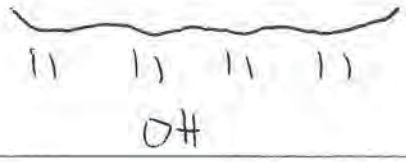
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-10 **Date:** 09.26.16 **Time:** 1127

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SE-10 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 16 % Tree: 0 % Shrub: 15 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1127
Path 46

Date: 9/26/2016 Feature ID: SE-10 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Planar

Veg Type(s) in Drainage: Larrea / Ambrosia

Upstream Photo	
Downstream Photo	X
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Other: Grazing Channel Channelized Riprap

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

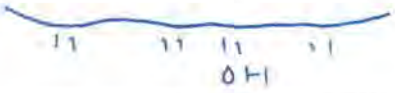
Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris Presence of bed and bank

Benches Soil development Surface relief

Other:

Community succession: NA X

Early (herbs/seedlings)

Mid (herbs/shrubs/saplings

Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 15 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris Presence of bed and bank

Benches Soil development Surface relief

Other:

Community succession: NA

Early (herbs/seedlings)

Mid (herbs/shrubs/saplings X

Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris Presence of bed and bank

Benches Soil development Surface relief

Other:

Community succession: NA

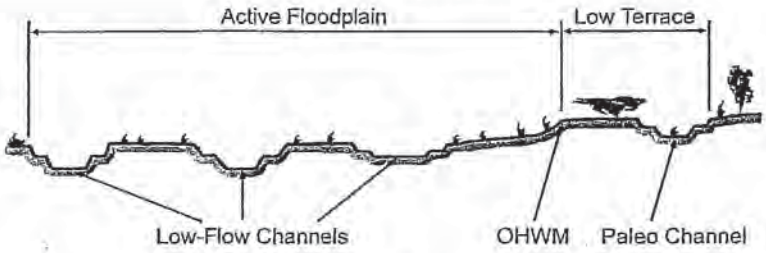
Early (herbs/seedlings)

Mid (herbs/shrubs/saplings

Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	
1/64	0.00031	0.0078	Fine silt	Silt
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SE-11
Investigator(s): I Cain, C Renfrew

Date: 09.26.16
Town: Mojave Desert
Time: 1134
State: CA
Photo begin file#:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

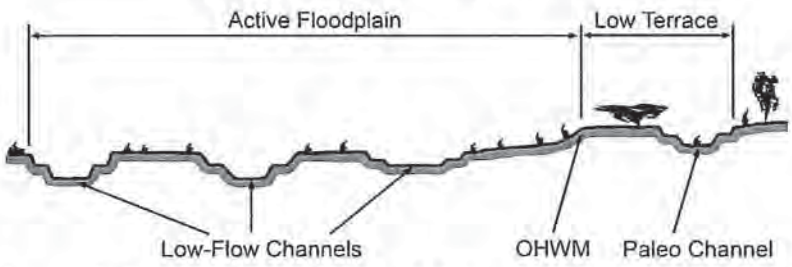
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

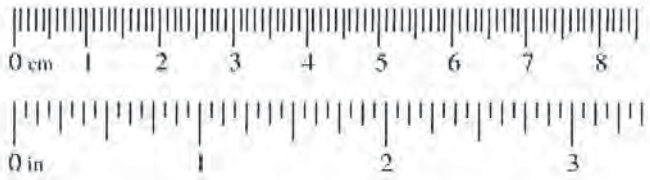


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SE-11 **Date:** 09.26.16 **Time:** 1134

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SE-11 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 10 % Tree: 0 % Shrub: 15 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1134	Upstream Photo		**Site Description:**		
			Downstream Photo	X	Stream is:		
Date: 9/26/2016	Feature ID: SE-11	Location: Mojave Desert			Braided	X	
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved		
		Significant Disturbance?		X	Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped		
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X	
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Planar					0-20	X	
Veg Type(s) in Drainage: Lurrea / Ambrosia					20-40		
					40-60		
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80		
	Culvert Channel Riprap		Downstream Blocked		80-100		
	Other:		Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel		
	Roads Utility Lines Other:				Desert Wash	X	
Stream Cross Section Drawing:					Flowing River/Stream		
					Dry Streambed		
					Additional Description:		

OHWM:

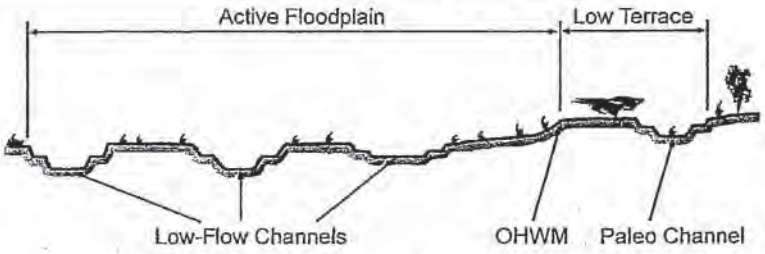
Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		
Comment:			

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 0	Herb % Cover 0	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Silt: Fine Medium Coarse		Other:			
Circle Indicators: Mudcracks Ripples		Community succession:		NA	X
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	
Comments:					

Active Floodplain:	X	Tree % Cover 0	Shrub % Cover 15	Herb % Cover 1	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples		Community succession:		NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	X
Other:				Late (herbs/shrubs/trees)	
Comments:					

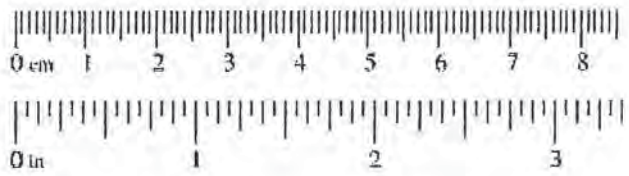
Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples		Community succession:		NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	
Comments:					

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1030
Path 46

Date: 9/21/2016 Feature ID: SF-1 Location: Mojave Desert

Circle Preliminary Status: USACE (CDFW) RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character (Ephemeral) Intermittent Perennial

OHWM Recorded by: (Field Map) GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: unveg in channel

Anthropogenic Modifications: (Road) Grazing Channelized
Culvert Channel Riprap
Other: Trash

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads (Utility Lines) Other: Open Space

Stream Cross Section Drawing:

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X 1 Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: (Fine) Medium Course Very Coarse
Other:

Circle Indicators: (Mudcracks) Ripples
Drift/Debris (Presence of bed and bank)
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 7 Tree % Cover Shrub % Cover 5 Herb % Cover 2
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris (Presence of bed and bank)
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule (Pebble) Cobble Boulder
Sand: (Fine) Medium Course Very Coarse
Other: Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris (Presence of bed and bank)
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

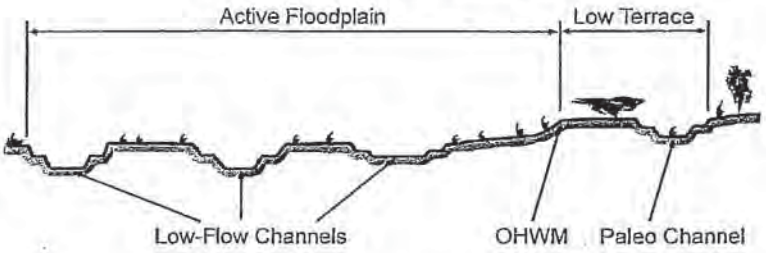
Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

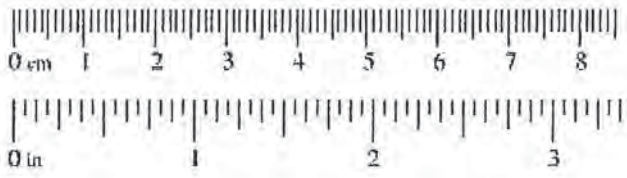
Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture, Rift deposits, Soil Cracks

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: AR and CC	Time: 1045	Upstream Photo / Downstream Photo	
Date: 9/20/2016	Feature ID: SF-2	Location:	Mojave Desert	
Circle Preliminary Status: USACE (CDFW RWQCB)		Do Normal Conditions Exist? Y / Significant Disturbance? N		
Circle Flow Character: (Ephemeral) Intermittent Perennial		Potential Wetland? Hydrology / Wetland Plants / Surface Water/Depth:		
OHWM Recorded by: (Field Map) GPS GIS Digitizing				
Side Slope Estimate: gentle slope				
Veg Type(s) in Drainage: unveg in slope				

Site Description:

Stream is:	
Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:	
0-20	
20-40	
40-60	
60-80	
80-100	

Stream Type:	
V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture,
Soil Cracks

Anthropogenic Modifications:	(Road) Culvert Other:	Grazing Channelized Channel Riprap	Upstream Blocked / Downstream Blocked / Lateral Flow Blocked
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication Other:
Circle Surrounding Land Use:	Urban Roads	Rural (Utility Lines)	Commercial Agriculture Other: Open space

Stream Cross Section Drawing:

OHWM:

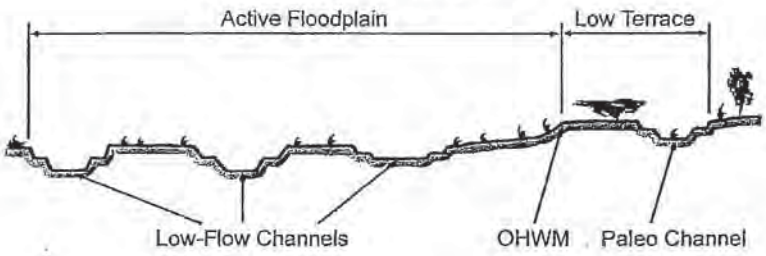
Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		
Comment:			

Low-Flow Channel: X	1	Tree % Cover Ø	Shrub % Cover <1	Herb % Cover <1		
Circle average sediment texture		Sand: (Fine) Medium Course Very Coarse				
Silt: Fine Medium Coarse		Other: Very Fine Sand				
Circle Indicators: (Mudcracks) Ripples		Community succession:			NA	
Drift/Debris (Presence of bed and bank)		Early (herbs/seedlings)			X	
Benches Soil development Surface relief		Mid (herbs/shrubs/saplings				
Other: Δ in sediment texture		Late (herbs/shrubs/trees)				
Comments:						

Active Floodplain: X	7	Tree % Cover Ø	Shrub % Cover 5	Herb % Cover 2		
Circle average sediment texture		~~Sand: (Fine) Medium Course Very Coarse~~				
(Granule) (Pebble) Cobble Boulder		Other: ~~Very Fine~~ Granule + Pebbles				
Circle Indicators: Mudcracks Ripples		Community succession:			NA	
Drift/Debris (Presence of bed and bank)		Early (herbs/seedlings)				
Benches Soil development Surface relief		Mid (herbs/shrubs/saplings			X	
Other: Δ in sediment texture		Late (herbs/shrubs/trees)				
Comments:						

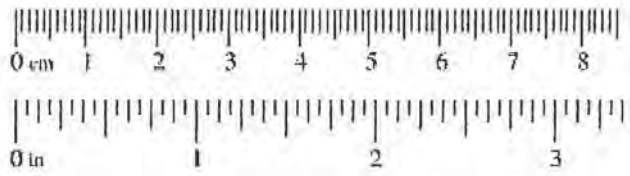
Low Terrace: X	15	Tree % Cover Ø	Shrub % Cover 10	Herb % Cover 5		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Granule (Pebble) Cobble Boulder		Other: ~~Fi~~ Very Fine Sand W/Pebble				
Circle Indicators: Mudcracks Ripples		Community succession:			NA	
Drift/Debris (Presence of bed and bank)		Early (herbs/seedlings)				
Benches Soil development Surface relief		Mid (herbs/shrubs/saplings			X	
Other: Δ in sediment texture		Late (herbs/shrubs/trees)				
Comments:						

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1055
Path 46

Date: 9/20/2016 Feature ID: 5-3 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants

OHWM Recorded by: Field Map GPS GIS Digitizing

Surface Water/Depth:

Side Slope Estimate: gentle slope

Veg Type(s) in Drainage: veg in channel

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X 1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other: Coarse Silt w/ Granule

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 2 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 2
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Coarse Silt w/ Pebble + Cobble

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings) X
Late (herbs/shrubs/trees)

Comments:

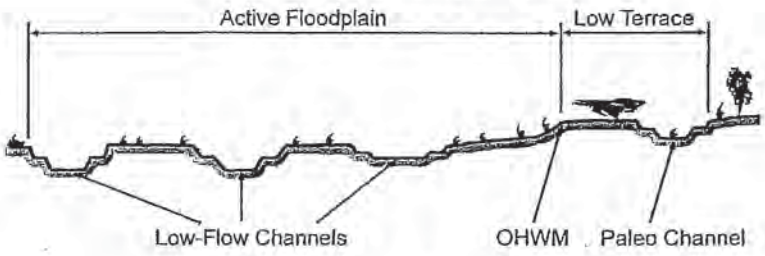
Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20 X
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

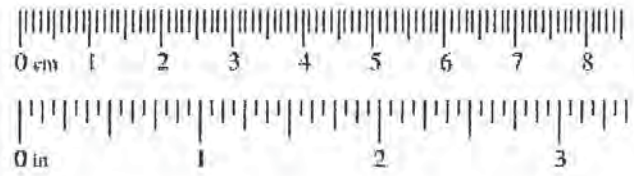
Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
2.56		64	Cobble	Gravel
0.157		4	Pebble	
0.079		2.00	Granule	
0.039		1.00	Very coarse sand	
0.020		0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1105
Path 46

Date: 9/20/2016 Feature ID: ~~SF-3~~ SF-4 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: veg in channel

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X 1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other: Fine to Medium Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments: N/A

Low Terrace: X Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments: N/A

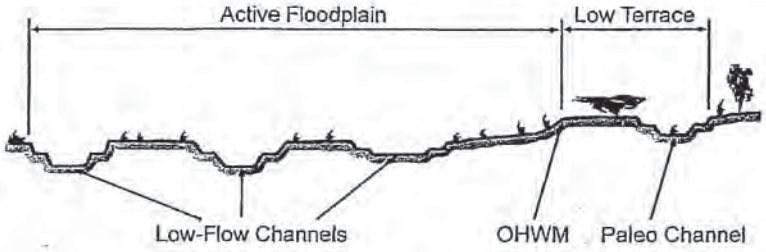
Site Description:
Stream is:
Braided
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

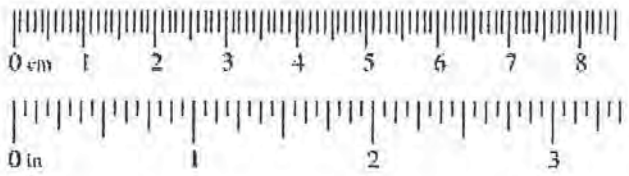
Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1110
Path 46

Date: 9/26/2016 Feature ID: SF-4 SF-5 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage:

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X <1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other: ~~Very Sm~~ Very Fine Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 10 Tree % Cover Shrub % Cover 8 Herb % Cover 2
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

V

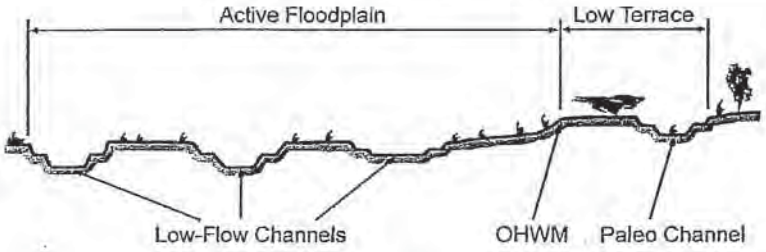
Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20 X
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture
Soil Cracks

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

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	0.157	4	Pebble	
	0.079	2.00	Granule	
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	0.020	0.50	Coarse sand	
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1/8	0.0025	0.0625	Very fine sand	
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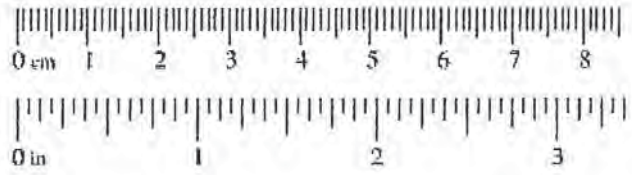
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1110
Path 46
Date: 9/ 21/2016 Feature ID: 5F-6 Location: Mojave Desert
Circle Preliminary Status: USACE CDFW RWQCB
Do Normal Conditions Exist? Y
Significant Disturbance? N
Circle Flow Character: Ephemeral Intermittent Perennial
Potential Wetland?
OHWM Recorded by: Field Map GPS GIS Digitizing
Hydrology
Wetland Plants
Surface Water/Depth:
Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: Unveg in channel

Upstream Photo
Downstream Photo

Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X
Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100 X
Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:
Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture
Drift deposit

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:
Break in bank slope X
Other:

Low-Flow Channel: X 2 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 4 Tree % Cover 0 Shrub % Cover 3 Herb % Cover 1
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

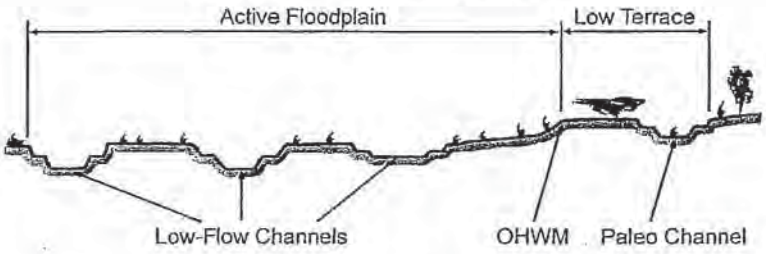
Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

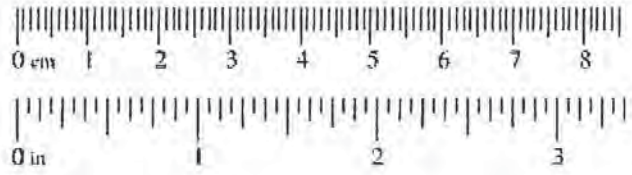
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1115
Path 46

Date: 9/20/2016 Feature ID: SF-7 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: gentle slope

Veg Type(s) in Drainage: ~~veg in~~ unveg in channel

Upstream Photo
Downstream Photo

Do Normal Conditions Exist? Y
Significant Disturbance? N

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

~~0-20~~	
20-40	
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture,

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:
Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: 1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: ~~Mudcracks~~ Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: 1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Pebble

Circle Indicators: ~~Mudcracks~~ Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

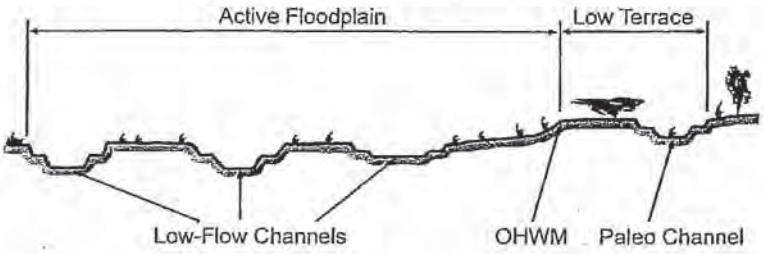
Low Terrace: 15 Tree % Cover Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris ~~Presence~~ of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

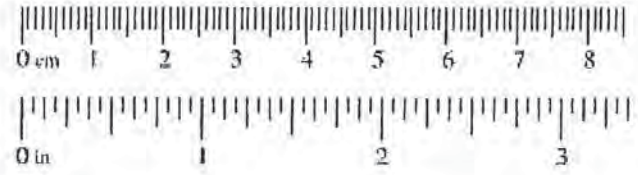
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1120
Path 46

Date: 9/26/2016 Feature ID: ~~SFS~~ SF-8 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants

OHWM Recorded by: Field Map GPS GIS Digitizing

Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: unveg in channel

Upstream Photo
Downstream Photo

Site Description:

Stream is:
- Braided X
- Sinuous X
- Curved
- Straight
- Entrenched
- Bowl Shaped
- Shallow X

Vegetation % In Stream:
- ~~0-20~~
- 20-40
- 40-60
- ~~60-80~~
- 80-100

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Stream Type:
- V-Ditch w/ Sediment
- Eroded Channel
- Desert Wash X
- Flowing River/Stream
- Dry Streambed

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture
Soil Cracks

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X 2 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
- NA
- Early (herbs/seedlings) X
- Mid (herbs/shrubs/saplings
- Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 7 Tree % Cover 0 Shrub % Cover 5 Herb % Cover 2
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Medium Sand w/ Pebble
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
- NA
- Early (herbs/seedlings)
- Mid (herbs/shrubs/saplings X
- Late (herbs/shrubs/trees)

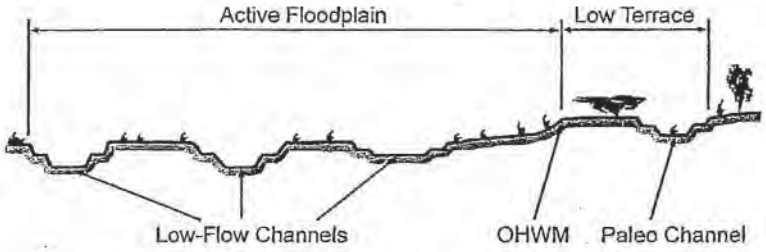
Comments:

Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Medium Sand w/ Pebble + Cobble
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
- NA
- Early (herbs/seedlings)
- Mid (herbs/shrubs/saplings X
- Late (herbs/shrubs/trees)

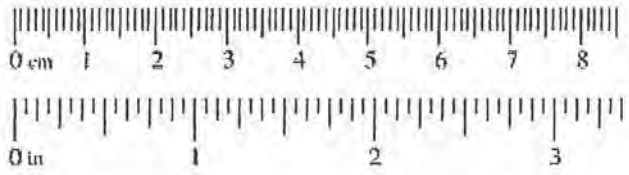
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
		Very coarse sand	
0.039	1.00		
		Coarse sand	
0.020	0.50		Sand
		Medium sand	
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1125
Path 46

Date: 9/22/2016 Feature ID: SF-9 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: Ornveg in channel

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X [4] Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other: Medium Sand w/ Coarse Silt

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X [ ] Tree % Cover Shrub % Cover 2 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Coarse Silt w/ Pebbles on top

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X [15] Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Pebble + Cobble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Site Description:
Stream is:

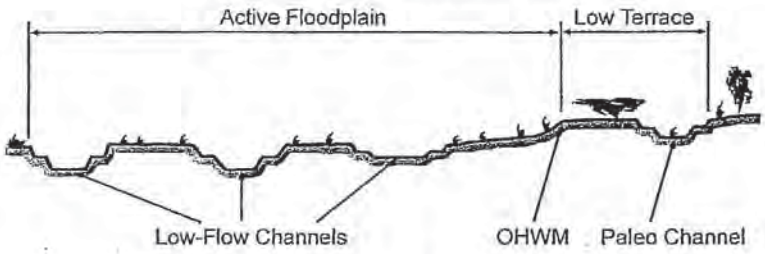
		Vegetation % In Stream:	
Braided	X	0-20	
Sinuous		20-40	
Curved		40-60	
Straight		60-80	
Entrenched		80-100	
Bowl Shaped			
Shallow	X		

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

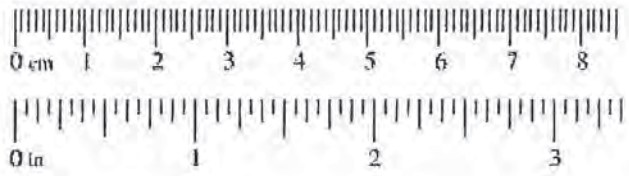
Additional Description:
Hydro indicators
Bed/Bank, Δ in sediment texture
Drift deposits

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
			Cobble	Gravel
2.56		64	Pebble	
0.157		4	Granule	
0.079		2.00	Very coarse sand	
0.039		1.00	Coarse sand	
0.020		0.50	Medium sand	Sand
1/2	0.0098	0.25	Fine sand	
1/4	0.005	0.125	Very fine sand	
1/8	0.0025	0.0625	Coarse silt	
1/16	0.0012	0.031	Medium silt	
1/32	0.00061	0.0156	Fine silt	Silt
1/64	0.00031	0.0078	Very fine silt	
1/128	0.00015	0.0039		
			Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1130
Path 46
Date: 9/26/2016 Feature ID: SF-10 Location: Mojave Desert

Upstream Photo
Downstream Photo

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: unveg in channel

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X <1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 5 Tree % Cover 0 Shrub % Cover 3 Herb % Cover 2
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Coarse Sand w/ Pebbles

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Site Description:
Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

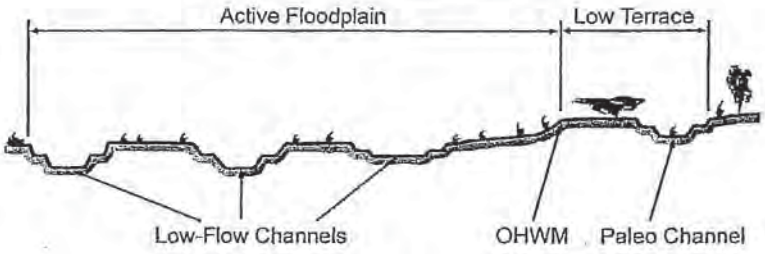
0-20	X
20-40	
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

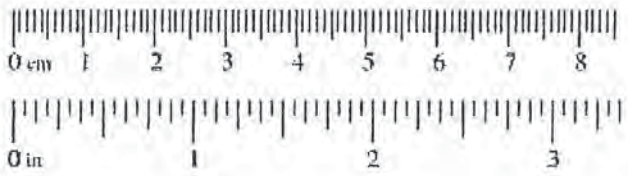
Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture
Soil cracks,
Rift deposits

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1130
Path 46

Date: 9/20/2016 Feature ID: SF-11 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle to moderate slope
Veg Type(s) in Drainage: no veg in channel

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other: Trash

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X <1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other: Very Fine to Fine Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 3 Tree % Cover 0 Shrub % Cover 2 Herb % Cover 1
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover <5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

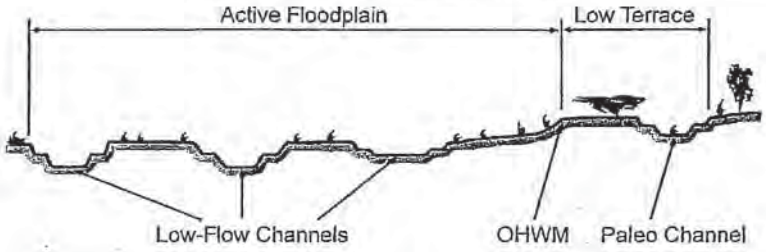
Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

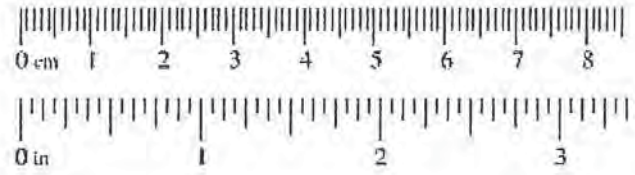
Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture, Rust deposit

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

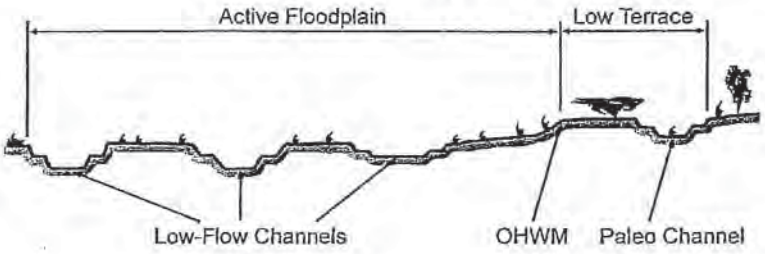
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

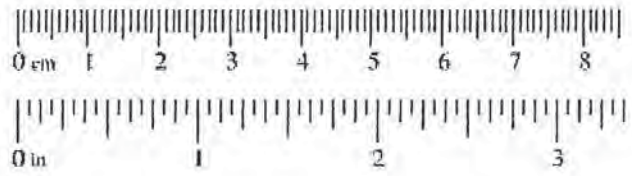
Project/Task: 3MBC000100 T 300 Path 46	Staff: AR and CC	Time: 0835	Upstream Photo Downstream Photo		**Site Description:** Stream is:
Date: 9/20/2016	Feature ID: SG-1	Location: Mojave Desert			Braided ✓ Sinuous Curved Straight Entrenched Bowl Shaped Shallow ✓
Circle Preliminary Status: USACE CDFW RWQCB			Do Normal Conditions Exist? Y Significant Disturbance? N		
Circle Flow Character: Ephemeral Intermittent Perennial			Potential Wetland?		
OHWM Recorded by: Field Map GPS GIS Digitizing			Hydrology Wetland Plants Surface Water/Depth:		
Side Slope Estimate: gentle slope Veg Type(s) in Drainage: UNveg in channel					Vegetation % In Stream: 0-20 ✓ 20-40 40-60 60-80 ✗ 80-100 ✗
Anthropogenic Modifications: Road Culvert Other:	Grazing Channel	Channelized Riprap	Upstream Blocked Downstream Blocked Lateral Flow Blocked		Stream Type: V-Ditch w/ Sediment Eroded Channel Desert Wash ✓ Flowing River/Stream Dry Streambed
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use: Urban Roads	Rural Utility Lines	Commercial	Agriculture Other: Open Space		
Stream Cross Section Drawing: 					Additional Description: Hydro Indicators Bed/Bank, Δ in sediment texture, Soil Cracks
OHWM: Change in sediment texture ✓ Change in vegetation species Change in vegetation cover Comment:			Break in bank slope ✓ Other:		
Low-Flow Channel: 50 ✓ Tree % Cover 0			Shrub % Cover 0	Herb % Cover 1	
Circle average sediment texture Silt: Fine Medium Coarse			Sand Fine Medium Coarse Very Coarse Other: Fine to Coarse Sand		
Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other: Δ in sediment texture			Community succession: NA Early (herbs/seedlings) ✓ Mid (herbs/shrubs/saplings Late (herbs/shrubs/trees)		
Comments:					
Active Floodplain: 50 ✓ 2 Tree % Cover 0			Shrub % Cover 1	Herb % Cover 1	
Circle average sediment texture Granule Pebble Cobble Boulder			Sand: Fine Medium Course Very Coarse Other: Granule to Pebble		
Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other: Δ in sediment texture			Community succession: NA Early (herbs/seedlings) ✓ Mid (herbs/shrubs/saplings Late (herbs/shrubs/trees)		
Comments:					
Low Terrace: Y			Shrub % Cover	Herb % Cover	
Circle average sediment texture Granule Pebble Cobble Boulder			Sand: Fine Medium Course Very Coarse Other:		
Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:			Community succession: NA Early (herbs/seedlings) Mid (herbs/shrubs/saplings Late (herbs/shrubs/trees)		
Comments: N/A					

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 0950
Path 46

Date: 9/26/2016 Feature ID: SG-2 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: veg in channel

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: Y | 1 | Tree % Cover 0 | Shrub % Cover 0 | Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments: Δ in sediment texture

Active Floodplain: Y | 13 | Tree % Cover 0 | Shrub % Cover 10 | Herb % Cover 3
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Y | 15 | Tree % Cover 0 | Shrub % Cover 10 | Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Medium Sand w/Cobble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

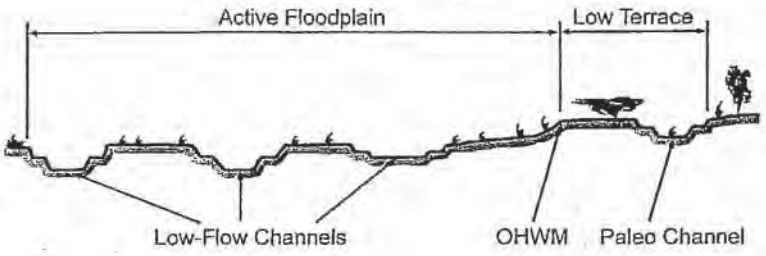
Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture,

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
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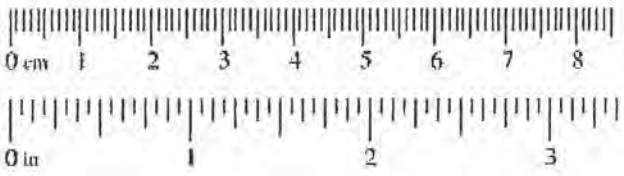
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 0900
Path 46

Date: 9/21/2016 Feature ID: SA-5G-3 Location: Mojave Desert

Upstream Photo
Downstream Photo

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: veg in channel

Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % in Stream:
0-20
20-40
40-60
60-80 X
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X 2 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other: Very Fine Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 5 Tree % Cover 0 Shrub % Cover 3 Herb % Cover 2
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

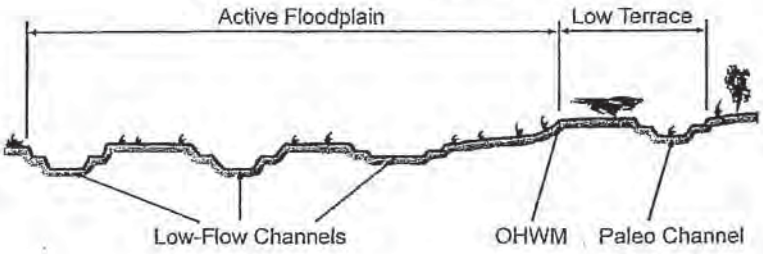
Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
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0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
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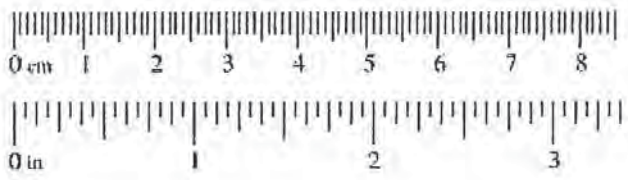
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 0715
Path 46

Date: 9/26/2016 Feature ID: SG-4 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: trees in channel

Upstream Photo
Downstream Photo

Site Description:
Stream is:

Braided	X
Sinuous	X
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % in Stream:

0-20	
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Other: Grazing Channel Channelized Riprap

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture,
Drift deposit

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover
Break in bank slope X
Other:
Comment:

Low-Flow Channel: Y <1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Y 2 Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Very Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

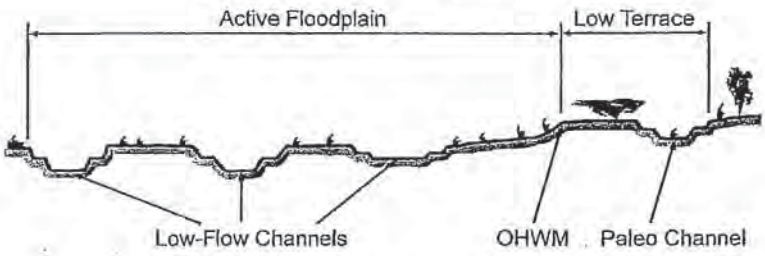
Low Terrace: Y Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments: N/A

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
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0.157	4	Pebble	
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0.039	1.00	Very coarse sand	
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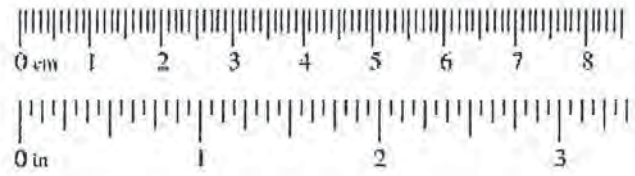
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 0915
Path 46

Date: 9/21/2016 Feature ID: SG-5 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: veg unveg in channel

Anthropogenic Modifications: Road Culvert Other: Grazing Channel Channelized Riprap

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X 4 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1

Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other: Medium to Coarse Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 4 Tree % Cover 0 Shrub % Cover 1 Herb % Cover 3

Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5

Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Very Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris: Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Site Description:

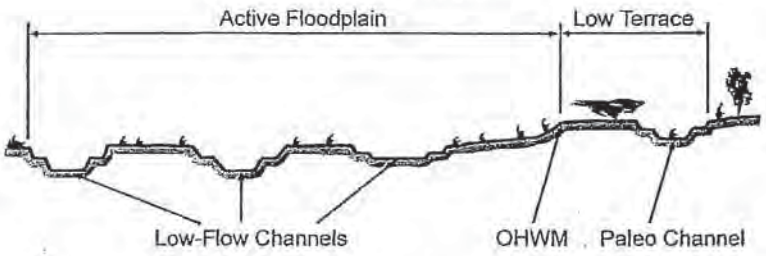
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20 /
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Additional Description:
Hydro Indicators
Bed / Bank,
Δ in sediment texture
Drift deposit

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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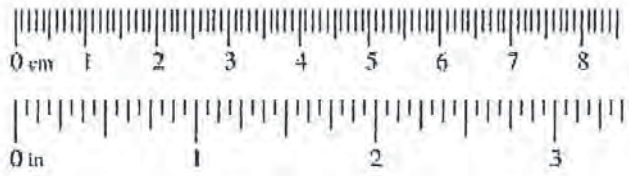


Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 0935
Path 46

Date: 9/ 26/2016 Feature ID: FG-6 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: unveg in channel

Upstream Photo
Downstream Photo

Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture
Drift deposit

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X <1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other: Very Fine Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 2 Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

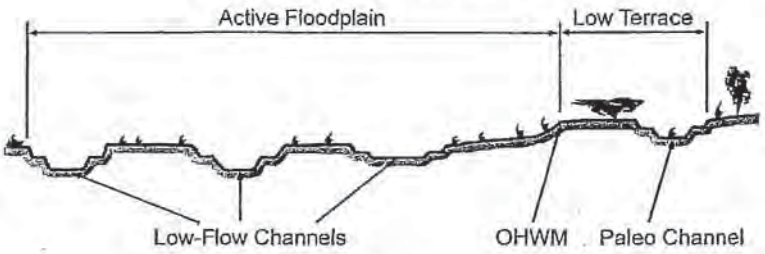
Low Terrace: X Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

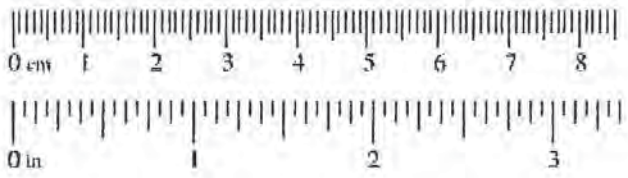
Comments:
N/A

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

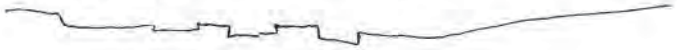
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 0950		Upstream Photo		**Site Description:**
Path 46		Downstream Photo		Stream is:
Date: 9/22/2016 Feature ID: 5Cr-7 5Cr-8	Location: Mojave Desert			Braided X
				Sinuous
Circle Preliminary Status: USACE (CDFW) RWQCB	Do Normal Conditions Exist? Y			Curved
	Significant Disturbance? N			Straight
Circle Flow Character: (Ephemeral) Intermittent Perennial	Potential Wetland?			Entrenched
	Hydrology			Bowl Shaped
OHWM Recorded by: (Field Map) GPS GIS Digitizing	Wetland Plants			Shallow X
	Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: gentle slope				0-20
Veg Type(s) in Drainage: Some veg in channel				20-40
				40-60
Anthropogenic Modifications: (Road) Grazing Channelized		Upstream Blocked		60-80
Culvert Channel Riprap		Downstream Blocked		80-100
Other:		Lateral Flow Blocked		Stream Type:
Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment
Circle Surrounding Land Use: Urban Rural Commercial Agriculture				Eroded Channel
Roads (Utility Lines) Other: Open Space				Desert Wash X
				Flowing River/Stream
				Dry Streambed

Stream Cross Section Drawing:



Additional Description:
Hydro Indicators
Bed/Bank,
Δ in sediment texture

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X <1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover <1
Circle average sediment texture Sand: (Fine) Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris (Presence of bed and bank)	Early (herbs/seedlings) X
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other: Δ in sediment texture	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 2 Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
(Granule Pebble) Cobble Boulder Other: Granule to Pebble

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris (Presence of bed and bank)	Early (herbs/seedlings) X
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other: Δ in sediment texture	Late (herbs/shrubs/trees)

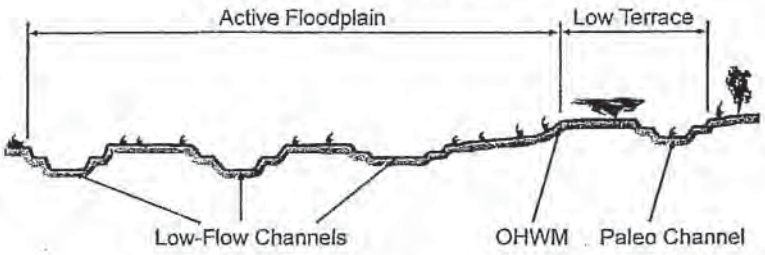
Comments:

Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule (Pebble) Cobble Boulder Other: Silt w/ Pebble

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris (Presence of bed and bank)	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other: Δ in sediment texture	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
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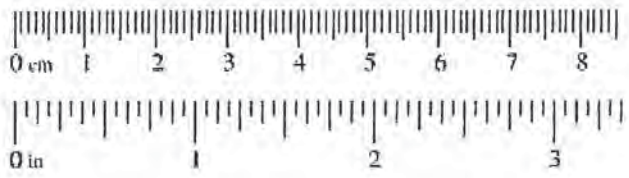
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1000
Path 46

Date: 9/26/2016 Feature ID: 5G-8 Location: Mojave Desert

Circle Preliminary Status: USACE (CDFW) RWQCB

Circle Flow Character: (Ephemeral) Intermittent Perennial

OHWM Recorded by: (Field Map), GPS GIS Digitizing

Side Slope Estimate: gentle slope

Veg Type(s) in Drainage: Unveg in channel

Do Normal Conditions Exist? Y

Significant Disturbance? N

Potential Wetland?

Hydrology

Wetland Plants

Surface Water/Depth:

Upstream Photo

Downstream Photo

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: (Road) Culvert Other: Grazing Channel Channelized Riprap

Upstream Blocked

Downstream Blocked

Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads (Utility Lines) Other: Open Space

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Stream Cross Section Drawing:

Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture, Drift deposit

OHWM:

Change in sediment texture [X]
Change in vegetation species [ ]
Change in vegetation cover [X]
Comment:

Break in bank slope [X]
Other:

Low-Flow Channel: X [0] Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand (Fine) Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples

(Drift/Debris Presence of bed and bank)

Benches Soil development Surface relief

Other: Δ in sediment texture

Community succession: NA X

Early (herbs/seedlings)

Mid (herbs/shrubs/saplings

Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X [1] Tree % Cover 0 Shrub % Cover <1 Herb % Cover <1

Circle average sediment texture Sand: Fine Medium Course Very Coarse

(Granule Pebble Cobble Boulder) Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris (Presence of bed and bank)

Benches Soil development Surface relief

Other: Δ in sediment texture

Community succession: NA

Early (herbs/seedlings) X

Mid (herbs/shrubs/saplings

Late (herbs/shrubs/trees)

Comments:

Low Terrace: X [ ] Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples

Drift/Debris Presence of bed and bank

Benches Soil development Surface relief

Other:

Community succession: NA

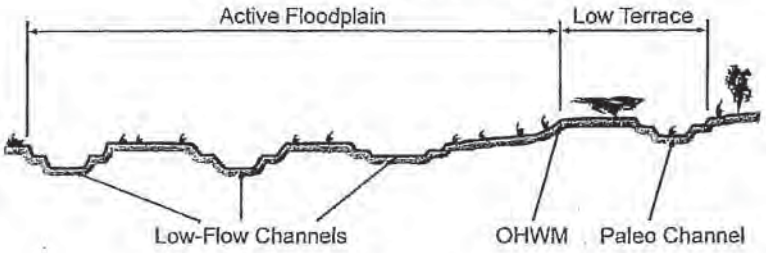
Early (herbs/seedlings)

Mid (herbs/shrubs/saplings

Late (herbs/shrubs/trees)

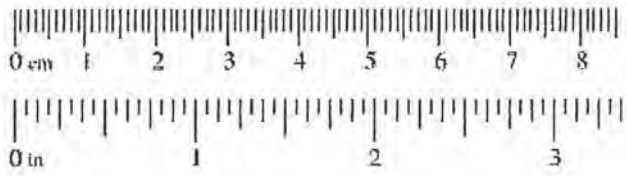
Comments: N/A

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1010
Path 46

Date: 9/26/2016 Feature ID: SG-9 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?

OHWM Recorded by: Field Map GPS GIS Digitizing

Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: Unveg in Channel

Upstream Photo
Downstream Photo

Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Anthropogenic Modifications: Road Culvert Other: Grazing Channel Channelized Riprap

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture
Soil Cracks

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X 41 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 41
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other: Medium Sand w/ Coarse Silt

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 10 Tree % Cover 0 Shrub % Cover 5 Herb % Cover 1
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Fine Sand w/ Pebble

Circle Indicators: ~~Mudcracks~~ Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

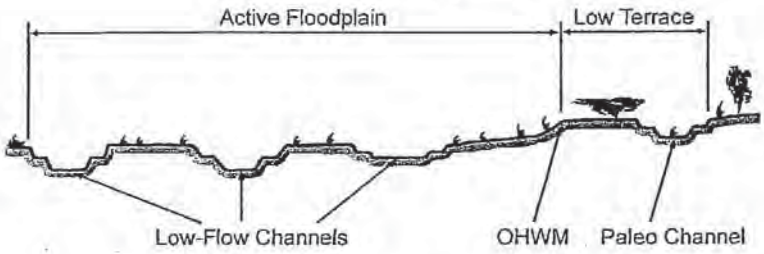
Low Terrace: X 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Fine Sand w/ Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

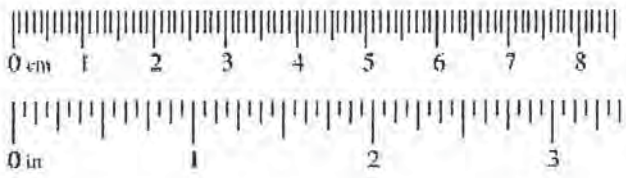
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1015 Upstream Photo
Path 46 Downstream Photo

Date: 9/21/2016 Feature ID: SG-10 Location: Mojave Desert

Circle Preliminary Status: USACE (CDFW) RWQCB Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: (Ephemeral) Intermittent Perennial Potential Wetland?
Hydrology
OHWM Recorded by: (Field Map) GPS GIS Digitizing Wetland Plants
Surface Water/Depth:

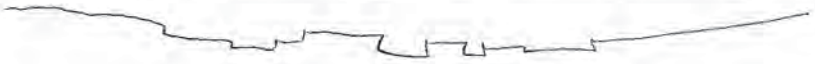
Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: Unveg in channel

Anthropogenic Modifications: (Road) Grazing Channelized Upstream Blocked
Culvert Channel Riprap Downstream Blocked
Other: Trash Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads (Utility Lines) Other: Open Space

Stream Cross Section Drawing:



OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:
Break in bank slope X
Other:

Low-Flow Channel: X 4 Tree % Cover Shrub % Cover 10 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium (Coarse) Other:
Circle Indicators: (Mudcracks) Ripples
(Drift/Debris) (Presence of bed and bank)
Benches Soil development Surface relief
Other: Δ in sediment texture
Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)
Comments:

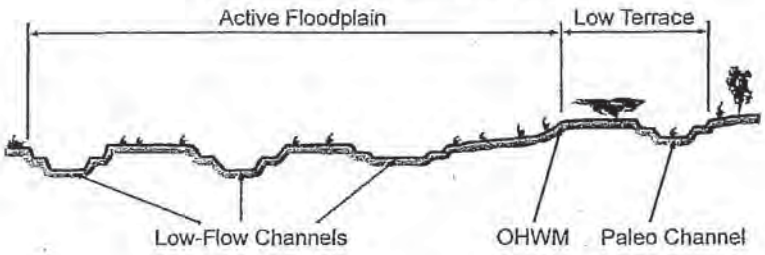
Active Floodplain: X 4 Tree % Cover 10 Shrub % Cover 3 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium (Course) Very Coarse
(Granule) Pebble Cobble Boulder Other: Coarse to Granule
Circle Indicators: Mudcracks Ripples
Drift/Debris (Presence of bed and bank)
Benches Soil development Surface relief
Other: Δ in sediment texture
Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)
Comments:

Low Terrace: X 15 Tree % Cover 10 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule (Pebble) Cobble Boulder Other:
Circle Indicators: Mudcracks Ripples
Drift/Debris (Presence of bed and bank)
Benches Soil development Surface relief
Other: Δ in sediment texture
Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings) X
Late (herbs/shrubs/trees)
Comments:

Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X
Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100
Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Additional Description:
Hydro Indic.
Bed/Bank,
Δ in sediment texture,
Soil Cracks,
Drift deposits

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

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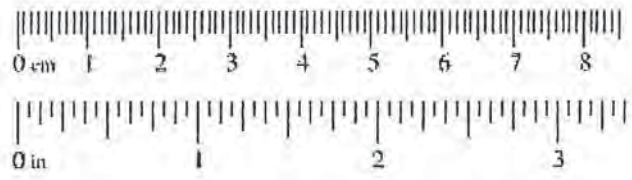
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5th A
Investigator(s): I. Cain, C. Renfrew

Date: 09.22.14 **Time:** 1035
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

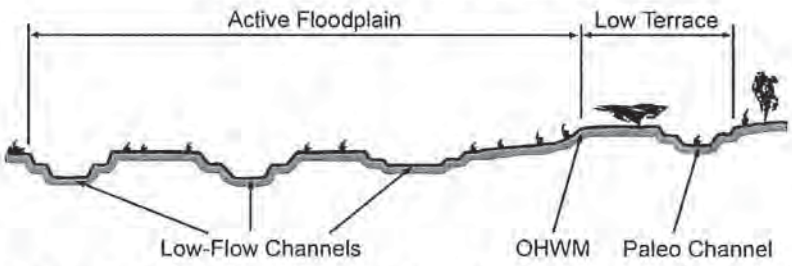
Brief site description:

Desert Wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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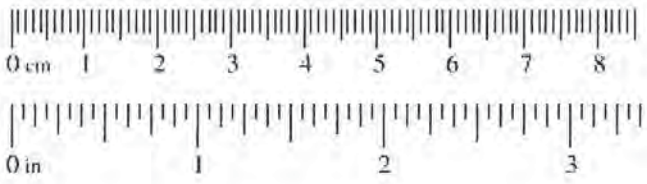
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SH-A **Date:** 09.22.16 **Time:** 1035

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse

Total veg cover: ____ % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5H-A **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: _____% Tree: 0 % Shrub: 2 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1035	Upstream Photo	X	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/22/2016	Feature ID: SH-A	Location: Mojave Desert			Braided X
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved
		Significant Disturbance?		X	Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology			Bowl Shaped X
		Wetland Plants			Shallow
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Moderate					0-20 X
Veg Type(s) in Drainage: Larrea Ambrosia					20-40
					40-60

Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	X
	Culvert	Channel	Riprap	Downstream Blocked	
	Other:			Lateral Flow Blocked	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	
	Roads	Utility Lines	Other:		

Stream Type:

60-80	X
80-100	
V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1

Circle average sediment texture: Silt: Fine Medium Coarse; Sand: Fine Medium Course Very Coarse; Other:

Circle Indicators: Mudcracks Ripples; Drift/Debris Presence of bed and bank; Benches Soil development Surface relief; Other:

Community succession: NA; Early (herbs/seedlings) X; Mid (herbs/shrubs/saplings; Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 2 Herb % Cover 1

Circle average sediment texture: Granule Pebble Cobble Boulder; Sand: Fine Medium Course Very Coarse; Other:

Circle Indicators: Mudcracks Ripples; Drift/Debris Presence of bed and bank; Benches Soil development Surface relief; Other:

Community succession: NA; Early (herbs/seedlings); Mid (herbs/shrubs/saplings X; Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover; Shrub % Cover; Herb % Cover

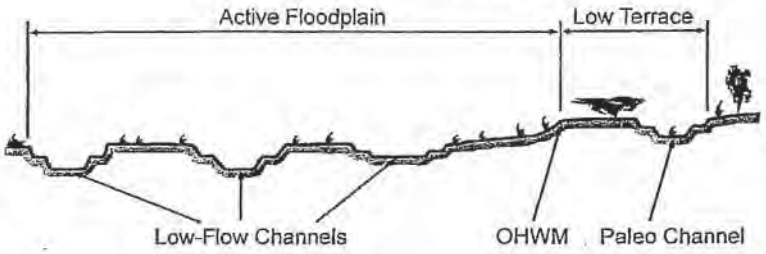
Circle average sediment texture: Granule Pebble Cobble Boulder; Sand: Fine Medium Course Very Coarse; Other:

Circle Indicators: Mudcracks Ripples; Drift/Debris Presence of bed and bank; Benches Soil development Surface relief; Other:

Community succession: NA; Early (herbs/seedlings); Mid (herbs/shrubs/saplings; Late (herbs/shrubs/trees)

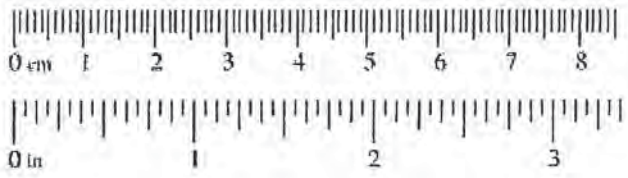
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SH-13
Investigator(s): I Cain, C Renfrew

Date: 09.22.16 **Time:** 1050
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

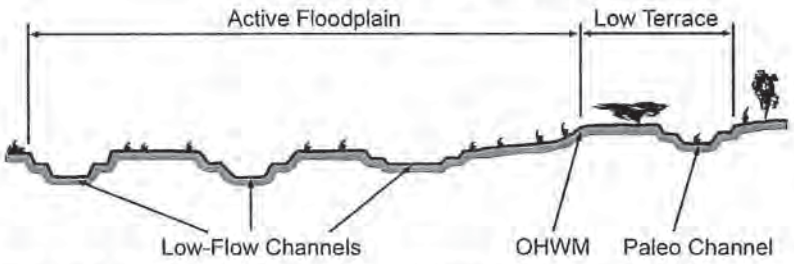
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

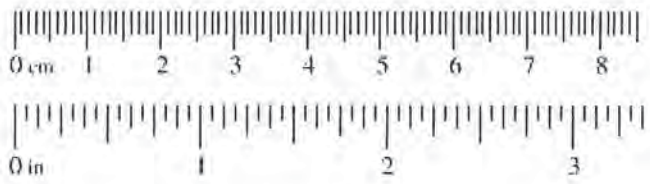


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5H-B **Date:** 9.22.16 **Time:** 1050

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse

Total veg cover: ____ % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** S4-B **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46 | Staff: CR and IC | Time: 1050 | Upstream Photo: X | Downstream Photo:

Date: 9/22/2016 | Feature ID: SH-B | Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? X

Significant Disturbance? X

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?

OHWM Recorded by: Field Map GPS GIS Digitizing

Hydrology

Wetland Plants

Surface Water/Depth:

Side Slope Estimate: Slight

Veg Type(s) in Drainage:

Site Description:

Stream is:

Braided		Curved	X
Sinuous		Straight	
Entrenched		Bowl Shaped	
Shallow	X		

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Other: | Grazing Channel | Channelized Riprap

Upstream Blocked | Downstream Blocked | Lateral Flow Blocked

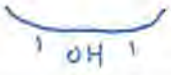
Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Cross Section Drawing:



Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA X | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings | Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings | Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

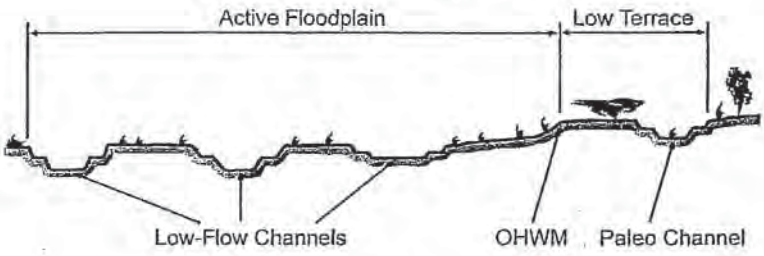
Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings | Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SH-C
Investigator(s): I Cain, C Renfrew

Date: 09.22.16 **Time:** 1105
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

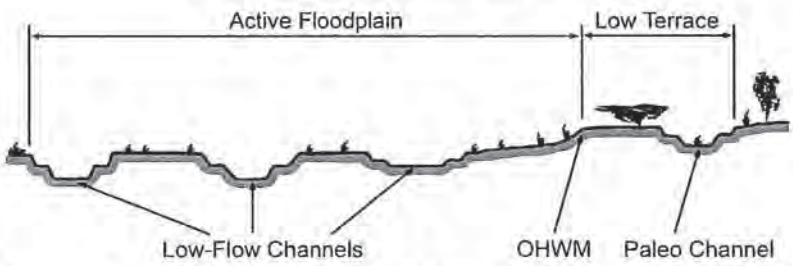
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

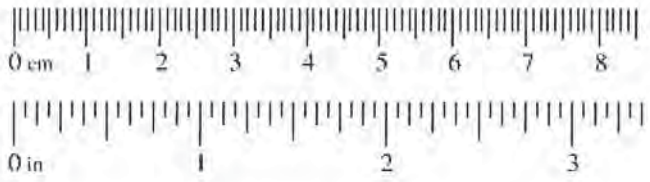


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SH-C **Date:** 09.22.16 **Time:** 1105

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very coarse

Total veg cover: ____ % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SH-C **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule/pebble

Total veg cover: 20 % Tree: 0 % Shrub: 10 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1105	Upstream Photo	X	**Site Description:**	
			Downstream Photo		Stream is:	
Date: 9/22/2016	Feature ID: SH-C	Location: Mojave Desert			Braided	X
					Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
		Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Slight					0-20	X
Veg Type(s) in Drainage: Larrea/Ambrosia					20-40	
					40-60	
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80	
	Culvert Channel Riprap		Downstream Blocked		80-100	
	Other:		Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel	
	Roads Utility Lines Other:				Desert Wash	X
Stream Cross Section Drawing:					Flowing River/Stream	
					Dry Streambed	
					Additional Description:	

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 0	Herb % Cover 0
Circle average sediment texture		Sand: Fine Medium Course Very Coarse		
Silt: Fine Medium Coarse		Other:		

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain:	X	Tree % Cover 0	Shrub % Cover 10	Herb % Cover 10
Circle average sediment texture		Sand: Fine Medium Course Very Coarse		
Granule Pebble Cobble Boulder		Other:		

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

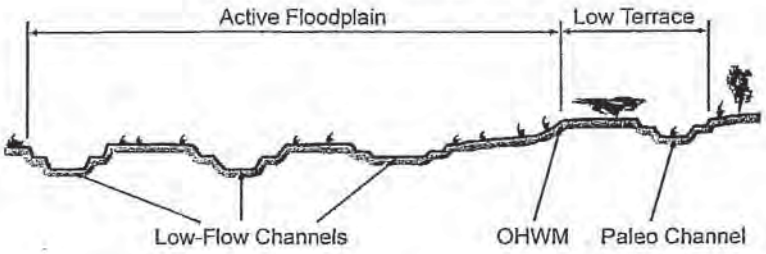
Comments:

Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover
Circle average sediment texture		Sand: Fine Medium Course Very Coarse		
Granule Pebble Cobble Boulder		Other:		

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

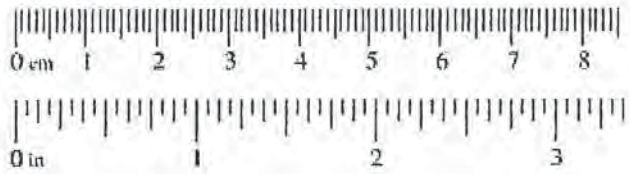
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SH-D
Investigator(s): I Cain, C Renfrew

Date: 09.22.16 **Time:** 1110
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

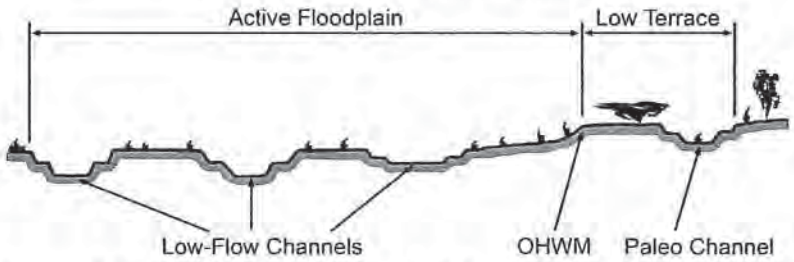
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
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0.079	2.00	Very coarse sand	
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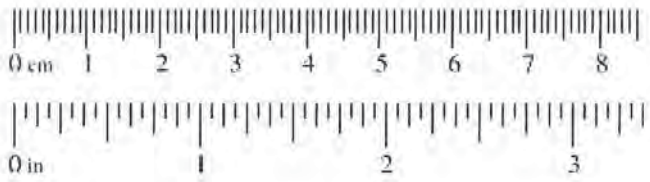
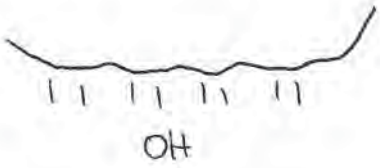
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5H-D **Date:** 09.22.16 **Time:** 1110

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: ____ % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SH-D **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: _____ % Tree: 0 % Shrub: 20 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~pebble~~

Total veg cover: _____ % ~~Tree: 0 % Shrub: 20 % Herb: 5 %~~

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ ~~Mid (herbaceous~~, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

v

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1110
Path 46

Upstream Photo X
Downstream Photo

Date: 9/22/2016 Feature ID: SH-D Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? X
Significant Disturbance? X

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: Lauren Anderson

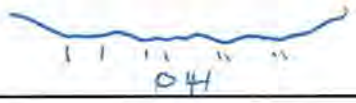
Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA X
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 20 Herb % Cover 5

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings) X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings)
Late (herbs/shrubs/trees)

Comments:

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

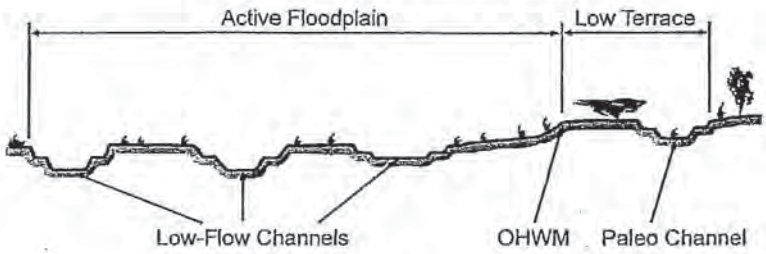
0-20	
20-40	X
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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1/8 0.0025	0.0625	Very fine sand	Sand
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1/32 0.00061	0.0156	Medium silt	Silt
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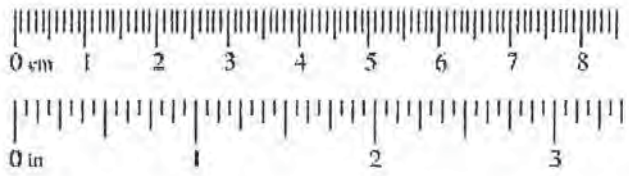
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SH-E
Investigator(s): I Cain, C Renfrew

Date: 09.22.16
Town: Mojave Desert
Time: 1115
State: CA
Photo begin file#:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

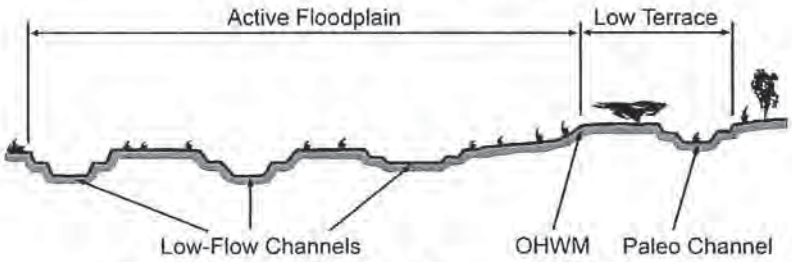
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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0.020	0.50	Medium sand	Sand
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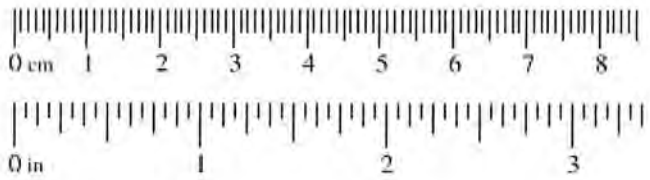
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5H-E **Date:** 09.22.16 **Time:** 1115

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5H-E **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1115	Upstream Photo	X	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/~~29~~/2016	Feature ID: SH-E	Location: Mojave Desert			Braided
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved
		Significant Disturbance?		?	Straight X
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
		Hydrology			Bowl Shaped ?
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Moderate					0-20 X
Veg Type(s) in Drainage:					20-40
					40-60
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80
	Culvert Channel Riprap		Downstream Blocked		80-100
	Other:		Lateral Flow Blocked		Stream Type:
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel
	Roads Utility Lines Other:				Desert Wash X
Stream Cross Section Drawing:					Flowing River/Stream
					Dry Streambed
					Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Silt: Fine Medium Coarse | Sand: Fine Medium Course Very Coarse | Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA X; Early (herbs/seedlings); Mid (herbs/shrubs/saplings); Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Silt: Fine Medium Coarse | Sand: Fine Medium Course Very Coarse | Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA; Early (herbs/seedlings); Mid (herbs/shrubs/saplings); Late (herbs/shrubs/trees)

Comments:

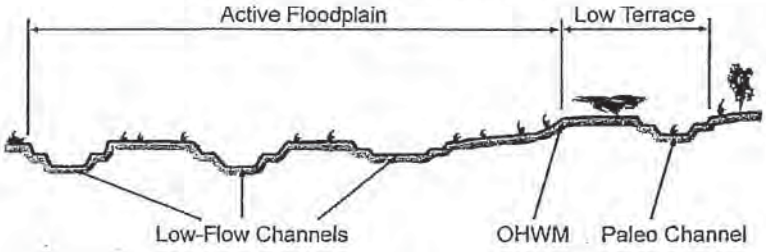
Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Silt: Fine Medium Coarse | Sand: Fine Medium Course Very Coarse | Granule Pebble Cobble Boulder | Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA; Early (herbs/seedlings); Mid (herbs/shrubs/saplings); Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



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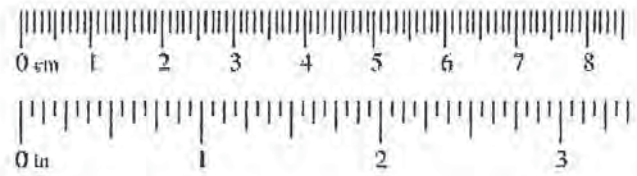


Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1030
Path 46

Date: 9/22/2016 Feature ID: ~~5H~~ 5H-1 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants

OHWM Recorded by: Field Map GPS GIS Digitizing

Surface Water/Depth:

Side Slope Estimate: gentle to moderate slope

Veg Type(s) in Drainage: unveg in channel

Upstream Photo
Downstream Photo

Site Description:

Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture
Drift deposit

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X (1) Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other: Very Fine to Medium Sand w/Pebble

Circle Indicators: Mudcracks Ripples
~~Drift/Debris~~ Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X (3) Tree % Cover 0 Shrub % Cover 1 Herb % Cover 2
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: ~~Very Fine~~ Very Fine Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

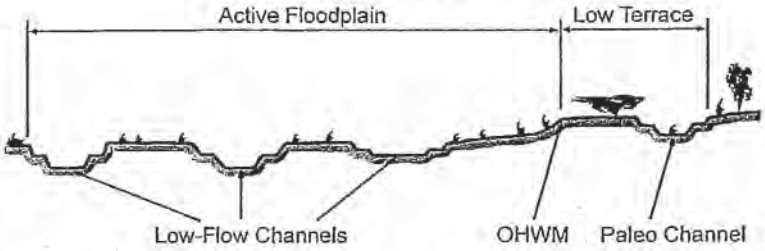
Low Terrace: X (15) Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Very Fine Sand w/Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

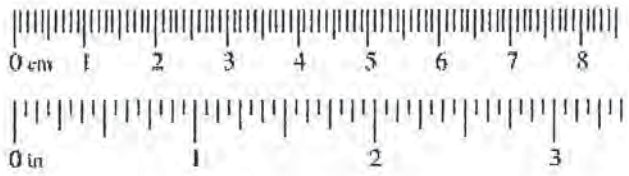
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: ~~ER and IC~~ CDC, AR Time: 1012
Path 46
Date: 9/22/2016 Feature ID: S1-1 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: negligible

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other: Trash

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover
Comment:

Break in bank slope X
Other:

Low-Flow Channel: 0 2 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 2
Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Very Fine Medium Course Very Coarse
Other: Very Fine to Coarse Sand

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: 0 Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments: N/A

Low Terrace: 0 Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments: N/A

V

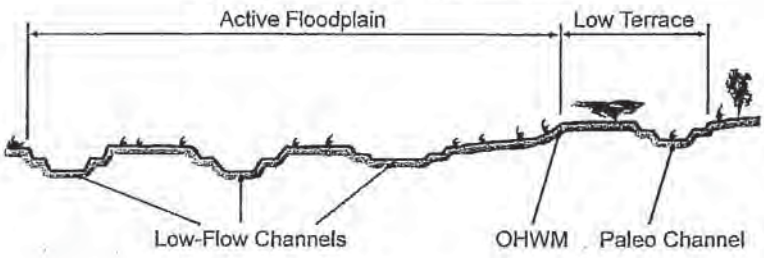
Site Description:
Stream is:
Braided
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

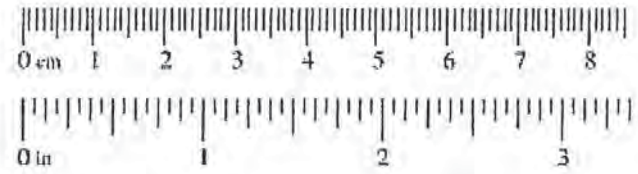
Additional Description:
Hydro Indicators
Bed/Bank
Δ in sediment

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
2.56		64	Cobble	Gravel
0.157		4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1040
Path 46
Date: 9/22/2016 Feature ID: 51-2 Location: Mojave Desert

Upstream Photo
Downstream Photo

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
~~Wetland Plants~~

OHWM Recorded by: Field Map GPS GIS Digitizing

Surface Water/Depth:

Side Slope Estimate: gentle to moderate slope
Veg Type(s) in Drainage: veg in channel

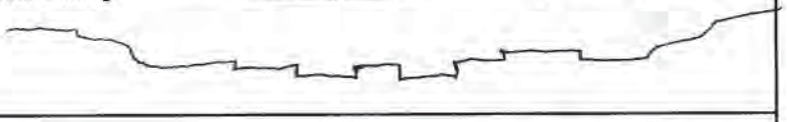
Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:



OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X ~~1~~ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture
~~Silt: Fine Medium Coarse~~
Sand Fine Medium Course Very Coarse
Other: Very Fine Sand w/Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development ~~Surface relief~~
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X ~~3~~ Tree % Cover 0 Shrub % Cover 1 Herb % Cover 2
Circle average sediment texture
~~Granule Pebble Cobble Boulder~~
~~Sand Fine Medium Course Very Coarse~~
~~Other: Very Fine Sand w/Pebble~~
* Coarse Silt w/ Granule

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X ~~15~~ Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: ~~Coarse~~ Silt w/Cobble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

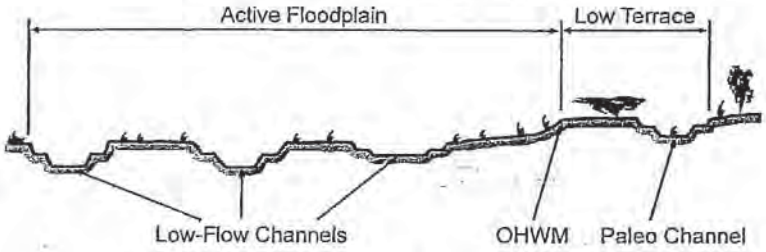
Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow

Vegetation % In Stream:
0-20
20-40
40-60
60-80
80-100 J

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

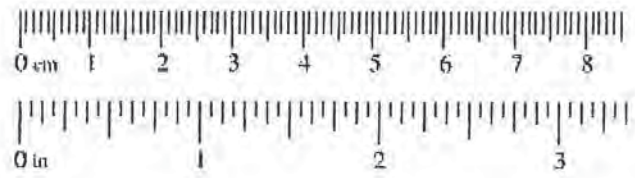
Additional Description:
Hydrology Indicators
Bed/Bank,
Δ in sediment texture

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: AR and CC Time: 1050
Path 46

Date: 9/22/2016 Feature ID: S1-3 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?
Hydrology
Wetland Plants

OHWM Recorded by: Field Map GPS GIS Digitizing

Surface Water/Depth:

Side Slope Estimate: moderate slope

Veg Type(s) in Drainage: veg in channel

Anthropogenic Modifications: Road Grazing Channelized
~~Culvert~~ Channel Riprap
Other:

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: ~~1~~ 1 Tree % Cover 0 Shrub % Cover Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other: Medium to Very Coarse

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment

Community succession:
NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X ~~3~~ 3 Tree % Cover 0 Shrub % Cover 1 Herb % Cover 2

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Coarse Silt w/Pebble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment

Community succession:
NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X ~~15~~ 15 Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Silt w/Cobble

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession:
NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

v

Site Description:

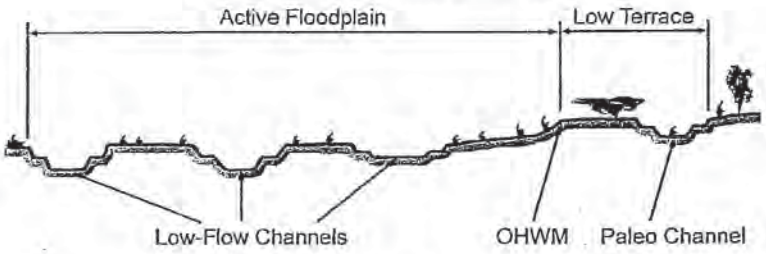
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow

Vegetation % in Stream:
0-20
20-40
40-60 X
60-80
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

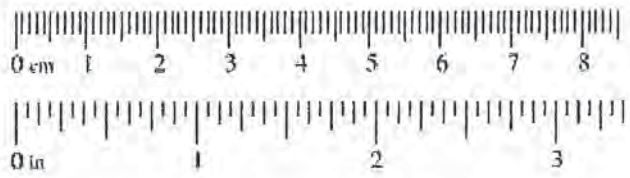
Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: ~~CR and IC~~ CRC, AR	Time:	Upstream Photo / Downstream Photo
Date: 9/22/2016	Feature ID: 51-4	Location: Mojave Desert	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist? Y	
		Significant Disturbance? N	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?	
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology / Wetland Plants / Surface Water/Depth:	
Side Slope Estimate: gentle slope + moderate			
Veg Type(s) in Drainage: on veg in Channel			

Site Description:

Stream is: Braided X, Sinuous, Curved, Straight X, Entrenched, Bowl Shaped, Shallow X

Vegetation % In Stream: 0-20, 20-40, 40-60, 60-80, 80-100 X

Stream Type: V-Ditch w/ Sediment, Eroded Channel, Desert Wash X, Flowing River/Stream, Dry Streambed

Additional Description: Hydro Indictors Bed/Bank, Δ in sediment texture, Drift deposit

Anthropogenic Modifications:	Road Culvert Other:	Grazing Channel	Channelized Riprap
			Upstream Blocked / Downstream Blocked / Lateral Flow Blocked
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication Other:
Circle Surrounding Land Use:	Urban Roads	Rural	Commercial Agriculture Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			
Comment:			

Low-Flow Channel: 1 — Tree % Cover 0 — Shrub % Cover 0 — Herb % Cover <1

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other: Medium Sand w/Pebble

Circle Indicators: ~~Mudcracks~~ Ripples	Community succession: NA
Drift/Debris: Presence of bed and bank	Early (herbs/seedlings) X
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other: Δ in sediment texture	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X 4 — Tree % Cover 0 — Shrub % Cover 2 — Herb % Cover 2

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other: Coarse Silt w/Pebble

Circle Indicators: ~~Mudcracks~~ Ripples	Community succession: NA
Drift/Debris: Presence of bed and bank	Early (herbs/seedlings)
Benches: Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other: Δ in sediment texture	Late (herbs/shrubs/trees)

Comments:

Low Terrace: 15 — Tree % Cover 0 — Shrub % Cover 10 — Herb % Cover 5

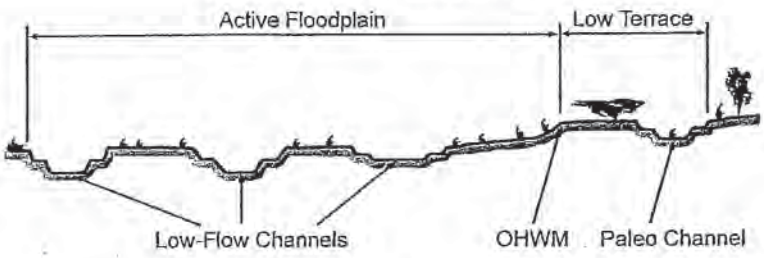
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other: Silt w/ Cobble

Circle Indicators: ~~Mudcracks~~ Ripples	Community succession: NA
Drift/Debris: Presence of bed and bank	Early (herbs/seedlings)
Benches: Soil development Surface relief	Mid (herbs/shrubs/saplings
Other: Δ in sediment texture	Late (herbs/shrubs/trees) X

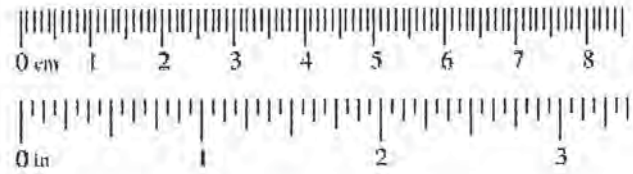
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
		Granule	Gravel
0.079	2.00		
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: ~~CR and IC~~ Time: Upstream Photo
Path 46 CRC, AR 0950 Downstream Photo
Date: 9/22/2016 Feature ID: SJ-1 Location: Mojave Desert
Circle Preliminary Status: USACE CDFW RWQCB Do Normal Conditions Exist? Y
Significant Disturbance? N
Circle Flow Character: Ephemeral Intermittent Perennial Potential Wetland?
Hydrology
OHWM Recorded by: Field Map GPS GIS Digitizing Wetland Plants
Surface Water/Depth:
Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: veg in channel

Site Description:
Stream is:
Braided
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow X
Vegetation % In Stream:
0-20
20-40
40-60
60-80 J
80-100

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:
Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Stream Cross Section Drawing:

Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture

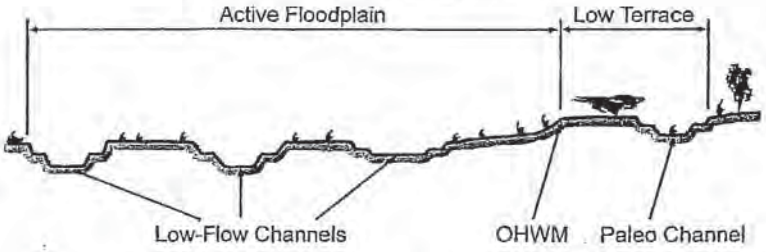
OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Break in bank slope X
Other:
Comment:

Low-Flow Channel: X (1) Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture
Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)
Comments:

Active Floodplain: X (3) Tree % Cover 0 Shrub % Cover 1 Herb % Cover 2
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Fine Sand w/ Pebble
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture
Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)
Comments:

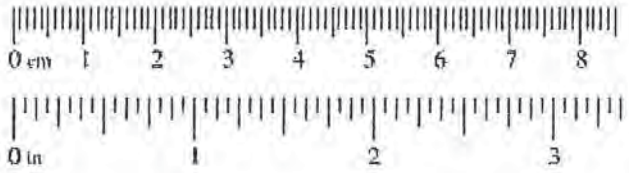
Low Terrace: X (15) Tree % Cover 0 Shrub % Cover 5 Herb % Cover 10
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other: Fine Sand w/ Granule
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture
Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5J-A
Investigator(s): I Cain, CRenfrew

Date: 09.22.16 **Time:** 1020
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

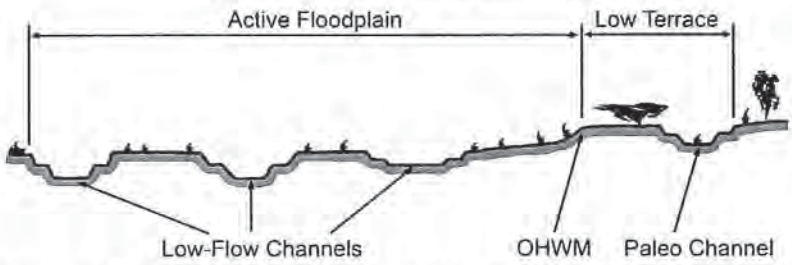
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

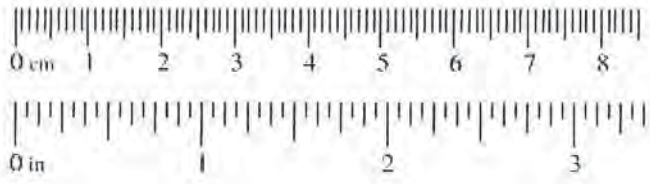


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

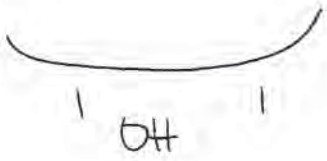
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SJ-A **Date:** 09.22.16 **Time:** 1020

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SJ-A **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: ____ % Tree: Ø % Shrub: 3 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

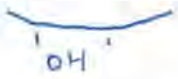
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1020	Upstream Photo	X	**Site Description:**	
			Downstream Photo		Stream is:	
Date: 9/22/2016	Feature ID: SJ-A	Location: Mojave Desert			Braided	X
					Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
		Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Slight / Flat					0-20	X
Veg Type(s) in Drainage: Larrea					20-40	
					40-60	
Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	60-80	
	Culvert	Channel	Riprap	Downstream Blocked	80-100	
	Other:			Lateral Flow Blocked	Stream Type:	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	Eroded Channel	
	Roads	Utility Lines	Other:		Desert Wash	X
Stream Cross Section Drawing:					Flowing River/Stream	
					Dry Streambed	
					Additional Description:	



OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

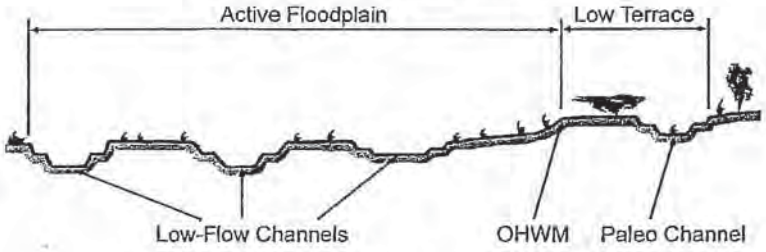
Comment:

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 0	Herb % Cover 0		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Silt: Fine Medium Coarse		Other:				
Circle Indicators: Mudcracks Ripples				Community succession:	NA	X
Drift/Debris Presence of bed and bank					Early (herbs/seedlings)	
Benches Soil development Surface relief					Mid (herbs/shrubs/saplings	
Other:					Late (herbs/shrubs/trees)	
Comments:						

Active Floodplain:	X	Tree % Cover 0	Shrub % Cover 3	Herb % Cover 5		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Granule Pebble Cobble Boulder		Other:				
Circle Indicators: Mudcracks Ripples				Community succession:	NA	
Drift/Debris Presence of bed and bank					Early (herbs/seedlings)	
Benches Soil development Surface relief					Mid (herbs/shrubs/saplings	X
Other:					Late (herbs/shrubs/trees)	
Comments:						

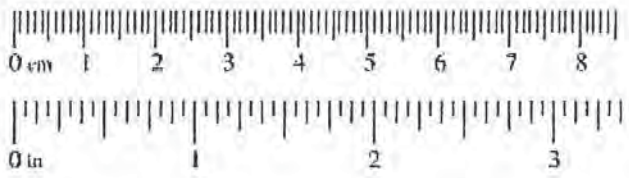
Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Granule Pebble Cobble Boulder		Other:				
Circle Indicators: Mudcracks Ripples				Community succession:	NA	
Drift/Debris Presence of bed and bank					Early (herbs/seedlings)	
Benches Soil development Surface relief					Mid (herbs/shrubs/saplings	
Other:					Late (herbs/shrubs/trees)	
Comments:						

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
		Very coarse sand	
0.039	1.00		
		Coarse sand	
0.020	0.50		Sand
		Medium sand	
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5K-1
Investigator(s): I Cain, C Renfrew

Date: 09.22.16 **Time:** 0930
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

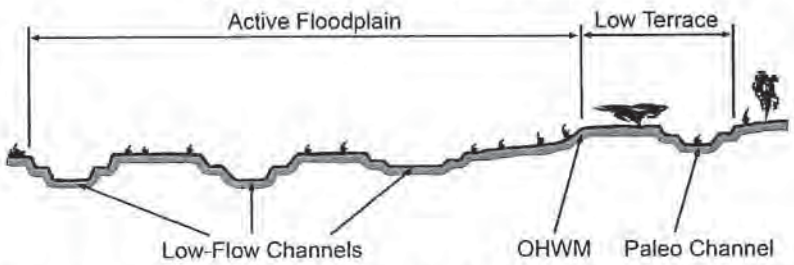
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

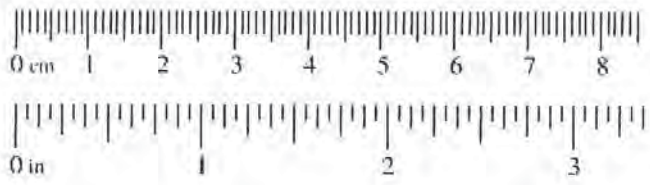


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

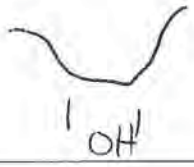
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SK-1 **Date:** 09.22.16 **Time:** 0930

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: Ø % Tree: Ø % Shrub: 1 % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5k-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 930	Upstream Photo	X	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/22/2016	Feature ID: ~~2~~ SK-1	Location: Mojave Desert			Braided
					Sinuous X
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved
		Significant Disturbance?			Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched X
		Hydrology			Bowl Shaped
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate:					0-20 X
Veg Type(s) in Drainage:					20-40
					40-60
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80
	Culvert Channel Riprap		Downstream Blocked		80-100
	Other:		Lateral Flow Blocked	X	Stream Type:
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel
	Roads Utility Lines Other:				Desert Wash X
Stream Cross Section Drawing:					Flowing River/Stream
					Dry Streambed
					Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

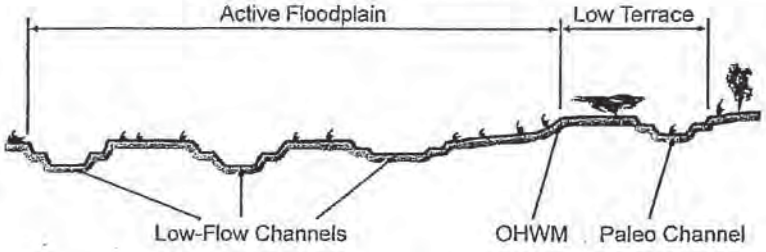
Comment:

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 1	Herb % Cover 0	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Silt: Fine Medium Coarse		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	X
Other:				Late (herbs/shrubs/trees)	
Comments:					

Active Floodplain:		Tree % Cover	Shrub % Cover	Herb % Cover	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	
Comments:					

Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	
Comments:					

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
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1/8 0.0025	0.0625	Very fine sand	
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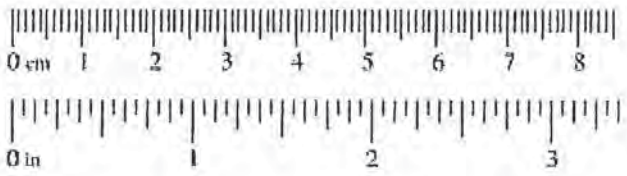
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5K-2
Investigator(s): I Cain, C Renfrew

Date: 09.22.16
Time: 0940
Town: Mojave Desert
State: CA
Photo begin file#:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

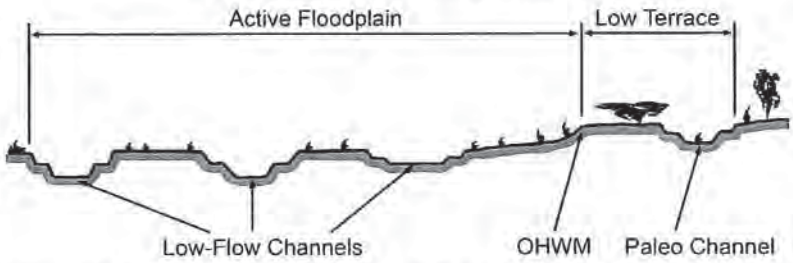
Brief site description:

Desert Wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

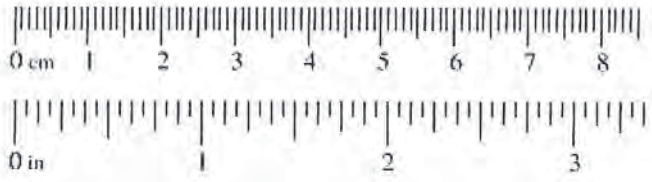


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SK-2 **Date:** 09.22.16 **Time:** 0940

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SK-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule/pebble

Total veg cover: 25 % Tree: 0 % Shrub: 5 % Herb: 20 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 940			Upstream Photo	X	**Site Description:**
Path 46			Downstream Photo		Stream is:
Date: 9/30/2016	Feature ID: SK-2	Location: Mojave Desert			Braided X
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved
		Significant Disturbance?		X	Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology			Bowl Shaped X
		Wetland Plants			Shallow
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Moderate					0-20
Veg Type(s) in Drainage: Larrea/Ambrosia					20-40 X
					40-60
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80
	Culvert Channel Riprap		Downstream Blocked		80-100
	Other:		Lateral Flow Blocked		Stream Type:
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel
	Roads Utility Lines Other:				Desert Wash X
					Flowing River/Stream
					Dry Streambed

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: 60X Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 6 Shrub % Cover 5 Herb % Cover 20

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

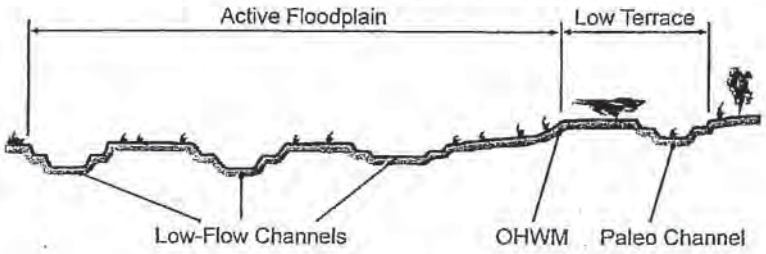
Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

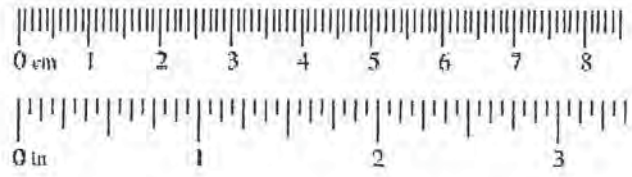
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5k-3
Investigator(s): J Cain, C Renfrow

Date: 09.22.16 **Time:** 1000
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

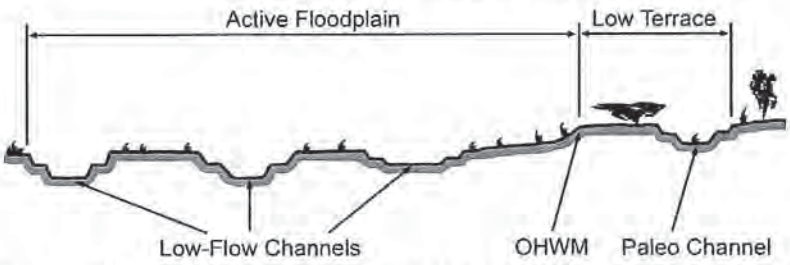
Brief site description:

Desert Wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
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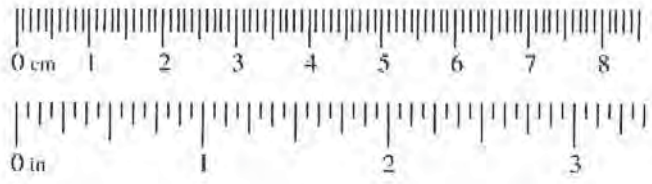
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SK-3 **Date:** 09.22.16 **Time:** 1000

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 3 % Tree: Ø % Shrub: 2 % Herb: 1 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5k-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1000	Upstream Photo	✓	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/22/2016	Feature ID: SK-3	Location: Mojave Desert			Braided		
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	X	
		Significant Disturbance?		X	Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	X	
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology			Bowl Shaped		
		Wetland Plants			Shallow		
		Surface Water/Depth:			Vegetation % in Stream:		
Side Slope Estimate: Vertical					0-20	X	
Veg Type(s) in Drainage: Creosote / Ambrosia					20-40		
					40-60		
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked	X	60-80		
	Culvert Channel Riprap		Downstream Blocked		80-100		
	Other:		Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel		
	Roads Utility Lines Other:				Desert Wash	X	
Stream Cross Section Drawing:					Flowing River/Stream		
					Dry Streambed		
					Additional Description:		

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 2 Herb % Cover 1

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples		Community succession: NA	
Drift/Debris Presence of bed and bank		Early (herbs/seedlings)	
Benches Soil development Surface relief		Mid (herbs/shrubs/saplings	X
Other:		Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: ✓ Tree % Cover 0 Shrub % Cover 5 Herb % Cover 2

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples		Community succession: NA	
Drift/Debris Presence of bed and bank		Early (herbs/seedlings)	
Benches Soil development Surface relief		Mid (herbs/shrubs/saplings	X
Other:		Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

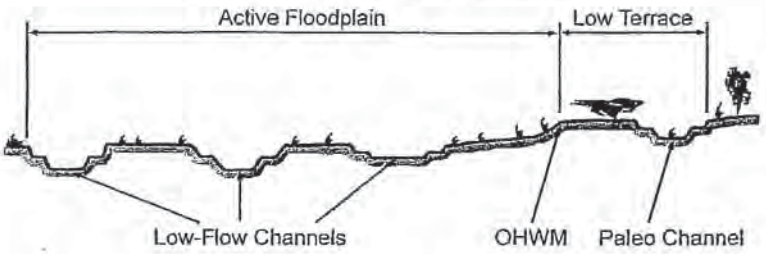
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples		Community succession: NA	
Drift/Debris Presence of bed and bank		Early (herbs/seedlings)	
Benches Soil development Surface relief		Mid (herbs/shrubs/saplings	
Other:		Late (herbs/shrubs/trees)	

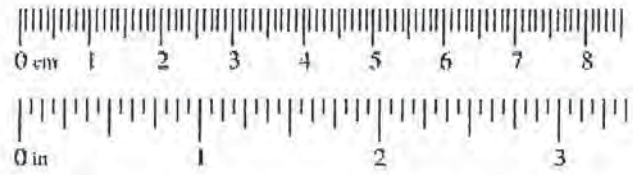
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
2.56		64	Cobble	Gravel
0.157		4	Pebble	
	0.079	2.00	Granule	
0.039		1.00	Very coarse sand	
0.020		0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5k-4
Investigator(s): I Cain, C Renfrew

Date: 09.22.16 **Time:** 1005
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

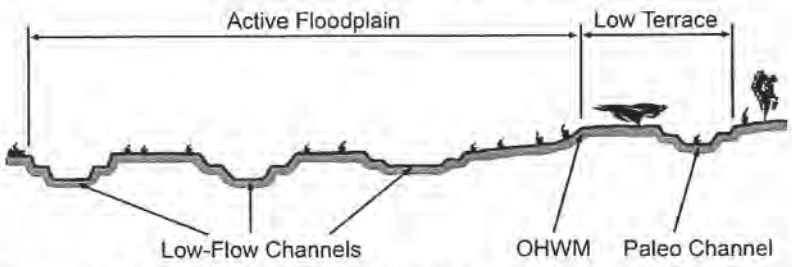
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
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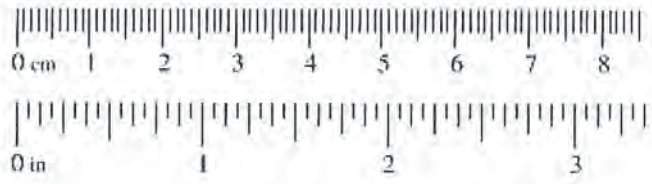
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SK-4 **Date:** 09.22.16 **Time:** 1005

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 1 % Tree: Ø % Shrub: Ø % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SK4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble/Cobble

Total veg cover: 40 % Tree: 0 % Shrub: 10 % Herb: 30 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1005	Upstream Photo / Downstream Photo ✓
Date: 9/22/2016	Feature ID: SK-4	Location: Mojave Desert	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist? ✗ / Significant Disturbance? ✓	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland? / Hydrology / Wetland Plants / Surface Water/Depth:	
OHWM Recorded by: Field Map GPS GIS Digitizing			
Side Slope Estimate: Slight			
Veg Type(s) in Drainage: Larrea tridentata			

Site Description:

Stream is:

Braided	✓
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	✓

Vegetation % In Stream:

0-20	
20-40	✓
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	✓
Flowing River/Stream	
Dry Streambed	

Additional Description:

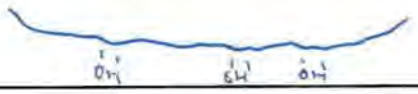
Anthropogenic Modifications: Road, Culvert, Other: / Grazing, Channel / Channelized, Riprap

Upstream Blocked / Downstream Blocked ✓ / Lateral Flow Blocked

Circle Chemical Issues: Pollution, Oil Slick, Eutrophication, Other:

Circle Surrounding Land Use: Urban, Rural, Commercial, Agriculture, Roads, Utility Lines, Other:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	✓	Break in bank slope	✓
Change in vegetation species		Other:	
Change in vegetation cover	✓		

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1

Circle average sediment texture: Silt: Fine Medium Coarse / Sand: Fine Medium Course Very Coarse / Other:

Circle Indicators: Mudcracks Ripples; Drift/Debris Presence of bed and bank; Benches Soil development Surface relief; Other:

Community succession: NA / Early (herbs/seedlings) ✓ / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

Comments:

Active Floodplain: ✓ Tree % Cover 0 Shrub % Cover 10 Herb % Cover 30

Circle average sediment texture: Granule Pebble Cobble Boulder / Sand: Fine Medium Course Very Coarse / Other:

Circle Indicators: Mudcracks Ripples; Drift/Debris Presence of bed and bank; Benches Soil development Surface relief; Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings ✓ / Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

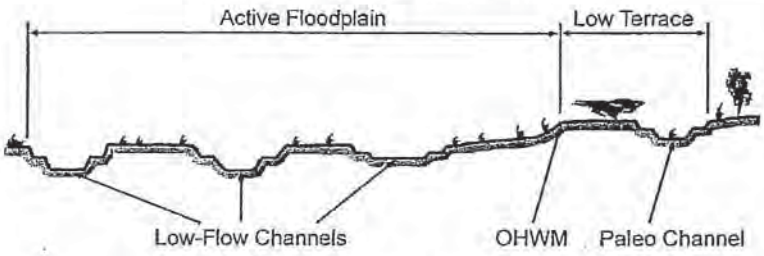
Circle average sediment texture: Granule Pebble Cobble Boulder / Sand: Fine Medium Course Very Coarse / Other:

Circle Indicators: Mudcracks Ripples; Drift/Debris Presence of bed and bank; Benches Soil development Surface relief; Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

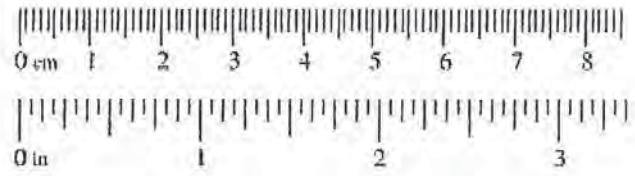
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
		Granule	Gravel
0.079	2.00		
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
		Very fine sand	Sand
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
		Very fine silt	Silt
1/128 0.00015	0.0039		
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5K-5
Investigator(s): I Cain, C Renfrew

Date: 09.22.16 **Time:** 1010
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

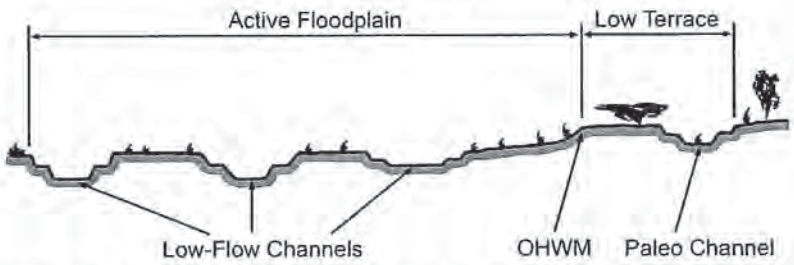
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

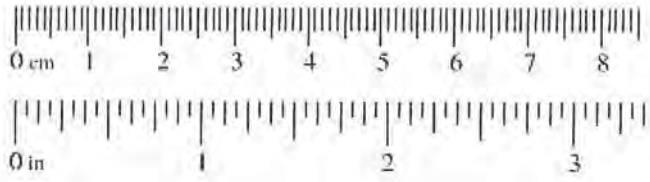


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
1/2 0.0098	0.25	Medium sand	Sand
		Fine sand	
1/4 0.005	0.125		
1/8 0.0025	0.0625	Very fine sand	
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156		Silt
		Fine silt	
1/64 0.00031	0.0078		
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SK-5 **Date:** 09.22.16 **Time:** 1010

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5K-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1010	Upstream Photo	X	**Site Description:**
Date: 9/22/2016	Feature ID: SK-5	Location: Mojave Desert	Downstream Photo		Stream is:
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Braided / Sinuous / Curved / Straight
		Significant Disturbance?		X	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched / Bowl Shaped / Shallow
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology / Wetland Plants			
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Vertical, the moderate					0-20 / 20-40 / 40-60 / 60-80 / 80-100
Veg Type(s) in Drainage:					

Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	X
	Culvert	Channel	Riprap	Downstream Blocked	
	Other:			Lateral Flow Blocked	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	
	Roads	Utility Lines	Other:		

Stream Type: V-Ditch w/ Sediment / Eroded Channel / Desert Wash X / Flowing River/Stream / Dry Streambed

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover — Shrub % Cover — Herb % Cover

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover — Shrub % Cover — Herb % Cover

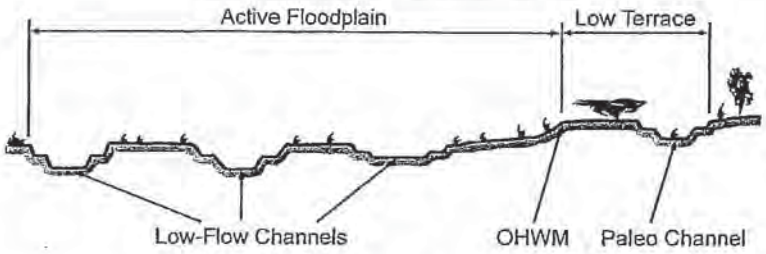
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

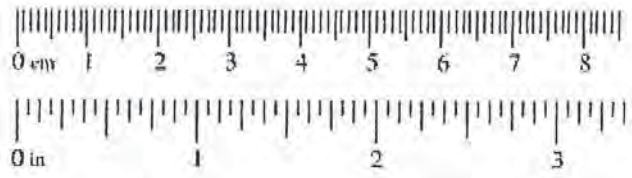
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SL-1
Investigator(s): I Cain, C Renfrew

Date: 09.22.16 **Time:** 0920
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

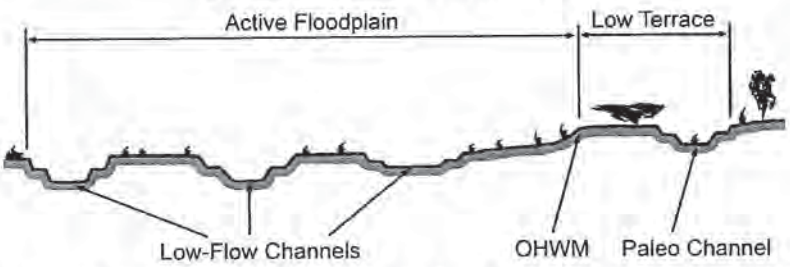
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

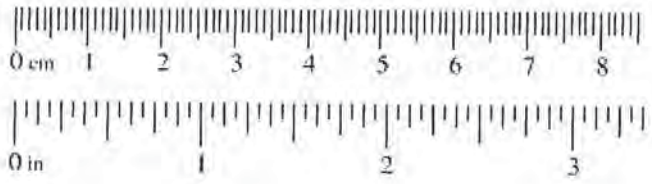


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SL-1 **Date:** 09.22.16 **Time:** 0920

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: 1 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SL-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 920	Upstream Photo	X	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/22/2016	Feature ID: SL-1	Location: Mojave Desert			Braided
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved X
		Significant Disturbance?		X	Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
		Hydrology			Bowl Shaped
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow X
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Slight					0-20 X
Veg Type(s) in Drainage: Creosote Ambrosia					20-40
					40-60
Anthropogenic Modifications: Road Grazing Channelized			Upstream Blocked		60-80
Culvert Channel Riprap			Downstream Blocked		80-100
Other:			Lateral Flow Blocked		Stream Type:
Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:					V-Ditch w/ Sediment
Circle Surrounding Land Use: Urban Rural Commercial Agriculture					Eroded Channel
Roads Utility Lines Other:					Desert Wash X
Stream Cross Section Drawing:					Flowing River/Stream
					Dry Streambed
					Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		
Comment:			

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 2 Herb % Cover 1

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

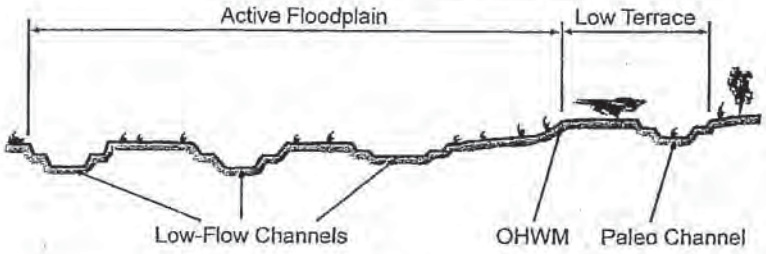
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SM-1
Investigator(s): ICain, CRenfrew

Date: 09.22.16 **Time:** 0900
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

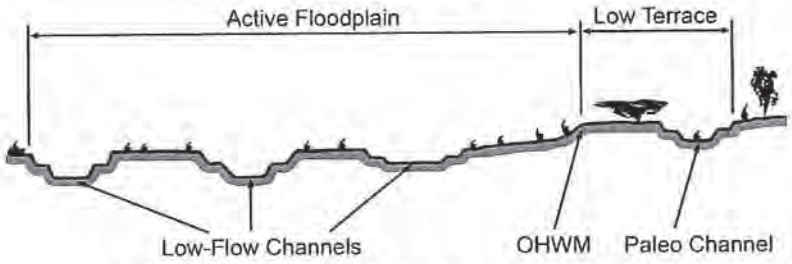
Brief site description:

Desert wash

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

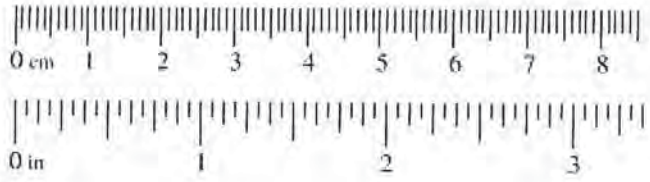


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5M-1 **Date:** 09.22.16 **Time:** 0900

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SM-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 15 % Tree: 0 % Shrub: 10 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 0900	Upstream Photo	
			Downstream Photo	X
Date: 9/22/2016	Feature ID: SM-1	Location: Mojave Desert		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X
		Significant Disturbance?		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?		
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology		
		Wetland Plants		
		Surface Water/Depth:		
Side Slope Estimate: Slight				
Veg Type(s) in Drainage: Larrea / Ambrosia				

Site Description:	
Stream is:	
Braided	
Sinuous	
Curved	
Straight	X
Entrenched	
Bowl Shaped	
Shallow	X
Vegetation % In Stream:	
0-20	X
20-40	
40-60	
60-80	
80-100	
Stream Type:	
V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	
Additional Description:	

Anthropogenic Modifications:	Road Culvert Other:	Grazing Channel	Channelized Riprap	Upstream Blocked
				Downstream Blocked X
				Lateral Flow Blocked
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication Other:	
Circle Surrounding Land Use:	Urban Roads	Rural Utility Lines	Commercial Other:	Agriculture

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators:	Community succession:	
Mudcracks Ripples	NA	X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators:	Community succession:	
Mudcracks Ripples	NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	X
Other:	Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

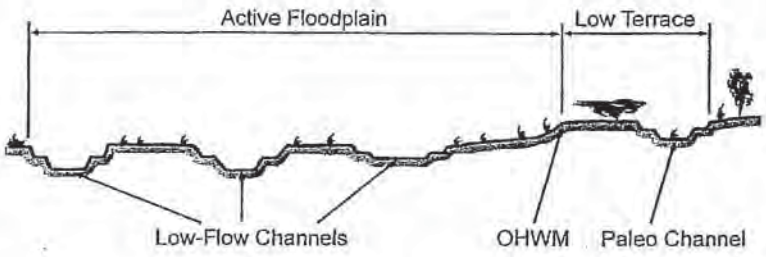
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators:	Community succession:	
Mudcracks Ripples	NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
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	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SN-1
Investigator(s): AR, CRC

Date: 9/22/16 **Time:** 0850
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

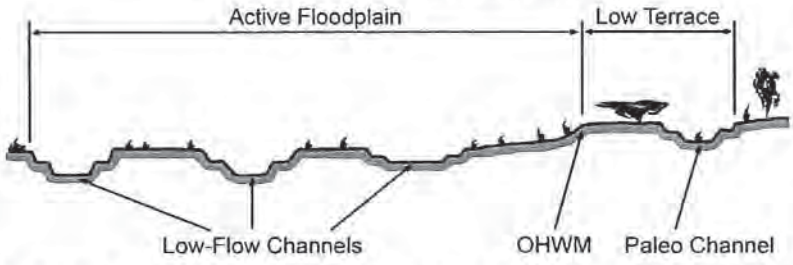
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

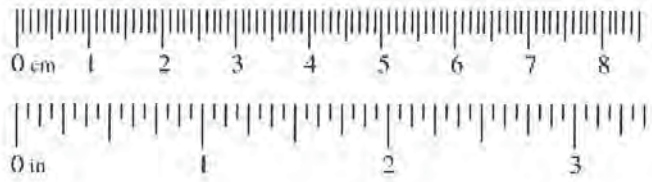


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

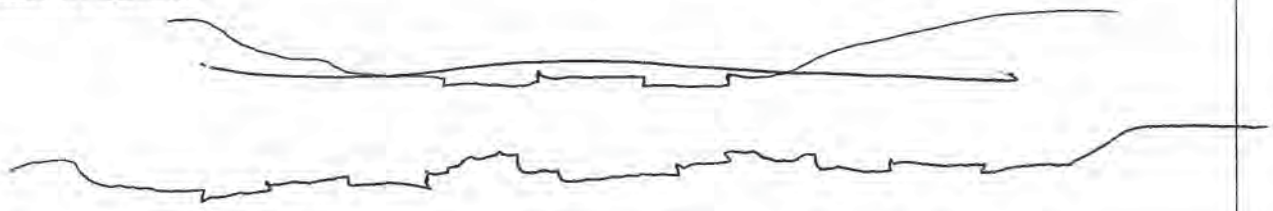
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5N-1 **Date:** 9/22/14 **Time:** 0850

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand to Medium Sand

Total veg cover: 1 % Tree: Ø % Shrub: Ø % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SN-1 **Date:** 9/22/16 **Time:** 0850

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule to Pebble

Total veg cover: 10 % Tree: 0 % Shrub: 8 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/ Pebbles

Total veg cover: 15 % Tree: 0 % Shrub: 10 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

D65D

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/22/14

Feature ID	SN-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle ~~slope~~ slope
Characteristic Vegetation[5]	UNveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: ~~ER and IC~~ CMC, AR Time: 0925
Path 46
Date: 9/22/2016 Feature ID: SN-2 Location: Mojave Desert

Upstream Photo
Downstream Photo

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? Y
Significant Disturbance? N

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Side Slope Estimate: gentle slope
Veg Type(s) in Drainage: unveg in channel

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other: Can Scatter & Trash

Upstream Blocked
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other: Open Space

Stream Cross Section Drawing:

OHWM:
Change in sediment texture X
Change in vegetation species
Change in vegetation cover X
Comment:

Break in bank slope X
Other:

Low-Flow Channel: X ~~0~~ 1 Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1
Circle average sediment texture
~~Silt: Fine Medium Coarse~~
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings) X
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X ~~30~~ 15 Tree % Cover Shrub % Cover 3 Herb % Cover 2
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Low Terrace: X ~~30~~ 15 Tree % Cover Shrub % Cover 10 Herb % Cover 5
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other: Fine Sand w/ Pebbles

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
~~Benches~~ Soil development Surface relief
Other: Δ in sediment texture

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

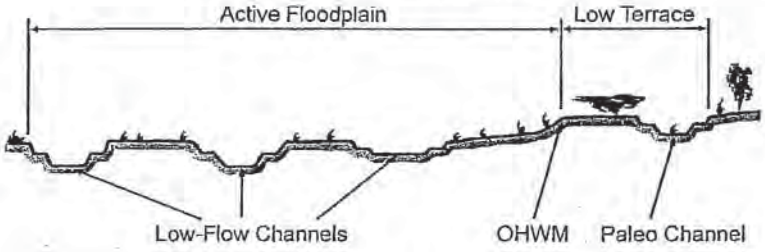
Site Description:
Stream is:
Braided X
Sinuous
Curved
Straight
Entrenched
Bowl Shaped
Shallow

Vegetation % In Stream:
~~0-20~~
20-40
40-60
~~60-80~~
80-100

Stream Type:
V-Ditch w/ Sediment
Eroded Channel
Desert Wash X
Flowing River/Stream
Dry Streambed

Additional Description:
Hydro Indicators
Bed/Bank, Δ in sediment texture

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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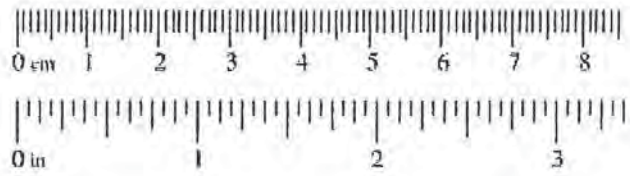
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 50-1
Investigator(s): AR, CRC

Date: 9/21/16 **Time:** 1450
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

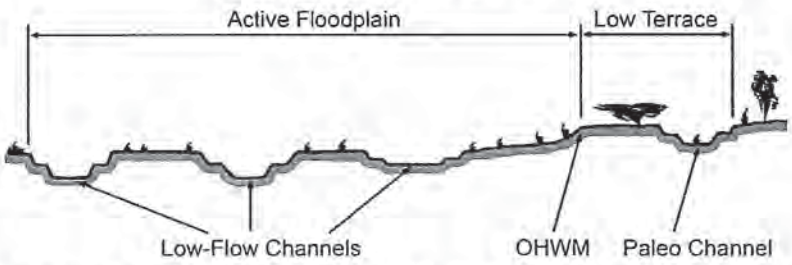
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

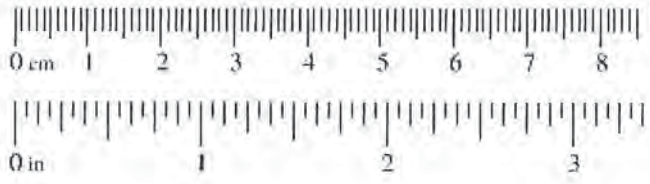


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	Gravel
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	Gravel
	0.079	2.00	Granule	Gravel
	0.039	1.00	Very coarse sand	Sand
	0.020	0.50	Coarse sand	Sand
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	Sand
1/8	0.0025	0.0625	Very fine sand	Sand
1/16	0.0012	0.031	Coarse silt	Silt
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	Silt
1/128	0.00015	0.0039	Very fine silt	Silt
			Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5D-1 **Date:** 9/21/16 **Time:** 1950

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand w/ Granule

Total veg cover: 4 % Tree: 0 % Shrub: 0 % Herb: 4 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 50-1 **Date:** 9/21/11 **Time:** 1450

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand w/ Cobble & Boulders

Total veg cover: 8 % Tree: 0 % Shrub: 5 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☒ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Silt w/ Boulders

Total veg cover: 11 % Tree: 0 % Shrub: 8 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

1450

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CBC	Date 9/21/16

Feature ID	50-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Soil cracks Sediment + Drift deposit, Drainage patterns
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle to moderate slope (w/ some vertical slopes)
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road Crossing,* + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	* Road gets through drainage @ multiple pts.

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SQ-1
Investigator(s): I Cain, C Renfrow

Date: 09.21.16 **Time:** 1410
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

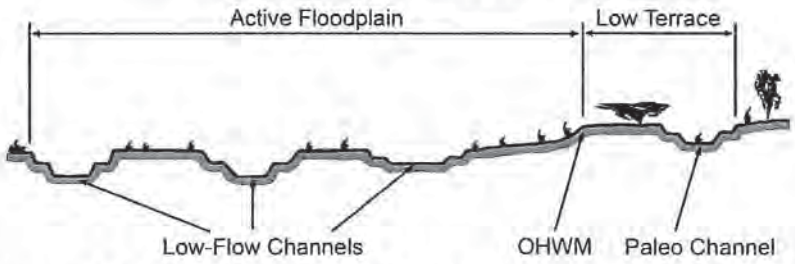
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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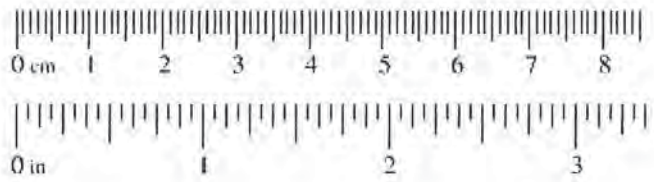
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SQ-1 **Date:** 09.21.16 **Time:** 1410

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 1 % Tree: Ø % Shrub: 1 % Herb: Ø %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** S01 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1410
Path 46

Date: 9/21/2016 Feature ID: SQ-1 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: Larrea

Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 1 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	X
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

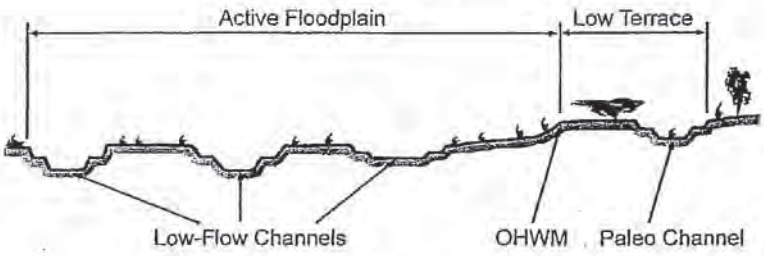
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Hydrogeomorphic Floodplain Units



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1/16 0.0012	0.031	Coarse silt	
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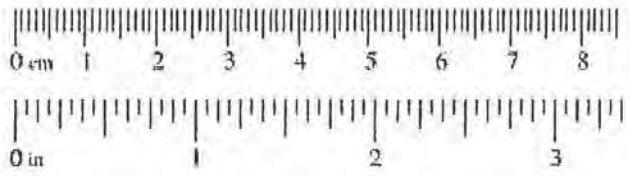
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 52-2
Investigator(s): I Cain, C Renfrow

Date: 09.21.16 **Time:** 1415
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

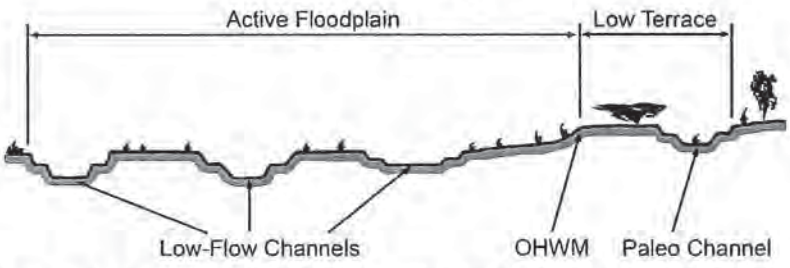
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   - ☐ GPS
   - ☐ Other:

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Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
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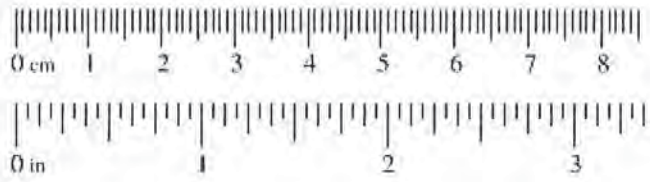
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5Q-2 **Date:** 09.21.16 **Time:** 1415

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: 1 % Tree: Ø % Shrub: 1 % Herb: Ø %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SQ-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
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- ☐ Late (herbaceous, shrubs, mature trees)

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- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

					√
Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1415	Upstream Photo		X
			Downstream Photo		
Date: 9/21/2016	Feature ID: SQ-2	Location: Mojave Desert			
Circle Preliminary Status: USACE CDFW RWQCB			Do Normal Conditions Exist?		X
			Significant Disturbance?		X
Circle Flow Character: Ephemeral Intermittent Perennial			Potential Wetland?		
OHWM Recorded by: Field Map GPS GIS Digitizing			Hydrology		
			Wetland Plants		
			Surface Water/Depth:		
Side Slope Estimate: ~~Level~~ Slight					
Veg Type(s) in Drainage: Lone					

Site Description:

Stream is:

Braided		Curved	
Sinuous		Straight	X
Entrenched		Shallow	X
Bowl Shaped			

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	
	Culvert	Channel	Riprap	Downstream Blocked	
	Other:			Lateral Flow Blocked	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	
	Roads	Utility Lines	Other:		

Stream Type:

V-Ditch w/ Sediment		Desert Wash	X
Eroded Channel		Flowing River/Stream	
		Dry Streambed	

Additional Description:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

Comment:

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 1	Herb % Cover 0	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Silt: Fine Medium Coarse		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	X
Benches Soil ~~development~~ Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	

Comments:

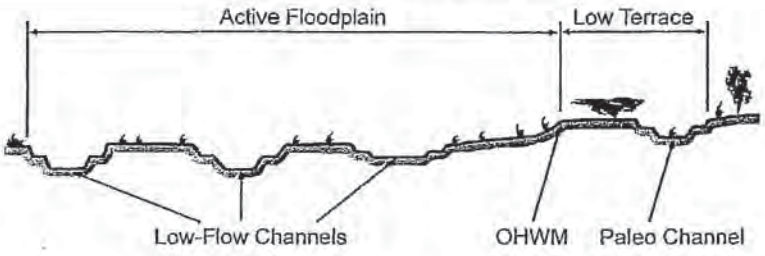
Active Floodplain:		Tree % Cover	Shrub % Cover	Herb % Cover	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	

Comments:

Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	

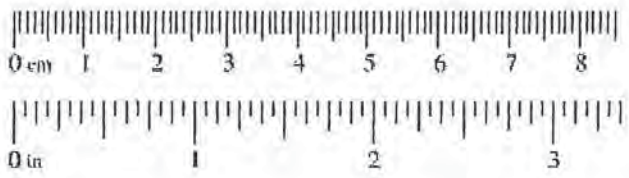
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SR-3
Investigator(s): ICain, CRenfrew

Date: 09.21.16 **Time:** 1420
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

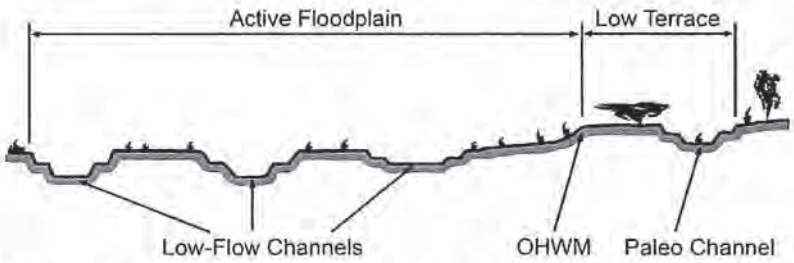
Brief site description:

desert wash

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

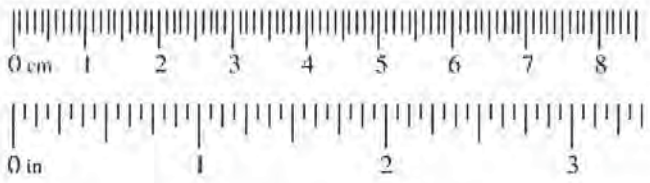


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

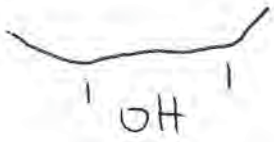
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 52-3 **Date:** 09.21.16 **Time:** 1420

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 1 % Tree: Ø % Shrub: 1 % Herb: Ø %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SQ-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1420
Path 46

Date: 9/21/2016 Feature ID: SQ-3 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: Larrea

Upstream Photo ✓
Downstream Photo

Do Normal Conditions Exist? ✓
Significant Disturbance? ✓

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Site Description:

Stream is:

Braided	
Sinuous	
Curved	
Straight	✓
Entrenched	
Bowl Shaped	
Shallow	✓

Vegetation % in Stream:

0-20	✓
20-40	
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	✓
Flowing River/Stream	
Dry Streambed	

Additional Description:

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked ✓
Downstream Blocked
Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	✓	Break in bank slope	✓
Change in vegetation species		Other:	
Change in vegetation cover	✓		

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 1 Herb % Cover 0
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings) ✓
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

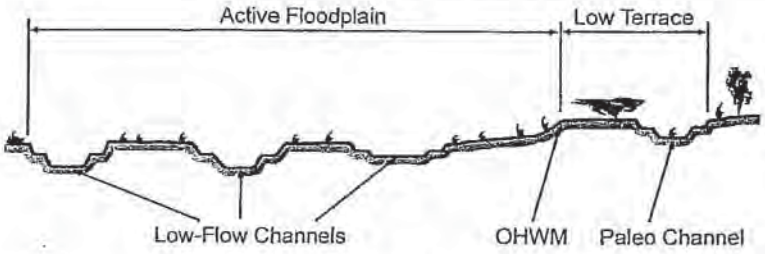
Low Terrace: Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

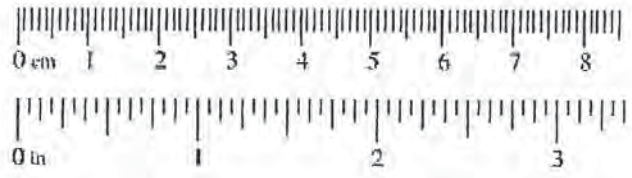
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 52-4
Investigator(s): ICain, CRenfrew

Date: 09.21.16 **Time:** 1430
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

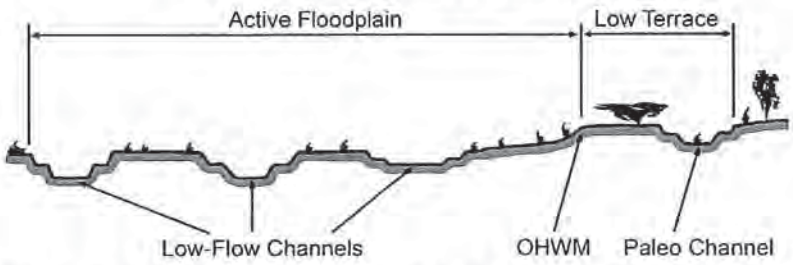
Brief site description:

Desert Wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

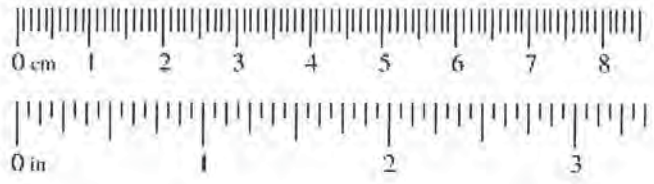


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SD-4 **Date:** 09.21.16 **Time:** 1430

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SQ-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1430	Upstream Photo			**Site Description:**	
			Downstream Photo			Stream is:	
Date: 9/21/2016	Feature ID: SQ-4	Location: Mojave Desert				Braided	
						Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?				Curved	X
		Significant Disturbance?				Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?				Entrenched	
		Hydrology				Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants				Shallow	X
		Surface Water/Depth:				Vegetation % In Stream:	
Side Slope Estimate: Slight						0-20	X
Veg Type(s) in Drainage: Larrea						20-40	
						40-60	
						60-80	
Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked		80-100	
	Culvert	Channel	Riprap	Downstream Blocked		Stream Type:	
	Other:			Lateral Flow Blocked		V-Ditch w/ Sediment	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:		Eroded Channel	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture		Desert Wash	X
	Roads	Utility Lines	Other:			Flowing River/Stream	
Stream Cross Section Drawing:						Dry Streambed	
						Additional Description:	

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

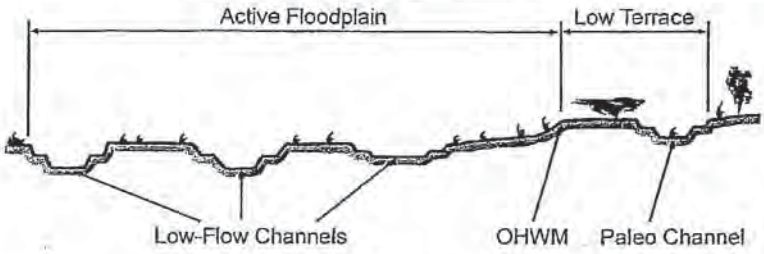
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
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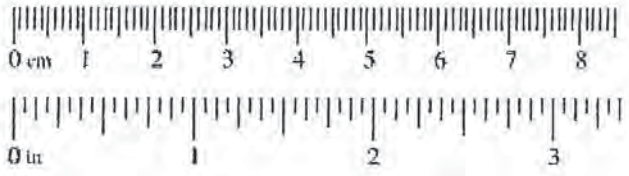
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
	1/8 — 0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
	1/128 — 0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SD-5
Investigator(s): I Cain, C Renfrew

Date: 09.21.16 **Time:** 1500
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

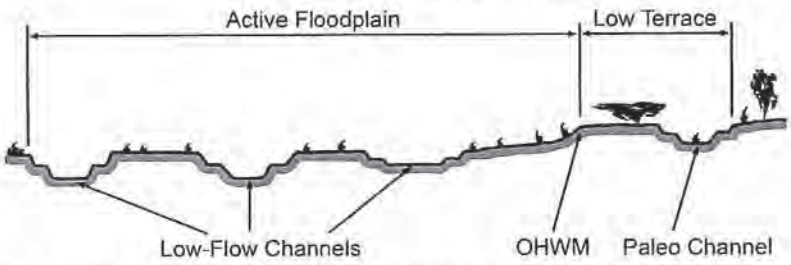
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

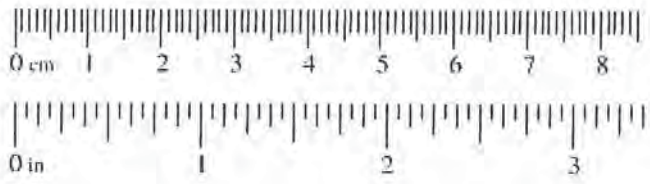


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SQ-5 **Date:** 09.21.16 **Time:** 1500

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SQ-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble/cobble

Total veg cover: 10 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1500	Upstream Photo [X] / Downstream Photo [ ]
Date: 9/21/2016	Feature ID: SQ-3	Location:	Mojave Desert
Circle Preliminary Status: USACE (CDFW) (RWQCB)		Do Normal Conditions Exist? [X] / Significant Disturbance? [X]	
Circle Flow Character: (Ephemeral) Intermittent Perennial		Potential Wetland? [ ] / Hydrology [ ] / Wetland Plants [ ]	
OHWM Recorded by: (Field Map) GPS GIS Digitizing		Surface Water/Depth:	
Side Slope Estimate: Planar almost			
Veg Type(s) in Drainage: Larrea / Ambrosia			

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	

Vegetation % In Stream:

0-20	
20-40	X
40-60	X
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description: near planar

Anthropogenic Modifications:	(Road)	Grazing	Channelized	Upstream Blocked [ ]
	Culvert	Channel	Riprap	Downstream Blocked [ ]
	Other:			Lateral Flow Blocked [ ]
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication Other:	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture
	(Roads)	(Utility Lines)	Other:	

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: [X] Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture — Sand: Fine (Medium) Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples (Drift/Debris) Presence of bed and bank Benches Soil development (Surface relief) Other:

Community succession: NA [X] / Early (herbs/seedlings) [ ] / Mid (herbs/shrubs/saplings [ ] / Late (herbs/shrubs/trees) [ ]

Comments:

Active Floodplain: [X] Tree % Cover 0 Shrub % Cover 5 Herb % Cover 1

Circle average sediment texture — Sand: Fine Medium Course (Very Coarse)

(Granule) (Pebble) (Cobble) Boulder — Other:

Circle Indicators: Mudcracks Ripples Drift/Debris (Presence of bed and bank) Benches Soil development (Surface relief) Other:

Community succession: NA [ ] / Early (herbs/seedlings) [ ] / Mid (herbs/shrubs/saplings [X] / Late (herbs/shrubs/trees) [ ]

Comments:

Low Terrace: [ ] Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

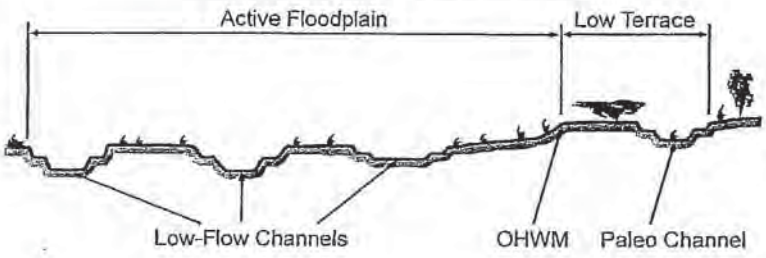
Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA [ ] / Early (herbs/seedlings) [ ] / Mid (herbs/shrubs/saplings [ ] / Late (herbs/shrubs/trees) [ ]

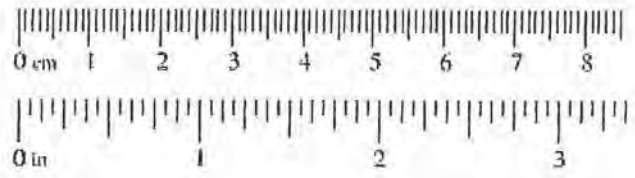
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 5D-6
Investigator(s): I Cain, C Renfrew

Date: 09.21.16 **Time:** 1510
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

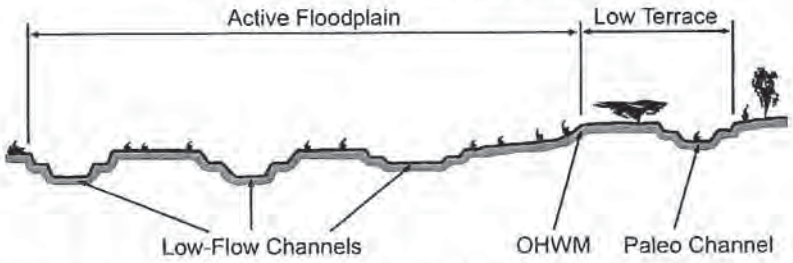
Brief site description:

desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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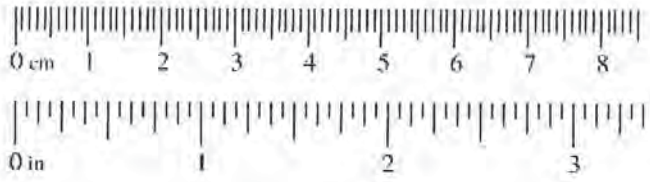
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble/cobble

Total veg cover: 6 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

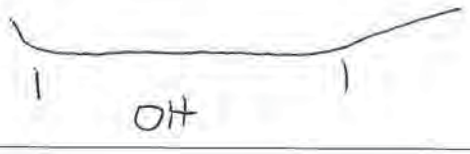
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 52-6 **Date:** 09.21.16 **Time:** 1510

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1510	Upstream Photo	X	**Site Description:**
Date: 9/21/2016	Feature ID: SQ-6	Location: Mojave Desert	Downstream Photo		Stream is:
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Braided X / Sinuous
		Significant Disturbance?		X	Curved / Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched / Bowl Shaped
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology / Wetland Plants			Shallow X
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Flat					0-20 X / 20-40 / 40-60 / 60-80 / 80-100
Veg Type(s) in Drainage: Larrea / Ambrosia					

Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		Stream Type:
	Culvert Channel Riprap		Downstream Blocked		V-Ditch w/ Sediment / Eroded Channel
	Other:		Lateral Flow Blocked		Desert Wash X / Flowing River/Stream / Dry Streambed
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				
	Roads Utility Lines Other:				

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 5 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

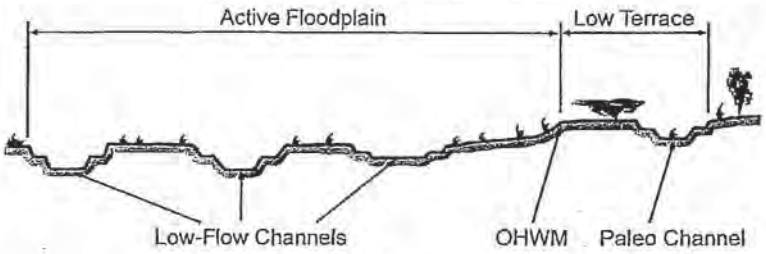
Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	Gravel
	2.56	64	Cobble	
	0.157	4	Pebble	
			Granule	
	0.079	2.00		
	0.039	1.00	Very coarse sand	Sand
	0.020	0.50	Coarse sand	
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1/4	0.005	0.125	Fine sand	
			Very fine sand	
1/8	0.0025	0.0625		
1/16	0.0012	0.031	Coarse silt	Silt
1/32	0.00061	0.0156	Medium silt	
1/64	0.00031	0.0078	Fine silt	
			Very fine silt	
1/128	0.00015	0.0039		
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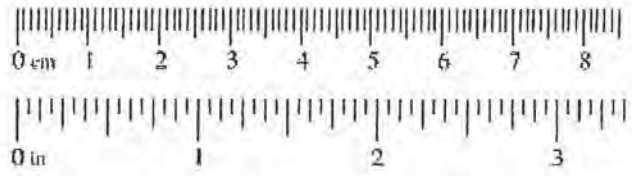


Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 52-7
Investigator(s): I Cain, C Renteas

Date: 09.21.16 **Time:** 1515
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

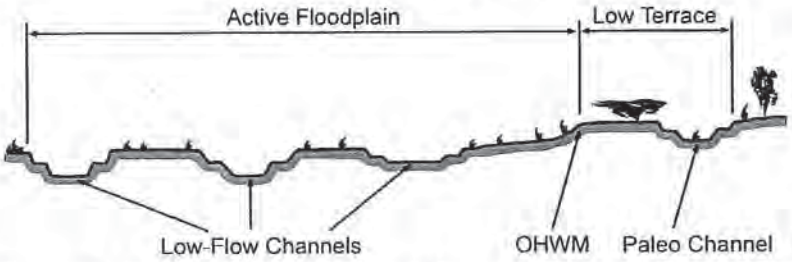
Brief site description:

desert wash

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [ ] Digitized on computer
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   - [ ] Other:

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0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
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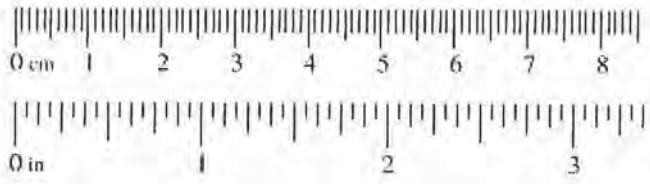
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 50-7 **Date:** 09.21.16 **Time:** 1515

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 527 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

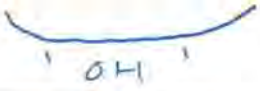
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1515	Upstream Photo	X	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/21/2016	Feature ID: SQ-7	Location: Mojave Desert			Braided ☐
					Sinuous ☐
Circle Preliminary Status: USACE COFW RWQCB		Do Normal Conditions Exist?		X	Curved X
		Significant Disturbance?		X	Straight ☐
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched ☐
		Hydrology			Bowl Shaped ☐
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow X
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Slight					0-20 X
Veg Type(s) in Drainage: —					20-40 ☐
					40-60 ☐

Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	60-80 ☐
	Culvert	Channel	Riprap	Downstream Blocked	80-100 ☐
	Other:			Lateral Flow Blocked	Stream Type:
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	V-Ditch w/ Sediment ☐
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	Eroded Channel ☐
	Roads	Utility Lines	Other:		Desert Wash ☐
Stream Cross Section Drawing:					Flowing River/Stream ☐
					Dry Streambed ☐



Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings) ☐
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings ☐
Other:	Late (herbs/shrubs/trees) ☐

Comments:

Active Floodplain: ☐ Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA ☐
Drift/Debris Presence of bed and bank	Early (herbs/seedlings) ☐
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings ☐
Other:	Late (herbs/shrubs/trees) ☐

Comments:

Low Terrace: ☐ Tree % Cover Shrub % Cover Herb % Cover

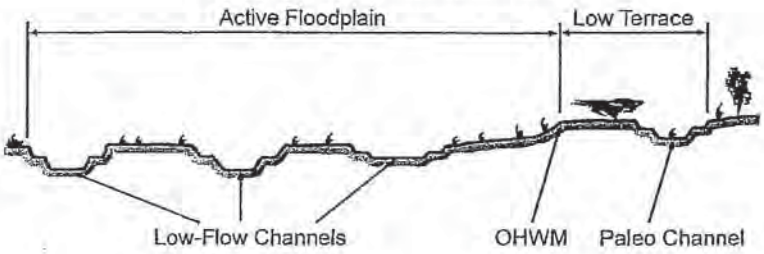
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA ☐
Drift/Debris Presence of bed and bank	Early (herbs/seedlings) ☐
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings ☐
Other:	Late (herbs/shrubs/trees) ☐

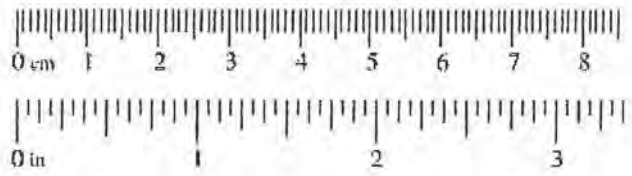
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SR-1
Investigator(s): AR, CRC

Date: 9/21/16
Town: Mojave Desert
Time: 1420
State: CA
Photo begin file#:
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

OHV + Road Crossing

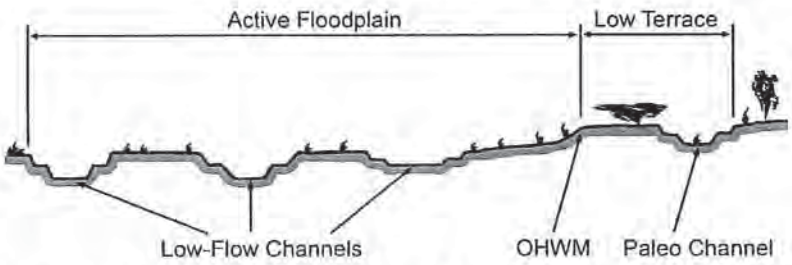
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

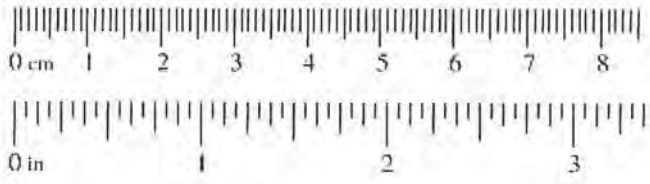


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** CSR-1 **Date:** 9/21/16 **Time:** 1420

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt to Coarse Sand

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SR-1 **Date:** 9/21/16 **Time:** 1420

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 10 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

1420

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/24/14

Feature ID	5R-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Soil Cracks, Δ in sediment
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	very gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SR-2
Investigator(s): AR, CRC

Date: 9/21/14 **Time:** 1430
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

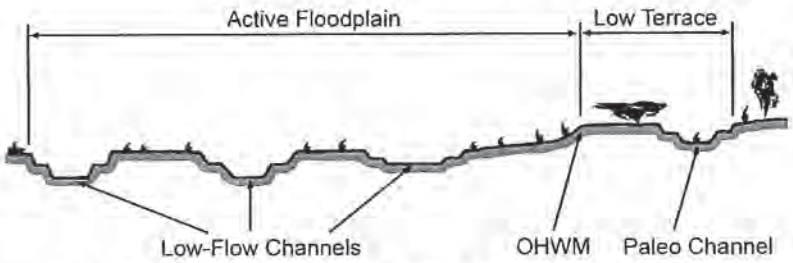
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

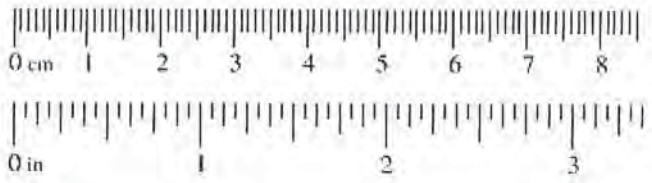


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5R-2 **Date:** 9/21/16 **Time:** 1430

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [x] ~~Soil development~~
- [ ] Surface relief
- [x] Other: Δ in sediment
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SR-2 **Date:** 9/21/14 **Time:** 1430

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt w/ Pebble

Total veg cover: 5 % Tree: 0 % Shrub: 5 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

1430

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/16

Feature ID	SR-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Soil Crack
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	very gentle slope
Characteristic Vegetation[5]	Unveg in Channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
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[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
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[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: ST-1
Investigator(s): ICain, CRenfrew

Date: 09.21.16 **Time:** 1340
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

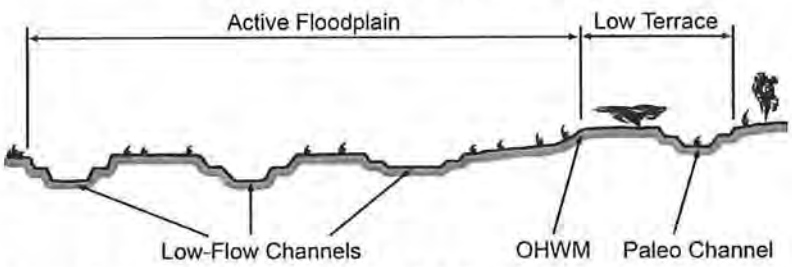
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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5. Identify the OHWM and record the indicators. Record the OHWM position via:
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   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

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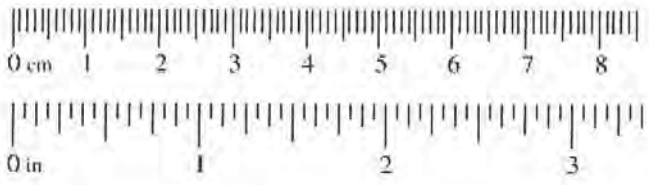
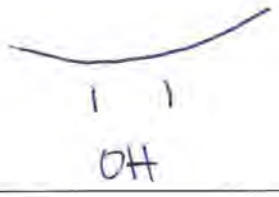
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	Silt
1/32	0.00061	0.0156	Medium silt	
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** ST-1 **Date:** 09.21.16 **Time:** 1340

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5T-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

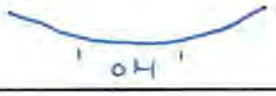
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1340	Upstream Photo	X	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/21/2016	Feature ID: ST-1	Location: Mojave Desert			Braided		
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	X	
		Significant Disturbance?			Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped		
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X	
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Slight					0-20	X	
Veg Type(s) in Drainage: Shrubs					20-40		
					40-60		
Anthropogenic Modifications:	Road	Grazing	Channelized		Upstream Blocked		60-80	
	Culvert	Channel	Riprap		Downstream Blocked		80-100	
	Other:				Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:			V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture			Eroded Channel	
	Roads	Utility Lines	Other:				Desert Wash	X
Stream Cross Section Drawing:							Flowing River/Stream	
							Dry Streambed	
							Additional Description:	



OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	?		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	X
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

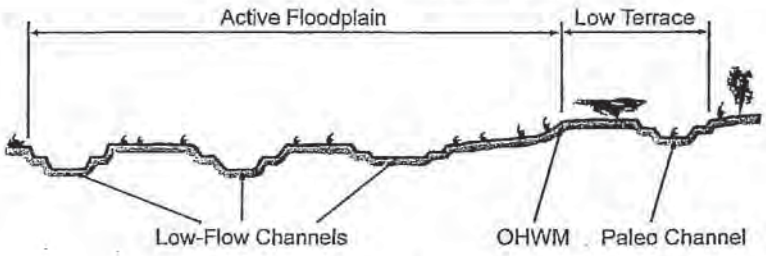
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA	
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)	
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings	
Other:	Late (herbs/shrubs/trees)	

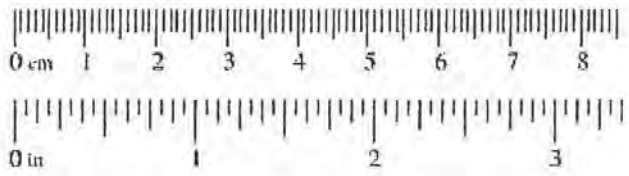
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: ST-2
Investigator(s): Cain, Cranfield

Date: 09.21.16 **Time:** 1350
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☐ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

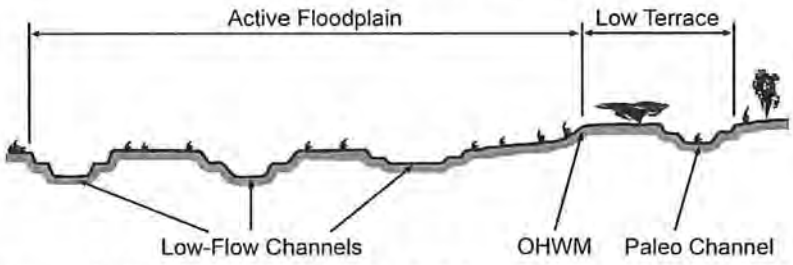
Brief site description:

Desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

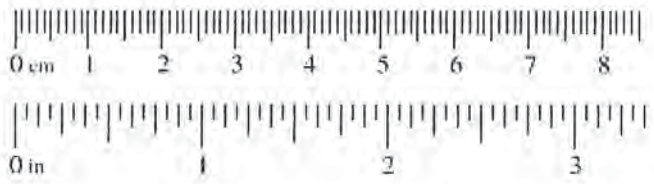


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

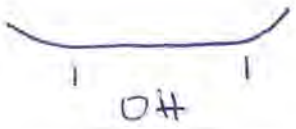
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** ST-2 **Date:** 09.21.16 **Time:** 1350

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** ST-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1350
Path 46

Date: 9/21/2016 Feature ID: ST-2 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: Saltbush

Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	
Sinuous	
Curved	X
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked	X
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

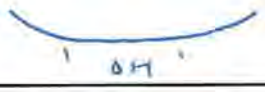
Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	X
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

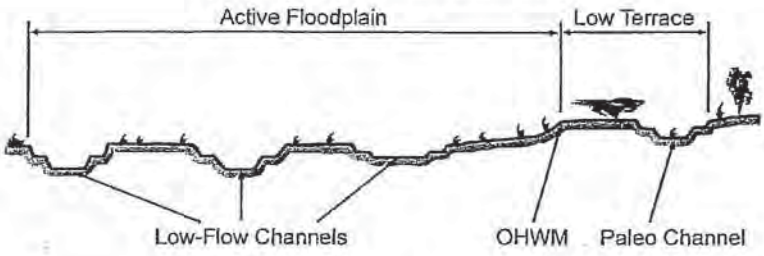
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
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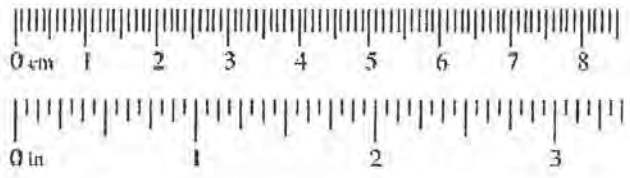
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 50-1
Investigator(s): AR, CDR

Date: 9/21/16 **Time:** 1327
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

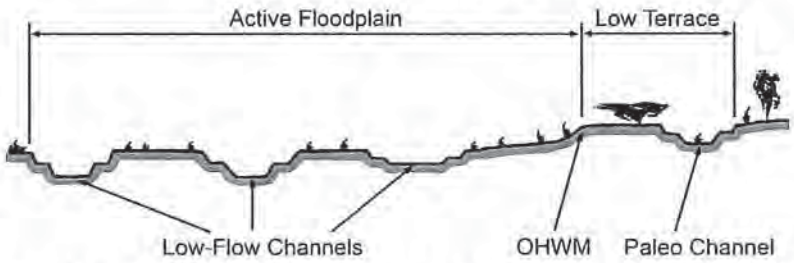
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
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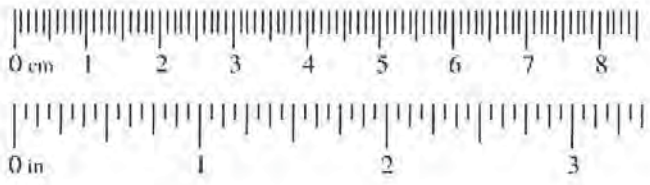
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SU-1 **Date:** 7/21/16 **Time:** 1322

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand over Boulder

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 0 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SU-1 **Date:** 9/21/16 **Time:** 1322

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDL	Date 9/21/14

Feature ID	SD-1 + SD-2 (Exactly the Same Data as SD-1)
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SU-3
Investigator(s): AR, CDC

Date: 9/21/16 **Time:** 1340
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

DRN + Road Crossing

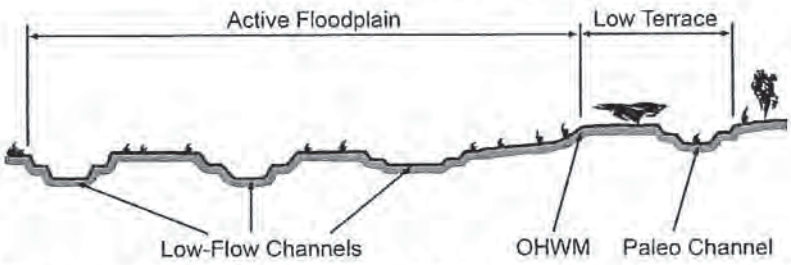
Brief site description:

Dry Desert + Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

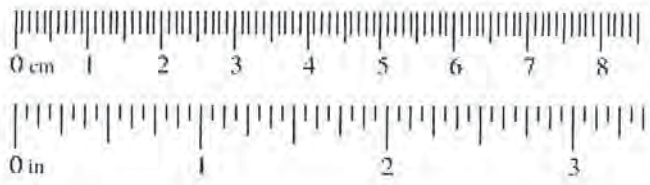


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 50-3 **Date:** 9/21/14 **Time:** 1340

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: A in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SU-3 **Date:** 9/21/16 **Time:** 1340

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Pebble w/ Very Fine Sand
Total veg cover: 4 % Tree: 0 % Shrub: 3 % Herb: 1 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: ~~Very~~ _____

Characteristics of the floodplain unit:
Average sediment texture: Very Fine Sand on top of Boulder
Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: <1 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/13

Feature ID	~~SD-2~~ SW-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Drift deposit, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: FV-1
Investigator(s): ICain, CRenfrew

Date: 09.21.16 **Time:** 1220
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

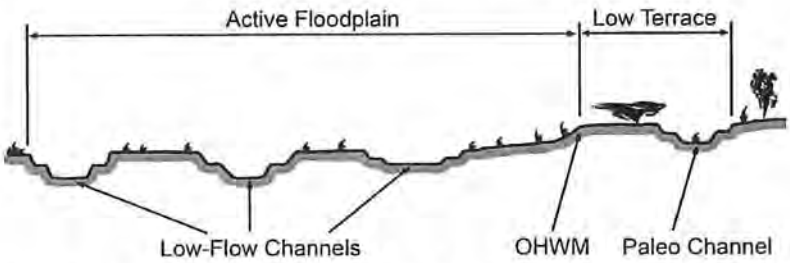
Brief site description:

Desert wash, straight, bowl-shaped ~~sinuous, entrenched~~

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

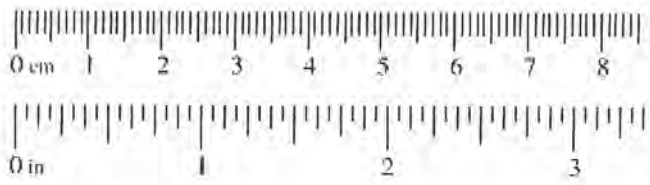


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

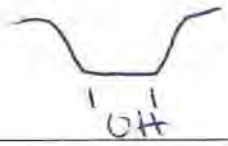
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SV-1 **Date:** 09.21.16 **Time:** 1220

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SV-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 10 % Tree: 0 % Shrub: 8 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46 | Staff: CR and IC | Time: 1215 | Upstream Photo: X | Downstream Photo:

Date: 9/21/2016 | Feature ID: ~~SV-A~~ SV-1 | Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Do Normal Conditions Exist? X

Significant Disturbance? X

Circle Flow Character: Ephemeral Intermittent Perennial

Potential Wetland?

OHWM Recorded by: Field Map GPS GIS Digitizing

Hydrology

Wetland Plants

Surface Water/Depth:

Side Slope Estimate: Moderate

Veg Type(s) in Drainage: Am cherm Sage

Site Description:

Stream is:

Braided		Curved	
Sinuous		Straight	X
Entrenched		Bowl Shaped	X
Shallow			

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Other: | Grazing Channel | Channelized Riprap

Upstream Blocked | Downstream Blocked | Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment		Desert Wash	X
Eroded Channel		Flowing River/Stream	
		Dry Streambed	

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 1 Herb % Cover 1

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings X | Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 8 Herb % Cover 2

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings X | Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

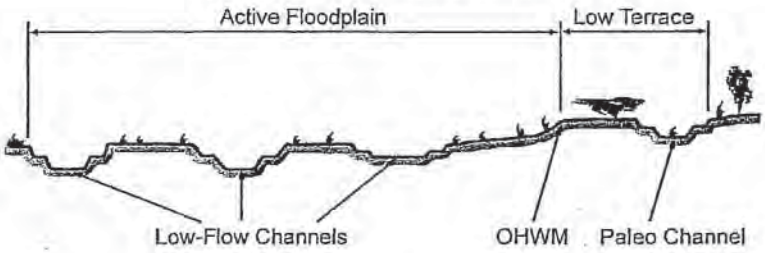
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA | Early (herbs/seedlings) | Mid (herbs/shrubs/saplings | Late (herbs/shrubs/trees)

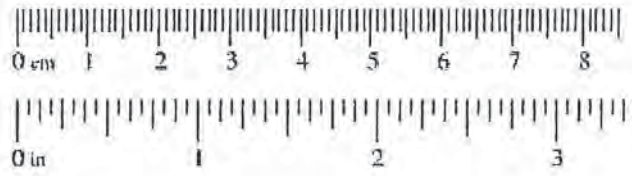
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SV-2
Investigator(s): ICain, CRenfrew

Date: 09.21.16
Town: Mojave Desert
Photo begin file#:

Time: 1220
State: CA
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

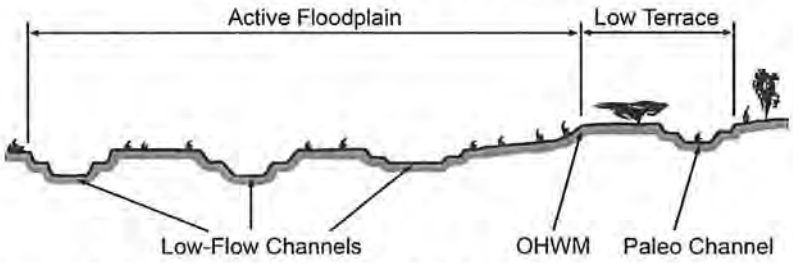
Brief site description:

Sinuous, entrenched desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

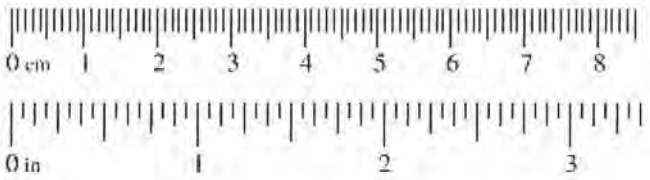


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SV-2 **Date:** 09.21.16 **Time:** 1220

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SV-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble/cobble

Total veg cover: 60 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

mix of large rocks & stones on banks/plain

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1220 ~~1230~~	Upstream Photo	X	**Site Description:**	
			Downstream Photo		Stream is:	
Date: 9/21/2016	Feature ID: ~~SV-1~~ SV-2	Location: Mojave Desert			Braided	
					Sinuous	X
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	X
		Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Steep					0-20	X
Veg Type(s) in Drainage: Am dum Sage					20-40	
					40-60	
Anthropogenic Modifications: Road Culvert Other:	Grazing Channel	Channelized Riprap	Upstream Blocked		60-80	
			Downstream Blocked		80-100	
			Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues: Pollution	Oil Slick	Eutrophication Other:			V-Ditch w/ Sediment	
Circle Surrounding Land Use: Urban Rural Commercial Agriculture					Eroded Channel	
Roads	Utility Lines	Other:			Desert Wash	X
					Flowing River/Stream	
					Dry Streambed	

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover 0 Shrub % Cover 5 Herb % Cover 1

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments: Mix of large rocks & stones on banks / plain

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

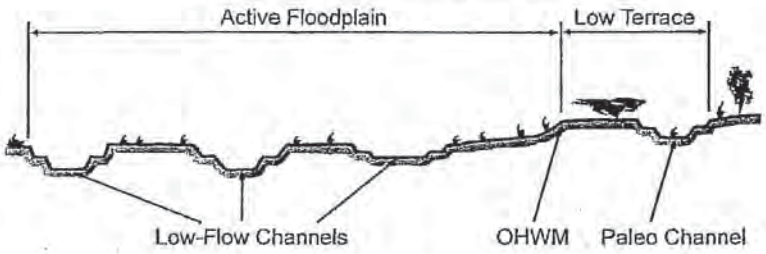
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

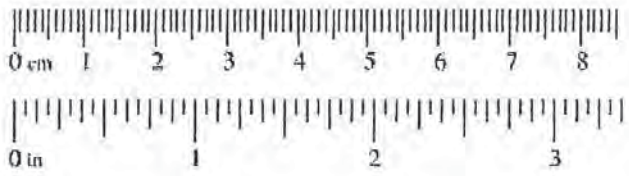
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
			Cobble	Gravel
2.56		64		
0.157		4	Pebble	
			Granule	
	0.079	2.00		
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SV-3
Investigator(s): JCain, CRenfrew

Date: 09.21.16 **Time:** 1230
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

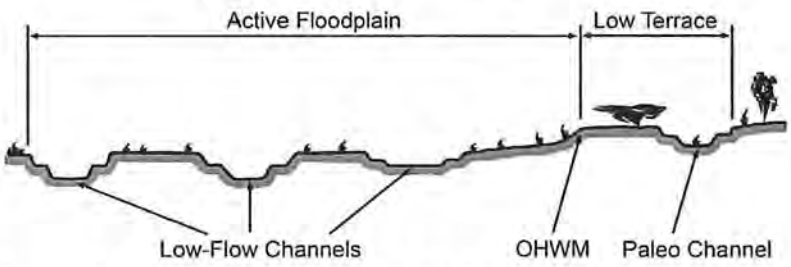
Brief site description:

sinuous, bowl-shaped desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

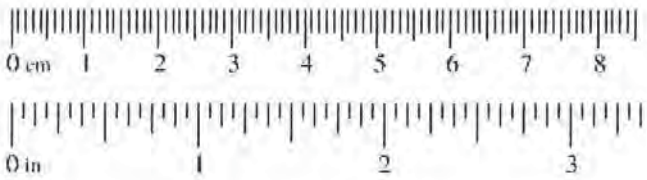


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

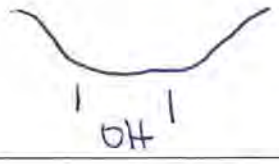
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SV-3 **Date:** 09.21.16 **Time:** 1230

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SV-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble/cobble

Total veg cover: 6 % Tree: 0 % Shrub: 5 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

large rocks & stones in plain

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1230	Upstream Photo	X	**Site Description:**	
			Downstream Photo		Stream is:	
Date: 9/21/2016	Feature ID: SV-E SV-3	Location: Mojave Desert			Braided	
					Sinuous	X
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
		Hydrology			Bowl Shaped	X
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Moderate					0-20	X
Veg Type(s) in Drainage: Am drum sage					20-40	
					40-60	
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80	
	Culvert Channel Riprap		Downstream Blocked		80-100	
	Other:		Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel	
	Roads Utility Lines Other:				Desert Wash	X
					Flowing River/Stream	
					Dry Streambed	

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 5 Herb % Cover 1

Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings X
Other:	Late (herbs/shrubs/trees)

Comments: Large rocks & stones in plain

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

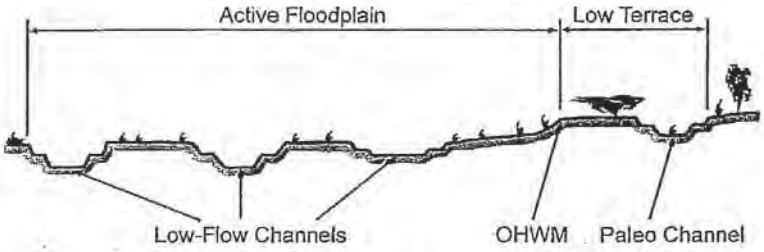
Circle average sediment texture Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

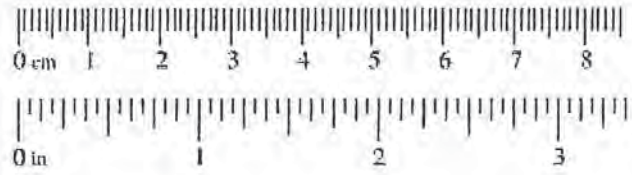
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SV-4
Investigator(s): I Cain, CRenfrew

Date: 09.21.16 **Time:** 1235
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

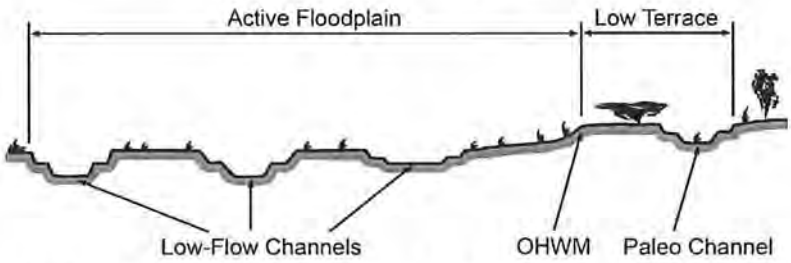
Brief site description:

Curved, entrenched, bowl shaped desert wash. Upstream blocked (downstream) (upstream)

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

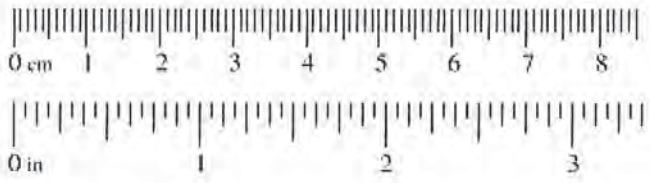


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

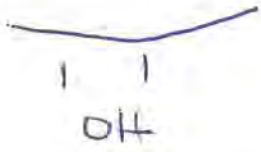
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SV-4 **Date:** 09.21.16 **Time:** 1235

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 1 % Tree: Ø % Shrub: 1 % Herb: Ø %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SV-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1233
Path 46

Date: 9/21/2016 Feature ID: SV-10 SV-4 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Moderate / Steep

Veg Type(s) in Drainage: Larrea, Krameria

Upstream Photo: X
Downstream Photo:

Do Normal Conditions Exist? X
Significant Disturbance? X

Potential Wetland?
Hydrology
Wetland Plants
Surface Water/Depth:

Site Description:

Stream is:

Braided		Curved	X
Sinuous		Straight	
Entrenched	X		
Bowl Shaped	X		
Shallow			

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment		Desert Wash	X
Eroded Channel		Flowing River/Stream	
		Dry Streambed	

Additional Description:
upstream braid
downstream trench

Anthropogenic Modifications: Road Grazing Channelized
Culvert Channel Riprap
Other:

Upstream Blocked: X
Downstream Blocked:
Lateral Flow Blocked:

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture
Roads Utility Lines Other:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 1 Herb % Cover 0
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings X
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

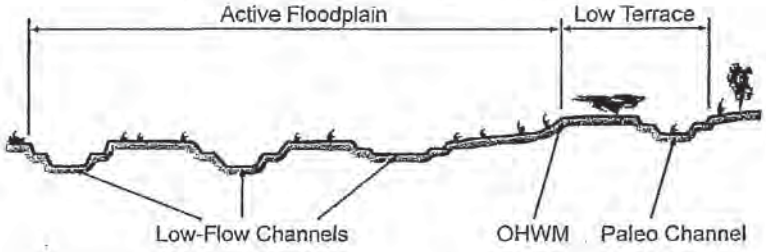
Low Terrace: Tree % Cover Shrub % Cover Herb % Cover
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

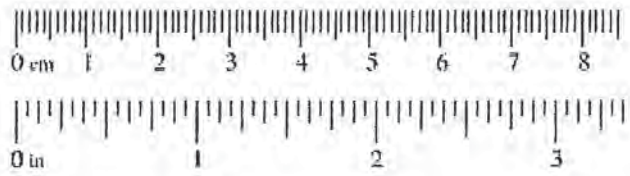
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: EV-S
Investigator(s): AR, CRC

Date: 9/21/14
Town: Mojave Desert
Time: 1206
State: CA
Photo begin file#:
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

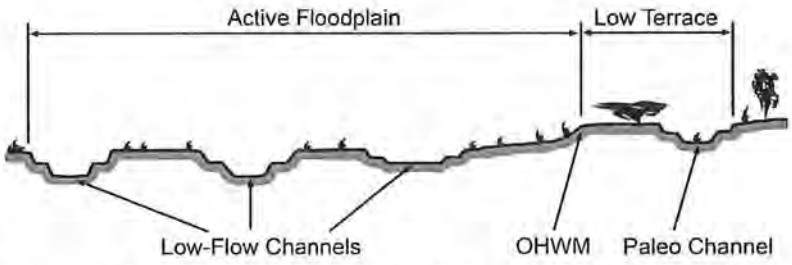
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

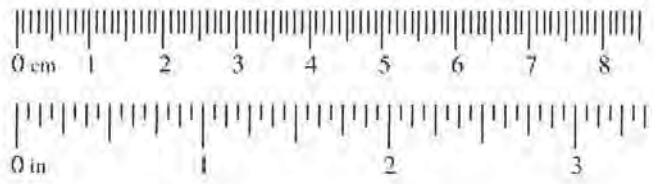


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 5V-5 **Date:** 09/21/16 **Time:** 1208

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/Pebbles

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SV-5 **Date:** 9/21/16 **Time:** 1208

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/16

Feature ID	5V-5
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	~~Open~~ Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SV-6
Investigator(s): AR, CBB

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 1218
State: CA
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

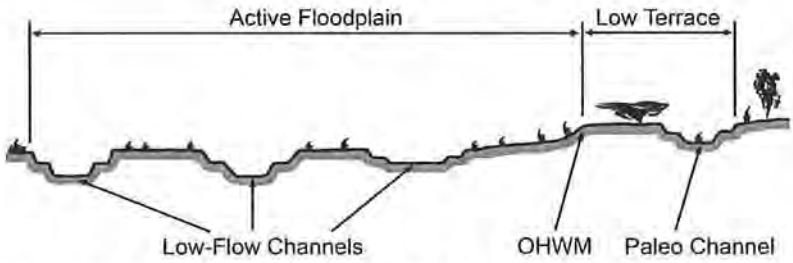
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

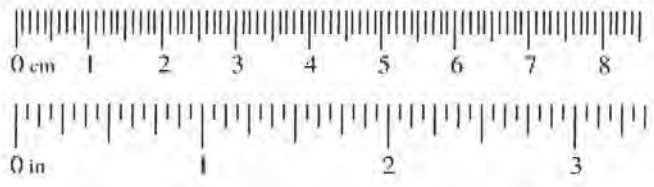


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SV-6 **Date:** 9/21/16 **Time:** 1218

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine to Medium Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** SV-6 **Date:** 9/21/18 **Time:** 1218

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/ Cobble

Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/16

Feature ID	5V-6
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	~~Ephemeral~~ Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: SV-7
Investigator(s): AR, CAC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 1225
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

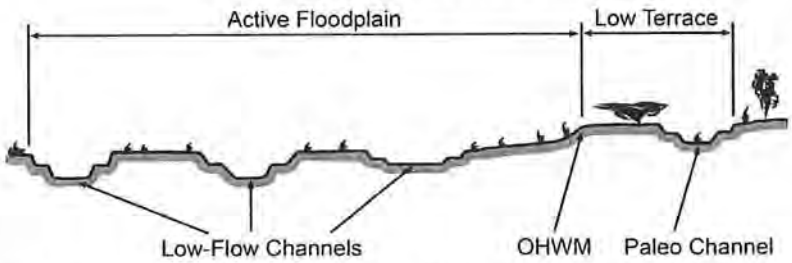
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

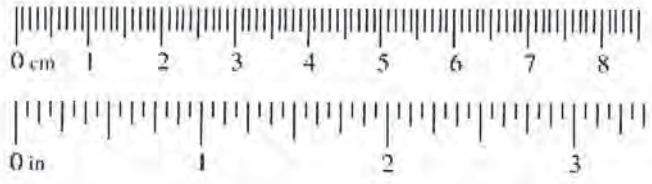


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

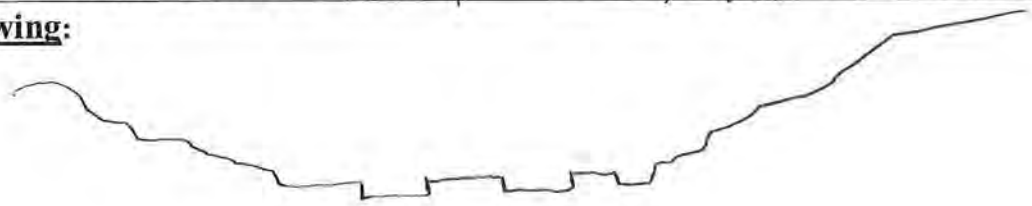
Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	Gravel
	2.56	64	Cobble	
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	Sand
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	Silt
1/32	0.00061	0.0156	Medium silt	
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** SV-7 **Date:** 9/21/16 **Time:** 1228

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 5V-7 **Date:** 9/21/16 **Time:** 1228

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble w/ Fine Sand

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CRC	Date 9/21/16

Feature ID	5V-7
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drainage Patterns
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: WA-1
Investigator(s): AR, CRC

Date: 9/20/16
Town: Mojave Desert
Photo begin file#:

Time: 1400
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

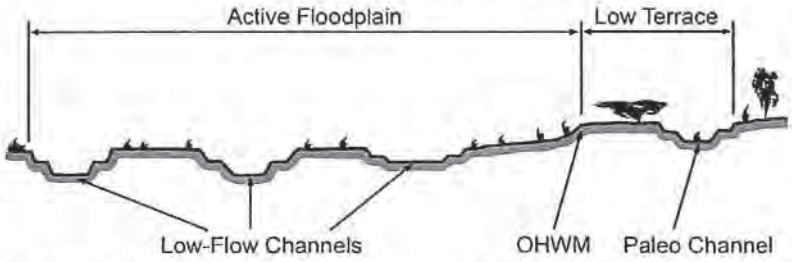
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

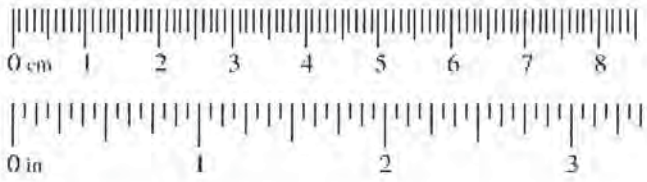


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
		Medium sand	
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000800 **Cross section ID:** LoA-1 **Date:** 9/20/14 **Time:** 1400

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium to Coarse Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [x] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6A-1 **Date:** 9/20/14 **Time:** 1400

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule + Pebble

Total veg cover: 65 % Tree: 0 % Shrub: 40 % Herb: ~~20~~ 25 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/20/16

Feature ID	6A-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Drainage Patterns, Drift Deposit, Δ in sediment texture, Bed/Bank
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6A-2
Investigator(s): AR, CRC

Date: 9/20/16
Town: Mojave Desert
Photo begin file#:

Time: 1420
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

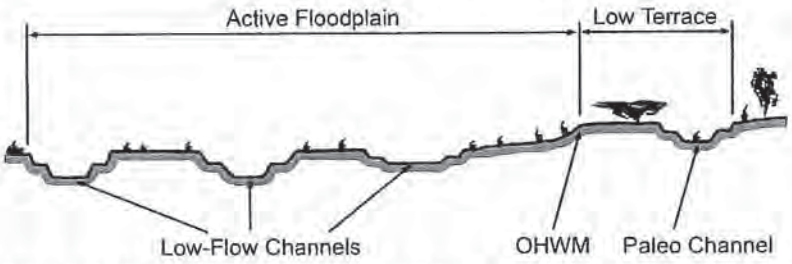
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

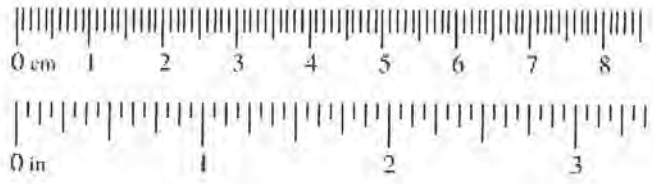


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6A-2 **Date:** 9/20/14 **Time:** 1420

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____ Same as 6A-3

Characteristics of the floodplain unit:

Average sediment texture: Cobble

Total veg cover: 2 % Tree: 0 % Shrub: <1 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6A-2 **Date:** 9/20/16 **Time:** 1420

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

1420

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/20/16

Feature ID	6A-2 & 6A-3
Preliminary Jurisdictional Status[1]	CDFW & RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	2.5' & 1'
CDFW Width(s)	2.5' & 1'
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6A-4
Investigator(s): AR, CDC

Date: 9/20/16
Town: Mojave Desert
Photo begin file#:

Time: 1435
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

DRV + Road Crossing

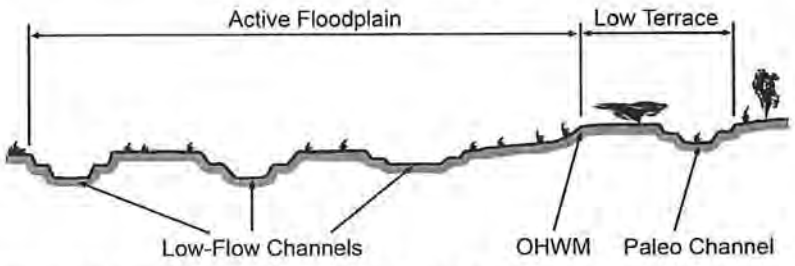
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

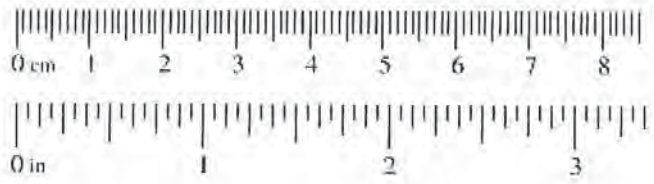


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

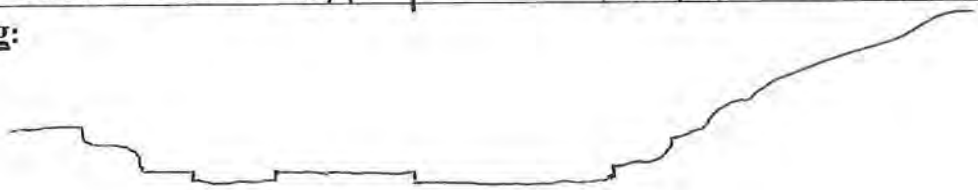
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
		Fine sand	
1/4 0.005	0.125		
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6A-4 **Date:** 7/20/16 **Time:** 1435

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt to Fine Sand

Total veg cover: 10 % Tree: 0 % Shrub: 4 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [x] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6A-4 **Date:** 9/20/10 **Time:** 1435

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebbles

Total veg cover: 12 % Tree: 0 % Shrub: 8 % Herb: 4 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 26 % Tree: 1 % Shrub: 15 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☑ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, COC	Date 9/20/16

Feature ID	LOA-24
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drainage Patterns, Soil Cracks
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + Trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: UA-5
Investigator(s): AR, CRC

Date: 9/20/10
Town: Mojave Desert
Photo begin file#:

Time: 1445
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

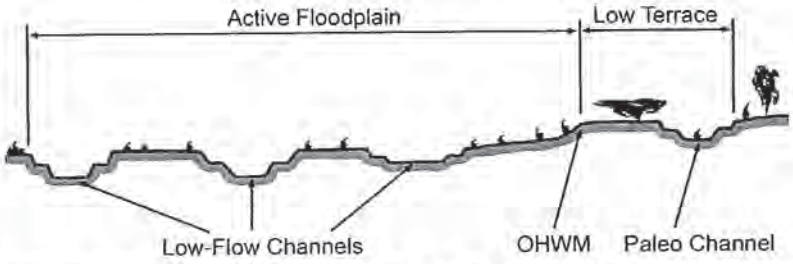
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

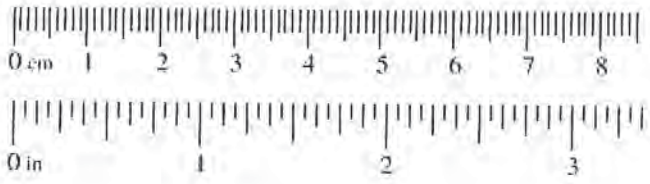


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6A-5 **Date:** 9/20/14 **Time:** 1445

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine sand w/ Granule

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** ~~LoA-2~~ LoA-5 **Date:** 9/20/16 **Time:** 1445

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

1445

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/20/16

Feature ID	6A-5
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Banks, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + Trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: UA-4
Investigator(s): AR, CDC

Date: 9/20/14
Town: Mojave Desert
Photo begin file#:

Time: 1500
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

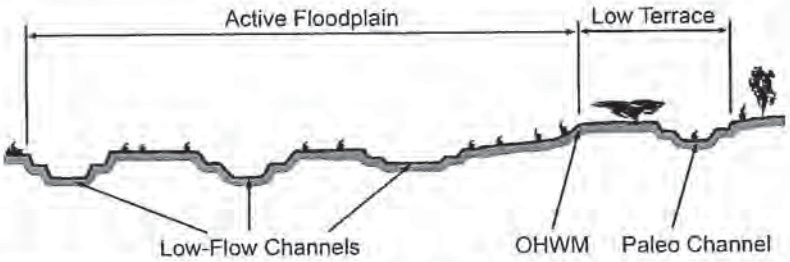
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** 6A-6 **Date:** 9/20/16 **Time:** 1500

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~Gravel~~ Medium to Coarse Sand

Total veg cover: 1 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6A-6 **Date:** 9/20/16 **Time:** 1500

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 4 % Tree: 0 % Shrub: 2 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

1500

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 7/20/16

Feature ID	UA-Lp
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Soil Crack
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6B-1
Investigator(s): ICain, CRenfrow

Date: 09.20.16 **Time:** 1420
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

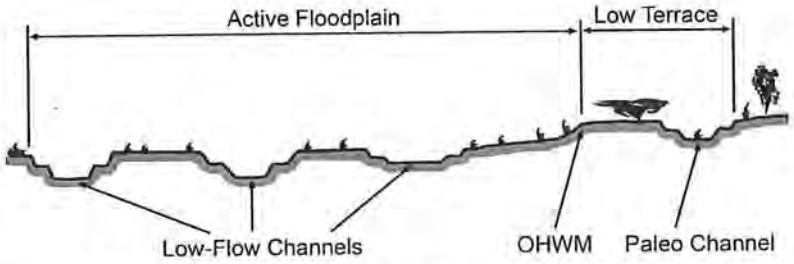
Brief site description:

braided, shallow desert-wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

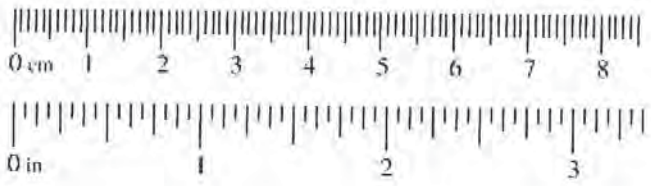


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

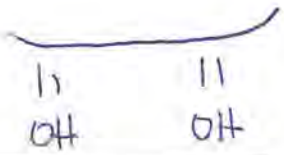
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** CB-1 **Date:** 09.20.14 **Time:** 1420

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** LoB-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 17 % Tree: 0 % Shrub: 15 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1420	Upstream Photo ✓ / Downstream Photo
Date: 9/20/2016	Feature ID: GD-1	Location: Mojave Desert	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist? ✓	
		Significant Disturbance? ✓	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?	
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology / Wetland Plants	
		Surface Water/Depth:	
Side Slope Estimate: Slight			
Veg Type(s) in Drainage: Creosote bush / Lorrea			

Site Description:

Stream is: Braided ✓ / Sinuous / Curved / Straight ✓ / Entrenched / Bowl Shaped / Shallow ✓

Vegetation % In Stream: 0-20 ✓ / 20-40 / 40-60 / 60-80 / 80-100

Stream Type: V-Ditch w/ Sediment / Eroded Channel / Desert Wash ✓ / Flowing River/Stream / Dry Streambed

Additional Description:

Anthropogenic Modifications: Road Culvert Other: Grazing Channel Channelized Riprap

Upstream Blocked / Downstream Blocked / Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	✓	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	✓		

Comment:

Low-Flow Channel: YOB Tree % Cover 0 Shrub % Cover 5 Herb % Cover 1

Circle average sediment texture
Silt: Fine Medium Coarse
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA / Early (herbs/seedlings) ✓ / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

Comments:

Active Floodplain: ✓ Tree % Cover 0 Shrub % Cover 15 Herb % Cover 2

Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings ✓ / Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

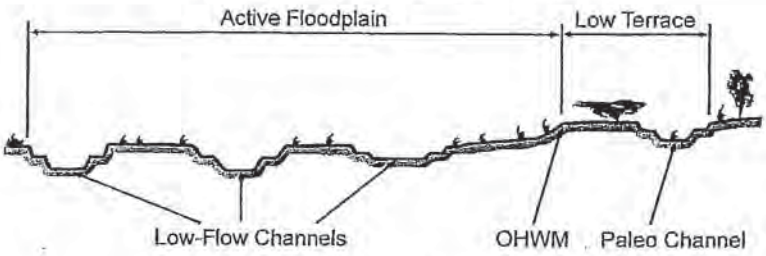
Circle average sediment texture
Granule Pebble Cobble Boulder
Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

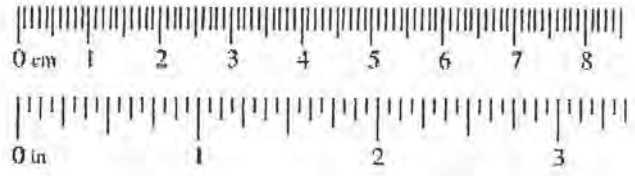
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: UBS-113
Investigator(s): ICain, CRenfrew

Date: 09.20.16 **Time:** 1430
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

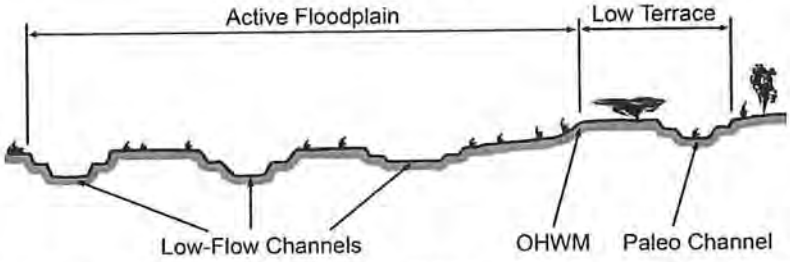
Brief site description:

curved, shallow desert wash - upstream blocked

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
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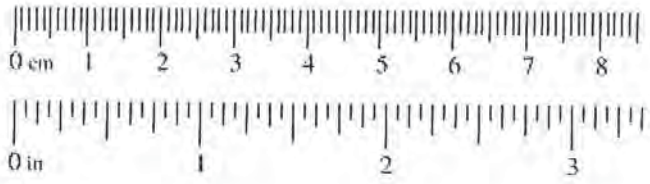
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6B-1B **Date:** 09.20.16 **Time:** 1430

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** GB-1B **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1430 Path 46			Upstream Photo	✓	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/20/2016	Feature ID: 6B-1B	Location: Mojave Desert			Braided / Sinuous / Curved ✓ / Straight
Circle Preliminary Status: USACE CDFW RWQCB			Do Normal Conditions Exist?	✓	Entrenched / Bowl Shaped / Shallow ✓
			Significant Disturbance?	✓	
Circle Flow Character: Ephemeral Intermittent Perennial			Potential Wetland?		Vegetation % In Stream:
OHWM Recorded by: Field Map GPS GIS Digitizing			Hydrology / Wetland Plants		0-20 ✓ / 20-40 / 40-60 / 60-80 / 80-100
			Surface Water/Depth:		
Side Slope Estimate:					
Veg Type(s) in Drainage:					

Anthropogenic Modifications:	Road Culvert Other:	Grazing Channel	Channelized Riprap	Upstream Blocked ✓ / Downstream Blocked / Lateral Flow Blocked	Stream Type:
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication Other:		V-Ditch w/ Sediment / Eroded Channel / Desert Wash ✓ / Flowing River/Stream / Dry Streambed
Circle Surrounding Land Use:	Urban Roads	Rural Utility Lines	Commercial Other:	Agriculture	Additional Description:

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

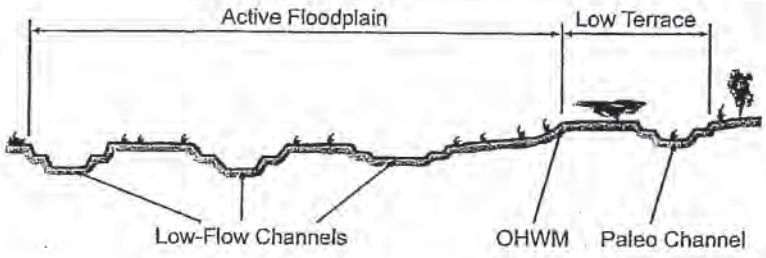
Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
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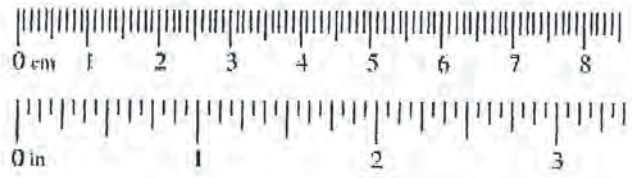
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LB-2
Investigator(s): ICain, CRenfrew

Date: 09.2016 **Time:** 1440
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

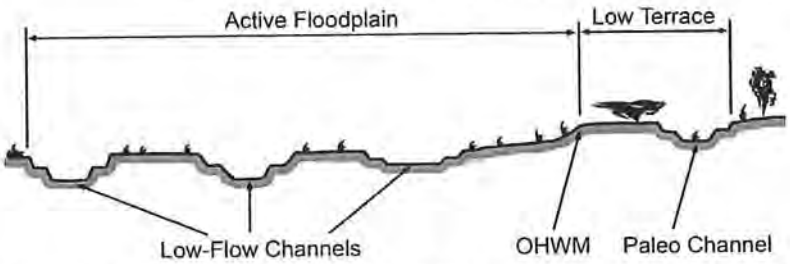
Brief site description:

Braided, shallow desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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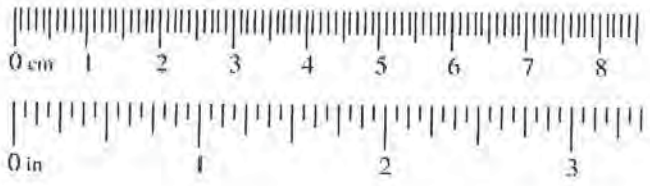
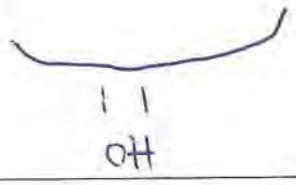
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** GB-2 **Date:** 09.20.16 **Time:** 1440

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse sand

Total veg cover: 1 % Tree: Ø % Shrub: Ø % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6B-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 25 % Tree: 0 % Shrub: 20 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

				√
Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1440 Path 46			Upstream Photo Downstream Photo	X	**Site Description:**
Date: 9/20/2016	Feature ID: 63-2	Location: Mojave Desert			Stream is:
Circle Preliminary Status: USACE CDFW RWQCB			Do Normal Conditions Exist? Significant Disturbance?	X X	Braided X Sinuous Curved Straight Entrenched Bowl Shaped Shallow X
Circle Flow Character: Ephemeral Intermittent Perennial			Potential Wetland?		
OHWM Recorded by: Field Map GPS GIS Digitizing			Hydrology Wetland Plants Surface Water/Depth:		
Side Slope Estimate: Slight Veg Type(s) in Drainage: Larrea / Ambrosia					Vegetation % In Stream: 0-20 20-40 X 40-60 60-80 80-100

Anthropogenic Modifications:	Road Culvert Other:	Grazing Channel	Channelized Riprap	Upstream Blocked Downstream Blocked Lateral Flow Blocked	Stream Type: V-Ditch w/ Sediment Eroded Channel Desert Wash X Flowing River/Stream Dry Streambed
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban Roads	Rural Utility Lines	Commercial Other:	Agriculture	

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA Early (herbs/seedlings) X Mid (herbs/shrubs/saplings Late (herbs/shrubs/trees)

Comments:

Active Floodplain: ✓ Tree % Cover 0 Shrub % Cover 20 Herb % Cover 5

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA Early (herbs/seedlings) Mid (herbs/shrubs/saplings X Late (herbs/shrubs/trees)

Comments:

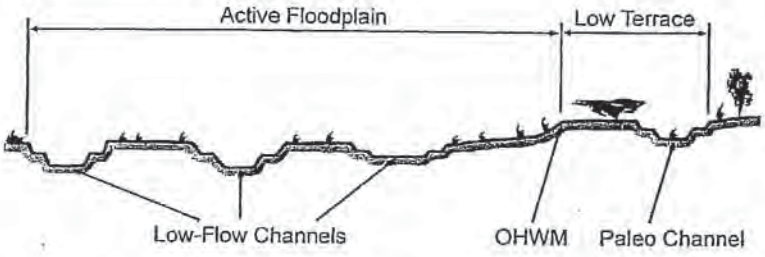
Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA Early (herbs/seedlings) Mid (herbs/shrubs/saplings Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
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1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: UB3-3
Investigator(s): ICain, CRenfrow

Date: 09.20.16 **Time:** 1500
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

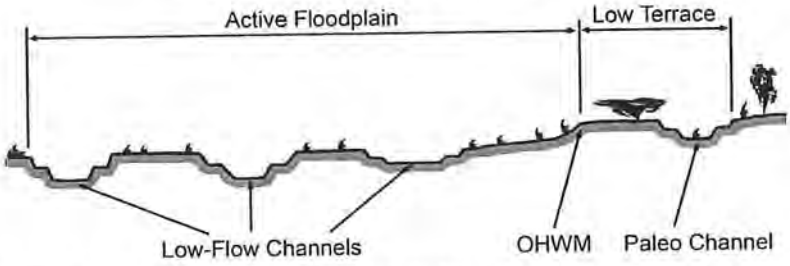
Brief site description:

Sinuous, bowl-shaped desert wash - downstream blocked.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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   - ☐ GPS
   - ☐ Other:

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1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** 6B-3 **Date:** 09.20.16 **Time:** 1500

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6B-3 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1506
Path 46

Date: 9/20/2016 Feature ID: 6D-3 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Moderate

Veg Type(s) in Drainage: —

Upstream Photo	✓
Downstream Photo	
Do Normal Conditions Exist?	✓
Significant Disturbance?	✓
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	
Sinuous	✓
Curved	
Straight	
Entrenched	
Bowl Shaped	✓
Shallow	

Vegetation % in Stream:

0-20	✓
20-40	
40-60	
60-80	
80-100	

Upstream Blocked	
Downstream Blocked	✓
Lateral Flow Blocked	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	✓
Flowing River/Stream	
Dry Streambed	

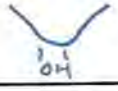
Additional Description:

Anthropogenic Modifications: Road Grazing Channelized Culvert Channel Riprap Other:

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	✓	Break in bank slope	✓
Change in vegetation species		Other:	
Change in vegetation cover	✓		

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA ✓
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

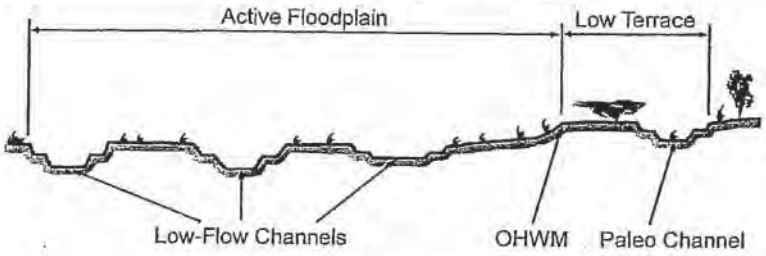
Circle average sediment texture: Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA
Early (herbs/seedlings)
Mid (herbs/shrubs/saplings
Late (herbs/shrubs/trees)

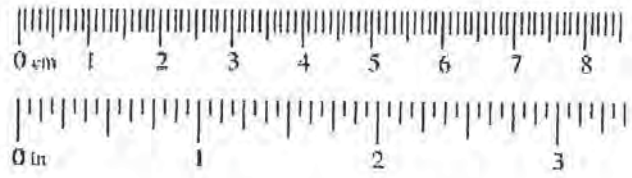
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
		Granule	Gravel
0.079	2.00		
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
		Very fine sand	Sand
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
		Very fine silt	Silt
1/128 0.00015	0.0039		
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LPB-4
Investigator(s): I Cain, CRenfrew

Date: 09.21.16 **Time:** 0910
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

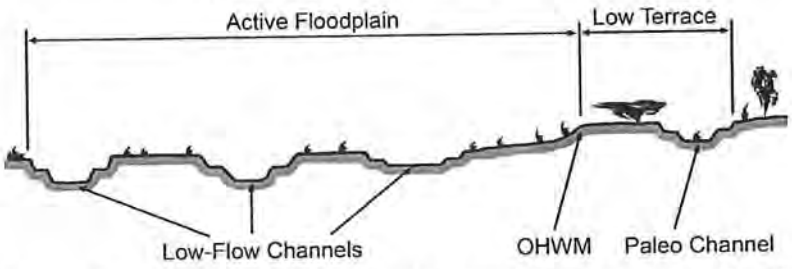
Brief site description:

curved, shallow desertwash - downstream braided

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** OB-4 **Date:** 09.21.16 **Time:** 0910

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6B-4 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 910 Path 46			Upstream Photo	✓	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/21/2016	Feature ID: ~~GB-6~~ GB-4	Location: Mojave Desert			Braided
					Sinuous
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		✓	Curved ✓
		Significant Disturbance?		✓	Straight
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched
		Hydrology			Bowl Shaped
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow ✓
		Surface Water/Depth:			Vegetation % In Stream:
Side Slope Estimate: Slight					0-20 ✓
Veg Type(s) in Drainage: -					20-40
					40-60
					60-80
Anthropogenic Modifications: Road Grazing Channelized			Upstream Blocked		80-100
Culvert Channel Riprap			Downstream Blocked	✓	Stream Type:
Other:			Lateral Flow Blocked		V-Ditch w/ Sediment
Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:					Eroded Channel
Circle Surrounding Land Use: Urban Rural Commercial Agriculture					Desert Wash ✓
Roads Utility Lines Other:					Flowing River/Stream
					Dry Streambed

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	✓	Break in bank slope	✓
Change in vegetation species		Other:	
Change in vegetation cover	✓		

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings) ✓
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

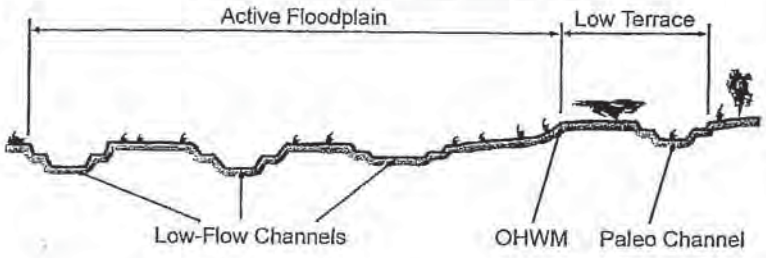
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

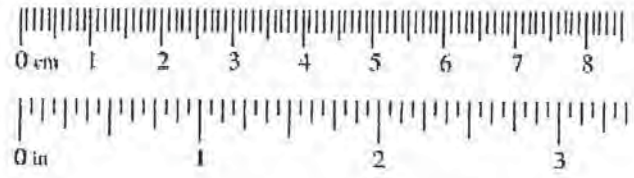
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
		Granule	Gravel
0.079	2.00		
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
		Very fine sand	Sand
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
		Very fine silt	Silt
1/128 0.00015	0.0039		
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: UPB-5
Investigator(s): JCain, CRentrew

Date: 09.21.16 **Time:** 0920
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

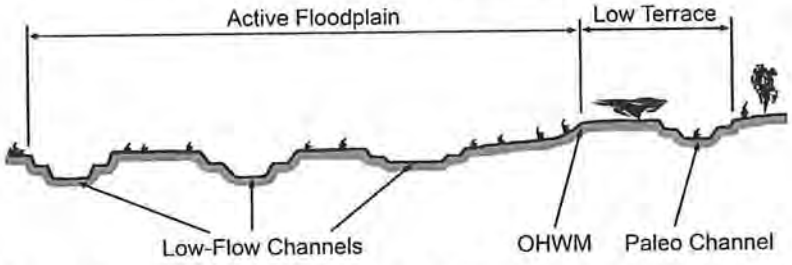
Brief site description:

Sinuous shallow desert wash, downstream blocked.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** 6B-5 **Date:** 09.21.16 **Time:** 0920

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium Sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** GB-5 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 9a
Path 46

Date: 9/21/2016 Feature ID: GB-5 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight

Veg Type(s) in Drainage: -

Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	
Sinuous	X
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Culvert Grazing Channel Channelized Riprap Other:

Upstream Blocked	
Downstream Blocked	X
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

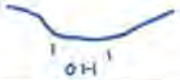
Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA X / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

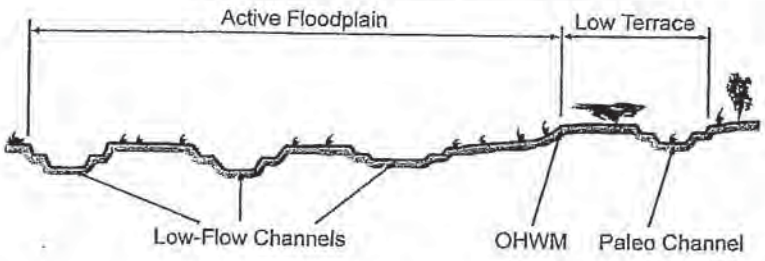
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: GB-6
Investigator(s): ICain, CRenfrew

Date: 09.21.16 **Time:** 0930
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

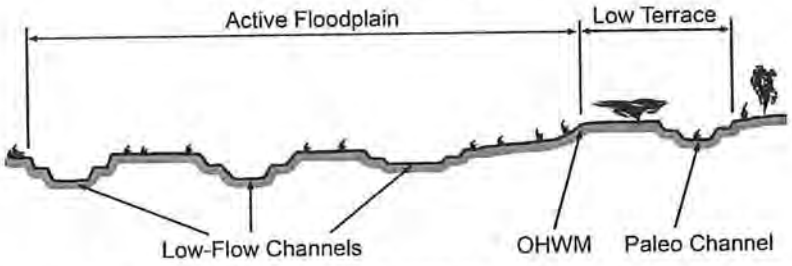
Brief site description:

Desert wash — North of road, straight & bowl shaped
South of road, braided & shallow

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** GB-6 **Date:** 09.21.16 **Time:** 0930

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 3 % Tree: 0 % Shrub: 1 % Herb: 2 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6B-6 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 15 % Tree: 0 % Shrub: 10 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 930
Path 46

Date: 9/21/2016 Feature ID: 6B-6 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Slight to moderate

Veg Type(s) in Drainage: Creosote scrub

Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	X
Entrenched	
Bowl Shaped	X
Shallow	X

Vegetation % In Stream:

0-20	X
20-40	
40-60	
60-80	
80-100	

Anthropogenic Modifications: Road Grazing Channelized Culvert Channel Riprap Other:

Upstream Blocked	
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Stream Cross Section Drawing:

Additional Description:

N of road straight & bowl

S of road braid. shallow

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 1 Herb % Cover 2

Circle average sediment texture
Silt: Fine Medium Coarse Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	X
Late (herbs/shrubs/trees)	

Comments:

Active Floodplain: X Tree % Cover 0 Shrub % Cover 10 Herb % Cover 5

Circle average sediment texture
Granule Pebble Cobble Boulder Sand: Fine Medium Course Very Coarse
Other:

Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	X
Late (herbs/shrubs/trees)	

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture
Granule Pebble Cobble Boulder Sand: Fine Medium Course Very Coarse
Other:

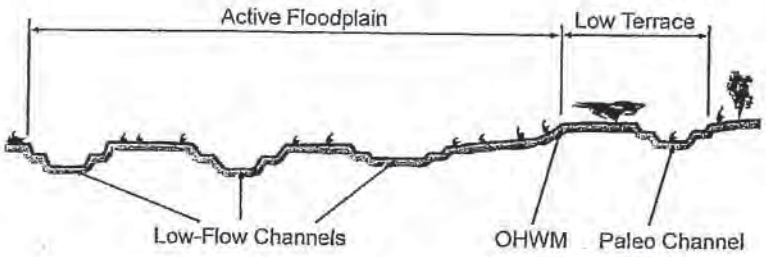
Circle Indicators: Mudcracks Ripples
Drift/Debris Presence of bed and bank
Benches Soil development Surface relief
Other:

Community succession:

NA	
Early (herbs/seedlings)	
Mid (herbs/shrubs/saplings	
Late (herbs/shrubs/trees)	

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

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1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path46 **Date:** 09.21.16 **Time:** 0940
Project Number: 3MB5000100 Task 00300 **Town:** Mojave **State:** CA
Stream: LC-1 **Photo begin file#:** **Photo end file#:**
Investigator(s): ICain, CRenfrew

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

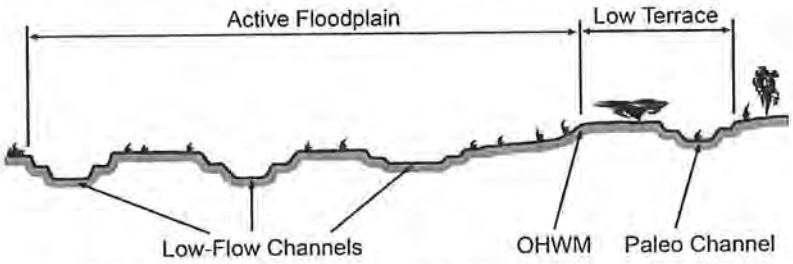
Brief site description:

Sinuous, bowl-shaped desert-wash - downstream braided.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

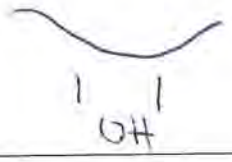
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

3MBC000300

Project ID: ~~[illegible]~~ **Cross section ID:** 6C-1 **Date:** 09.21.16 **Time:** 0940

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 3 % Tree: 0 % Shrub: 1 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** 6C-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

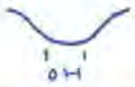
Comments:

Jurisdictional Delineation Data Sheet

					√
Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 940	Upstream Photo		X
			Downstream Photo		
Date: 9/21/2016	Feature ID: 6C-1	Location: Mojave Desert			
Circle Preliminary Status: USACE CDFW RWQCB			Do Normal Conditions Exist?		X
			Significant Disturbance?		X
Circle Flow Character: Ephemeral Intermittent Perennial			Potential Wetland?		
OHWM Recorded by: Field Map GPS GIS Digitizing			Hydrology		
			Wetland Plants		
			Surface Water/Depth:		
Side Slope Estimate: Mulant					
Veg Type(s) in Drainage: Larrea / Krameria					

Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	
	Culvert	Channel	Riprap	Downstream Blocked	X
	Other:			Lateral Flow Blocked	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	
	Roads	Utility Lines	Other:		

Stream Cross Section Drawing:



OHWM:			
Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		
Comment:			

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 1	Herb % Cover 2	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Silt: Fine Medium Coarse		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	X
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	
Comments:					

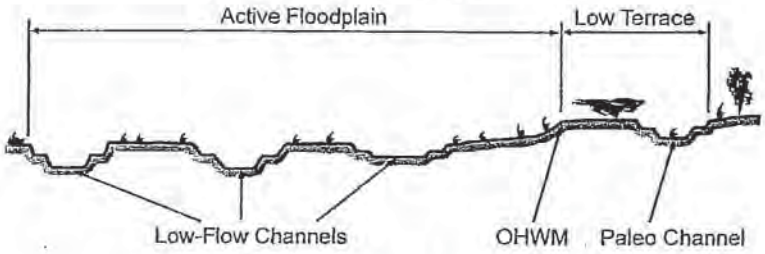
Active Floodplain:		Tree % Cover	Shrub % Cover	Herb % Cover	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	
Comments:					

Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover	
Circle average sediment texture		Sand: Fine Medium Course Very Coarse			
Granule Pebble Cobble Boulder		Other:			
Circle Indicators: Mudcracks Ripples			Community succession:	NA	
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	
Other:				Late (herbs/shrubs/trees)	
Comments:					

Site Description:	
Stream is:	
Braided	
Sinuous	X
Curved	
Straight	
Entrenched	
Bowl Shaped	X
Shallow	
Vegetation % In Stream:	
0-20	X
20-40	
40-60	
60-80	
80-100	
Stream Type:	
V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
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1/8 0.0025	0.0625	Very fine sand	
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1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LOC-2
Investigator(s): ICain, CRenfrow

Date: 09.21.16 **Time:** 0950
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

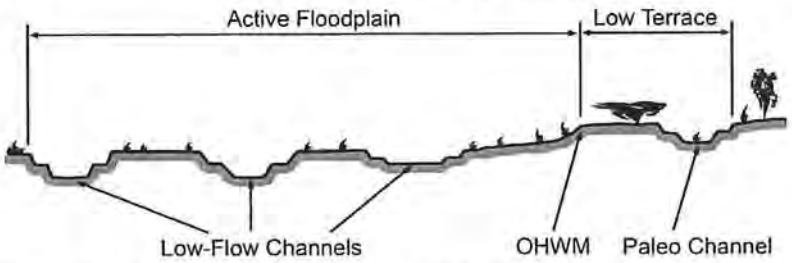
Brief site description:

braided, shallow desert wash
— low road built near middle of feature.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

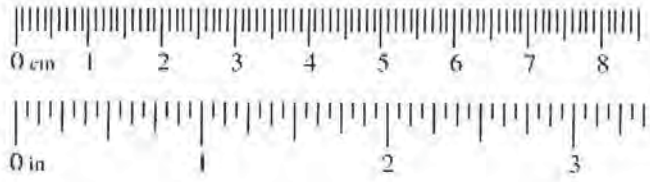


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6C-2 **Date:** 09.21.16 **Time:** 0950

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

No grasses

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6C-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 12-17 % Tree: 1 % Shrub: 10-15% Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 950	Upstream Photo		**Site Description:**	
			Downstream Photo	X	Stream is:	
Date: 9/21/2016	Feature ID: 6C-2	Location: Mojave Desert			Braided	X
					Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	
		Significant Disturbance?			Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
		Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Slight					0-20	
Veg Type(s) in Drainage: Am salsola scrub					20-40	X
					40-60	
					60-80	
					80-100	

Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	
	Culvert	Channel	Riprap	Downstream Blocked	
	Other:			Lateral Flow Blocked	X
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	
	Roads	Utility Lines	Other:		

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Stream Cross Section Drawing:

Additional Description:

Low road built near middle of feature in survey area

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species	X	Other:	
Change in vegetation cover	X		

Comment: No grasses

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings) X
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 1 Shrub % Cover 10-15 Herb % Cover 0

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees) X

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

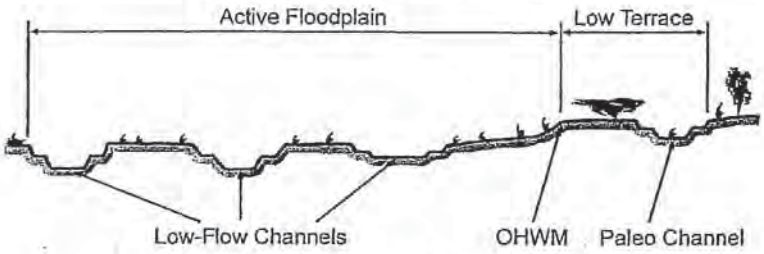
Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
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	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
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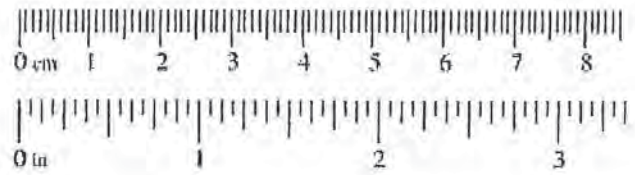
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LD-1
Investigator(s): JCain, CRenfrew

Date: 09.21.16 **Time:** 1030
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

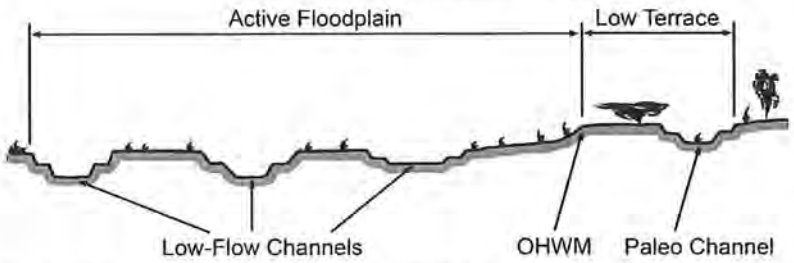
Brief site description:

Braided bowl shaped desert wash - upstream blocked

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
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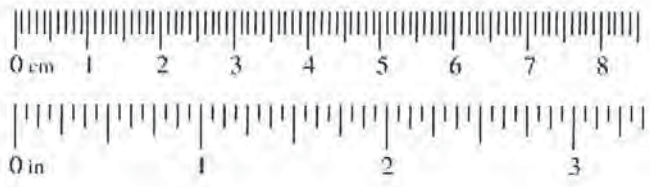
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		Sand
1/2 0.0098	0.25	Medium sand	
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
		Medium silt	
1/32 0.00061	0.0156		Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** LOD-1 **Date:** 09.21.16 **Time:** 1030

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse sand

Total veg cover: 3 % Tree: 0 % Shrub: 1 % Herb: 2 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6D-1 **Date:** 09.21.16 **Time:** 1030

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 26-31% Tree: 1 % Shrub: 20 % Herb: 5-10%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1030
Path 46

Date: 9/21/2016 Feature ID: GD-1 Location: Mojave Desert

Circle Preliminary Status: USACE CDFW RWQCB

Circle Flow Character: Ephemeral Intermittent Perennial

OHWM Recorded by: Field Map GPS GIS Digitizing

Side Slope Estimate: Moderate

Veg Type(s) in Drainage: J tree, Larrea, Krumeria

	V
Upstream Photo	X
Downstream Photo	
Do Normal Conditions Exist?	X
Significant Disturbance?	X
Potential Wetland?	
Hydrology	
Wetland Plants	
Surface Water/Depth:	

Site Description:

Stream is:

Braided	X
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	X
Shallow	

Vegetation % In Stream:

0-20	
20-40	
40-60	X
60-80	
80-100	

Anthropogenic Modifications: Road Grazing Channelized Culvert Channel Riprap Other:

Upstream Blocked	X
Downstream Blocked	
Lateral Flow Blocked	

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

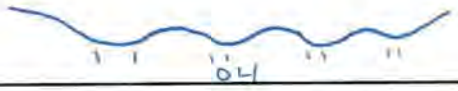
Circle Surrounding Land Use: Urban Rural Commercial Agriculture Roads Utility Lines Other:

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description:

Stream Cross Section Drawing:



OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 3 Herb % Cover 2

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings X / Late (herbs/shrubs/trees)

Comments:

Active Floodplain: X Tree % Cover 1 Shrub % Cover 20 Herb % Cover 5-10

Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees) X

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

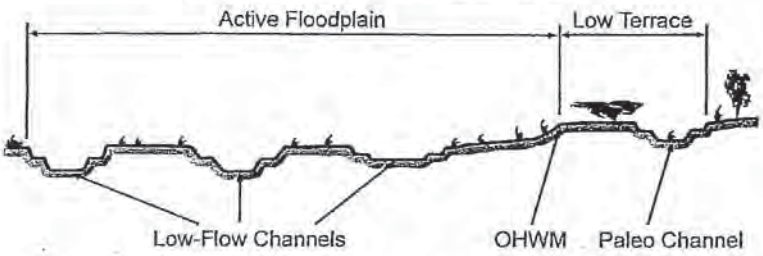
Circle average sediment texture Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA / Early (herbs/seedlings) / Mid (herbs/shrubs/saplings / Late (herbs/shrubs/trees)

Comments:

Hydrogeomorphic Floodplain Units



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		Very fine sand	Sand
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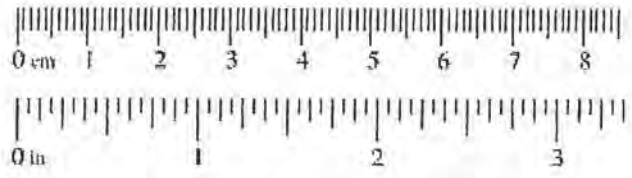


Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6D-2
Investigator(s): I Cain, C Renfrew

Date: 09.21.16
Time: 1100
Town: Mojave Desert
State: CA
Photo begin file#:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

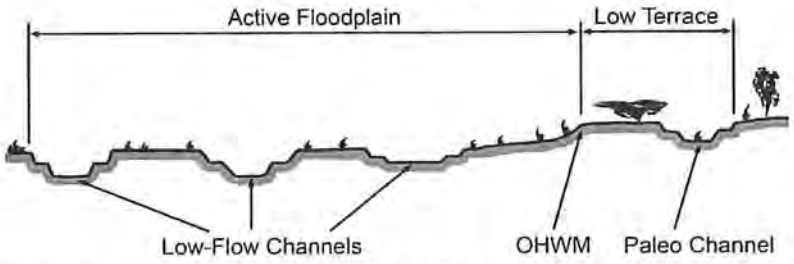
Brief site description:

Braided shallow desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



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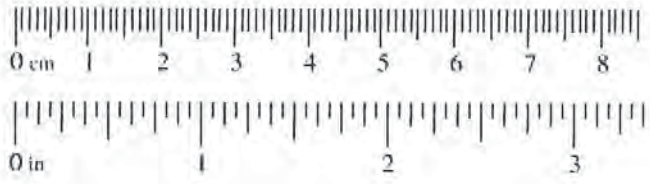
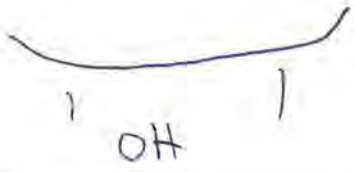
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6D-2 **Date:** 09.21.16 **Time:** 1100

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: med/coarse sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6D-2 **Date:** 09.21.16 **Time:** 1100

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 6-11 % Tree: 0 % Shrub: 5-10 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Staff: CR and IC Time: 1100 Path 46		Upstream Photo Downstream Photo	✓
Date: 9/21/2016 Feature ID: 6D-2	Location: Mojave Desert		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist? Significant Disturbance?	✓ ✓
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?	
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology Wetland Plants Surface Water/Depth:	
Side Slope Estimate: Slight			
Veg Type(s) in Drainage: Krameria, Lycium			

Anthropogenic Modifications:	Road Culvert Other:	Grazing Channel	Channelized Riprap	Upstream Blocked Downstream Blocked Lateral Flow Blocked	
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban Roads	Rural Utility Lines	Commercial Other:	Agriculture	

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	✓	Break in bank slope	✓
Change in vegetation species		Other:	
Change in vegetation cover	✓		

Comment:

Low-Flow Channel: ✓ Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse — Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA ✓ Early (herbs/seedlings) Mid (herbs/shrubs/saplings Late (herbs/shrubs/trees)

Comments:

Active Floodplain: ✓ Tree % Cover 0 Shrub % Cover 5-10 Herb % Cover 1

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA Early (herbs/seedlings) Mid (herbs/shrubs/saplings ✓ Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture — Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder — Other:

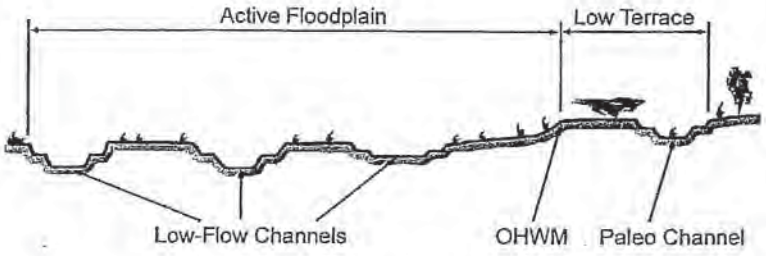
Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:	Community succession: NA Early (herbs/seedlings) Mid (herbs/shrubs/saplings Late (herbs/shrubs/trees)

Comments:

Site Description:	
Stream is:	
Braided	✓
Sinuous	
Curved	
Straight	
Entrenched	
Bowl Shaped	
Shallow	✓
Vegetation % In Stream:	
0-20	✓
20-40	
40-60	
60-80	
80-100	
Stream Type:	
V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	✓
Flowing River/Stream	
Dry Streambed	

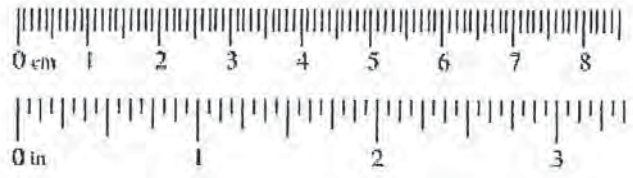
Additional Description:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 60-3
Investigator(s): ICain, CKenfield

Date: 07.21.16 **Time:** 1110
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

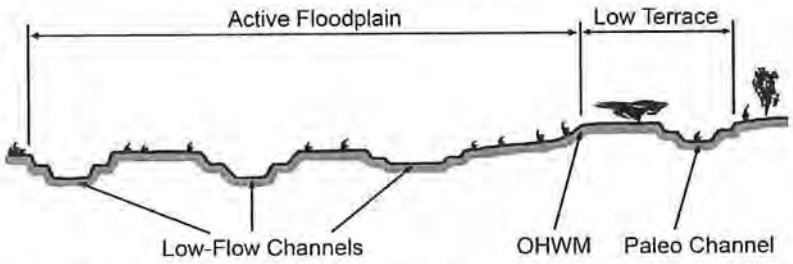
Brief site description:

curved shallow desert wash — lateral flow blocked.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

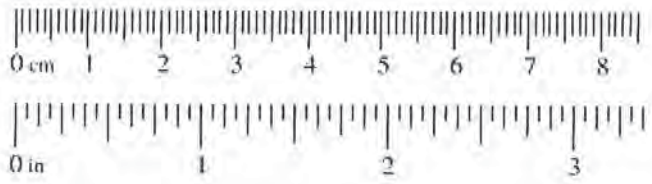


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

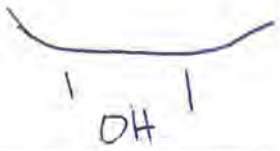
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6D-3 **Date:** 09.21.16 **Time:** 1110

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: med. sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1110	Upstream Photo	X	**Site Description:**
			Downstream Photo		Stream is:
Date: 9/21/2016	Feature ID: 6D-3	Location: Mojave Desert			Braided ☐ Sinuous ☐ Curved X Straight ☐
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Entrenched ☐ Bowl Shaped ☐ Shallow X
		Significant Disturbance?		X	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Vegetation % In Stream:
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology			0-20 X; 20-40 ☐; 40-60 ☐; 60-80 ☐; 80-100 ☐
		Wetland Plants			
		Surface Water/Depth:			
Side Slope Estimate: Slight					
Veg Type(s) in Drainage: Amdum sage					

Anthropogenic Modifications:	Road	Grazing	Channelized	Upstream Blocked	☐
	Culvert	Channel	Riprap	Downstream Blocked	☐
	Other:			Lateral Flow Blocked	X
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:	
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture	
	Roads	Utility Lines	Other:		

Stream Type: V-Ditch w/ Sediment ☐; Eroded Channel ☐; Desert Wash X; Flowing River/Stream ☐; Dry Streambed ☐

Stream Cross Section Drawing:

Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 1

Circle average sediment texture: Silt: Fine Medium Coarse; Sand: Fine Medium Course Very Coarse; Granule Pebble Cobble Boulder; Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA ☐; Early (herbs/seedlings) X; Mid (herbs/shrubs/saplings ☐; Late (herbs/shrubs/trees) ☐

Comments:

Active Floodplain: ☐ Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Silt: Fine Medium Coarse; Sand: Fine Medium Course Very Coarse; Granule Pebble Cobble Boulder; Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA ☐; Early (herbs/seedlings) ☐; Mid (herbs/shrubs/saplings ☐; Late (herbs/shrubs/trees) ☐

Comments:

Low Terrace: ☐ Tree % Cover Shrub % Cover Herb % Cover

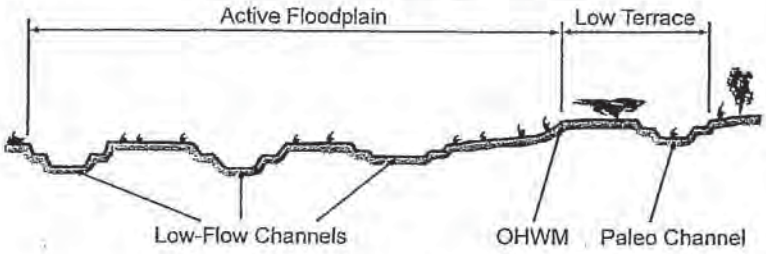
Circle average sediment texture: Silt: Fine Medium Coarse; Sand: Fine Medium Course Very Coarse; Granule Pebble Cobble Boulder; Other:

Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief Other:

Community succession: NA ☐; Early (herbs/seedlings) ☐; Mid (herbs/shrubs/saplings ☐; Late (herbs/shrubs/trees) ☐

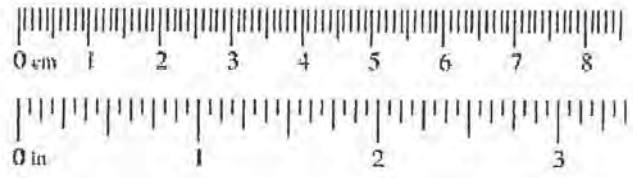
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: WE-1
Investigator(s): AR, CVSC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 1110
State: CA
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

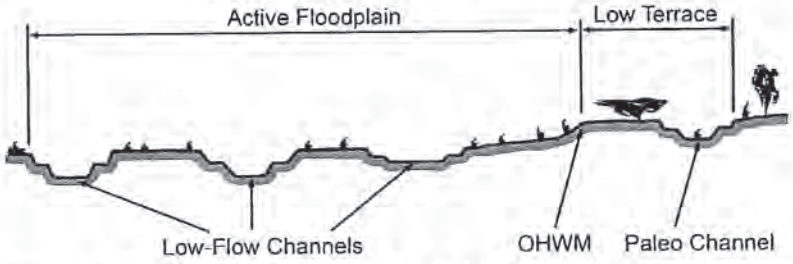
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

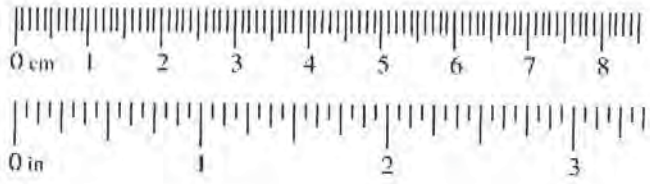


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6E-1 **Date:** 9/21/16 **Time:** 1110

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6E-1 **Date:** 9/21/16 **Time:** 1116

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt w/Pebble

Total veg cover: 30 % Tree: <1 % Shrub: 15 % Herb: 15 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ ~~Mid (herbaceous, shrubs, saplings)~~
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment textur
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/16

Feature ID	6E-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drift deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash +
Surrounding Land Use	Open Space + transmission line
Other Notes	mound of sediment pushed into drainage

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: UE-2
Investigator(s): AR, CDC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 1125
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

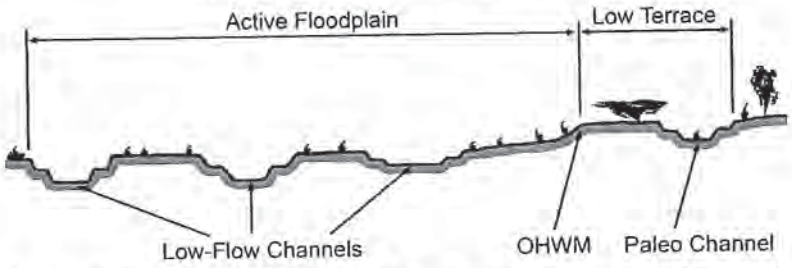
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** XE-1 **Date:** 9/21/16 **Time:** 1125

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine to Medium Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6E-2 **Date:** 9/21/16 **Time:** 1125

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt w/Pebble

Total veg cover: 15 % Tree: 0 % Shrub: 10 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/2/14

Feature ID	6E-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drift deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6F-1
Investigator(s): AR, CDC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 0945
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

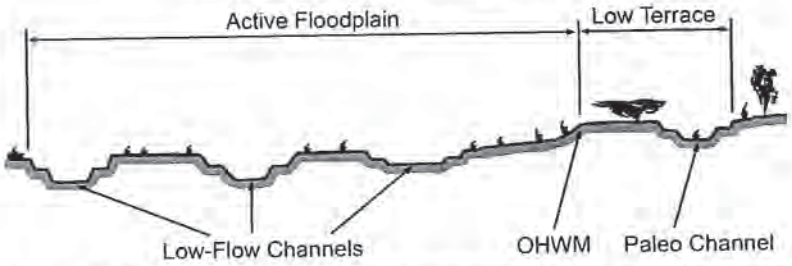
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** 6F-1 **Date:** 9/21/16 **Time:** 0945

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very Fine Sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** LoF-1 **Date:** 9/21/16 **Time:** 0945

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand w/Pebble

Total veg cover: 32 % Tree: 2 % Shrub: 10 % Herb: 20 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

0945

Project/Task No. 3MBC000100/00300	Project Name Path 46	9/21/16
Field Staff AR, CDC		Date 9/30

Feature ID	~~C-6F-1~~
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Drainage Patterns, Δ in sediment texture, Soil Cracks
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody -- herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LOF-2
Investigator(s): AR, CRC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 0945
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

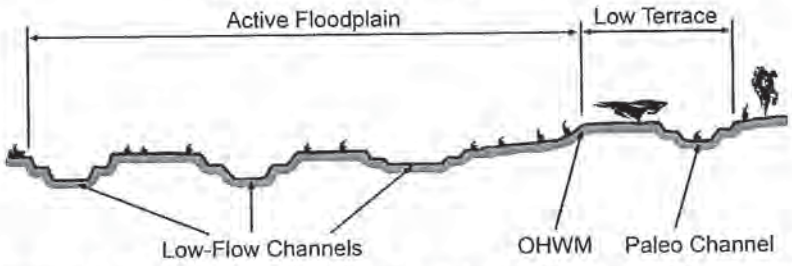
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

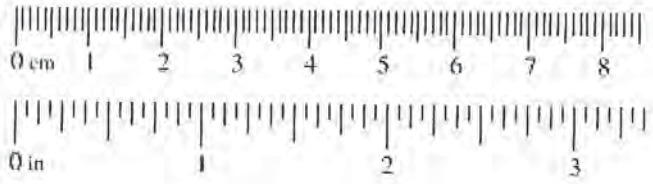


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** LF-2 **Date:** 9/21/16 **Time:** 0955

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule to Cobble

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6F-2 **Date:** 9/24/14 **Time:** 0955

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Pebble
Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: 1 %
Community successional stage:
- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Pebble
Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: 1 %
Community successional stage:
- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet 0955

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CC	Date 9/21/16

Feature ID	6F-2
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	*Trash → can scatter

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: WF-3
Investigator(s): AR, CC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 1020
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

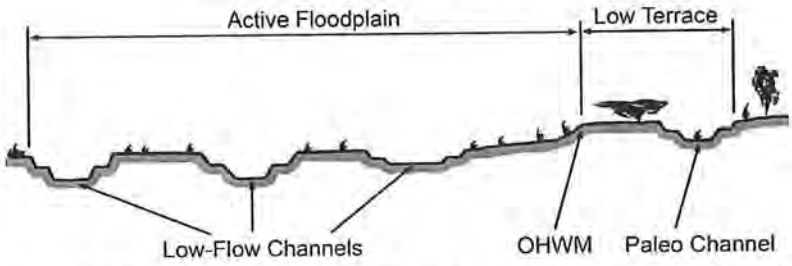
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

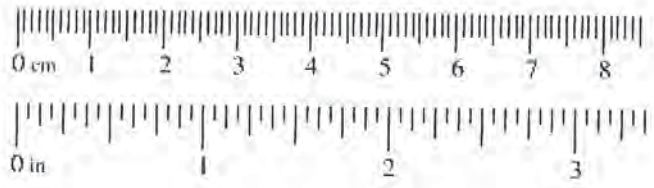


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6F-3 **Date:** 9/21/14 **Time:** 1020

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Silt to Very Fine Sand

Total veg cover: 4 % Tree: 0 % Shrub: 2 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] ~~Surface relief~~
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6F-3 **Date:** 9/21/16 **Time:** 1020

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/Pebble

Total veg cover: ____ % Tree: 1 % Shrub: 20 % Herb: 50 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/24/14

Feature ID	LOF-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Soil Crack, Drift Deposit, Bed/Bank, A in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: UF-4
Investigator(s): AR, CRC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 1035
State: CA
Photo end file#:

Y [x] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [x] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

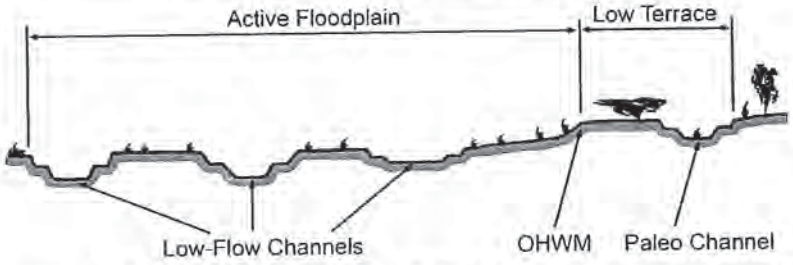
Brief site description:

Dry Reser + Wash

Checklist of resources (if available):

- [ ] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** LeF-4 **Date:** 9/21/14 **Time:** 1035

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand w/Pebble

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: A in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6F-4 **Date:** 9/21/16 **Time:** 1035

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/ Pebble + Cobble

Total veg cover: 25 % Tree: 0 % Shrub: 15 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/14

Feature ID	6F-4
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment, Soil Cracks, Drift Deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6F-5
Investigator(s): AR, CDC

Date: 9/30/14
Town: Mojave Desert
Photo begin file#:

Time: 1044
State: CA
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

DRV + Road Crossing

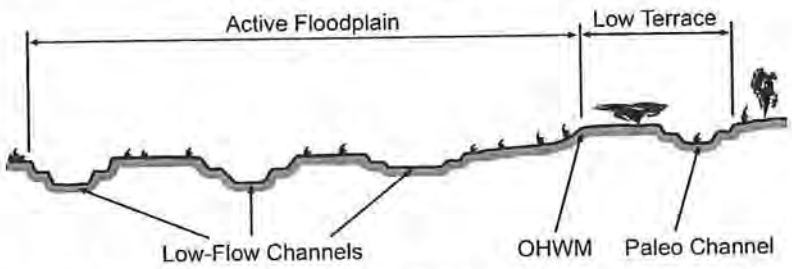
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

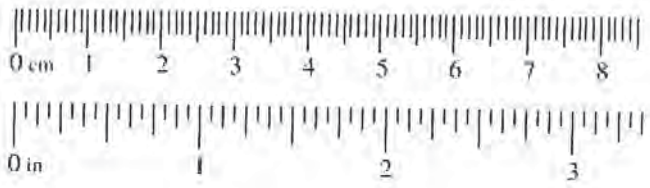


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6F-5 **Date:** 9/21/16 **Time:** 1048

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6F-5 **Date:** 7/21/16 **Time:** 1045

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble w/Cobble

Total veg cover: 5 % Tree: 0 % Shrub: 4 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CRC	Date 9/21/16

Feature ID	LOF-5
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture,
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing & trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 6G-1
Investigator(s): AR, CBC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 0900
State: CA
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossings

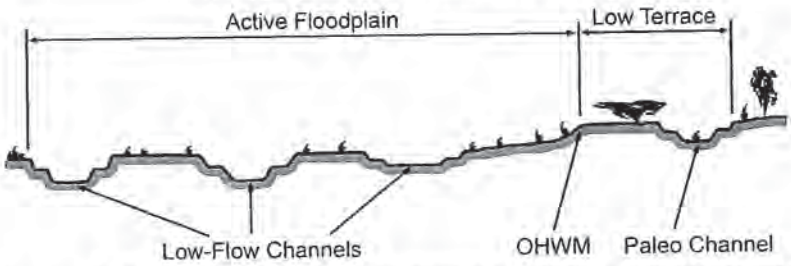
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
0.0098 (1/2)	0.25	Medium sand	Sand
0.005 (1/4)	0.125	Fine sand	
0.0025 (1/8)	0.0625	Very fine sand	
0.0012 (1/16)	0.031	Coarse silt	
0.00061 (1/32)	0.0156	Medium silt	Silt
0.00031 (1/64)	0.0078	Fine silt	
0.00015 (1/128)	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** 6Cr-2 **Date:** 9/21/14 ~~9/20/14~~ **Time:** 0900

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: ~~4~~

Characteristics of the floodplain unit:

Average sediment texture: Medium

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6G-1 **Date:** 9/21/16 **Time:** 0900

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 50 % Tree: 0 % Shrub: 10 % Herb: 40 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/14

Feature ID	DG-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drift deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	~~bve~~ unveg in channel
Chemical Indicators[6]	un/L
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LGR-2
Investigator(s): AR, CDC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 0915
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

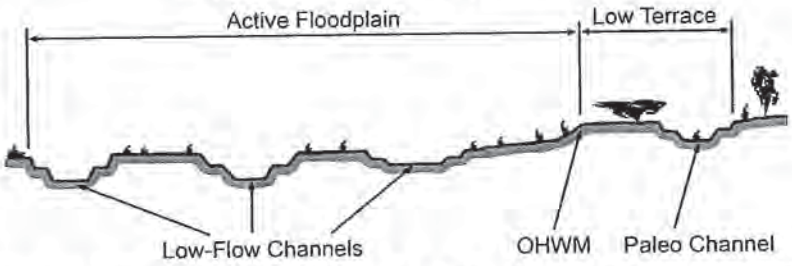
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

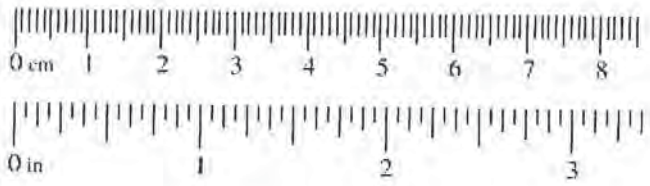


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6Gr-2 **Date:** 9/21/16 **Time:** 0915

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine to Medium Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** LoGr-2 **Date:** 9/21/16 **Time:** 0915

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 3 % Tree: 0 % Shrub: 2 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/Pebble

Total veg cover: 32 % Tree: 0 % Shrub: 2 % Herb: 30 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/16

Feature ID	6G-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drift deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LG-3
Investigator(s): AR, CRC

Date: 9/21/16
Town: Mojave Desert
Photo begin file#:

Time: 0916
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

Brief site description:

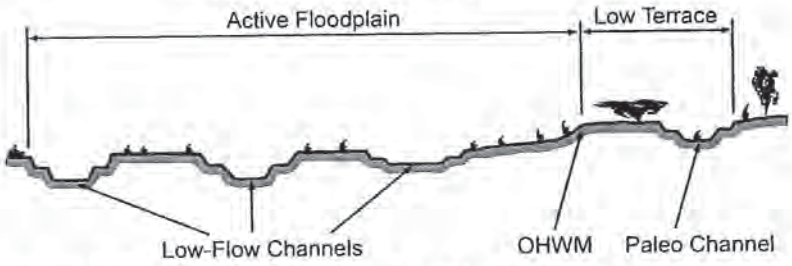
Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: 3MBC000300 **Cross section ID:** LeGr-3 **Date:** 09/21/16 **Time:** 0916

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** LoGr-3 **Date:** 9/21/16 **Time:** 1021

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Pebble

Total veg cover: 4 % Tree: 0 % Shrub: 1 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/Pebble

Total veg cover: 12 % Tree: 0 % Shrub: 2 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/11

Feature ID	6G-3
Preliminary Jurisdictional Status[1]	CDFW, RWQCB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Sediment deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: LOG-4
Investigator(s): AR, CDC

Date: 9/21/16 **Time:** 0930
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

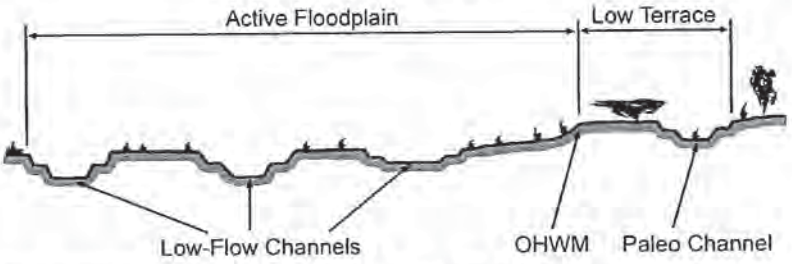
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

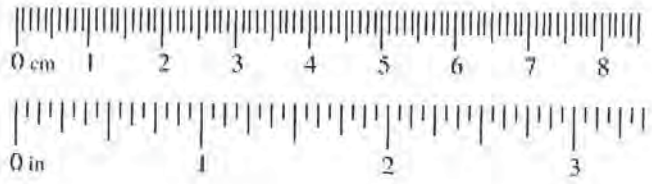


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 6G-4 **Date:** 9/21/16 **Time:** 0930

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 6G-4 **Date:** 7/21/16 **Time:** 0930

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Granule
Total veg cover: 3 % Tree: 0 % Shrub: 1 % Herb: 2 %
Community successional stage:
- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Pebble
Total veg cover: 20 % Tree: 0 % Shrub: 5 % Herb: 15 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

0930

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/21/14

Feature ID	LoG-4
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	Unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7A-1
Investigator(s): AR, CRC

Date: 9/20/14 **Time:** 1113
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

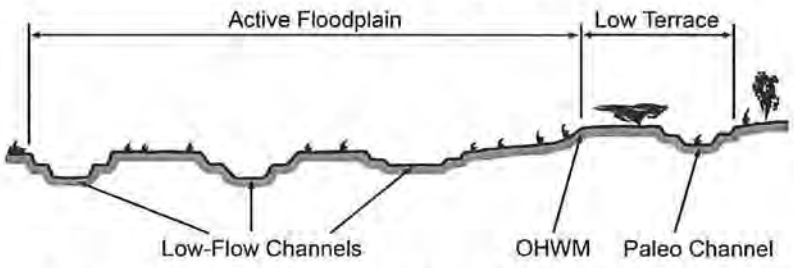
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- [ ] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

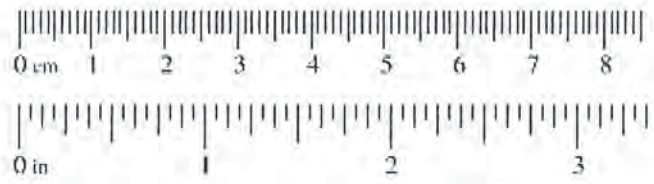


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7A-1 **Date:** 9/20/14 **Time:** 1113

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Silt

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** MA-1 **Date:** 9/20/14 **Time:** 1113

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Pebble w/Coarse Sand
Total veg cover: 43 % Tree: 0 % Shrub: 40 % Herb: 3 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Pebbles w/Cobble
Total veg cover: 31 % Tree: 1 % Shrub: 10 % Herb: 20 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/20/16

Feature ID	7A-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Drift deposit, Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7A-2
Investigator(s): AR, CDC

Date: 9/20/14
Town: Mojave Desert
Time: 1129
State: CA
Photo begin file#:
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

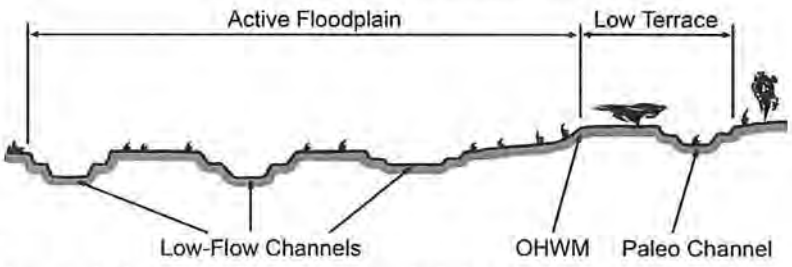
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

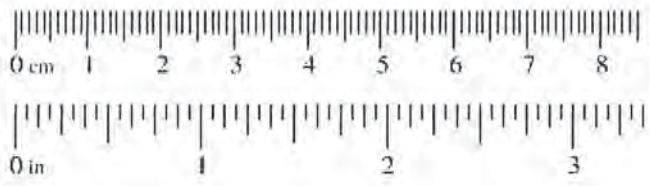


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156		Silt
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** MA-2 **Date:** 7/20/16 **Time:** 1129

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] ~~Change in vegetation cover~~
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cobble to Boulder

Total veg cover: <1 % Tree: 0 % Shrub: 0 % Herb: <1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000800 **Cross section ID:** 7A-2 **Date:** 9/20/16 **Time:** 1129

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/20/14

Feature ID	7A-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment (barely texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7B-1
Investigator(s): ICain, C Renfrew

Date: 09.20.16 **Time:** 1125
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road, culvert

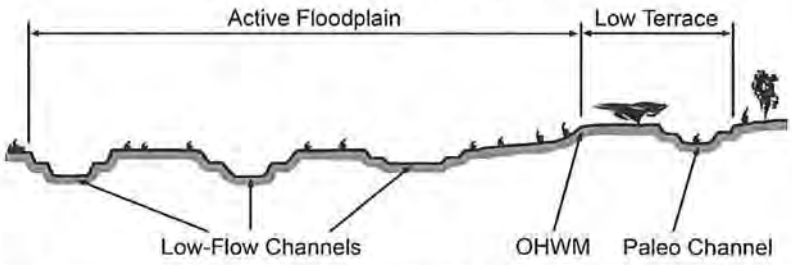
Brief site description:

Shivas bowl-shaped desert-wash — failed culvert.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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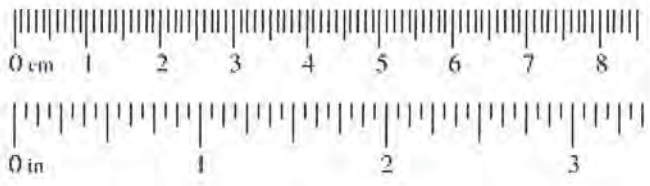
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** TB-1 **Date:** 09.20.16 **Time:** 1125

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 10 % Tree: 0 % Shrub: 5 % Herb: 5 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [x] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** TB-1 **Date:** 09.20.16 **Time:** 1125

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 57 % Tree: 2 % Shrub: 50 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

				√	
Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1125	Upstream Photo / Downstream Photo	X	**Site Description:** Stream is:
Date: 9/20/2016	Feature ID: 7B-1	Location:	Mojave Desert		
Circle Preliminary Status: USACE (CDFW) (RWQCB)		Do Normal Conditions Exist?		X	
		Significant Disturbance?		X	
Circle Flow Character: (Ephemeral) Intermittent Perennial		Potential Wetland?			
OHWM Recorded by: (Field Map) GPS GIS Digitizing		Hydrology / Wetland Plants / Surface Water/Depth:			
Side Slope Estimate: Moderate					
Veg Type(s) in Drainage: J tree, Gutierrezia, Lycium					

Stream is:

Braided	
Sinuous	X
Curved	
Straight	
Entrenched	
Bowl Shaped	X
Shallow	

Vegetation % In Stream:

0-20	
20-40	
40-60	X
60-80	
80-100	

Stream Type:

V-Ditch w/ Sediment	
Eroded Channel	
Desert Wash	X
Flowing River/Stream	
Dry Streambed	

Additional Description: Failed culvert

Anthropogenic Modifications: (Road) (Culvert) Other: failed; Grazing; Channel; Channelized; Riprap; Upstream Blocked; Downstream Blocked; Lateral Flow Blocked

Circle Chemical Issues: Pollution Oil Slick Eutrophication Other:

Circle Surrounding Land Use: Urban Rural Commercial Agriculture (Roads) (Utility Lines) Other: OS

Stream Cross Section Drawing:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

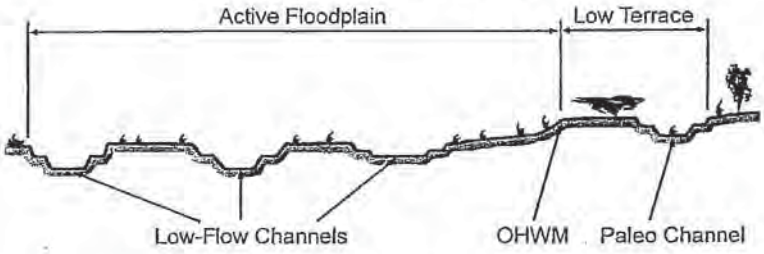
Comment:

Low-Flow Channel: X — Tree % Cover 0 — Shrub % Cover 5 — Herb % Cover 5
Circle average sediment texture — Sand: Fine (Medium) Course Very Coarse
Silt: Fine Medium Coarse — Other:
Circle Indicators: (Mudcracks) (Ripples) (Drift/Debris) Presence of bed and bank Benches Soil development Surface relief
Other:
Community succession: NA [ ] Early (herbs/seedlings) [ ] Mid (herbs/shrubs/saplings [X] Late (herbs/shrubs/trees) [ ]
Comments:

Active Floodplain: X — Tree % Cover 2 — Shrub % Cover 50 — Herb % Cover 5
Circle average sediment texture — Sand: Fine Medium Course Very Coarse
Granule Pebble (Cobble) Boulder — Other:
Circle Indicators: ~~Mudcracks~~ Ripples Drift/Debris (Presence of bed and bank) (Benches) ~~Soil development~~ ~~Surface~~ relief
Other:
Community succession: NA [ ] Early (herbs/seedlings) [ ] Mid (herbs/shrubs/saplings [ ] Late (herbs/shrubs/trees) [X]
Comments:

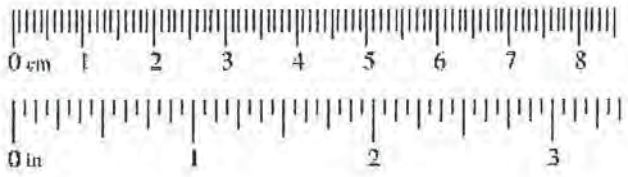
Low Terrace: [ ] Tree % Cover — Shrub % Cover — Herb % Cover
Circle average sediment texture — Sand: Fine Medium Course Very Coarse
Granule Pebble Cobble Boulder — Other:
Circle Indicators: Mudcracks Ripples Drift/Debris Presence of bed and bank Benches Soil development Surface relief
Other:
Community succession: NA [ ] Early (herbs/seedlings) [ ] Mid (herbs/shrubs/saplings [ ] Late (herbs/shrubs/trees) [ ]
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
10.08		256	Boulder	
2.56		64	Cobble	Gravel
0.157		4	Pebble	
			Granule	
	0.079	2.00		
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
			Very fine sand	
1/8	0.0025	0.0625		
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
			Very fine silt	
1/128	0.00015	0.0039		
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: TB-2
Investigator(s): I Cain, CRenfrew

Date: 09.20.16 **Time:** 1140
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road, culvert

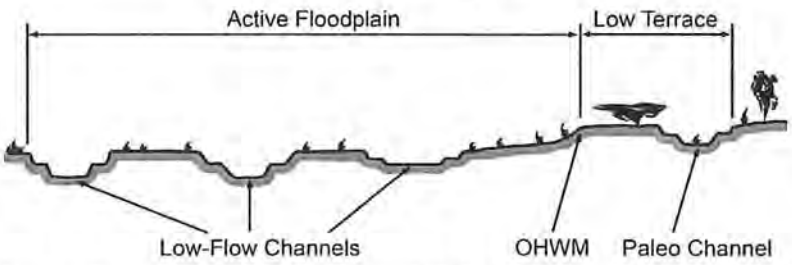
Brief site description:

straight shallow desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

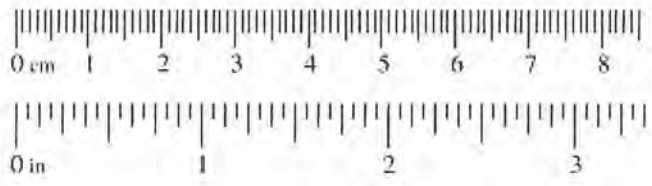


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7B-2 **Date:** 09.20.16 **Time:** 1140

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: med/coarse sand

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** TB-2 **Date:** 09.20.16 **Time:** 1140

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cobble

Total veg cover: 47 % Tree: 2 % Shrub: 40 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1140	Upstream Photo	X	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/20/2016	Feature ID: TB-2	Location: Mojave Desert			Braided		
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved		
		Significant Disturbance?		X	Straight	X	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped		
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X	
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Slight					0-20		
Veg Type(s) in Drainage: Atri, Larrea, Gutierrezia, Lycium					20-40		
					40-60	X	
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80		
	Culvert Channel Riprap		Downstream Blocked		80-100		
	Other:		Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel		
	Roads Utility Lines Other:				Desert Wash	X	
Stream Cross Section Drawing:					Flowing River/Stream		
					Dry Streambed		
					Additional Description:		

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover	X		

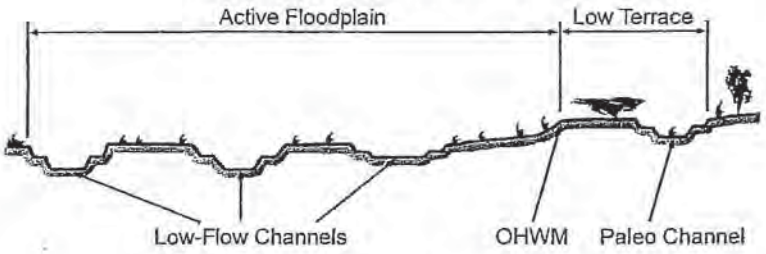
Comment:

Low-Flow Channel:		Tree % Cover 0	Shrub % Cover 5	Herb % Cover 2			
Circle average sediment texture		Sand: Fine Medium Course Very Coarse					
Silt: Fine Medium Coarse		Other:					
Circle Indicators: Mudcracks Ripples			Community succession:	NA			
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)	X		
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings			
Other:				Late (herbs/shrubs/trees)			
Comments:							

Active Floodplain:		Tree % Cover 2	Shrub % Cover 40	Herb % Cover 5			
Circle average sediment texture		Sand: Fine Medium Course Very Coarse					
Granule Pebble Cobble Boulder		Other:					
Circle Indicators: Mudcracks Ripples			Community succession:	NA			
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)			
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings			
Other:				Late (herbs/shrubs/trees)	X		
Comments:							

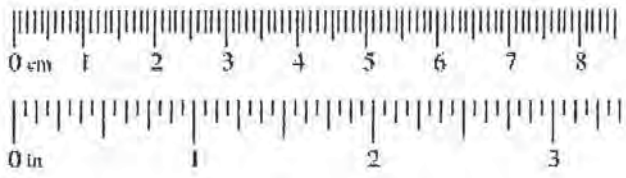
Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover			
Circle average sediment texture		Sand: Fine Medium Course Very Coarse					
Granule Pebble Cobble Boulder		Other:					
Circle Indicators: Mudcracks Ripples			Community succession:	NA			
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)			
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings			
Other:				Late (herbs/shrubs/trees)			
Comments:							

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7C-1
Investigator(s): AR, CRC

Date: 7/20/14 **Time:** 0945
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

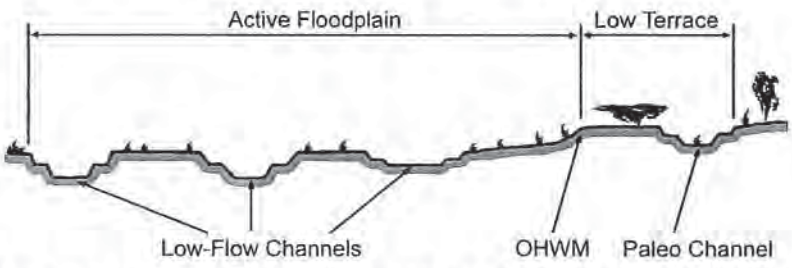
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- [ ] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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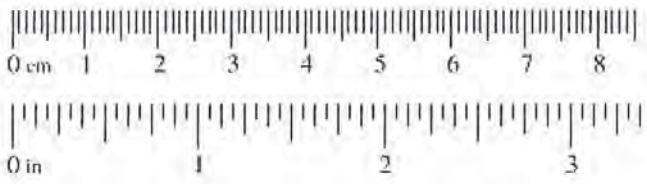
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

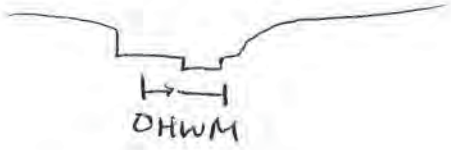
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7C-1 **Date:** 9/20/16 **Time:** 0945

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 1 % Tree: 0 % Shrub: <1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** TC-1 **Date:** 9/20/14 **Time:** 0945

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand w/Pebbles

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, COC	Date 9/20/16

Feature ID	7C-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, ∆ in sediment texture, Drift
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	unveg in
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7C-2
Investigator(s): AR, CRC

Date: 9/20/14
Town: Mojave Desert
Photo begin file#:

Time: 0945
State: CA
Photo end file#:

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV & Road Crossing

Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
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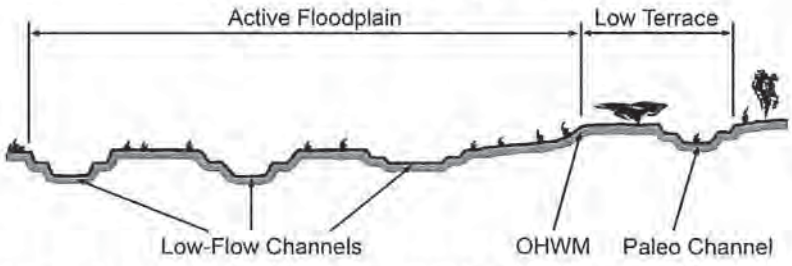
Hydrogeomorphic Floodplain Units



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   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

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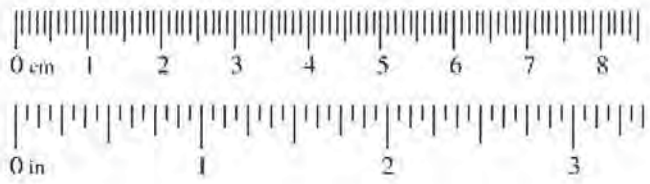
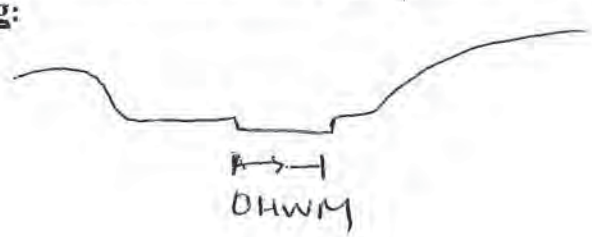
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** ~~7C-1~~ 7C-2 **Date:** 9/20/16 **Time:** 0945

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 7C-1 **Date:** 9/20/16 **Time:** 0945

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~Ve~~ Fine Sand w/ Pebble + Cobble

Total veg cover: 0 % Tree: 0 % Shrub: + % Herb: 15 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 9/20/14

Feature ID	MC-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drift Deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Vineg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: ~~2~~ 7C-3
Investigator(s): AR, CRC

Date: 9/20/14 **Time:** 1015
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

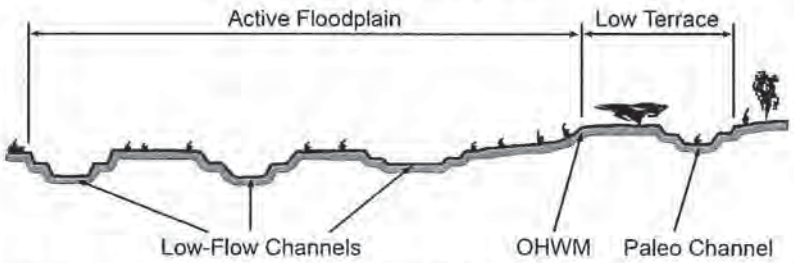
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

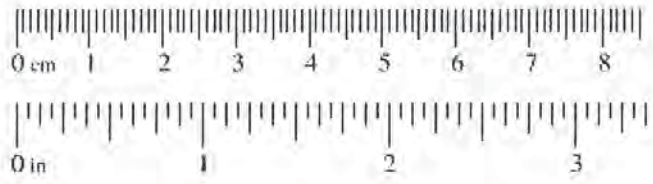


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

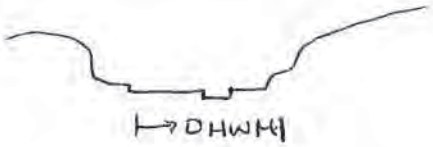
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7C-3 **Date:** ~~9~~ 9/20/16 **Time:** 1015

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** ~~2~~ 7C-3 **Date:** 9/20/16 **Time:** 1015

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: ~~B~~ Pebble to Cobble

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☑ ~~Other:~~ Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

1015

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CC	Date 09/20/16

Feature ID	MC-3
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drift Deposit
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	moderate slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7E-1
Investigator(s): I Cain, C Renfrew

Date: 09.20.16 **Time:** 0950
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

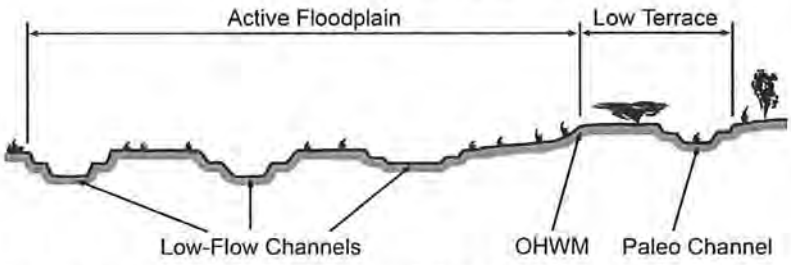
Brief site description:

Curved shallow desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

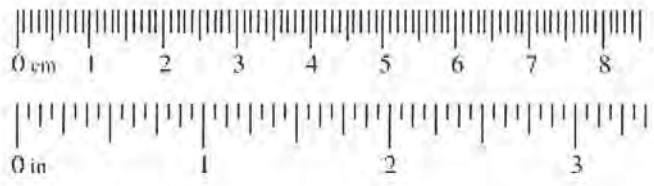


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

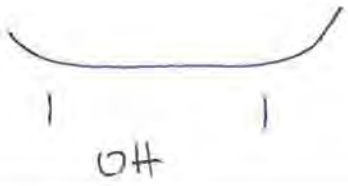
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7E-1 **Date:** 09.20.16 **Time:** 0950

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse sand

Total veg cover: 2 % Tree: 0 % Shrub: 0 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

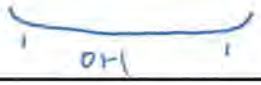
Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 950	Upstream Photo	X	**Site Description:**	
			Downstream Photo		Stream is:	
Date: 9/20/2016	Feature ID: TE-1	Location: Mojave Desert			Braided	
					Sinuous	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	X
		Significant Disturbance?		X	Straight	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched	
		Hydrology			Bowl Shaped	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X
		Surface Water/Depth:			Vegetation % In Stream:	
Side Slope Estimate: Slight					0-20	X
Veg Type(s) in Drainage: Herbs					20-40	
					40-60	
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80	
	Culvert Channel Riprap		Downstream Blocked		80-100	
	Other:		Lateral Flow Blocked		Stream Type:	
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment	
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel	
	Roads Utility Lines Other: OS				Desert Wash	X
Stream Cross Section Drawing:					Flowing River/Stream	
					Dry Streambed	
					Additional Description:	



OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 2

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Silt: Fine Medium Coarse Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings) X
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

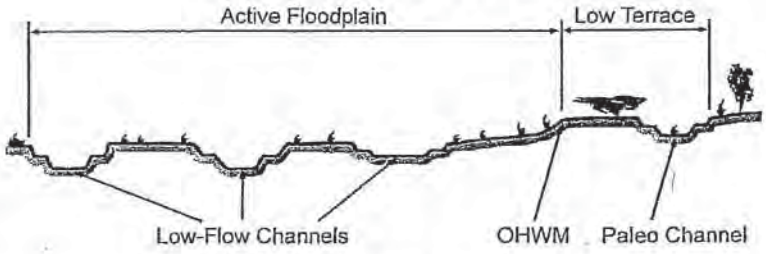
Circle average sediment texture: Sand: Fine Medium Course Very Coarse

Granule Pebble Cobble Boulder Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

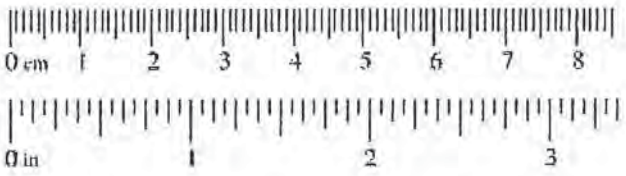
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7E-2
Investigator(s): ICain, CRenfrew

Date: 09.20.16 **Time:** 1005
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

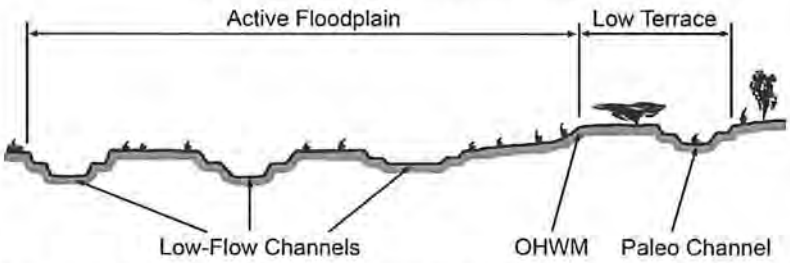
Brief site description:

sinuous bowl-shaped desertwash – downstream bedrock

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

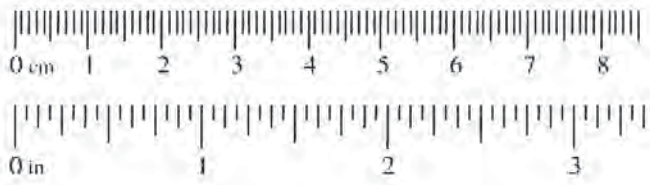


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
1/2 0.0098	0.25	Medium sand	Sand
		Fine sand	
1/4 0.005	0.125		
1/8 0.0025	0.0625	Very fine sand	
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7E-2 **Date:** 09.20.16 **Time:** 1005

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: coarse sand

Total veg cover: 22 % Tree: 0 % Shrub: 20 % Herb: 2 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 7E-2 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1005	Upstream Photo	X	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/20/2016	Feature ID: 7E-2	Location: Mojave Desert			Braided		
					Sinuous	X	
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved		
		Significant Disturbance?			Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped	X	
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow		
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Slight-Moderate					0-20		
Veg Type(s) in Drainage: Lycium Acacia					20-40	X	
					40-60		
Anthropogenic Modifications:	Road	Grazing	Channelized		Upstream Blocked		60-80		
	Culvert	Channel	Riprap		Downstream Blocked	X	80-100		
	Other:				Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:			V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture			Eroded Channel		
	Roads	Utility Lines	Other: OS				Desert Wash	X	
Stream Cross Section Drawing:							Flowing River/Stream		
							Dry Streambed		
							Additional Description:		

OHWM:

Change in sediment texture	X	Break in bank slope	X
Change in vegetation species		Other:	
Change in vegetation cover			

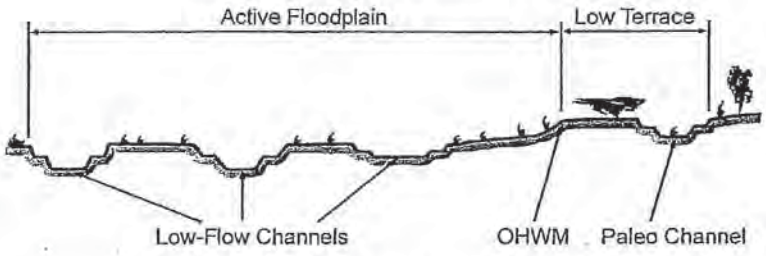
Comment:

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 20	Herb % Cover 2		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Silt: Fine Medium Coarse		Other:				
Circle Indicators: Mudcracks Ripples			Community succession:	NA		
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)		
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	X	
Other:				Late (herbs/shrubs/trees)		
Comments:						

Active Floodplain:		Tree % Cover	Shrub % Cover	Herb % Cover		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Granule Pebble Cobble Boulder		Other:				
Circle Indicators: Mudcracks Ripples			Community succession:	NA		
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)		
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings		
Other:				Late (herbs/shrubs/trees)		
Comments:						

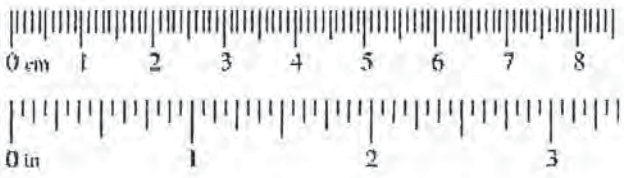
Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Granule Pebble Cobble Boulder		Other:				
Circle Indicators: Mudcracks Ripples			Community succession:	NA		
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)		
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings		
Other:				Late (herbs/shrubs/trees)		
Comments:						

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)		Millimeters (mm)	Wentworth size class	
	10.08	256	Boulder	
	2.56	64	Cobble	Gravel
	0.157	4	Pebble	
	0.079	2.00	Granule	
	0.039	1.00	Very coarse sand	
	0.020	0.50	Coarse sand	
1/2	0.0098	0.25	Medium sand	Sand
1/4	0.005	0.125	Fine sand	
1/8	0.0025	0.0625	Very fine sand	
1/16	0.0012	0.031	Coarse silt	
1/32	0.00061	0.0156	Medium silt	Silt
1/64	0.00031	0.0078	Fine silt	
1/128	0.00015	0.0039	Very fine silt	
			Clay	Mud



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7E-3
Investigator(s): ICain, CRenfrew

Date: 09.20.16 **Time:** 1030
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

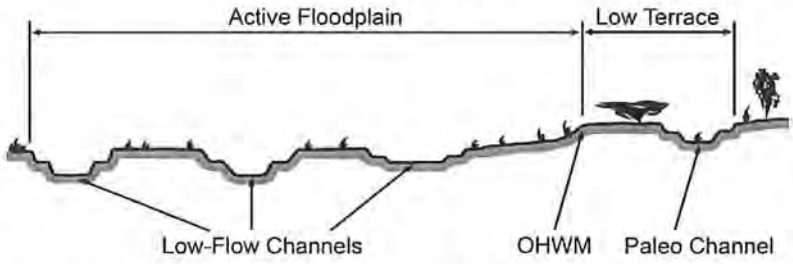
Brief site description:

curved bowl shaped desert wash - downstream blocked

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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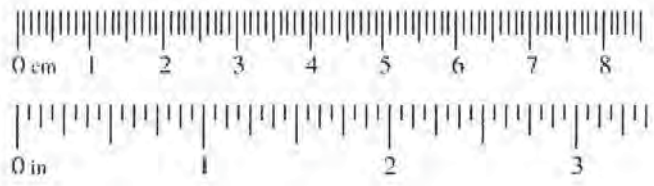
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

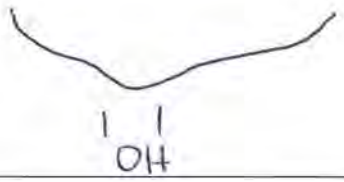
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
0.0098	0.25	Medium sand	Sand
		Fine sand	
0.005	0.125		
0.0025	0.0625	Very fine sand	
		Coarse silt	
0.0012	0.031		
0.00061	0.0156	Medium silt	Silt
		Fine silt	
0.00031	0.0078		
0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7E-3 **Date:** 09.20.16 **Time:** 1030

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [ ] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 30 % Tree: 0 % Shrub: 10 % Herb: 20 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 7E-3 **Date:** 09.20.16 **Time:** 1030

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebble

Total veg cover: 55 % Tree: 0 % Shrub: 50 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 1030	Upstream Photo	X	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/20/2016	Feature ID: ~~E-3~~ 7E-3	Location: Mojave Desert			Braided		
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved	X	
		Significant Disturbance?		X	Straight		
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
OHWM Recorded by: Field Map GPS GIS Digitizing		Hydrology			Bowl Shaped	X	
		Wetland Plants			Shallow		
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Moderate					0-20		
Veg Type(s) in Drainage: ~~Sagebrush~~ Blue sage brush - Ephedra					20-40		
					40-60	X	
Anthropogenic Modifications:	Road Grazing Channelized		Upstream Blocked		60-80		
	Culvert Channel Riprap		Downstream Blocked	X	80-100		
	Other:		Lateral Flow Blocked		Stream Type:		
Circle Chemical Issues:	Pollution Oil Slick Eutrophication Other:				V-Ditch w/ Sediment		
Circle Surrounding Land Use:	Urban Rural Commercial Agriculture				Eroded Channel		
	Roads Utility Lines Other:				Desert Wash	X	
Stream Cross Section Drawing:					Flowing River/Stream		
					Dry Streambed		
					Additional Description:		

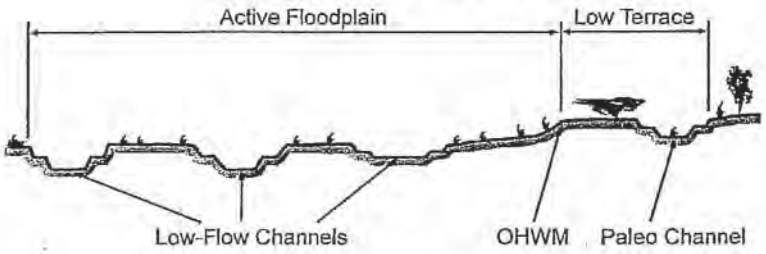
OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species	X	Other:	
Change in vegetation cover			

Comment:

Low-Flow Channel:	X	Tree % Cover 0	Shrub % Cover 10	Herb % Cover 20		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Silt: Fine Medium Coarse		Other:				
Circle Indicators: Mudcracks Ripples			Community succession:	NA		
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)		
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	X	
Other:				Late (herbs/shrubs/trees)		
Comments:						
Active Floodplain:	X	Tree % Cover	Shrub % Cover 70-80	Herb % Cover)		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Granule Pebble Cobble Boulder		Other:				
Circle Indicators: Mudcracks Ripples			Community succession:	NA		
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)		
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings	X	
Other:				Late (herbs/shrubs/trees)		
Comments:						
Low Terrace:		Tree % Cover	Shrub % Cover	Herb % Cover		
Circle average sediment texture		Sand: Fine Medium Course Very Coarse				
Granule Pebble Cobble Boulder		Other:				
Circle Indicators: Mudcracks Ripples			Community succession:	NA		
Drift/Debris Presence of bed and bank				Early (herbs/seedlings)		
Benches Soil development Surface relief				Mid (herbs/shrubs/saplings		
Other:				Late (herbs/shrubs/trees)		
Comments:						

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

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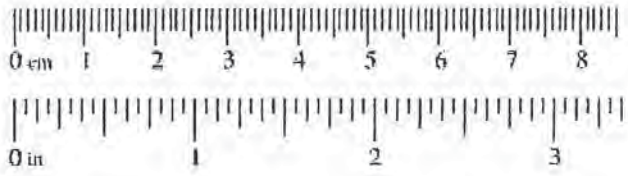


Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: FF-1
Investigator(s): AR, CDE

Date: 9/20/14 **Time:** 0834
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

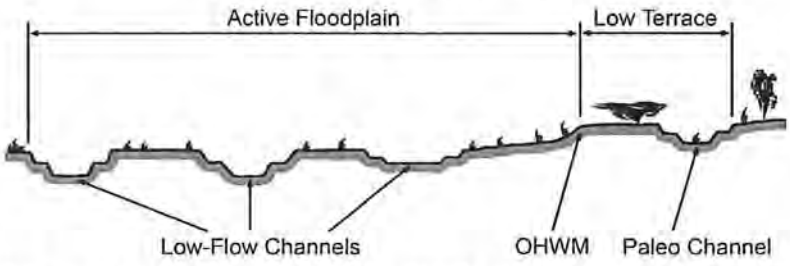
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
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   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
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4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
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   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

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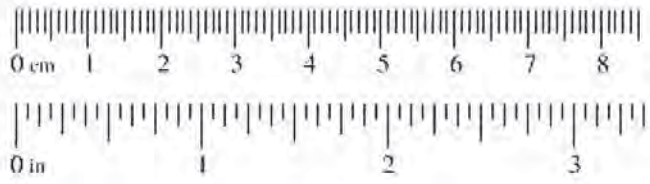
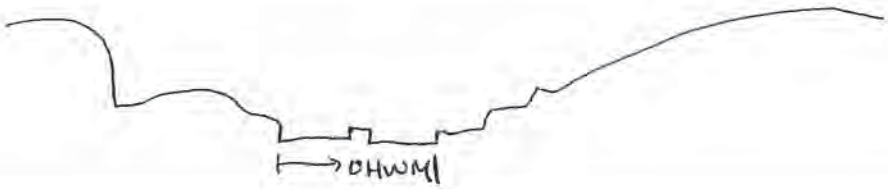
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** MF-1 **Date:** 9/20/14 **Time:** 0834

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [x] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 7F-1 **Date:** 9/20/16 **Time:** 0834

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 3 % Tree: 0 % Shrub: 1 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☑ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand to Pebble

Total veg cover: 24 % Tree: 1 % Shrub: 20 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ ~~Drift and/or debris~~
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CDC	Date 7/20/14

Feature ID	7F-1
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Drainage Patterns, Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	veg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7F-2
Investigator(s): AR, CRC

Date: 9/20/14
Town: Mojave Desert
Photo begin file#:

Time: 0905
State: CA
Photo end file#:

Y [x] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [x] Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

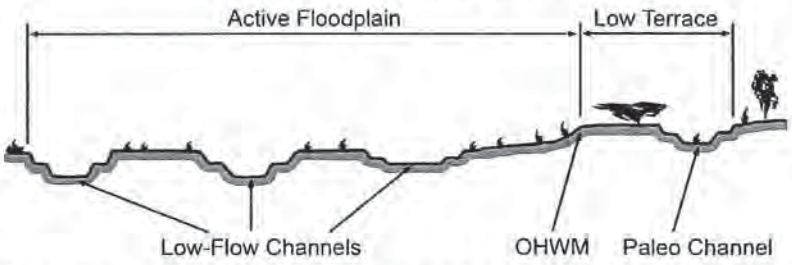
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- [ ] Aerial photography
  Dates:
- [ ] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

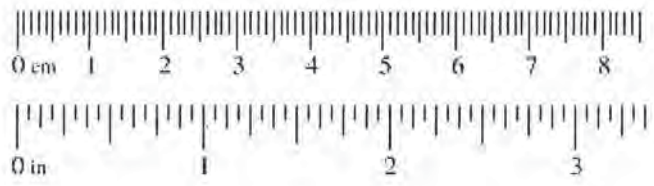


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [ ] GPS
   - [ ] Other:

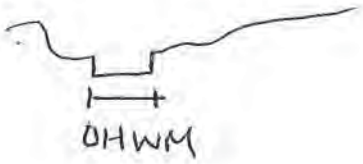
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
0.0098 (1/2)	0.25	Medium sand	Sand
0.005 (1/4)	0.125	Fine sand	
0.0025 (1/8)	0.0625	Very fine sand	
0.0012 (1/16)	0.031	Coarse silt	
0.00061 (1/32)	0.0156	Medium silt	Silt
0.00031 (1/64)	0.0078	Fine silt	
0.00015 (1/128)	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** TF-2 **Date:** 9/20/14 **Time:** 0905

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: Very _____

Characteristics of the floodplain unit:

Average sediment texture: Very Coarse Sand + Medium Sand

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** ~~7F~~ 7F-2 **Date:** 9/20/16 **Time:** 0905

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Cobble to Boulder

Total veg cover: 7 % Tree: 0 % Shrub: 5 % Herb: 2 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☑ Other: Δ in sediment texture
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AB, CBC	Date 9/20/16

Feature ID	TF-2
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	~~N~~ Bed/Bank, Δ in sediment texture
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	moderate to steep
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	UNK
Anthropogenic Modifications[7]	Road Crossing + trash
Surrounding Land Use	Open Space + transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: MF-3
Investigator(s): AR, CDC

Date: 9/20/14 **Time:** 0920
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

ORV + Road Crossing

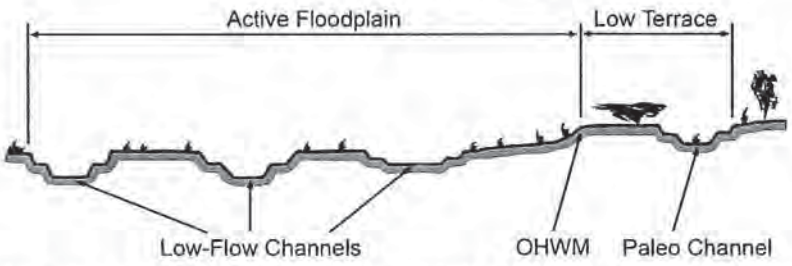
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

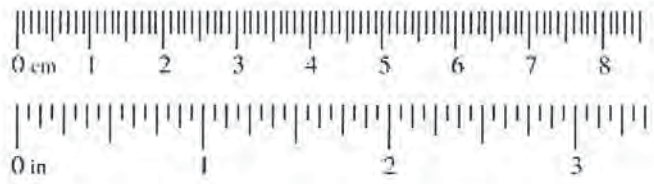


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

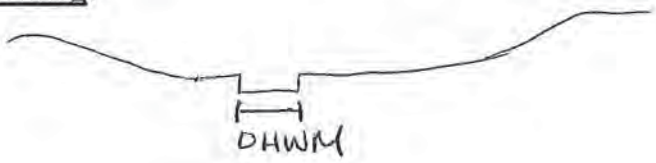
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7F-3 **Date:** 9/20/16 **Time:** 0920

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Medium to Coarse Sand

Total veg cover: 3 % Tree: 0 % Shrub: <1 % Herb: 2 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** TF-3 **Date:** 9/20/14 **Time:** 0920

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AB, CDC	Date 9/20/16

Feature ID	7F-3
Preliminary Jurisdictional Status[1]	CDFW + RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank, Δ in sediment texture, Drift deposits
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle to moderate slope
Characteristic Vegetation[5]	unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space + transmission
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 7F-4
Investigator(s): AB, COE

Date: 9/20/14 **Time:** 0927
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

DRV + Road Crossing

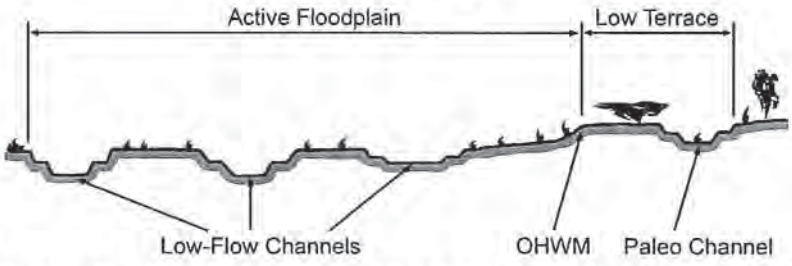
Brief site description:

Dry Desert Wash

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

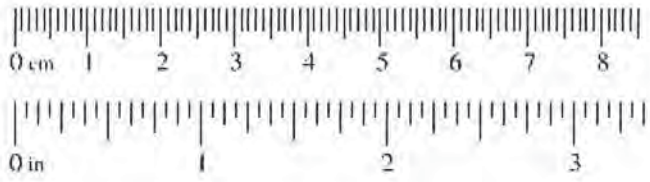


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

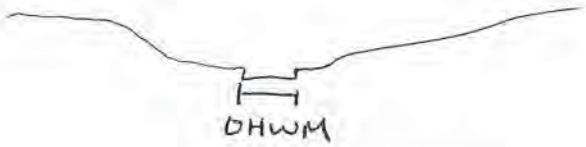
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 7F-4 **Date:** 9/20/14 **Time:** 0927

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 2 % Tree: 0 % Shrub: 1 % Herb: 1 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [x] Other: Δ in sediment texture
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** MF-4 **Date:** 9/20/16 **Time:** 0927

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Jurisdictional Delineation Summary Datasheet

Project/Task No. 3MBC000100/00300	Project Name Path 46
Field Staff AR, CRC	Date 9/20/16

Feature ID	7F-4
Preliminary Jurisdictional Status[1]	CDFW, RWQB
Potential Wetland (y/n)[2]	N
Hydrologic Indicators	Bed/Bank
Wetland Plant Indicators	N/A
Preliminary Hydrologic Regime[3]	Ephemeral
Surface Water Present (y/n), Depth	N
OHWM Width(s)	
CDFW Width(s)	
Side Slope Estimate[4]	gentle slope
Characteristic Vegetation[5]	Unveg in channel
Chemical Indicators[6]	unk
Anthropogenic Modifications[7]	Road Crossing
Surrounding Land Use	Open Space & transmission line
Other Notes	

[1] USACE/Isolated Water/CDFW.
[2] Note if wetland plants/hydrology present; if both present, proceed to dig soil test pit and fill out Wetland Determination Data Form.
[3] Hydrology is **ephemeral** when it occurs only during and immediately following precipitation; **intermittent** if occurs for extended period of time, e.g., due to groundwater influence; and **perennial** if flow is year-round. **Nuisance** flow varies and is a function of anthropogenic influences; can be in addition to natural flow.
[4] Percent slope, degrees, rise over run, or qualitative description.
[5] Describe vegetation within and surrounding drainage/waterbody – herbaceous wetland/shrubland, riparian woodland/forest, upland, etc.
[6] Describe any chemical influences on waters – e.g., potential toxics from road, oil film observed.
[7] Describe any anthropogenic modifications to channel – e.g., artificial channel, riprap, concrete banks, culverts, storm drains.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Path 46
Project Number: 3MBC000100 Task 00300
Stream: 79-1
Investigator(s): ICain, CRenfrew

Date: 09.20.16 **Time:** 0850
Town: Mojave Desert **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Road

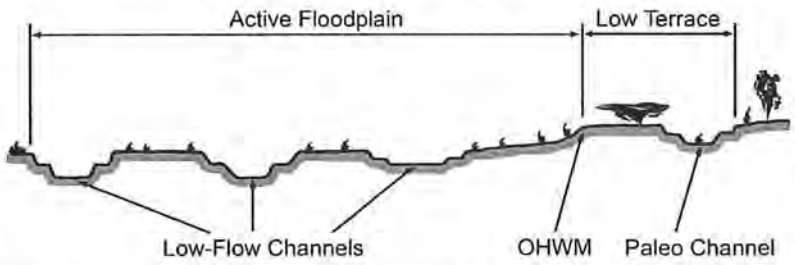
Brief site description:

Straight shallow desert wash

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

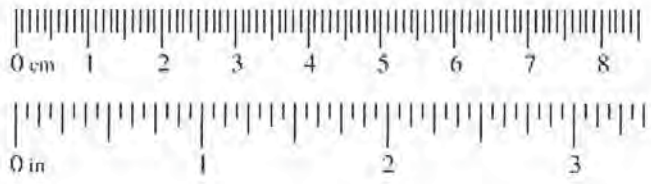


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: 3MBC000300 **Cross section ID:** 79-1 **Date:** 09.20.16 **Time:** 0850

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: very coarse sand

Total veg cover: Ø % Tree: Ø % Shrub: Ø % Herb: Ø %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: 3MBC000300 **Cross section ID:** 79-1 **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

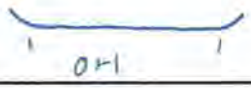
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Jurisdictional Delineation Data Sheet

Project/Task: 3MBC000100 T 300 Path 46	Staff: CR and IC	Time: 850	Upstream Photo	X	**Site Description:**		
			Downstream Photo		Stream is:		
Date: 9/20/2016	Feature ID: TG-1	Location: Mojave Desert			Braided		
					Sinuous		
Circle Preliminary Status: USACE CDFW RWQCB		Do Normal Conditions Exist?		X	Curved		
		Significant Disturbance?		X	Straight	X	
Circle Flow Character: Ephemeral Intermittent Perennial		Potential Wetland?			Entrenched		
		Hydrology			Bowl Shaped		
OHWM Recorded by: Field Map GPS GIS Digitizing		Wetland Plants			Shallow	X	
		Surface Water/Depth:			Vegetation % In Stream:		
Side Slope Estimate: Slight					0-20	X	
Veg Type(s) in Drainage: Unvegetated					20-40		
					40-60		
Anthropogenic Modifications:	Road	Grazing	Channelized		Upstream Blocked		60-80
	Culvert	Channel	Riprap		Downstream Blocked		80-100
	Other:				Lateral Flow Blocked		Stream Type:
Circle Chemical Issues:	Pollution	Oil Slick	Eutrophication	Other:			V-Ditch w/ Sediment
Circle Surrounding Land Use:	Urban	Rural	Commercial	Agriculture			Eroded Channel
	Roads	Utility Lines	Other: OS				Desert Wash X
							Flowing River/Stream
							Dry Streambed

Stream Cross Section Drawing:



Additional Description:

OHWM:

Change in sediment texture	X	Break in bank slope	
Change in vegetation species		Other:	
Change in vegetation cover	X		

Comment:

Low-Flow Channel: X Tree % Cover 0 Shrub % Cover 0 Herb % Cover 0

Circle average sediment texture: Silt: Fine Medium Coarse; Sand: Fine Medium Course Very Coarse; Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA X
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

Active Floodplain: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Granule Pebble Cobble Boulder; Sand: Fine Medium Course Very Coarse; Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

Comments:

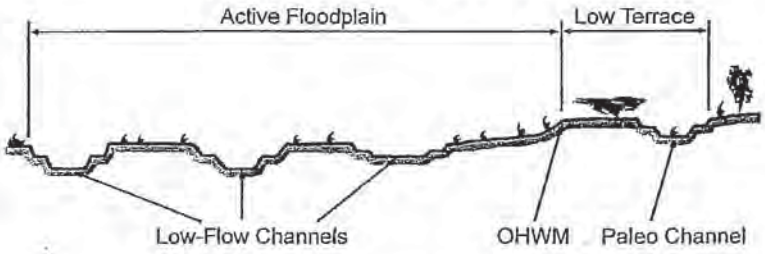
Low Terrace: Tree % Cover Shrub % Cover Herb % Cover

Circle average sediment texture: Granule Pebble Cobble Boulder; Sand: Fine Medium Course Very Coarse; Other:

Circle Indicators: Mudcracks Ripples	Community succession: NA
Drift/Debris Presence of bed and bank	Early (herbs/seedlings)
Benches Soil development Surface relief	Mid (herbs/shrubs/saplings
Other:	Late (herbs/shrubs/trees)

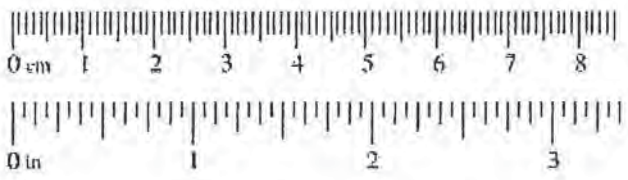
Comments:

Hydrogeomorphic Floodplain Units



Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



ATTACHMENT E

REPRESENTATIVE PHOTOGRAPHS

Drainage 1A-1

Drainage 1B-1

Drainage 1B-2

Drainage 1C-1

Drainage 1C-2

Drainage 1C-3

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-1

PSOMAS

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Drainage 1C-4

Drainage 1D-1

Drainage 1E-1

Drainage 1E-2

Drainage 1E-3

Drainage 1E-4

Representative Photographs

Attachment E-2

Path 46 Transmission Line Clearances Project

PSOMAS

Drainage 2A-1

Drainage 2A-2

Drainage 2A-3

Drainage 2B-1

Drainage 2B-2

Drainage 2C-1

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-3

PSOMAS

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Drainage 2C-2

Drainage 2D-1

Drainage 2D-2

Drainage 2D-3

Drainage 2D-4

Drainage 2D-5

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-4

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Drainage 2D-6

Drainage 2E-1

Drainage 2E-2

Drainage 2E-3

Drainage 2E-4

Drainage 2E-5

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Representative Photographs

Attachment E-5

Path 46 Transmission Line Clearances Project

PSOMAS

Drainage 2E-6

Drainage 2E-7

Drainage 2E-8

Drainage 2E-9

Drainage 2F-1

Drainage 2F-2

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-6

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Drainage 2F-3

Drainage 2F-4

Drainage 2F-5

Drainage 3C-1

Drainage 3C-2

Drainage 3C-3

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Representative Photographs

Attachment E-7

Path 46 Transmission Line Clearances Project

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Drainage 3C-4

Drainage 3C-5

Drainage 4A-1

Drainage 4A-2

Drainage 4A-3

Drainage 4A-4

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Representative Photographs

Attachment E-8

Path 46 Transmission Line Clearances Project

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Drainage 4A-5

Drainage 4A-6

Drainage 4A-7

Drainage 4B-1

Drainage 4B-2

Drainage 4B-3

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-9

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Drainage 4C-1

Drainage 4C-2

Drainage 4C-3

Drainage 4D-1

Drainage 4D-2

Drainage 4D-3

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Representative Photographs

Attachment E-10

Path 46 Transmission Line Clearances Project

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Drainage 4D-4

Drainage 4D-5

Drainage 4D-6

Drainage 4D-7

Drainage 4D-8

Drainage 4E-1

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Representative Photographs

Attachment E-11

Path 46 Transmission Line Clearances Project

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Drainage 4E-2

Drainage 4E-3

Drainage 4E-4

Drainage 4E-5

Drainage 4F-2

Drainage 4F-3A

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Representative Photographs

Attachment E-12

Path 46 Transmission Line Clearances Project

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Drainage 4G-1

Drainage 4G-2

Drainage 4G-3

Drainage 4G-4

Drainage 4H-1

Drainage 4J-1

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-13

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Drainage 4J-2

Drainage 4K-1

Drainage 4K-2

Drainage 4K-4

Drainage 4K-5

Drainage 5B-1

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Representative Photographs

Attachment E-14

Path 46 Transmission Line Clearances Project

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Drainage 5B-2

Drainage 5B-3

Drainage 5B-4

Drainage 5C-1

Drainage 5C-2

Drainage 5D-1

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Representative Photographs

Attachment E-15

Path 46 Transmission Line Clearances Project

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Drainage 5D-2

Drainage 5D-3

Drainage 5D-4

Drainage 5D-5

Drainage 5E-1

Drainage 5E-10

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-16

PSOMAS

Drainage 5E-11

Drainage 5E-2

Drainage 5E-3

Drainage 5E-4

Drainage 5E-5

Drainage 5E-6

Drainage 5E-7

Drainage 5E-8

Drainage 5E-9

Drainage 5F-1

Drainage 5F-10

Drainage 5F-11

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-18

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Drainage 5F-2

Drainage 5F-3

Drainage 5F-4

Drainage 5F-5

Drainage 5F-6

Drainage 5F-7

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Representative Photographs

Attachment E-19

Path 46 Transmission Line Clearances Project

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Drainage 5F-8

Drainage 5F-9

Drainage 5G-1

Drainage 5G-10

Drainage 5G-2

Drainage 5G-3

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Representative Photographs

Attachment E-20

Path 46 Transmission Line Clearances Project

PSOMAS

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Drainage 5G-4

Drainage 5G-5

Drainage 5G-6

Drainage 5G-7

Drainage 5G-8

Drainage 5G-9

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Representative Photographs

Attachment E-21

Path 46 Transmission Line Clearances Project

PSOMAS

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\AttE_SP_20160929.pdf

Drainage 5H-1

Drainage 5H-A

Drainage 5H-B

Drainage 5H-C

Drainage 5H-D

Drainage 5H-E

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Representative Photographs

Attachment E-22

Path 46 Transmission Line Clearances Project

PSOMAS

Drainage 5I-1

Drainage 5I-2

Drainage 5I-3

Drainage 5I-4

Drainage 5J-1

Drainage 5J-A

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Representative Photographs

Attachment E-23

Path 46 Transmission Line Clearances Project

PSOMAS

Drainage 5K-1

Drainage 5K-2

Drainage 5K-3

Drainage 5K-4

Drainage 5K-5

Drainage 5L-1

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Representative Photographs

Attachment E-24

Path 46 Transmission Line Clearances Project

PSOMAS

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Drainage 5M-1

Drainage 5N-1

Drainage 5N-2

Drainage 5O-1

Drainage 5Q-1

Drainage 5Q-2

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Representative Photographs

Attachment E-25

Path 46 Transmission Line Clearances Project

PSOMAS

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Drainage 5Q-3

Drainage 5Q-4

Drainage 5Q-5

Drainage 5Q-6

Drainage 5Q-7

Drainage 5R-1

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Representative Photographs

Attachment E-26

Path 46 Transmission Line Clearances Project

PSOMAS

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\AttE_SP_20160929.pdf

Drainage 5R-2

Drainage 5T-1

Drainage 5T-2

Drainage 5U-1

Drainage 5U-2

Drainage 5U-3

Representative Photographs

Attachment E-27

Path 46 Transmission Line Clearances Project

PSOMAS

Drainage 5V-1

Drainage 5V-2

Drainage 5V-3

Drainage 5V-A

Drainage 5V-B

Drainage 5V-C

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-28

PSOMAS

Drainage 5V-D

Drainage 6A-1

Drainage 6A-2

Drainage 6A-3

Drainage 6A-4

Drainage 6A-5

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Representative Photographs

Attachment E-29

Path 46 Transmission Line Clearances Project

PSOMAS

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\AttE_SP_20160929.pdf

Drainage 6A-6

Drainage 6B-1

Drainage 6B-1B

Drainage 6B-2

Drainage 6B-3

Drainage 6B-4

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Representative Photographs

Attachment E-30

Path 46 Transmission Line Clearances Project

PSOMAS

Drainage 6B-5

Drainage 6B-6

Drainage 6C-1

Drainage 6C-2

Drainage 6D-1

Drainage 6D-2

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Representative Photographs

Attachment E-31

Path 46 Transmission Line Clearances Project

PSOMAS

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\AttE_SP_20160929.pdf

Drainage 6D-3

Drainage 6F-1

Drainage 6F-2

Drainage 6F-3

Drainage 6F-4

Drainage 6F-5

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Representative Photographs

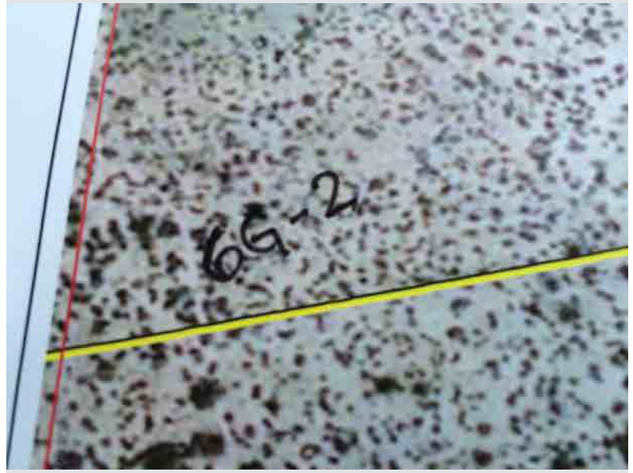
Path 46 Transmission Line Clearances Project

Attachment E-32

PSOMAS

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\AttE_SP_20160929.pdf

Drainage 6G-1



Drainage 6G-2

Drainage 6G-3

Drainage 6G-4

Drainage 7A-1

Drainage 7A-2

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Representative Photographs

Attachment E-33

Path 46 Transmission Line Clearances Project

PSOMAS

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\AttE_SP_20160929.pdf

Drainage 7B-1

Drainage 7B-2

Drainage 7C-1

Drainage 7C-2

Drainage 7C-3

Drainage 7E-1

Drainage 7E-2

Drainage 7E-3

Drainage 7F-1

Drainage 7F-2

Drainage 7F-3

Drainage 7F-4

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-35

PSOMAS

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\AttE_SP_20160929.pdf

Drainage 7G-1

Desert tortoise observed in Segment 2 near tower MCV1-129-2.

Desert bighorn sheep carcass observed east of Segment 7.

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Representative Photographs

Path 46 Transmission Line Clearances Project

Attachment E-36

PSOMAS

ATTACHMENT F

CALIFORNIA NATURAL DIVERSITY DATABASE FORMS

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 09/08/2016

For Office Use Only
Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: *Gopherus agassizii*

Common Name: desert tortoise

Species Found? (●) Yes ( ) No _____ If not found, why?

Total No. Individuals: 1 Subsequent Visit? ( ) Yes (●) No

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ No ☒ Unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Allison Rudalevige, Psomas
Address: 3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
E-mail Address: Allison.Rudalevige@psomas.com
Phone: 714-481-8024

Plant Information

Phenology:

_____ % vegetative _____ % flowering _____ % fruiting

Animal Information

1 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ lek ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Mojave desert west of Daggett approximately 1/4 mile south of Interstate 40 near tower MCV1-129-2

County: San Bernardino Landowner / Mgr: _____

Quad Name: Minneola Elevation: 2,227 ft

T 09N R 01E Sec 26 , ____ 1/4 of ____ 1/4, Meridian: H ( ) M ( ) S (●) Source of Coordinates (GPS, topo. map & type): GPS

T ____ R ____ Sec ____ , ____ 1/4 of ____ 1/4, Meridian: H ( ) M ( ) S ( ) GPS Make & Model: Garmin eTrex Vista

DATUM: **NAD27** ( ) **NAD83** (●) **WGS84** ( ) Horizontal Accuracy: 10ft meters/feet

Coordinate System: UTM Zone 10 ( ) UTM Zone 11 ( ) ***OR*** Geographic (Latitude & Longitude) (●)

Coordinates: 34.843889, -116.854389

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Individual observed in open, creosote bush scrub dominated by Larrea tridentata with Ambrosia dumosa.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ( ) Excellent (●) Good ( ) Fair ( ) Poor

Immediate AND surrounding land use: undeveloped open space and transmission lines with associated access roads

Visible disturbances: _____

Threats: transmission line maintenance

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☒ Other: familiarity with species

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☒
Habitat	☐	☐	☒
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? (●) yes ( ) no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 09/20/2016

For Office Use Only
Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: *Ovis canadensis nelsoni*

Common Name: desert bighorn sheep

Species Found? (●) Yes ( ) No _____ If not found, why?

Total No. Individuals: 1 Subsequent Visit? ( ) Yes (●) No

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ No ☒ Unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Allison Rudalevige, Psomas
Address: 3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
E-mail Address: Allison.Rudalevige@psomas.com
Phone: 714-481-8024

Plant Information

Phenology:

_____ % vegetative _____ % flowering _____ % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses 1 # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ lek ☒ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Mojave desert approximately 8.5 miles west of Primm, Nevada.

County: San Bernardino Landowner / Mgr: _____

Quad Name: Clark Mountain Elevation: 4,186 ft

T 17N R 13E Sec 01 , ____ 1/4 of ____ 1/4, Meridian: H ( ) M ( ) S (●)

T ____ R ____ Sec ____ , ____ 1/4 of ____ 1/4, Meridian: H ( ) M ( ) S ( )

DATUM: **NAD27** ( ) **NAD83** (●) **WGS84** ( )

Coordinate System: UTM Zone 10 ( ) UTM Zone 11 ( ) ***OR*** Geographic (Latitude & Longitude) (●)

Source of Coordinates (GPS, topo. map & type): GPS

GPS Make & Model: Garmin eTrex Vista

Horizontal Accuracy: 10ft meters/feet

Coordinates: 35.593186, -115.536972

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

One individual carcass (partially decomposed) observed at edge of a dirt transmission line access road. Cause of death is unknown.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ( ) Excellent (●) Good ( ) Fair ( ) Poor

Immediate AND surrounding land use: undeveloped open space and transmission lines with associated access roads

Visible disturbances: _____

Threats: transmission line maintenance

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☒ By another person (name): Dr. Brad Blood, Psomas
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☒
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? (●) yes ( ) no

ATTACHMENT G

DETAILED PROJECT IMPACTS

IMPACTS ON JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	"waters of the U.S." (ac)		Isolated Waters (ac)		CDFW Jurisdiction (ac)	
	Road Demolition	Grading	Road Demolition	Grading	Road Demolition	Grading
1A-1	0.000	0.000	–	–	0.000	0.000
1B-1	0.000	0.000	–	–	0.000	0.000
1B-2	0.000	0.000	–	–	0.000	0.000
1C-1	0.000	0.000	–	–	0.000	0.000
1C-2	0.000	0.000	–	–	0.000	0.000
1C-3	0.000	0.000	–	–	0.000	0.000
1C-4	0.000	0.000	–	–	0.000	0.000
1D-1	0.000	0.000	–	–	0.000	0.000
1E-1	0.000	0.000	–	–	0.000	0.000
1E-2	0.000	0.000	–	–	0.000	0.000
1E-3	0.000	0.000	–	–	0.000	0.000
1E-4	0.000	0.000	–	–	0.000	0.000
2A-1	0.000	0.000	–	–	0.000	0.000
2A-2	0.000	0.001	–	–	0.000	0.001
2A-3	0.000	0.000	–	–	0.000	0.000
2B-1	0.000	0.001	–	–	0.000	0.004
2B-2	0.000	0.000	–	–	0.000	0.000
2C-1	0.000	0.000	–	–	0.000	0.000
2C-2	0.000	0.000	–	–	0.000	0.000
2C-3	0.000	0.000	–	–	0.000	0.000
2D-1	0.000	0.000	–	–	0.000	0.000
2D-2	0.000	0.000	–	–	0.000	0.000
2D-3	0.000	0.000	–	–	0.000	0.000
2D-4	0.000	0.000	–	–	0.000	0.000
2D-5	0.000	0.000	–	–	0.000	0.000
2D-6	0.000	0.000	–	–	0.000	0.000
2E-1	0.000	0.000	–	–	0.000	0.000
2E-2	0.000	0.000	–	–	0.000	0.000
2E-3	0.000	0.000	–	–	0.000	0.000
2E-4	0.000	0.000	–	–	0.000	0.000
2E-5	0.000	0.000	–	–	0.000	0.000
2E-6	0.000	0.001	–	–	0.000	0.001
2E-7	0.000	0.000	–	–	0.000	0.000*
2E-8	0.000	0.000	–	–	0.000	0.000
2E-9	0.000	0.000	–	–	0.000	0.000
2E-10	0.000	0.000	–	–	0.000	0.000
2F-1	0.000	0.000	–	–	0.000	0.000
2F-2	0.000	0.000	–	–	0.000	0.000
2F-3	0.000	0.000	–	–	0.000	0.000
2F-4	0.000	0.000	–	–	0.000	0.000
2F-5	0.000	0.005	–	–	0.000	0.007
2F-6	0.000	0.028	–	–	0.000	0.030
3C-1	–	–	0.000	0.000	0.000	0.000
3C-2	–	–	0.000	0.000	0.000	0.000

IMPACTS ON JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	"waters of the U.S." (ac)		Isolated Waters (ac)		CDFW Jurisdiction (ac)	
	Road Demolition	Grading	Road Demolition	Grading	Road Demolition	Grading
3C-3	–	–	0.000	0.000	0.000	0.000
3C-4	–	–	0.000	0.000	0.000	0.000
3C-5	–	–	0.000	0.000	0.000	0.000
4A-1	0.000	0.000	–	–	0.000	0.000
4A-2	0.000	0.000	–	–	0.000	0.000
4A-3	–	–	0.000	0.000	0.000	0.000
4A-4	–	–	0.000	0.000	0.000	0.000
4A-5	–	–	0.000	0.000	0.000	0.000
4A-6	–	–	0.000	0.000	0.000	0.000
4A-7	–	–	0.000	0.000	0.000	0.000
4A-8	–	–	0.000	0.000	0.000	0.000
4B-1	0.000	0.000	–	–	0.000	0.000
4B-2	0.000	0.000	–	–	0.000	0.000
4B-3	0.000	0.000	–	–	0.000	0.000
4C-1	–	–	0.000	0.000	0.000	0.000
4C-2	–	–	0.000	0.000	0.000	0.000
4C-3	0.000	0.000	–	–	0.000	0.000
4D-1	–	–	0.000	0.000	0.000	0.000
4D-2	–	–	0.000	0.000	0.000	0.000
4D-3	–	–	0.000	0.000	0.000	0.000
4D-4	–	–	0.000	0.000	0.000	0.000
4D-5	–	–	0.000	0.000	0.000	0.000
4D-6	–	–	0.000	0.000	0.000	0.000
4D-7	–	–	0.000	0.000	0.000	0.000
4D-8	–	–	0.000	0.000	0.000	0.000
4E-1	–	–	0.000	0.000	0.000	0.000
4E-2	–	–	0.000	0.000	0.000	0.000
4E-3	–	–	0.000	0.000	0.000	0.000
4E-4	–	–	0.000	0.000	0.000	0.000
4E-5	–	–	0.000	0.000	0.000	0.000
4F-1	–	–	0.000	0.000	0.000	0.000
4F-2	–	–	0.000	0.000	0.000	0.000
4F-3	–	–	0.000	0.000	0.000	0.000
4G-1	–	–	0.000	0.000	0.000	0.000
4G-2	–	–	0.000	0.000	0.000	0.000
4G-3	–	–	0.000	0.000	0.000	0.000
4G-4	–	–	0.000	0.000	0.000	0.000
4H-1	–	–	0.000	0.000	0.000	0.000
4J-1	–	–	0.000	0.000*	0.000	0.001
4J-2	–	–	0.000	0.001	0.000	0.001
4K-1	–	–	0.000	0.000	0.000	0.000
4K-2	–	–	0.000	0.000	0.000	0.000
4K-3	–	–	0.000	0.000	0.000	0.000
4K-4	–	–	0.000	0.000	0.000	0.000

IMPACTS ON JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	"waters of the U.S." (ac)		Isolated Waters (ac)		CDFW Jurisdiction (ac)	
	Road Demolition	Grading	Road Demolition	Grading	Road Demolition	Grading
4K-5	–	–	0.000	0.000	0.000	0.000
5B-1	–	–	0.000	0.000	0.000	0.000
5B-2	–	–	0.000	0.010	0.000*	0.021
5B-3	–	–	0.000	0.000	0.000	0.000
5B-4	–	–	0.000	0.005	0.000	0.009
5C-1	–	–	0.000	0.000	0.000	0.000
5C-2	–	–	0.039	0.092	0.039	0.092
5D-1	–	–	0.004	0.011	0.004	0.011
5D-2	–	–	0.007	0.106	0.007	0.106
5D-3	–	–	0.000	0.001	0.000	0.003
5D-4	–	–	0.000	0.000	0.000	0.000
5D-5	–	–	0.000	0.000	0.000	0.000
5E-1	–	–	0.003	0.010	0.003	0.010
5E-2	–	–	0.000	0.000	0.000	0.000
5E-3	–	–	0.034	0.043	0.034	0.043
5E-4	–	–	0.000	0.005	0.000	0.005
5E-5	–	–	0.000	0.000	0.000	0.000
5E-6	–	–	0.000	0.000	0.000	0.000
5E-7	–	–	0.000	0.000	0.000	0.000
5E-8	–	–	0.000	0.042	0.000	0.042
5E-9	–	–	0.000	0.001	0.000	0.002
5E-10	–	–	0.000	0.000	0.000	0.000
5E-11	–	–	0.000	0.000	0.000	0.000
5F-1	–	–	0.010	0.048	0.010	0.048
5F-2	–	–	0.000	0.000	0.000	0.000
5F-3	–	–	0.000	0.000	0.000	0.000
5F-4	–	–	0.000	0.000	0.000	0.000
5F-5	–	–	0.000	0.000	0.000	0.000
5F-6	–	–	0.000	0.000	0.000	0.000
5F-7	–	–	0.000	0.003	0.000	0.003
5F-8	–	–	0.000	0.010	0.000	0.010
5F-9	–	–	0.000	0.000	0.000	0.000
5F-10	–	–	0.000	0.000	0.000	0.000
5F-11	–	–	0.000	0.000	0.000	0.000
5G-1	–	–	0.000*	0.001	0.000*	0.002
5G-2	–	–	0.023	0.016	0.023	0.016
5G-3	–	–	0.000	0.001	0.000*	0.002
5G-4	–	–	0.000	0.000	0.000	0.000
5G-5	–	–	0.000	0.001	0.000	0.002
5G-6	–	–	0.000	0.000	0.000	0.000
5G-7	–	–	0.000	0.000	0.000	0.000
5G-8	–	–	0.000	0.000	0.000	0.000
5G-9	–	–	0.000	0.000	0.000	0.000
5G-10	–	–	0.000	0.027	0.000	0.027

IMPACTS ON JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	"waters of the U.S." (ac)		Isolated Waters (ac)		CDFW Jurisdiction (ac)	
	Road Demolition	Grading	Road Demolition	Grading	Road Demolition	Grading
5H-1	–	–	0.000	0.000	0.000	0.000
5H-A	–	–	0.000	0.000	0.000	0.000
5H-B	–	–	0.000	0.000	0.000	0.000
5H-C	–	–	0.004	0.012	0.004	0.012
5H-D	–	–	0.004	0.003	0.004	0.003
5H-E	–	–	0.000	0.000	0.000	0.000
5I-1	–	–	0.000	0.000	0.000	0.000
5I-2	–	–	0.000	0.000	0.000	0.000
5I-3	–	–	0.000	0.000	0.000	0.000
5I-4	–	–	0.005	0.008	0.005	0.008
5J-1	–	–	0.000	0.000	0.000	0.000
5J-2	–	–	0.000	0.000	0.000	0.000
5K-1	–	–	0.000	0.000	0.000	0.000
5K-2	–	–	0.000	0.000	0.000	0.000
5K-3	–	–	0.000	0.000	0.000	0.000
5K-4	–	–	0.000	0.000	0.000	0.000
5K-5	–	–	0.000	0.000	0.000	0.000
5L-1	–	–	0.000	0.000	0.000	0.000
5M-1	–	–	0.000	0.000	0.000	0.000
5N-1	0.000	0.010	–	–	0.000	0.010
5N-2	0.000	0.000	–	–	0.000	0.000
5O-1	0.000	0.044	–	–	0.000	0.044
5Q-1	0.000	0.000	–	–	0.000	0.000
5Q-2	0.000	0.000	–	–	0.000	0.000
5Q-3	0.000	0.000	–	–	0.000	0.000
5Q-4	0.000	0.000	–	–	0.000	0.000
5Q-5	0.000	0.024	–	–	0.000	0.024
5Q-6	0.002	0.072	–	–	0.002	0.072
5Q-7	0.053	0.068	–	–	0.053	0.068
5R-1	0.005	0.006	–	–	0.005	0.006
5R-2	0.000	0.000	–	–	0.000	0.000
5T-1	0.000	0.000	–	–	0.000	0.000
5T-2	0.000	0.000	–	–	0.000	0.000
5U-1	–	–	0.000	0.000	0.000	0.000
5U-2	–	–	0.000	0.000	0.000	0.000
5U-3	–	–	0.000	0.000	0.000	0.000
5V-1	–	–	0.000	0.000	0.000	0.000
5V-2	–	–	0.000	0.000	0.000	0.000
5V-3	–	–	0.000	0.000	0.000	0.000
5V-4	–	–	0.000	0.000	0.000	0.000
5V-5	–	–	0.000	0.000	0.000	0.000
5V-6	–	–	0.000	0.000	0.000	0.000
5V-7	–	–	0.000	0.000	0.000	0.000
6A-1	0.000	0.000	–	–	0.000	0.000

IMPACTS ON JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	"waters of the U.S." (ac)		Isolated Waters (ac)		CDFW Jurisdiction (ac)	
	Road Demolition	Grading	Road Demolition	Grading	Road Demolition	Grading
6A-2	0.000	0.000	–	–	0.000	0.000
6A-3	0.000	0.000	–	–	0.000	0.000
6A-4	0.000	0.000	–	–	0.000	0.000
6A-5	0.000	0.000	–	–	0.000	0.000
6A-6	0.000	0.000	–	–	0.000	0.000
6B-1	0.000	0.000	–	–	0.000	0.000
6B-1B	0.000	0.000	–	–	0.000	0.000
6B-2	0.000	0.000	–	–	0.000	0.000*
6B-3	0.000	0.000	–	–	0.000	0.000
6B-4	0.000	0.000	–	–	0.000	0.000
6B-5	0.000	0.000	–	–	0.000	0.000
6B-6	0.000	0.059	–	–	0.000	0.059
6C-1	0.000	0.000	–	–	0.000	0.000
6C-2	0.000	0.017	–	–	0.000	0.017
6D-1	0.000	0.001	–	–	0.000	0.003
6D-2	0.000	0.000	–	–	0.000	0.000
6D-3	0.000	0.000	–	–	0.000	0.000
6E-1	0.000	0.000	–	–	0.000	0.000
6E-2	0.000	0.000	–	–	0.000	0.000
6F-1	0.000	0.000	–	–	0.000	0.000
6F-2	0.000	0.000	–	–	0.000	0.000
6F-3	0.000	0.000	–	–	0.000	0.000
6F-4	0.000	0.000	–	–	0.000	0.000
6F-5	0.000	0.000	–	–	0.000	0.000
6G-1	–	–	0.000	0.000	0.000	0.000
6G-2	–	–	0.000	0.000	0.000	0.000
6G-3	–	–	0.000	0.000	0.000	0.000
6G-4	–	–	0.000	0.000	0.000	0.000
7A-1	–	–	0.000	0.000	0.000	0.000
7A-2	–	–	0.000	0.000	0.000	0.000
7B-1	–	–	0.000	0.000	0.000	0.000
7B-2	–	–	0.000	0.000	0.000	0.000
7C-1	–	–	0.000	0.000	0.000	0.000
7C-2	–	–	0.000	0.000	0.000	0.000
7C-3	–	–	0.000	0.000	0.000	0.000
7E-1	–	–	0.000	0.000	0.000	0.000
7E-2	–	–	0.000	0.000	0.000	0.000
7E-3	–	–	0.000	0.000	0.000	0.000
7F-1	–	–	0.000	0.000	0.000	0.000
7F-2	–	–	0.000	0.000	0.000	0.000
7F-3	–	–	0.000	0.000	0.000	0.000

IMPACTS ON JURISDICTIONAL WATER RESOURCES IN THE SURVEY AREA

Drainage	"waters of the U.S." (ac)		Isolated Waters (ac)		CDFW Jurisdiction (ac)	
	Road Demolition	Grading	Road Demolition	Grading	Road Demolition	Grading
7F-4	–	–	0.000	0.000	0.000	0.000
7G-1	–	–	0.000	0.000	0.000	0.000
Total	**0.060**	**0.337**	**0.133**	**0.457**	**0.193**	**0.825**

ac: acre; CDFW: California Department of Fish and Wildlife; "–" indicates the mapped drainage does not include this jurisdictional water; a value of "0.000*" indicates that less than 0.0005 acre of that jurisdictional water was impacted RWQCB: Regional Water Quality Control Board; USACE: U.S. Army Corps of Engineers.

(RWQCB) jurisdictional boundaries are defined as those determined for the USACE under "waters of the U.S."; however, the RWQCB also takes jurisdiction over isolated waters.

ATTACHMENT H

NATIONWIDE PERMIT SUMMARY

The following is a summary of Nationwide Permit 12 (Utility Line Activities).

NWP 12. Utility Line Activities. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead

utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 31.) (Sections 10 and 404).

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 4: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

General Condition 31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not

commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments.

The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where

there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

APPENDIX D3

Ground Disturbance Mitigation Plan

DRAFT
GROUND DISTURBANCE MITIGATION PLAN
FOR THE PATH 46 TRANSMISSION LINE CLEARANCE PROJECT

PREPARED BY

Los Angeles Department of Water & Power

Environmental Affairs

111 North Hope Street, Room 1044

Los Angeles, California 90012

WITH ASSISTANCE FROM

DUDEK

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JULY 2018

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FIGURES

TABLES

SUMMARY

This Ground Disturbance Mitigation Plan is intended to provide details on the conceptual approach to mitigating the effects of the Path 46 Transmission Line Clearance Project (proposed project) on Bureau of Land Management (BLM) conservation designations (Areas of Critical Environmental Concern [ACECs] and National Conservation Lands [NCLs]) pursuant to MM-BIO-2 of the Draft Environmental Assessment (Case File Number CACA-055592). Ground disturbance mitigation is necessary because the proposed project would impact BLM-administered lands within ACEC and NCL units that are cumulatively over their ground disturbance caps established by the BLM's Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA). This Ground Disturbance Mitigation Plan specifically addresses the proposed approach to remediating the effects of previous land disturbance effects (i.e., pre-existing ground disturbances) within the ACEC and NCL units. This plan does not address habitat restoration activities that would be implemented to restore areas affected during construction of the proposed project.

As shown in Table 1 (Table 3.5-1 in the EA document) in the Environmental Assessment for the proposed project (copied below), a minimum total of 11.19 acres of total nested mitigation is expected to be required to offset both the impacts to desert tortoise (*Gopherus agassizii*) critical habitat and the ground disturbance impacts in ACEC and NCL units. (The final mitigation amount shall be determined once the status of the unit disturbance cap for all applicable ACECs and NCLs is established by BLM.)

Table 1. Impacts and Mitigation with BLM Land Designations

Land Designation		Area to be Impacted within Designation (acres)	Desert Tortoise Critical Habitat	Overall Mitigation Ratio	Total Nested Mitigation Required (acres)
BLM Area of Critical Environmental Concern (ACEC)	Daggett Ridge Monkey Flower*^	0.42	Yes	5-to-1	2.10
	Ivanpah^	0.38	No	3-to-1	1.14
	Northern Lucerne Wildlife Linkage^	0.07	No	3-to-1	0.21
	Ord-Rodman*^	0.52	Yes	5-to-1	2.60
	Shadow Valley*	0.98	No	3-to-1	2.94
	Superior-Cronese	0.44	Yes	5-to-1	2.20
California Desert National Conservation Lands (NCL)	Kingston-Amargosa*	0.98	No	NA	--
	Mojave and Silurian Valley*	0.41	Yes	NA	--
	Pinto Lucerne Valley and Eastern Slopes	0.52	Yes	NA	--

Notes: Impact acreages based on the ESA Biological Assessment (February 2017). Status of Unit Disturbance Cap based on the BLM Disturbance Cap Tracking data (February 2017). * indicates where ACEC units overlap with NCL units; see Table 3.4-1 of the ESA Biological Assessment for unit overlap details. ^ indicates units that are or are assumed to be cumulatively at or above their

respective ground disturbance caps. Overall required mitigation ratio considers the overlap of units and the co-occurrence of impacts to determine the final required ratio.

The following Ground Disturbance Mitigation Plan provides:

1. A quantitative summary and mapping of the existing non-authorized ground disturbance areas within each ACEC and NCL unit (based on the BLM Disturbed Lands mapping GIS data) in the vicinity the proposed project components that are available to be restored/rehabilitated
2. A description of the approach to restoring/rehabilitating the areas of previous ground disturbance, including a discussion of:
    a. The types of disturbance to be rehabilitated/restored. Based on preliminary review of the BLM Disturbed Lands mapping, the majority of the disturbed lands available to the rehabilitated in the vicinity of the proposed project are infrastructure-related (i.e., disturbances associated with roadways and pipelines).
    b. Mobilization and site preparation, including a discussion of access, equipment, staffing, timing, and approaches to address soil compaction and erosion.
    c. Rehabilitation techniques, including a discussion of appropriate seed mixes and sources (e.g., species composition, certified weed-free, native, locally appropriate), vertical mulching (i.e., creating structure with live vegetation, rocks, dead shrubs, snags, and other woody materials), and other techniques to reclaim and disguise roadways and other ground disturbances.
    d. Success criteria, monitoring, and contingency measures.

The draft outline for the Ground Disturbance Mitigation Plan is provided below.

1 INTRODUCTION AND BACKGROUND

The Path 46 Transmission Line Clearance Project (proposed project) would restore ground-to-conductor clearances that are out of compliance with transmission line safety and reliability standards. The location of the proposed project is along three existing overhead transmission lines located in San Bernardino County near Victorville, Barstow, and Baker, California: the 500-kilovolt (kV) McCullough–Victorville Lines 1 and 2 (MCV1 and MCV2) and the 287 kV Mead–Victorville Line 1 (MVL1).

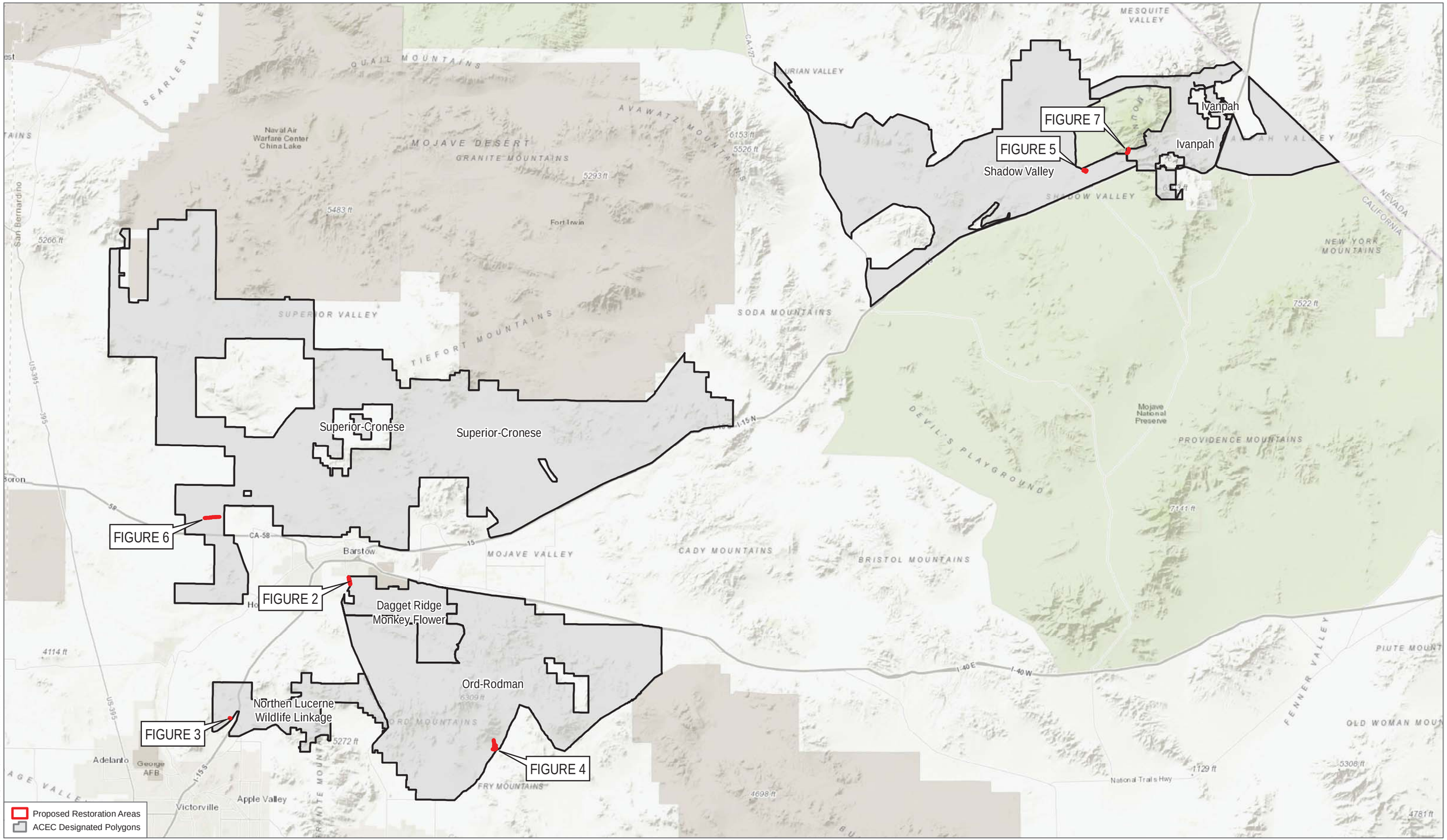
The proposed project involves ensuring that the distance between the transmission line conductors and the ground or road surface below is sufficient to meet code requirements guiding the safe and reliable operation of transmission lines. The Los Angeles Department of Water and Power (LADWP) proposes to comply with the code clearances by grading the ground surface of the area underneath the transmission lines at 68 work areas to achieve height consistency per North American Electric Reliability Corporation (NERC) requirements. Additionally, LADWP has identified two locations where grading is infeasible due to topography. In these locations, LADWP proposes to raise existing transmission line towers to achieve height consistency. Two additional locations will involve the installation of compacted soil barricades or other similar barrier system to eliminate vehicle access to areas underneath a conductor where a clearance issue exists. The project, as proposed, would also involve improvements to portions of existing access roads to be used for site access, equipment staging and storage, and distribution of excavated soils. The project would primarily be located on federal land, but some work sites would be located within LADWP property or on private property.

Ground disturbance mitigation is necessary because the proposed project would impact BLM-administered lands within Areas of Critical Environmental Concern (ACECs) and National Conservation Lands (NCLs) that are cumulatively over their ground disturbance caps established by the Bureau of Land Management (BLM) Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA).

A minimum total of 11.19 acres of mitigation is proposed for ground disturbance, as shown in Table 1, and is proposed to be located at the sites shown in Figures 1 through 7. This acreage for ground disturbance mitigation may be "nested" (i.e., combined) with other resource mitigation site, when appropriate. For example, a parcel restored for desert tortoise habitat mitigation may also satisfy the disturbance mitigation requirement under appropriate conditions (BLM 2016).

The proposed mitigation sites shown in Figures 1 through 7 are based on current knowledge of the project areas, but may be modified by the Project Biologist in the field, based on existing specific site conditions. Should modifications to the location or shape of the mitigation sites be necessary, the Project Biologist will record the modified sites with a sub-meter accuracy Global Positioning System (GPS) unit, and the updated mitigation site footprint will be utilized for planning and reporting purposes going forward. In the event that mitigation site locations/ shapes are modified, the Project Biologist shall ensure that the required mitigation acreage shown in Table 1 is met.

The ultimate goal of the ground disturbance mitigation is to ensure that ground disturbance can no longer be seen at a 1:10,000 scale using aerial imagery. This goal is proposed to be accomplished through a combination of soil recontouring, grade modifications, vertical mulching, and appropriate native seed installation.



SOURCE: BLM 2018; Bing Maps 2018

DUDEK

0 5 10 Miles

FIGURE 1

Restoration Sites Overview Map

Path 46

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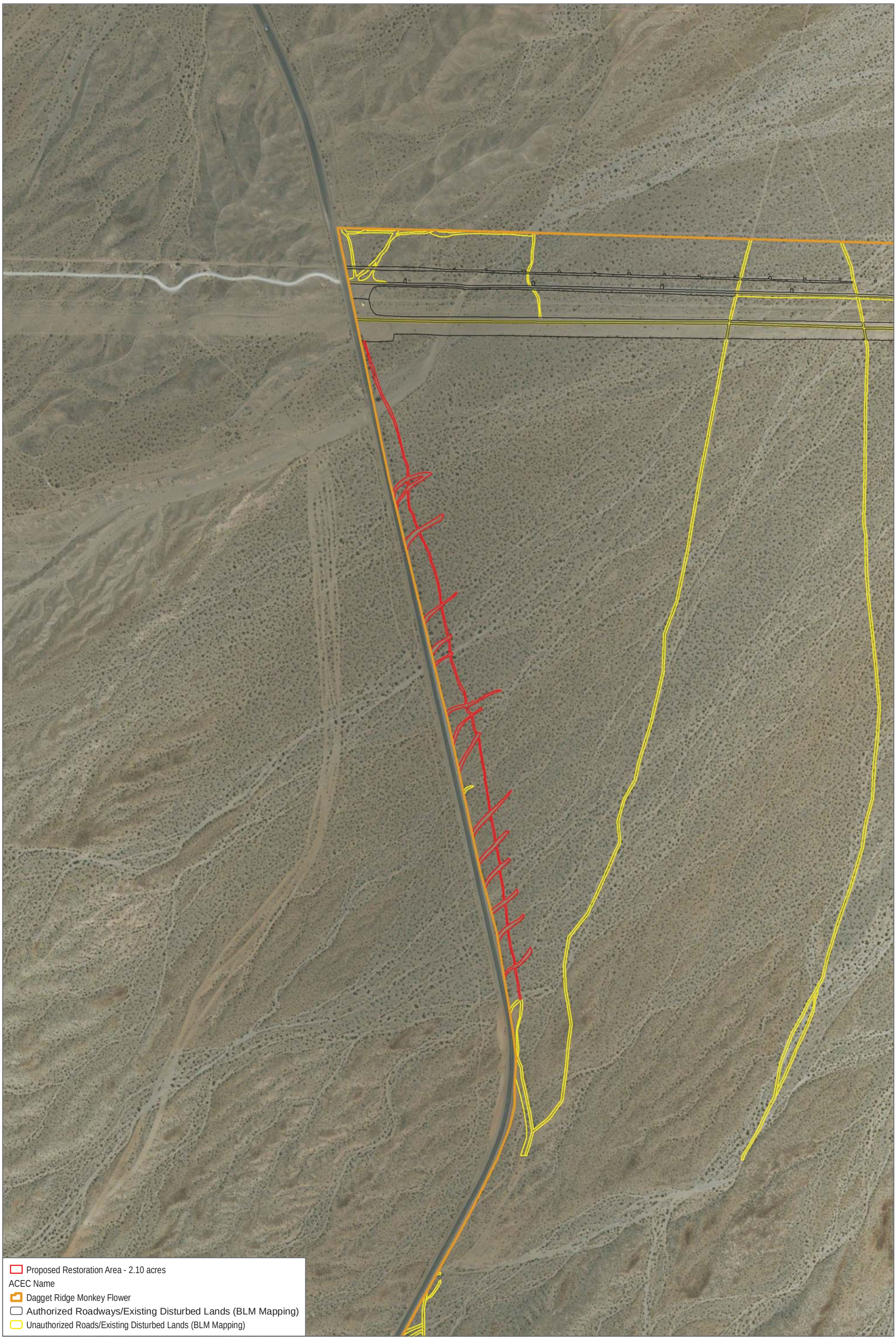

SOURCE: BLM 2018; USDA 2018; County San Bernardino 2018; Bing Maps 2018

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0 300 600 Feet

FIGURE 2

Dagger Ridge Monkey Flower ACEC - Proposed Restoration Site

Path 46

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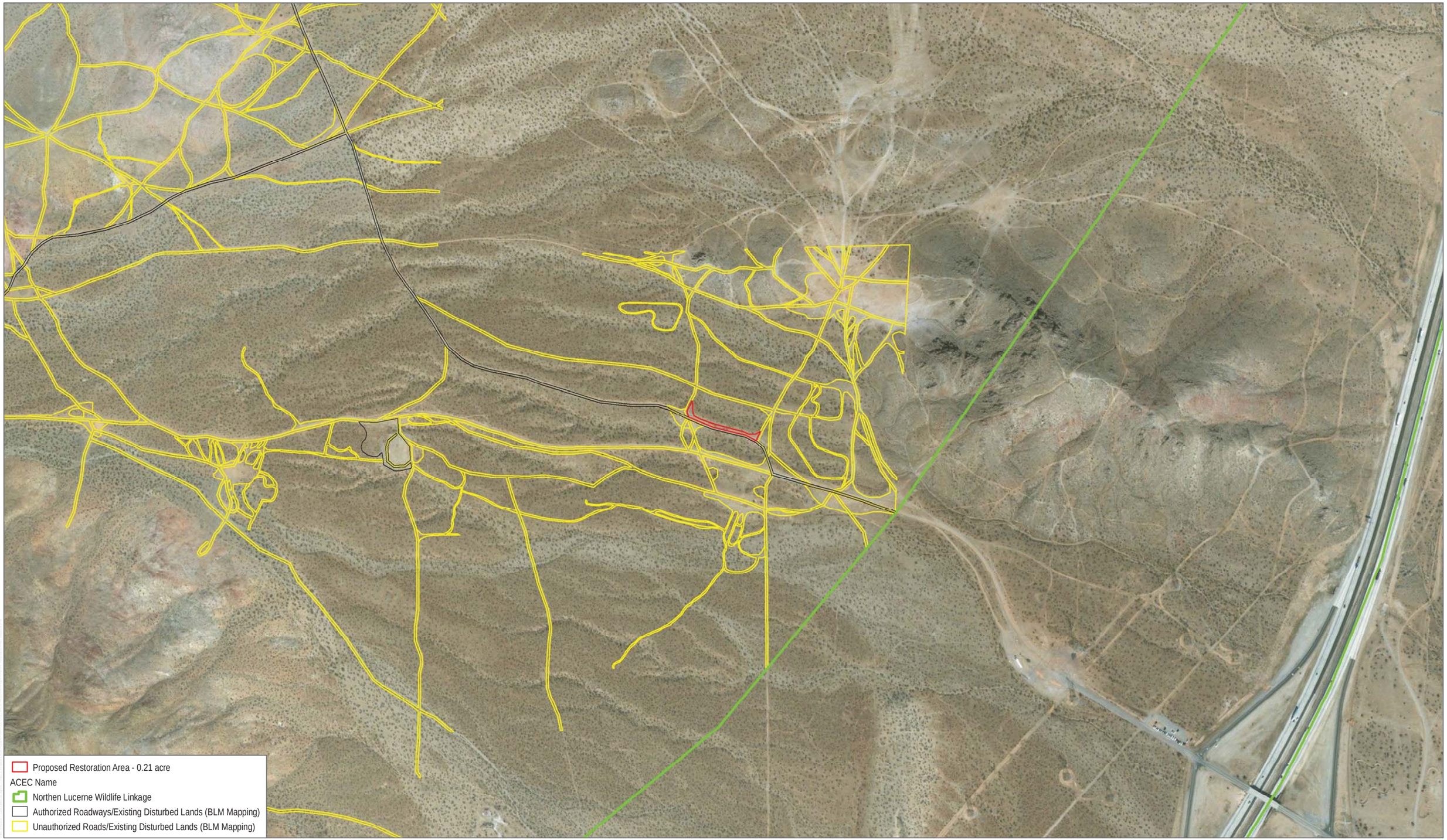

SOURCE: BLM 2018; USDA 2018; County San Bernardino 2018; Bing Maps 2018

DUDEK

0 150 300 Feet

FIGURE 3

Northern Lucerne Wildlife Linkage ACEC - Proposed Restoration Site

Path 46

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Proposed Restoration Area - 2.6 acres

ACEC Name

Ord-Rodman

Authorized Roadways/Existing Disturbed Lands (BLM Mapping)

Unauthorized Roads/Existing Disturbed Lands (BLM Mapping)

SOURCE: BLM 2018; USDA 2018; County San Bernardino 2018; Bing Maps 2018

DUDEK

0 300 600 Feet

FIGURE 44

Ord-Rodman ACEC - Proposed Restoration Site

Path 46

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Proposed Restoration Area - 2.94 acres

ACEC Name

Shadow Valley

Authorized Roadways/Existing Disturbed Lands (BLM Mapping)

Unauthorized Roads/Existing Disturbed Lands (BLM Mapping)

SOURCE: BLM 2018; USDA 2018; County San Bernardino 2018; Bing Maps 2018

DUDEK

0 150 300 Feet

FIGURE 5

Shadow Valley ACEC - Proposed Restoration Site

Path 46

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SOURCE: BLM 2018; USDA 2018; County San Bernardino 2018; Bing Maps 2018

DUDEK

0 150 300 Feet

FIGURE 6

Superior-Cronese ACEC - Proposed Restoration Site

Path 46

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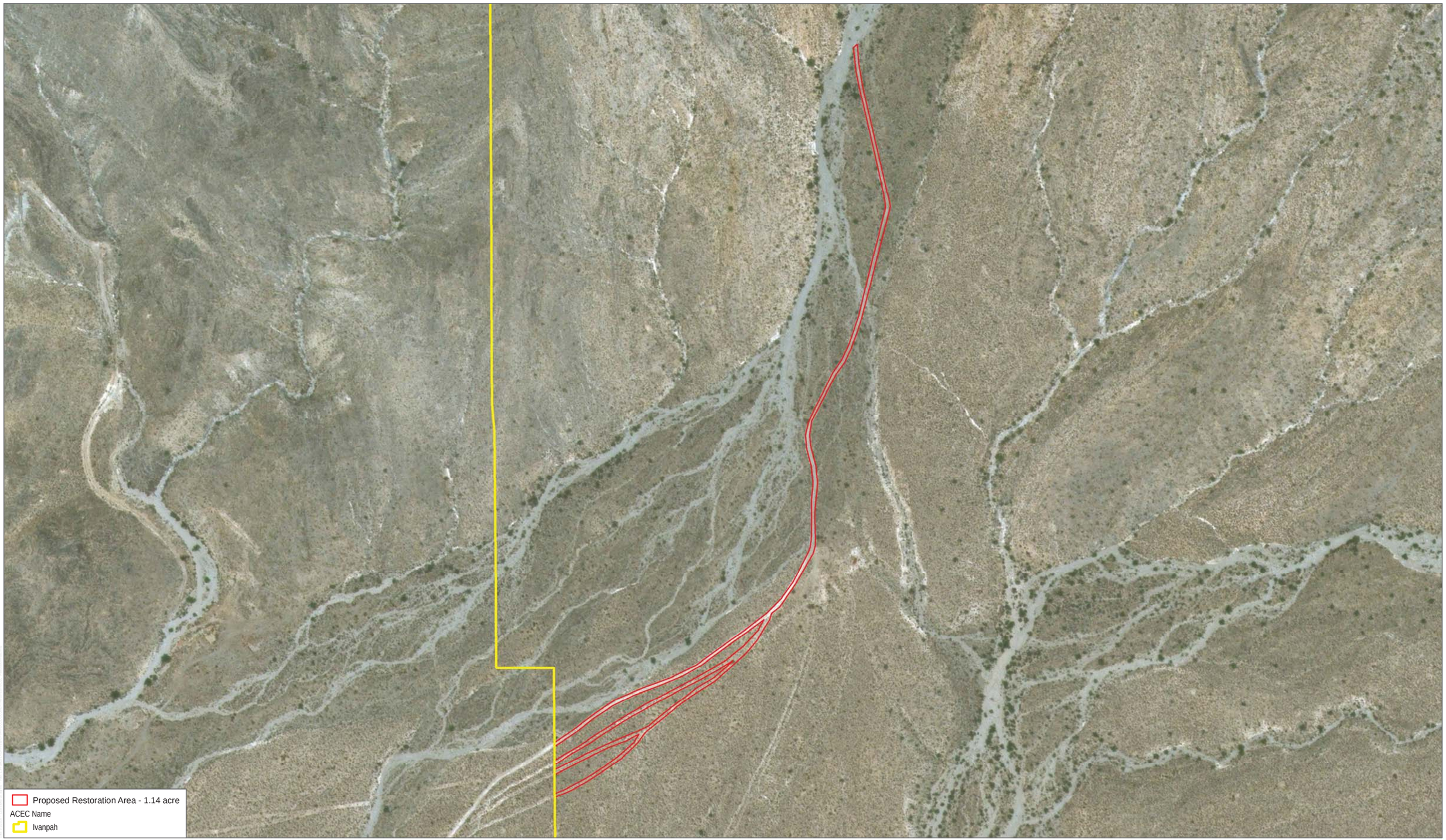

SOURCE: BLM 2018; USDA 2018; County San Bernardino 2018; Bing Maps 2018

DUDEK

0 150 300 Feet

FIGURE 7

Ivanpah ACEC - Proposed Restoration Site

Path 46

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2 MITIGATION AREA EXISTING SETTING

The ground disturbance mitigation sites are located in the Mojave Desert, throughout an area extending from Victorville northeast to the California–Nevada border, as shown in Figure 1. Each mitigation site is located within the land designation unit where the impacts occur. All sites are within a BLM ACEC.

2.1 Site Descriptions/Conditions

All proposed mitigation sites consist of disturbed habitats where vegetation, topsoil, and organic detritus have been disturbed through unauthorized vehicle and other anthropogenic use, and are visible on aerial imagery based on BLM mapping of ground disturbance in each ACEC unit. Areas proposed for mitigation are largely non-vegetated, but may contain isolated native plant individuals.

2.2 Topography and Soils

The topography and landforms vary throughout the mitigation sites, and are described in this section below. Elevations throughout the mitigation sites range from 1,925 to 5,025 feet above mean sea level (AMSL), as shown in Table 2.

Table 2. Elevation Ranges Among Mitigation Sites by Land Designation

Land Designation (ACEC Unit)	Feet Above Mean Sea Level
Daggett Ridge Monkey Flower	2,575–2,675
Ivanpah	4,750–5,025
Northern Lucerne Wildlife Linkage	3,250–3,300
Ord-Rodman	3,500–3,925
Shadow Valley	3,625–3,725
Superior-Cronese	2,175–2,225

Soil types found within the mitigation sites are shown in Table 3.

Table 3. Soil Types

Land Designation	Soil Type	Acres
Daggett Ridge Monkey Flower	Cajon gravelly sand, 2% to 15% slopes	2.10
	Typic Haplargids-Yermo complex, 8% to 30% slopes	0.01
Ivanpah	Unmapped area	1.13
Northern Lucerne Wildlife Linkage	Helendale-Bryman loamy sands, 2% to 5% slopes	0.21
Ord-Rodman	Unmapped Area	2.66
Shadow Valley	Unmapped area	3.11

Table 3. Soil Types

Land Designation	Soil Type	Acres
Superior-Cronese	Cajon loamy sand, loamy substratum, 0% to 2% slopes	0.08
	Norob-Halloran complex, 0% to 5% slopes	2.14
	Grand Total	**11.44**

Soil types found within the mitigation areas are described below.

Cajon Series

The Cajon series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks throughout southeastern California, southern Nevada, and Arizona. The Cajon soils typically have gradients of 0% to 15% and are located on recent fans, fan skirts, fan aprons, inset fans, and river terraces at elevations between 200 to 4,300 feet above mean sea level. The lower elevations commonly occur in the San Joaquin Valley. They formed in sandy alluvium, mostly granitic rock sources, but a variety of sources are included. The climate is arid with hot dry summers and somewhat moist winters. Frost-free season is 150 to 340 days. The average annual precipitation is about 6 inches, and the mean annual temperature is about 65°F. The soil is usually dry from mid-March to mid-December and is not continuously moist for as long as 90 days in the winter (NRCS 2018).

Common textures include coarse sand, loamy coarse sand, sand, loamy sand, fine sand, or loamy fine sand or their gravelly or cobbly equivalents. Some pedons have a sandy loam horizon at a depth of more than 40 inches. The soils are somewhat excessively drained with negligible to low runoff and rapid permeability. Cajon soils with sandy loam surface textures have moderately rapid over rapid permeability. Flooding is none to rare (NRCS 2018).

Common land uses for this soil series include rangeland, watershed, and recreation. A few areas are irrigated and are used for growing alfalfa and other crops. Vegetation is mostly desert shrubs, including creosote bush (*Larrea tridentata*), saltbush (*Atriplex* spp.), Mormon tea (*Ephedra viridis*), Joshua tree (*Yucca brevifolia*), Indian rice grass (*Stipa hymenoides*), annual grasses, and forbs (NRCS 2018).

Yermo Series

The Yermo series consists of deep, well-drained soils that formed in mixed, moderately coarse textured, calcareous, gravelly or cobbly alluvium found throughout the uplands and alluvial fans of Mojave Desert. Yermo soils are located on broad, alluvial fans and on older, faulted or uplifted uplands or valley floors at elevations of about 2,300 to 4,200 feet, with slopes ranging from 0% to 50%. The soils formed in mixed, moderately coarse textured gravelly or cobbly alluvium. The soil is well drained, with medium to rapid runoff and moderately rapid permeability (NRCS 2018).

The climate is arid, with hot, dry summers and cool, somewhat moist winters. The mean annual precipitation is 4 to 6 inches, most of which occurs as rain in the winter. Some moisture falls occasionally as snow. The mean annual soil

temperature is 59°F–63°F, and the soil temperature usually is not below 47°F at any time. The soil between the depths of about 8 and 24 inches is consistently dry from mid-spring to early winter and is not continuously moist for as long as 60 days. The frost-free season is 210 to 255 days (NRCS 2018).

Common land use for this soil series include wildlife habitat and home sites. Vegetation is typically creosote bush, white bursage (*Ambrosia dumosa*), scattered yucca (*Yucca schidigera*) and Joshua tree, and annual grasses and forbs (NRCS 2018).

For the proposed mitigation sites located within the Yermo series, the subgroup is Typic Haplargids. The Typic subgroup is centered on soils that are moderately deep or deeper and have a soil moisture regime that borders on neither ustic nor xeric. These soils do not have a high shrink-swell potential. Typical saturation occurs within 100 centimeters of the soil surface for 1 month or more in normal years. Typical horizons have a sandy or sandy-skeletal particlesize class from the soil surface to a depth of approximately 50 centimeters; or horizons with significant accumulations of durinodes, concretions, nodules, volcanic glass, pumice, cinders, or pumicelike fragments (NRCS 2018).

Helendale Series

The Helendale series consists of deep, well-drained soils that formed in alluvium from granitoid rocks. Helendale soils are located on fan piedmonts, fan remnants, alluvial fans, and terraces within the Mojave Desert of southeastern California. Helendale soils are on fan piedmonts, fan remnants, alluvial fans and terraces, with coarse-loamy, mixed, superactive, thermic Typic Haplargids textures. Slopes range from 0% to 15%. Elevations are 610 to 1,200 meters (2,000 to 3,935 feet). These soils formed in alluvium from granitoid rock. The climate is arid with hot, dry summers and cool, moist winters. The mean annual precipitation is 75 to 200 millimeters (3 to 8 inches). The mean annual temperature is 17°C to 20°C (62.5°F to 68°F). The frost-free season is 270 to 320 days (NRCS 2018).

Soil moisture control section: usually dry, moist in some part for short periods during winter and early spring and for 10 to 20 days cumulative between July and September following summer convection storms. The soils have a Typic-Aridic soil moisture regime (NRCS 2018).

The soils tend to be well drained, with negligible to low runoff and moderately high and high saturated hydraulic conductivity (NRCS 2018).

Common land uses for this soil series include irrigated agriculture and pasture, home sites, military operations, recreation, and wildlife habitat. Vegetation is mainly creosote bush, white bursage, Nevada joint fir (*Ephedra nevadensis*), Joshua trees, and annual forbs and grasses (NRCS 2018).

Bryman Series

The Bryman series consists of deep, well-drained soils that formed in alluvium from dominantly granitic sources found on terraces and older alluvial fans of the Mojave Desert. Bryman soils are on terraces and older alluvial fans and have gradients of 0% to 15%. They formed in mixed alluvium derived mainly from granitic sources. Elevations are

2,800 to 3,800 feet. The climate is arid with hot, dry summers and cool, somewhat moist winters. The mean annual precipitation is 4 to 6 inches with most of the moisture occurring as rain in late autumn and winter. Some moisture falls occasionally as snow. The mean annual temperature is 61°F to 65°F.; the average July temperature is about 44°F; and the average July temperature is about 83°F. The frost-free season is 190 to 255 days (NRCS 2018).

The soils are well drained with slow runoff and moderately slow permeability. Some areas are subject to flooding for 1 to 2 weeks from December to early February (NRCS 2018).

Common land uses for this soil series include irrigated crops such as alfalfa, small grains, and pasture. Other land uses include home sites and recreation. Vegetation is mostly creosote bush, white bursage, Mormon tea, Joshua tree, and annual forbs and grasses (NRCS 2018).

Norob Series

The Norob series consists of deep, moderately well drained soils that formed from mixed alluvium, with many areas having aeolian deposits on the soil surface, located at the eastern edge of Kern County near the town of Boron in the high desert area of the Mojave Desert. Norob soils are on alluvial plains and alluvial flats. Slopes are 0% to 5% and are formed in mixed alluvium. Elevations are 2,300 to 3,200 feet. The climate is characterized by hot, dry summers and cool, slightly moist winters. The mean annual precipitation is 4 to 6 inches. The average January temperature is 44°F.; the average July temperature is 87°F; and the mean annual temperature is 62°F to 65°F. The frost-free season is 200 to 250 days (NRCS 2018).

The soils are moderately well drained with negligible to medium runoff and some ponding during occasional heavy rainstorms, as well as slow permeability (NRCS 2018).

Common land uses for this soil include livestock grazing, military operations, and recreation. Vegetation is typically saltbush, creosote bush, and scattered annual grasses and forbs (NRCS 2018).

Halloran Series

The Halloran series consists of deep, moderately well drained soils that formed in mixed alluvium dominantly from granitic sources located on older, higher, alluvial river terraces of the Mojave Desert. Halloran soils occupy level and minor depressional areas on old, high alluvial river terraces and have gradients of 0% to 2%. They formed in old alluvium of mixed origin, although granitic material makes up a considerable part. They have been overblown with irregularly spaced hummocks and small dunes, which occupy 15% to 35% of the area and are mapped in some areas as a complex with dune land. Elevations are 1,800 to 1,850 feet. The climate is arid with hot, dry summers and cool, somewhat moist winters. The mean annual precipitation is about 4 inches occurring as rain in late autumn and winter. Some moisture falls occasionally as snow. The mean annual temperature is 61°F to 63°F.; the mean January temperature is about 44°F; and the mean July temperature is about 83°F. The frost-free season is 190 to 255 days (NRCS 2018).

The soils are moderately well drained, with slow runoff with some ponding during flooding after heavy rainstorms and moderately slow permeability (NRCS 2018).

Land use for these soils mainly includes wildlife habitat and recreation. Small areas are used for irrigated alfalfa, small grains, and pasture. Vegetation is mainly creosote bush, saltbush, and alkali-tolerant vegetation. Where wind-blown hummocks and small dunes occur, mesquite trees (*Prosopis glandulosa*) grow (NRCS 2018).

2.3 Vegetation Communities

Surrounding the proposed mitigation sites (Figures 1 through 7) there are six vegetation community alliances per California Native Plant Society (CNPS) classification, occurring within in the land designations shown in Table 4. Land cover types within the mitigation sites themselves are disturbed land, which is why they are proposed for restoration.

Table 4. Vegetation Community Distribution Among Mitigation Sites

Land Designation	Vegetation Community	Acreage of Mitigation Site within Vegetation Community Context
Daggett Ridge Monkey Flower	*Larrea tridentata–Ambrosia dumosa*	2.10
Ivanpah	*Yucca brevifolia* woodland	1.13
Northen Lucerne Wildlife Linkage	*Larrea tridentata*	0.21
Ord-Rodman	*Larrea tridentata–Ambrosia dumosa*	2.11
	Yucca schidigera	0.55
Shadow Valley	*Yucca brevifolia* woodland	3.11
Superior-Cronese	*Atriplex polycarpa*	0.21
	Atriplex spinifera	1.71
	Larrea tridentata–Ambrosia dumosa	0.30
	Total Mitigation Acreage	**11.44**

Vegetation community alliances surrounding the mitigation sites are described below.

***Atriplex polycarpa* Shrubland Alliance (Allscale Scrub)**

Atriplex polycarpa is dominant in the shrub canopy with *Ambrosia dumosa*, *Ambrosia salsola, Atriplex canescens, Bromus rubens, Chamaesyce polycarpa, Cleome isomeris, Isocoma acradenia*, and *Larrea tridentata*. Emergent trees may be present in lesser numbers, including *Prosopis glandulosa* (CNPS 2018).

The vegetation community form tends to be shrubs less than 3 meters in height with a canopy that is open to continuous, with a variable herbaceous layer, including seasonal annuals (CNPS 2018). This alliance is typically found in washes, playa lakebeds and shores, dissected alluvial fans, rolling hills, terraces, and edges of large, low gradient washes. Associated soils may be carbonate rich, alkaline, sandy, or sandy clay loams.

***Yucca brevifolia* Woodland Alliance (Joshua Tree Woodland)**

Yucca brevifolia is an emergent small tree over a shrub or grass layer with *Ambrosia dumosa, Ambrosia salsola, Artemisia tridentata, Chrysothamnus viscidiflorus, Coleogyne ramosissima, Cylindropuntia acanthocarpa, Ephedra nevadensis, Eriogonum fasciculatum, Gutierrezia microcephala, Krascheninnikovia lanata, Larrea tridentata, Lycium andersonii, Yucca baccata*, and *Yucca schidigera*. Other trees may be present at low cover, including *Juniperus californica, Juniperus osteosperma*, or *Pinus monophylla* (CNPS 2018).

The vegetation community form tends to be trees less than 14 meters, with a canopy that is open to intermittent. Shrub layer tends to be open to intermittent, with an open to intermittent herbaceous layer that includes perennial grasses and seasonal annuals (CNPS 2018). This alliance is typically found in gentle alluvial fans, ridges, and on gentle to moderate slopes. Associated soils are coarse sands, very fine silts, gravel, or sandy loams. Many sites have bimodal soils with both coarse sands and fine silts (CNPS 2018).

***Larrea tridentata* Shrubland Alliance (Creosote Bush Scrub)**

Larrea tridentata is dominant or co-dominant in the shrub canopy with *Acamptopappus shockleyi, Acamptopappus sphaerocephalus, Ambrosia dumosa, Ambrosia salsola, Atriplex confertifolia, Atriplex hymenelytra, Atriplex polycarpa, Brickellia incana, Encelia farinosa, Ephedra californica, Ephedra nevadensis*, and *Lycium andersonii*. Emergent trees may be present at low cover, including *Prosopis glandulosa* or *Yucca brevifolia* (CNPS 2018).

The vegetation community form tends to be shrubs less than 3 meters in height with a canopy that is intermittent to open. The herbaceous layer is open to intermittent with seasonal annuals or perennial grasses (CNPS 2018). This alliance is typically found in alluvial fans, bajadas, upland slopes, and minor intermittent washes. Associated soils are well drained, sometimes with desert pavement (CNPS 2018).

***Larrea tridentata–Ambrosia dumosa* Shrubland Alliance (Creosote Bush–White Bursage Scrub)**

Ambrosia dumosa and *Larrea tridentata* are co-dominant in the shrub canopy with *Ambrosia salsola, Amphipappus fremontii, Atriplex confertifolia, Atriplex hymenelytra, Atriplex polycarpa, Bebbia juncea, Croton californicus, Cylindropuntia acanthocarpa, Cylindropuntia ramosissima, Dalea mollissima, Echinocactus polycephalus, Encelia farinosa, Encelia virginensis, Ephedra* spp., *Eriogonum fasciculatum, Krameria* spp., *Lepidium fremontii, Lycium andersonii, Psorothamnus* spp., *Salazaria mexicana, Senna armata, Viguiera parishii*, and *Yucca schidigera*. Emergent trees or tall shrubs may be present at low cover, including *Fouquieria splendens* or *Yucca brevifolia* (CNPS 2018).

The vegetation community form tends to be shrubs less than 3 meters, with a canopy that is open to intermittent and two tiered. The herbaceous layer is absent to intermittent with seasonal annuals (CNPS 2018). This alliance is typically found in washes and rills, alluvial fans, bajadas, valleys, basins, upland slopes, mesas, and erosional highlands. Associated soils are well-drained, alluvial, colluvial, sandy, sometimes underlain by a hardpan that may be calcareous, igneous, and/or covered with desert pavement (CNPS 2018).

***Atriplex spinifera* Shrubland Alliance (Spinescale Scrub)**

Atriplex spinifera is dominant or co-dominant in the shrub canopy with *Ambrosia salsola, Atriplex polycarpa, Ephedra californica, Frankenia salina, Gutierrezia californica, Isocoma acradenia,* and *Picrothamnus desertorum* (CNPS 2018).

The vegetation community form tends to shrubs less than 2 meters, with a canopy that is open. The herbaceous layer is variable, with seasonal annuals reaching high cover (CNPS 2018). This alliance is typically found on alluvial fans, old lake beds perched above current drainages. Associated soils are moderately sandy clay loams to fine, silty clays that may be carbonate rich. Occurrences in the Coast Ranges may be located on moderate to steep slopes on sedimentary substrate.

***Yucca schidigera* Shrubland Alliance (Mojave yucca scrub)**

Yucca schidigera is dominant or characteristically present in the shrub or small tree canopy with *Ambrosia dumosa, Coleogyne ramosissima, Cylindropuntia acanthocarpa, Encelia farinosa, Ephedra nevadensis, Eriogonum fasciculatum, Larrea tridentata, Pleuraphis rigida, Salazaria mexicana, Simmondsia chinensis,* and *Viguiera parishii* (CNPS 2018).

The vegetation community form tends to shrubs less than 5 meters, with shrub and grass layers that are open to intermittent (CNPS 2018). This alliance is typically found on alluvial fans, rocky slopes, and upper bajadas. Soils are well-drained, sandy loams (CNPS 2018).

2.4 Special-Status Plant and Wildlife

No special-status plant or wildlife species were mapped within the proposed mitigation sites during the biological surveys associated with the proposed project. If special-status plants or wildlife are encountered during site review, project implementation, maintenance, or monitoring activities, the Project Biologist will review the specific situation and put in place measures to avoid impact to the observed resource. If special-status plant individuals are encountered on site, they shall be left undisturbed and incorporated into the overall site restoration effort.

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3 GROUND DISTURBANCE MITIGATION GOALS

The goal of the mitigation effort outlined herein includes physical restoration of a minimum of 11.19 acres of previously disturbed BLM lands within the boundary of the specific California Desert NCLs and/or ACEC unit(s) being impacted as shown in Table 1. This goal will be considered achieved once success criteria in Section 6.1 is achieved, as determined by BLM. It should be noted that there is no requirement for percent native vegetation cover associated with this effort, but rather visual and topographical restoration to blend in with the surrounding, typical landscape. This overall goal may be obtained in part by establishment of some native vegetation, but establishment of a certain level of native vegetation cover is not the ultimate intent.

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4 IMPLEMENTATION PLAN

LADWP will oversee mitigation implementation and is responsible for the successful implementation of this mitigation and monitoring program. Project management will be provided by LADWP, who will be financially responsible for implementation and management of this mitigation program.

4.1 Project Biologist

LADWP shall designate a qualified biologist (Project Biologist) to provide biological monitoring during implementation of the mitigation program. The Project Biologist will review all aspects of pertinent project documents prior to project implementation.

The Project Biologist will oversee and coordinate implementation of this mitigation plan, conduct field monitoring of project installation, and perform biological monitoring throughout the maintenance and monitoring period. The Project Biologist shall possess specific project knowledge and demonstrate experience with mitigation projects.

The Project Biologist will inform all project personnel prior to implementation of this mitigation plan of all on-site construction restrictions and conditions. The Project Biologist will inform all project personnel of the presence or potential presence of sensitive species and vegetation communities within or adjacent to the project areas, as well as any potential dangers on site. Information about federal, state, and local laws relating to these biological resources will be discussed as part of personnel education. Access and staging areas outside of environmentally and culturally sensitive areas will be established.

Biological monitoring will occur throughout the mitigation installation period. Monitoring time may increase or decrease as required by field conditions and installation activities. During installation, the Project Biologist, via the LADWP point of contact, will have authority to stop work in situations where biological resources not authorized to be impacted are in imminent danger of impacts from adjacent construction activities. Each site visit will be documented in a site observation report that will note restoration installation activities relating to this mitigation plan.

The Project Biologist shall conduct on-site monitoring visits throughout the maintenance and monitoring period to assess progress and growth trends, document project deficiencies, and provide recommendations for remedial measures, if necessary, to achieve compliance with success criteria outlined in Section 6.1. Each monitoring visit will include a qualitative assessment of maintenance work and will include remedial recommendations as necessary to help ensure successful project completion.

4.2 Installation and Maintenance Contractor

LADWP will select a qualified installation contractor to implement the mitigation installation and maintenance program. The contractor must be able to identify California native plants and common weed species and demonstrate knowledge of desert habitat restoration techniques.

The installation contractor will be responsible for conformance to (1) this mitigation plan, and (2) environmental regulatory agency requirements. The contractor's responsibility for installation will continue until successful completion and final acceptance by LADWP and the Project Biologist.

After initial mitigation project installation, LADWP will designate a maintenance contractor. Maintenance work shall be performed as indicated herein and per the Project Biologist's recommendations. LADWP may choose to designate a maintenance entity that is separate from the installation entity.

4.3 Preliminary Schedule

The schedule presented in Table 5 is a preliminary schedule of implementation and may be modified based on site conditions, accessibility, and personal availability. It is recommended that the majority of the work be conducted during the cooler season of the year, but this may be modified based on the overall project timeline. Initiation of the restoration effort will begin within 12 months following initiation of the construction activities associated with this mitigation.

Table 5. Ground Disturbance Mitigation Program Schedule

Work Tasks	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Site delineation									X			
Seed collection/plant salvage										X		
Soil contouring											X	X
Vertical mulch and landscaping	X											X
Seed installation	X											X
Erosion control		X	X									

4.4 Site Access

The mitigation sites will be accessed via existing authorized roads to the extent feasible. Staging will occur outside of sensitive habitat, preferably in existing disturbed areas, and avoid unauthorized additional impacts to the surrounding area.

Prior to implementation, the Project Biologist will coordinate with the installation contractor to determine appropriate routes for accessing each mitigation site, accounting for the type(s) of equipment needed.

4.5 Sensitive Species Protection Measures

Prior to mitigation implementation, the Project Biologist will review pertinent project-specific literature and biological survey data results. The Project Biologist shall evaluate each mitigation site in the field to determine if suitable habitat is present that warrants additional focused survey efforts in order to identify special-status plant or wildlife species with a potential to occur within the mitigation site footprints, and with potential to be adversely affected during implementation of the mitigation project.

If special-status plant species are observed within a mitigation site prior to project implementation, the Project Biologist will flag and delineate the plant locations, and make the installation contractor aware of their presence prior to implementation. Impacts to special-status plant species will avoided, and the presence of such plants will be incorporated into the overall design of the project.

If special-status wildlife are observed, or evidence of their territories and utilization of the site are observed prior to project implementation, the Project Biologist will work with the installation contractor to avoid "take" of individuals or their functional habitats.

If the contractor observes special-status plants or wildlife during mitigation installation implementation or subsequent maintenance activities, he/she shall stop work in that area and notify the Project Biologist. The Project Biologist will then work with the crews to avoid impacts appropriately based on the site condition.

4.6 Site Preparation

The sites will be delineated by the Project Biologist prior to project implementation. The flagging will be temporary in nature and will be removed following implementation to avoid attracting unwanted attention and possible vandalism to the site. No fencing shall be used to delineate the site that could cause additional impacts and barrier to wildlife movement. In the event that flagging in the field is not feasible or desirable, the Project Biologist will provide the installation contractor a georeferenced PDF file of the site footprint overlaid onto a high-resolution aerial map. The georeferenced map may be accessed in the field via mobile electronic device and used for spatial navigation while on site.

A variety of restoration methods may be employed, based on their suitability to a given location and site context, as determined by the Project Biologist. Not all methods will be uniformly suitable throughout the entirety of the mitigation sites, and they will be utilized as appropriate. Methods outlined in Sections 4.6.1 through 4.8 may be used independently, or in combination with each other to achieve the overall goals of the project, based on site conditions.

4.6.1 Native Plant Salvage and Seed Collection

For areas where seeding is utilized, seeds should be gathered as close to the specific mitigation site as possible. Seeds can be collected from the ground at the base of existing, mature native plants (such as a creosote bush). The

surrounding debris may also be collected with the seed for efficiency and to provide organic matter with the seeds. No more than approximately 10% of observed seeds should be removed from any individual plant to ensure that seeding occurs from a diverse group of individuals. This approach will also help to ensure that there is no disruption of habitat development due to over collection of seeds from a given area (SCA 2013). Collected seed shall be stored in a cool, dry location until it is installed on the mitigation site.

If feasible, existing native vegetation within the mitigation sites shall be left in place and incorporated into the overall restoration design of the site. If the overall restoration approach requires grading, recontouring, or other soil work that necessitates the removal of existing native vegetation, then native plant individuals shall be salvaged to the greatest extent feasible. Salvaged plants shall be stored in a stockpile area adjacent the site, and then replanted as part of the restoration effort following completion of soil work. The Project Biologist shall work directly with the installation contractor to identify vegetation for salvage within the mitigation sites.

Vegetation salvage shall occur during the cooler months, preferably between October and February. Vegetation collection of stem succulent segments includes individual and multiple stem sections. Each salvaged segment shall include at a minimum complete segments. Segments shall be manually separated from host plants with hand tools (i.e., bladed tools) and transferred directly to a transport vehicle or temporary on-site stockpile areas approved by the Project Biologist.

For both succulent and non-succulent plants, individual stems or stem clusters containing established roots shall be carefully lifted from the soil with intact root ball and soil attached. These specimens shall be separated from the non-rooted segments.

All salvaged plants with developed root balls shall be salvaged and transplanted in the designated stockpile area adjacent the site. Rooted specimens shall be carefully excavated from the soil with a minimum of an 8-inch x 8-inch root ball and soil attached. The root ball and soil shall be kept intact for transport to the stockpile area. Salvage will include the collection of segments and rooted plants as directed in the field by the Project Biologist. Rooted segments shall be planted immediately upon arrival at the stockpile area.

In addition to preserving the rootball, all existing attached pads or plant parts shall be preserved intact to provide the maximum vertical and horizontal structure for transplantation.

Salvaged plant individuals shall be stockpiled adjacent the site in a location designated by the Project Biologist while grading and re-contouring is occurring. The salvage can be transferred to prepared 3-foot-wide, 18-inch-deep stockpiling trenches of any desired length. If using multiple, parallel trenches, they should be far enough apart to allow any applicable equipment access to each trench. Trenches will be watered thoroughly prior to transplanting material. Salvaged individuals should be placed in the trench and planted with native soil. Care should be taken to properly tamp down and compact all soil around roots of plants to remove all air pockets. A depression around each plant should be formed to hold water. After individuals are transplanted, they will be watered thoroughly one time. A one-time watering approximately 15 days after planting will occur to remove or minimize any air pockets and assure

proper soil compaction. Yucca will be placed in the trenches and the soil tamped by hand around the base of the plant so that there are no air pockets. To reduce watering, DriWater can be applied to each individual. DriWater is a gelatinous polymer that slowly breaks down to water over time. DriWater comes in biodegradable cartons and is applied by cutting the top of the carton and placing it upsidedown around the plant to be watered. The area around the plant must be thoroughly wet to activate the DriWater. The DriWater is applied around the base of the plant at a rate of 1 quart for every foot in plant height. DriWater cartons are to be buried completely. At the surface, a watering well will be formed around the plant. Afterward, the plant will be watered thoroughly again (Ironwood 2014).

Following grading, re-contouring and soil surface preparation, salvaged plant material may be replanted back onto the mitigation site. Any soil disturbance associated with stockpiling salvage plants adjacent the site shall also be restored as part of the project.

4.6.2 Equipment and Materials

Equipment utilized for grading, re-contouring, decompacting, ripping, planting salvaged native plants, and vertical mulch may include hand tools such as rakes, buckets, shovels, pick mattocks, McLeods, brooms rock bars, and wheelbarrows.

Mechanized equipment such as skid-steer loaders and mini-excavators may also be used in combination for various tasks such as native plant salvage, moving rocks, soil ripping (for decompaction), grading, re-contouring, and materials relocation. Larger machinery is not recommended because additional soil compaction is not desirable.

A water truck is also recommended to be on site for the purposes of emergency fire control, dust control, and watering in salvaged plant materials.

4.6.3 Soil Preparation and Grading

Soil work within the mitigation sites will consist of decompacting, raking, recontouring, berms, and sweeping. It may also involve movement or placement of native rock material in a way that provides a determent to unauthorized use, or creates a break in the line-of-site, helping to blend the mitigation site visually back into the surrounding landscape context. Methods of soil preparation and grading are discussed below. Each site will be different, and the contractor, in coordination with the Project Biologist, will develop a work plan utilizing a combination of methods outlined herein.

4.6.3.1 Decompacting/Soil Ripping

Unauthorized vehicle use in the desert causes soils to compact, as may be the case with some of the mitigation sites. In order to promote suitable soil habitat for new plant growth and to improve water infiltration and runoff, it may be necessary to decompact the soil. This may be accomplished using hand tools such as rakes, McLeods, or pick mattocks, depending on the extent that the soil is compacted. If significant compaction over a large area is present, a

skid steer, mini-excavator, or small tractor may be fitted with a ripper. Heavy decompaction may require more extensive finishing efforts to lend the decompacted area visually with the surrounding soils, as the churning of the soils changes not only the color of the soil but also the look of it. Decompaction should be done in a way that creates irregular, organically shaped edges to avoid creating straight lines or geometric forms. Once soil has been decompacted, it should be smoothed via raking or sweeping and assessed to determine how much finish contouring and texturizing is necessary (SCA 2013).

4.6.3.2 Raking

Raking may be used to erase small ruts and redistribute sand and small rocks to match the surrounding area. This may be used as a finish technique following other grading methods, or on its own for areas of minor impact. Raking should seek to distribute materials evenly and avoid forming lines or clumps of rock, especially when raking a long, narrow incursion. Irregular, organically shaped edges should be created to blend in with the surrounding landscape context.

Once raking is complete, the area should be assessed to determine if the soil is discolored. Sanding and or rocking with native topsoil materials can be used to mask discolored soil and to help redistribute the texture more evenly. With any soil disturbance, some soil discoloration is probable, but the color of the soil tends to fade with sun and dry air over time (SCA 2013).

4.6.3.3 Recontouring

In some cases, changing the contour of the landscape is sometimes desirable—either to restore an area to what it was pre-disturbance, or to modify it in a way that will discourage future disturbance. Unauthorized vehicle routes in softer desert soils may become deeply compacted, resulting in a general trough shape that remains even after decompaction. Disrupting the shape of the trough feature assists in eliminating visual evidence of the disturbance. Recontouring the shape to include other forms can assist in breaking up the linear trough feature. Recontouring should always seek to form shapes that are in context with the surrounding landforms and features of the site (SCA 2013).

4.6.3.4 Berms

Berms can occur along the edge of unauthorized desert roads in areas of sand or loose soils. These berms may be interrupted, or new berms created that blend into their surroundings and disrupt the linear visual features of the unauthorized road (SCA 2013).

4.6.3.5 Large Rock Placement

If larger rocks are present within a mitigation site, they may be moved to appear in formations that can serve as natural barricades for discouraging unauthorized vehicle use. Rocks may be utilized to block and camouflage existing

routes, or to create new, similar formations that blend with the surroundings. Only rocks within the mitigation site in areas of disturbance should be considered for this application (SCA 2013).

4.6.3.6 Small Rocks/Desert Pavement

In mitigation sites where desert pavement or small exposed rocks are prominent on the soil surface, rocks may be gathered and scattered to blend the mitigation area with its surroundings. Only rocks within the mitigation site in areas of disturbance should be considered for this application. Care must be taken to avoid creating patches devoid of any rocks or other obvious evidence of disruption. A variety of rock sizes should be collected to avoid a uniform appearance. Rock dispersal should cover an organically shaped, irregular area to blend in with the surrounding landscape (SCA 2013).

4.6.3.7 Sanding

For areas where decompaction or raking has discolored the soil surface, scattering a layer of sand or fine gravel can mask the discoloration as well as can help visually blend the site with its surroundings. Collection of sand for this purpose should be from within the mitigation site in a disturbed area (SCA 2013).

4.6.3.8 Sweeping

For finishing the soil surface, sweeping may be used to remove vehicle tracks in sandy washes, remove footprints, or other signs of human usage (SCA 2013).

4.6.4 Vertical Mulching Techniques

Vertical mulch collection involves gathering dead branches from surrounding plants, or gathering small dead bushes no longer rooted into the ground. When collecting from live plants, remove only dead branches from plants, and do not remove more than 10% of the dead branches from a single individual plant. Branches used should break away using only a minimum amount of force. Branches that do not break easily should be left in place (SCA 2013).

To install vertical mulch, a hole of sufficient depth is dug to "plant" it. Rocks may be used in the bottom of the hole to help support and anchor the vertical mulch. Once branches are secured and able to stand upright on their own, the remainder of the hole may be filled with more rocks and then soil. A mound may be constructed around the base of the installation for additional support if necessary (SCA 2013).

Placement of branches should appear natural, and asymmetrical within the installation clump. Clumps should be spaced consistently with the natural surrounding vegetation density.

4.7 Seeding and Planting Techniques

All salvaged plant material stockpiled next to the mitigation sites will be replanted in a natural pattern, consistent with the landscape context. Plant individuals will be carefully removed from the stockpiling area, taking care to not damage stems, roots, or the base of the plant. A hole at least two times the size of the rootball/succulent base will be prepared for each plant. The hole will be filled with water and allowed to drain once; then the hole will be filled with water again and then back-filled with soil to form a muddy matrix. The plant will then be planted, and the soil around the plant will be tamped so that there are no air pockets. DriWater may be applied around the plant at a rate of one quart for every foot in height. DriWater cartons are to be buried completely, with no visual trace from the surface. At the surface, a watering well will be formed around the plant (Ironwood 2014).

Collected seed may be installed using two applications: seed pits and broadcast seeding.

4.7.1 Seed Pits

Following installation of vertical mulch, a shallow pit may be dug at the base. Pits should be 2 to 6 inches deep and sized to hold approximately a hand full of seeds. Placing seeds in these pits protects them from windy conditions. Seed pits may also be prepared where no vertical mulch has been installed (SCA 2013). Small organic matter should also be placed in the seed pits to help hold moisture.

4.7.2 Broadcast Seeding

Seed may also be disbursed throughout the site through hand broadcasting. This should only be done in areas that have been decompacted, and where the soil surface has enough texture through raking for the seeds to incorporate into the topsoil layer, as opposed to staying on top of the soil and being prone to relocation by the wind (SCA 2013).

For areas and applications where collection of native seed from the area surrounding the site is not feasible, a native seed mix may be utilized. The seed mix may be modified by the Project Biologist based on site conditions. An example seed mix is shown in Table 6.

Table 6. Example Native Seed Mix

Species and Common name	Pounds Per Acre	Percent Purity
Ambrosia dumosa (white bursage)	3.5	29
Atriplex canescens (four-winged saltbush)	1.5	12
Ephedra nevadensis (Nevada ephedra)	1.5	12
Larrea tridentata (creosote bush)	2.5	3

All purchased seeds will be clearly labeled, showing type of seed, test date, the name of the supplier, and percentage of the following: pure seed, crop seed, inert matter, weed seed, noxious weeds, and total germination content. All material will be delivered to the site in original, unopened containers bearing the manufacturer's guaranteed analysis. All seed mixes will be stored in a dark, cool place and not be allowed to become damp. All seed from seed mixes should be sourced from as close to the mitigation sites as possible. Labels for each seed delivered to the site will be inspected and approved by the Project Biologist prior to mixing and application.

Installation between the months of October to January is ideal for allowing establishment during the cooler and wetter time of the year.

Additional seed may be hand broadcast at a later date if the seed of selected species is not available at the time of initial seed installation. The contractor should consult the Project Biologist for modifications to the seed palette.

4.8 Erosion and Sedimentation Control Measures

If a rainfall event is forecasted by the National Weather Service while bare mineral soil is exposed from vegetation clearing work, the contractor shall deploy erosion control devices such as silt fencing, straw wattles, bonded fiber matrix, or spreading of crushed mulch as directed by the Project Biologist. All materials, with the exception of silt fencing, shall be made of 100% biodegradable materials. No erosion control materials shall contain plastic that may entrap or endanger wildlife.

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5 SITE MAINTENANCE PLAN

5.1 Maintenance Activities and Schedule

Following successful mitigation project installation, as approved by the Project Biologist and LADWP, the mitigation program will begin its maintenance and monitoring phase, which shall extend until performance criteria in Section 6.1 are achieved for all areas of all mitigation sites.

Maintenance activities will be directed by the Project Biologist and shall consist of correcting any deficiencies in the original project design, or making adjustments to the site to maintain its compliance with the original design. Maintenance activities may include removal of anthropogenic trash, repair and soil recontouring following unauthorized vehicle impact, and addressing soil erosion. Methods outlined in Sections 4.6.3 through 4.8 may be utilized for maintenance purposes and corrective actions. Maintenance visits are twice a year, and may be increased or decreased as recommended by the Project Biologist based on the trajectory of the project. An estimated maintenance schedule is shown in Table 5. Not all maintenance activities listed in Table 7 may be necessary at every visit, but they will be evaluated by the Project Biologist.

Table 7. Mitigation Maintenance Program Schedule

Work Tasks	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Anthropogenic trash removal				X						X		
Erosion control				X						X		
Maintenance of vertical mulch				X						X		
Repair of unauthorized vehicle use				X						X		

5.2 Maintenance Guidelines

Specific maintenance activities shall be directed by the Project Biologist, and shall be consistent with the intent of achieving the success criteria outlined in Section 6.1.

While eradication of non-native plant species is not a specific goal of the project, the site shall be maintained such that presence of non-native plant species within the site does not exceed that of the ambient, surrounding landscape context, as directed by the Project Biologist. Non-native plant control measures will include the following: (1) hand removal, (2) cutting with mechanical devices, and (3) herbicide application. Hand removal of non-natives is the most desirable method of control and will be used around existing individual native plants where feasible. Weeds should be pulled when plants are 6–12 inches tall or when they can be positively identified, and prior to the formation of seed

heads. If seed heads have formed, they shall be hand cut and bagged for removal from the site. Care should be taken to avoid spreading weed seeds throughout the site.

The maintenance contractor should coordinate with the Project Biologist to identify weeds for removal as needed. Chemical herbicide control will be used for perennial species that are low growing and difficult to control by hand pulling. Any herbicide treatment must be applied by a licensed pest control applicator.

Pruning or clearing of native vegetation will generally not be allowed within the mitigation areas, except as directed by the Project Biologist. Dead biomass and plant litter will not be removed and will be left in place, or utilized for additional vertical mulch applications as directed by the Project Biologist. Organic biomass and leaf litter provide valuable microhabitats for benthic and terrestrial invertebrates, reptiles, small mammals, and birds. In addition, the decomposition of plant material is essential for the replenishment of soil nutrients and minerals.

Anthropogenic trash will be removed from the mitigation areas by hand on a regular basis. Trash consists of all anthropogenic materials, equipment, or debris dumped, thrown, washed, blown, and left within the mitigation areas.

Contractor maintenance shall include maintenance and repair of specific grading/recontouring features that are intended to obscure unauthorized roads, or deter unauthorized human use. The contractor shall confer with the Project Biologist if it appears that maintenance needs of the site indicate that changes in the specified location, materials, or methods need to be altered to meet their intent for this project.

Remedial seeding may also be recommended by the Project Biologist to help increase cover and structure to the site.

6 MONITORING PLAN

6.1 Success Criteria

Per BLM requirements (BLM 2016), mitigation areas will be considered successful and the effort complete when they meet one of the two following criteria, as determined by BLM:

1. Field verification that disturbed areas are dominated by the establishment of native shrubs, as appropriate for the site, and demonstrated function of ecological processes (e.g., water flow, soil stability).
2. Ground disturbance can no longer be seen at the 1:10,000 scale using the best available aerial imagery.

Portions of the mitigation sites may be determined recovered by BLM at any time, once one of the two success criteria are met, prior to the entirety of the mitigation polygon being determined recovered. Once a given area is determined to have met one of the two success criteria, it will be removed from the acreage of the active, ongoing mitigation program footprint. Maintenance and monitoring will continue for the remaining areas until all required mitigation areas have been determined to have met final success criteria by BLM.

While establishment of native shrubs is listed as a component of site restoration, there is no specific native vegetation cover requirement for these sites, nor is there criteria for control of non-native plant species.

6.2 Monitoring Methods

To evaluate the success criteria outlined in Section 6.1, monitoring of the mitigation effort shall consist of qualitative approaches, including desktop analysis of existing commercially available aerial imagery, utilizing an unmanned drone to obtain aerial imagery of the mitigation sites and on-site qualitative visual assessment.

6.2.1 Field Evaluations

Qualitative monitoring field visits will be conducted twice a year by the Project Biologist to determine if the site is meeting interim and final success criteria as described in success criteria option number 1. If mitigation efforts are observed to be failing to meet the intent of the success criteria, the Project Biologist may recommend remedial actions to bring the site into compliance. This will involve an assessment of native species composition and vegetation density present throughout site compared with an undisturbed control area adjacent the site.

Monitoring activities will include regular evaluation of weed species establishment. No plant species listed as problematic and/or invasive by the CNPS, the California Invasive Plant Council, or the State of California shall be allowed to naturalize or persist in the mitigation site. No plant species listed as a "noxious weed" by the State of California or the U.S. federal government shall be planted or allowed to naturalize or persist within the mitigation site.

Following each site visit, the Project Biologist shall generate a brief Site Observation Report detailing the condition of the mitigation sites and any maintenance and/or remedial actions recommended to support the project in meeting its success criteria. Copies of the Site Observation Report shall be provided to LADWP and the maintenance contractor.

6.2.2 Aerial Survey and Map Evaluation

To determine if the mitigation sites are meeting success criteria option number 2, commercially available high-resolution aerial imagery (such as Google Earth or equivalent) may be used for evaluation if the date of the imagery is current and relevant to capturing recent site development. Obscuring the site in plan view at a 1:10,000 scale requires distribution of vegetation and land features in addition to presence and density of native vegetation. It is for this reason that evaluation of the site from an aerial plan view is necessary in addition to field evaluation of vegetation.

If commercially available aerial imagery is not current or insufficient, aerial surveys of the mitigation sites may be conducted to provide high-resolution aerial basemap (RGB color value/true color) to document current conditions of the project site and allow for evaluation of site progress and success criteria. Data may be collected by flying a small unmanned aerial system (sUAS/drone) over the mitigation sites (this activity may be combined with site monitoring, conditions permitting). Collected photographic mapping data will be post-processed and converted into a georeferenced composite aerial map compatible for use with ESRI mapping software and CAD software. The final mapping product will have a minimum resolution of 1-inch per pixel. Mapping will then be scaled to 1:10,000, and assessed for attainment of success criteria. All flight operations shall comply with the following:

- All flight operations will be conducted in compliance with the requirements of the Federal Aviation Administration Part 107 Federal Aviation Regulations (14 CFR Part 107)
- The sUAS/drone carries current FAA registration.

6.3 Monitoring Schedule

Monitoring shall be conducted twice a year, and be coordinated with the contractor's maintenance efforts, as shown in Table 5. Monitoring may occur prior to the contractor's maintenance visits, or may be conducted in conjunction with the contractor's maintenance visit to provide direct coordination.

6.4 Annual Reports

An annual biological monitoring report outlining the results of the progress of the mitigation effort will be submitted to LADWP, permitting regulatory agencies and BLM at the end of each year on the anniversary date of completion of project installation, or at the end of the calendar year (December). The annual monitoring reports will include the following: describe the existing conditions of the mitigation sites derived from qualitative and aerial imagery data, provide a comparison of pre-project field conditions with current conditions, identify any shortcomings of the mitigation program, and recommend remedial measures necessary for the successful

completion of the mitigation project. The reports will also identify any portions of the mitigation sites that are currently meeting success criteria and are ready to be requested for final completion by BLM.

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7 CONTINGENCY MEASURES

As the project progresses, if portions of the mitigation sites are struggling to meet success criteria, the Project Biologist in consultation with LADWP will prepare an analysis of the cause(s) of failure(s) and, if determined to be necessary, propose remedial actions to correct the mitigation effort deficiencies. If the mitigation sites have not met the performance criterion, LADWP maintenance and monitoring obligations will continue until final project approval/ confirmation is obtained.

As owner and permittee of the project, LADWP is financially responsible for implementation and management of the mitigation program. LADWP will oversee mitigation installation and will be responsible for the successful implementation of the mitigation program. Funding will be made available by LADPW for adaptive management of the mitigation effort, should it become necessary.

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8 MITIGATION COMPLETION

When monitoring results indicate the project has met the final performance criteria for the mitigation sites, LADWP will notify BLM and submit a monitoring report outlining compliance with final performance criteria and request final sign-off of the mitigation as being complete.

Areas within California Desert NCLs and/or ACECs may be determined recovered by BLM at any time, once one of the two success criteria in Section 6.1 are met, prior to the entire unit (of calculation and mitigation) being determined recovered. Areas determined recovered by BLM would be removed from the subsequent ground disturbance calculation for that unit (BLM 2016). The mitigation program would continue until all of the required 11.19 acres meet final performance criteria.

Ground disturbance is assessed during the decadal ground disturbance threshold ecoregion trend monitoring assessments that are conducted. Between the decadal assessments, BLM will assume the mitigation sites are not restored until data is presented otherwise and BLM agrees with the conclusion (see Section 6.4 for reporting).

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9 REFERENCES

14 CCR Part 107. Small Unmanned Aircraft Systems.

BLM (Bureau of Land Management). 2016. *Desert Renewable Energy Conservation Plan Land Use Plan Amendment to the California Desert Conservation Area Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan*. September 2016.

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