

Minimum Standards for Aquatic Resource Delineations and Mapping Standards

Kara Hellige

Durango Regulatory Office

Sacramento District

16 February 2016



Minimum Standards for Aquatic Resource Delineations



MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS

U.S. ARMY CORPS OF ENGINEERS

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January 2016

The U.S. Army Corps of Engineers, through its Regulatory Program, regulates certain activities in waters of the United States. Waters of the U.S. are defined under 33 CFR Part 328. In order for the Corps to determine the amount and extent of waters of the United States at a site, aquatic resources must first be delineated in accordance with established regulatory standards, guidance and protocol, such as the 1987 Corps of Engineers Wetlands Delineation Manual and appropriate regional supplements. Before making any permit decision, the Corps is responsible for conducting or verifying the delineation and determining which of the aquatic resources have the potential to fall under federal jurisdiction.

Due to limited staffing and resources, the Corps' Sacramento District recommends permit applicants employ the services of individuals experienced in delineating aquatic resources. Permit applicants are further encouraged early in the project planning stages to submit the delineation, along with a request for a preliminary or approved jurisdictional determination, and engage in a pre-application consultation with their local District office. Early consultation may help identify potential concerns and result in a quicker permit decision.

The District has established minimum standards for delineation reports to insure consistency and accuracy in the delineation of aquatic resources, which will minimize potential delays. The standards are based on years of experience conducting and verifying delineations, as well as the best practices of environmental consultants. Delineations submitted for verification must follow the standards, unless determined to not be practical on a case-by-case basis. Situations where adherence to the standards may not be practical include activities with small permanent or temporary impacts to aquatic resources (under 0.10 acre), applicants with limited financial resources, and emergencies. The District will notify the requestor for delineation submissions that do not contain sufficient information to accurately identify the limits of waters of the U.S.

Aquatic resources delineation reports submitted to the District must include the following:

- ☐ A cover letter requesting a jurisdictional determination. The letter must specify whether a preliminary or approved jurisdictional determination is requested.
- ☐ A signed statement from the property owner(s) allowing Corps personnel to enter the property and to collect samples during normal business hours. If the property is land-locked, the owner or proponent must obtain permission from the adjacent property owner(s) to provide access for Corps personnel.
- ☐ A statement that the delineation has been conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and appropriate regional supplement(s). The regional supplement(s) used must be identified. For ordinary high water mark (OHWM) delineations, a statement identifying the use of the OHWM field guide must be included.

Page 2 of 4

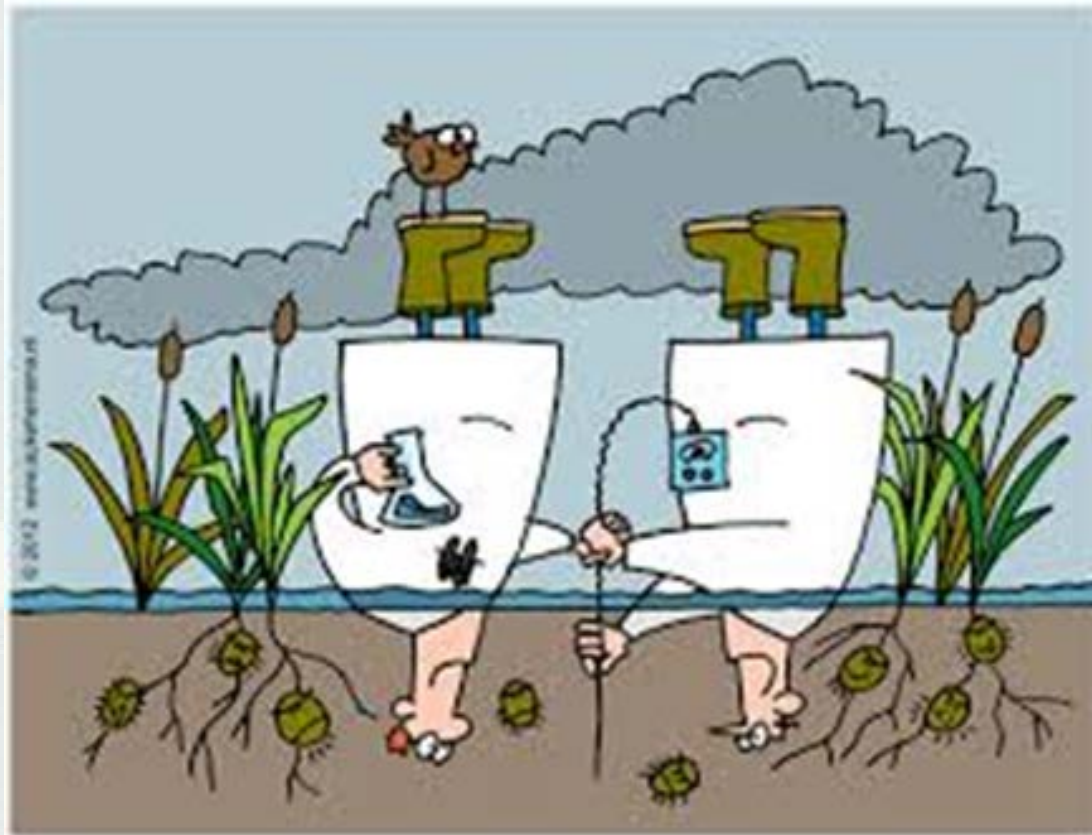
- ☐ Directions to the survey area.
- ☐ Contact information for the applicant(s), property owner(s), and agent(s).
- ☐ A narrative describing all aquatic resources at the site and an explanation for the mapped boundaries, especially for resources containing complex transition zones. If the site contains resources that meet one or two wetland criteria or do not exhibit a clear OHWM, describe the rationale for not delineating these features. Examples include erosional features, upland swales, and other upland areas that appear "wet" on satellite or aerial imagery.
- ☐ The total acreage of the survey area.
- ☐ Date(s) field work was completed.
- ☐ A table listing all aquatic resources. The table will include the name of each aquatic resource, its Cowardin type, acreage, and location (latitude/longitude). For linear features, the table must show both acreage and linear feet.
- ☐ A description of existing field conditions. The field condition description may include current land use, flood/drought conditions, irrigation practices, modifications to the site, and any characteristics considered atypical.
- ☐ A discussion of the hydrology at the site, including all known surface or subsurface sources, drainage gradients, surface water connections to the nearest traditional navigable waterway or interstate water, and any potential influence for manmade water sources, such as irrigation. The discussion should also identify the nearest "blue-line" waterway or other feature found on the most recent USGS map.
- ☐ If remote sensing was used in the delineation, provide an explanation of how it was used and include the name, date and source of the tools used and copies of applicable maps/photographs.
- ☐ A discussion of plant communities and habitat types present at the site and a list of the scientific name, common name, and wetland indicator status of all plants.
- ☐ Soil descriptions, soil map(s), and a discussion of hydric soils or soils with hydric inclusions at the site.
- ☐ Any observed or documented interstate or foreign commerce associated with aquatic resources found on the site, specifically recreation or other use by interstate or foreign travelers, sale of fish or shellfish in interstate or foreign commerce, and use by industries operating in interstate or foreign commerce.

U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT, 1325 J ST., SACRAMENTO, CA 95814
www.sac.usace.army.mil

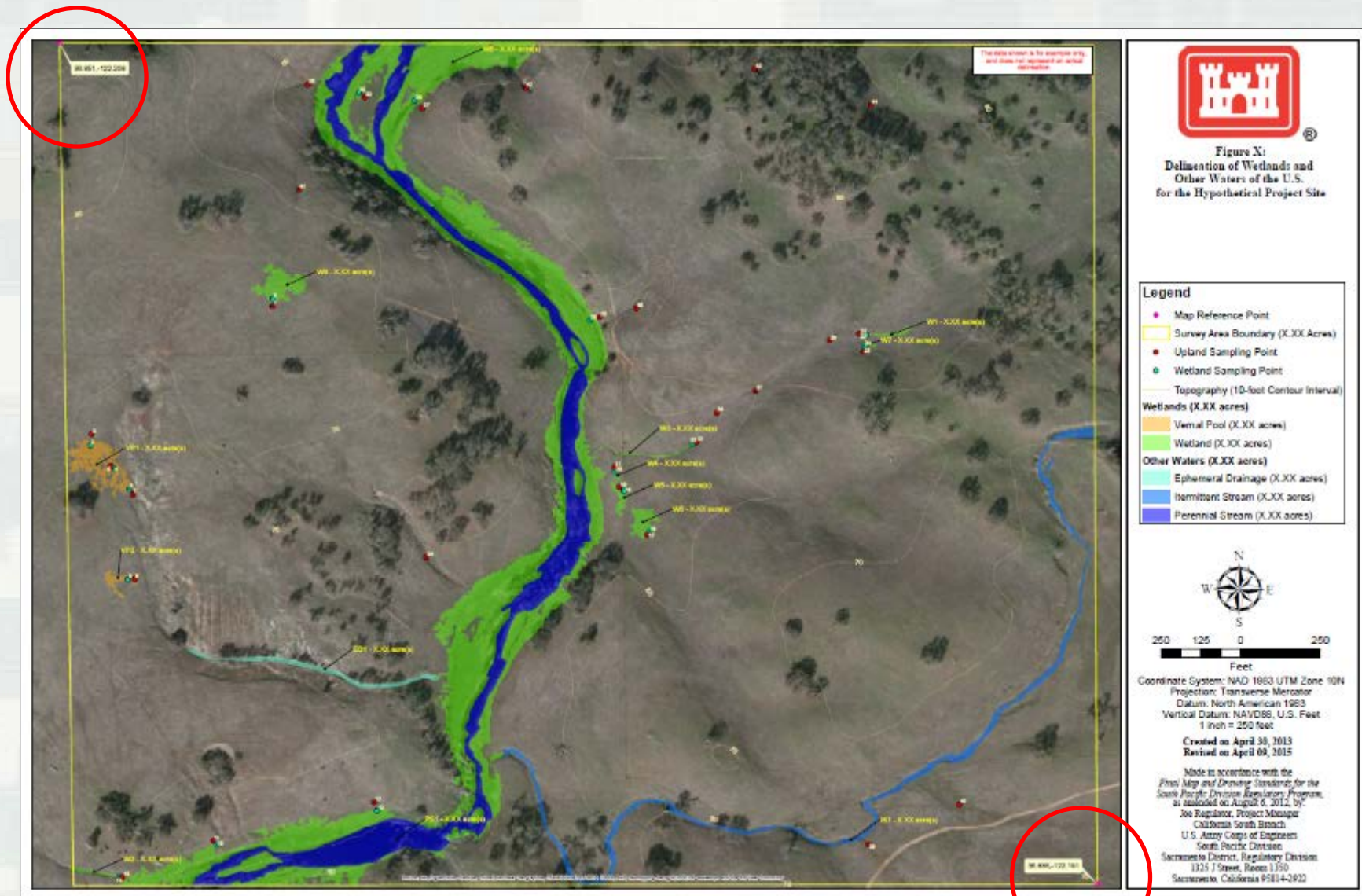


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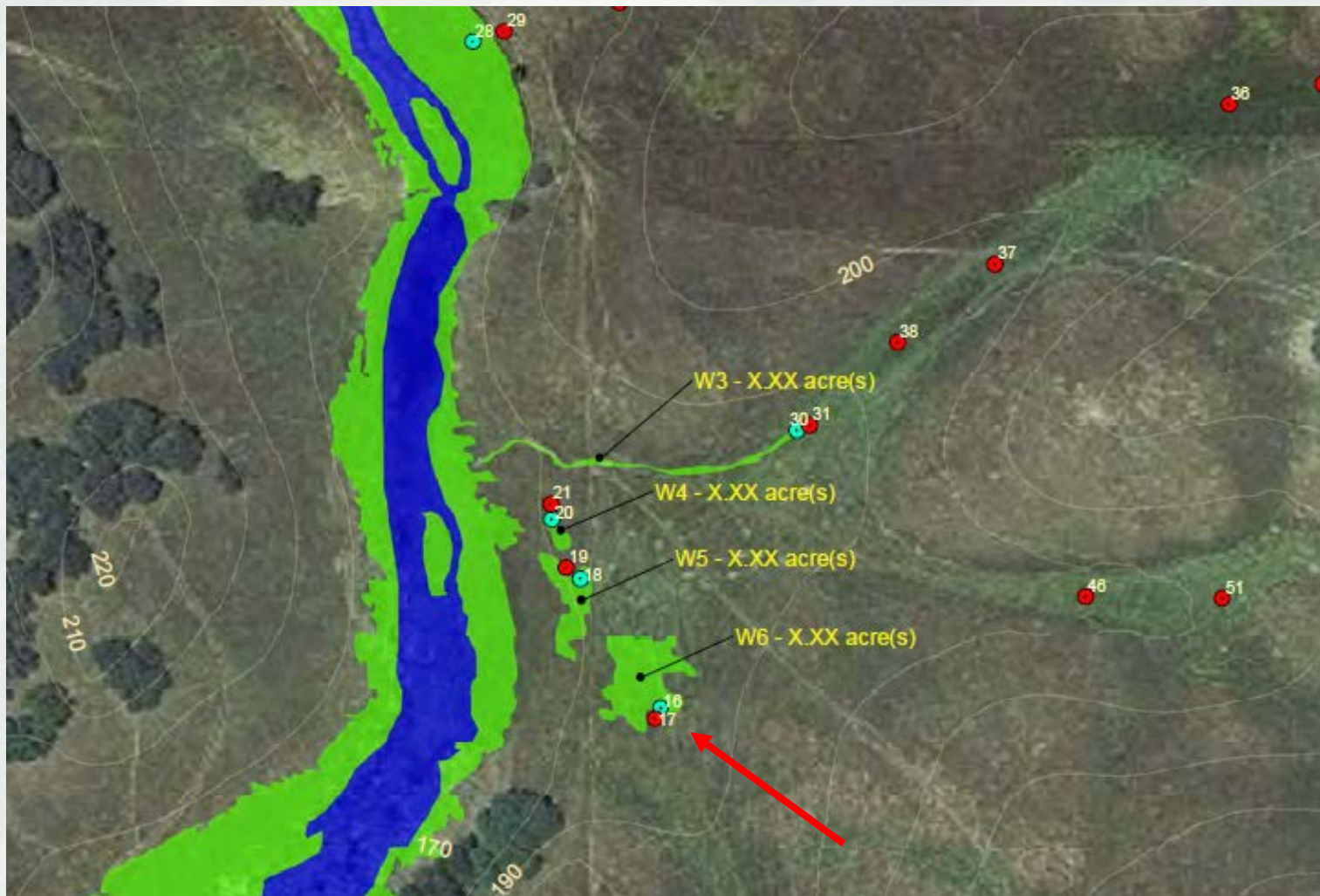
Highlights



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Identify wetland and upland points along with community changes



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Identify areas, community type, sample point locations,
date of map, contact information, references

Legend

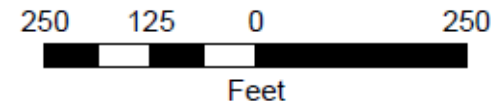
- Map Reference Point
- Survey Area Boundary (X.XX Acres)
- Upland Sampling Point
- Wetland Sampling Point
- Topography (10-foot Contour Interval)

Wetlands (X.XX acres)

- Vernal Pool (X.XX acres)
- Wetland (X.XX acres)

Other Waters (X.XX acres)

- Ephemeral Drainage (X.XX acres)
- Intermittent Stream (X.XX acres)
- Perennial Stream (X.XX acres)



Coordinate System: NAD 1983 UTM Zone 10N
Projection: Transverse Mercator
Datum: North American 1983
Vertical Datum: NAVD88, U.S. Feet
1 inch = 250 feet

Created on April 30, 2013
Revised on February 8, 2016

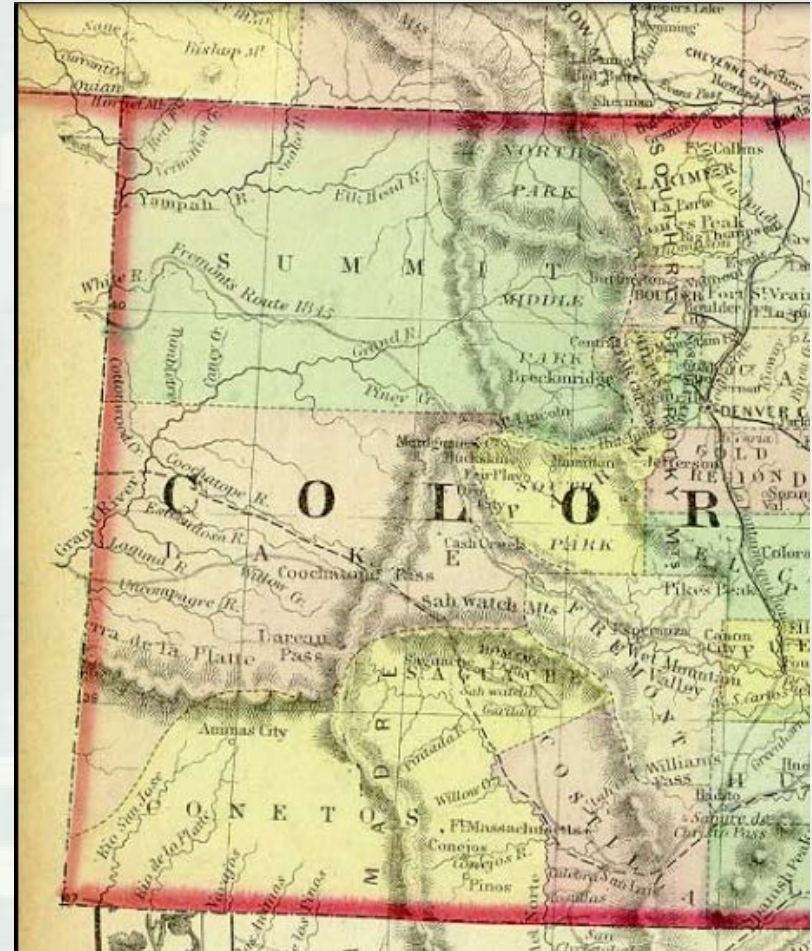
Made in accordance with the
*Updated Map and Drawing Standards for the
South Pacific Division Regulatory Program,*
as amended on February 10, 2016, by:

Jason Deters, Project Manager
Enforcement and Special Projects Unit
U.S. Army Corps of Engineers
South Pacific Division
Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922



Why are there standards for maps and drawings?

- Improve the quality and consistency
- Simplify the review process by project managers
- Good maps = clear story = faster review times and fewer requests for additional information



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General Standards

Submission of both a location (vicinity) map AND plan view map is a minimum requirement

■ Location Maps

- ▶ At least one must use a USGS 7.5-minute quadrangle sheet as its basemap
- ▶ Quadrangle name identified
- ▶ Project study boundary clearly outlined and annotated
- ▶ Should include recognizable landmarks
- ▶ Include adjacent local roadways
- ▶ North arrow



General Standards

Submission of both a location (vicinity) map AND plan view map is a minimum requirement

■ Plan View Maps

- ▶ At least two control points on opposite corners, with latitude and longitude clearly annotated
- ▶ Date prepared/revised
- ▶ Name and organization of the map preparer
- ▶ Bar scale and scale text
- ▶ North arrow



General Standards

Submission of both a location (vicinity) map AND plan view map is a minimum requirement

■ Plan View Maps

- ▶ Legend for all relevant features on the map – this means wetlands and other waters of the U.S., the project boundary, project construction footprint, impacts to waters of the U.S., etc.
 - Legend should include acres or square feet in parentheses for EVERY relevant feature or class of features!
- ▶ If elevations are shown, the vertical datum being used must be indicated on the map
- ▶ Locations of any cross-sectional views must be annotated clearly (e.g. A-A')



General Standards

- **Basemaps used in Plan View Maps**
 - ▶ Topography is required, and should be shown on at least one map
 - ▶ Aerial photography (if used)
 - Date stamped
 - Orthorectified
 - Source identified
 - Choose imagery with maximum visibility of aquatic resources (e.g. wet season)



Specific Standards

■ Cross-Sectional Views

- ▶ Must have a bar scale and scale text, for both the horizontal and vertical dimensions
- ▶ Vertical datum must be indicated
- ▶ If there are tidal areas within survey area, identify the location and elevation of both the Mean High Water and the High Tide Line
- ▶ Cross-Sectional Views are required for:
 - Proposed Projects / Construction Drawings
 - Mitigation Plans / Long Term Preservation Maps
 - As-Built / Post-Construction Drawings
- ▶ Cross-Sectional Views for Delineation Maps are required at PM's discretion



Specific Standards

- **Proposed Projects**

- ▶ All proposed impacts, structures, and limits of work within and adjacent to wetlands and potential waters of the U.S. must be shown
- ▶ Clearly annotate all impacts of work as either permanent or temporary



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Attachment 1. Proposed Wetland Impacts

Map Features

- Project BSA¹
- Culvert
- Bridge Location (Span)
- Temporary Impact Areas**
 - Proposed Work Area
 - Proposed Staging Area
 - Construction Creek Access
- Permanent Impact Areas**
 - Approach Roadway Work
 - Storm Drain
 - Bridge Footing
 - Bridge Wingwalls
 - Fill
 - Dredging Limits
 - Rock Slope Protection

- Wetlands**
 - Riparian Scrub Wetland
 - Other Waters**
 - Perennial Creek
 - Intermittent Drainage

	Permanent Impacts	Temporary Impacts
Riparian Scrub Wetland	0.182	0.011
Perennial Creek	0.042	0.002
Intermittent Drainage	0.057	0.000
Total	0.281	0.013

¹ Boundary Source: City of Sutter (Creek, with title based on additional project components)
Photo Source: Microsoft 2012 (2011 World Imagery layer accessed 2/24/2013)

USGS 7.5' Topographic Quadrangle: Amador City
1:24,000



2012-106



Map Date: 3/24/2013
Coordinate System: NAD 1983 StatePlane California II FIPS 4602 Feet



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USGS 7.5' Topographic Quadrangle: Amador City
1:24,000



2012-106

Scale in Feet
0 70



Map Date: 3/24/2013
Coordinate System: NAD 1983 StatePlane California II FIPS 4602 Feet



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¹ Boundary Source: City of Sutter (Trails, with title based on additional project components)
Photo Source: Microsoft 2012 (2010 World Imagery layer accessed 2/24/2013)

USGS 7.5 Minute Topographic Quadrangle, Anderson City
1:24,000



2012-106



Map Date: 3/24/2013
Coordinate System: NAD 1983 StatePlane California II FIPS 4602 Feet



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¹ Boundary Source: City of Sutter Creek, with title based on additional project components.
Photo Source: Microsoft 2012, 2011 World Imagery (last accessed 2/24/2013)

USGS 7.5' Topographic Quadrangle: Amador City
1:24,000



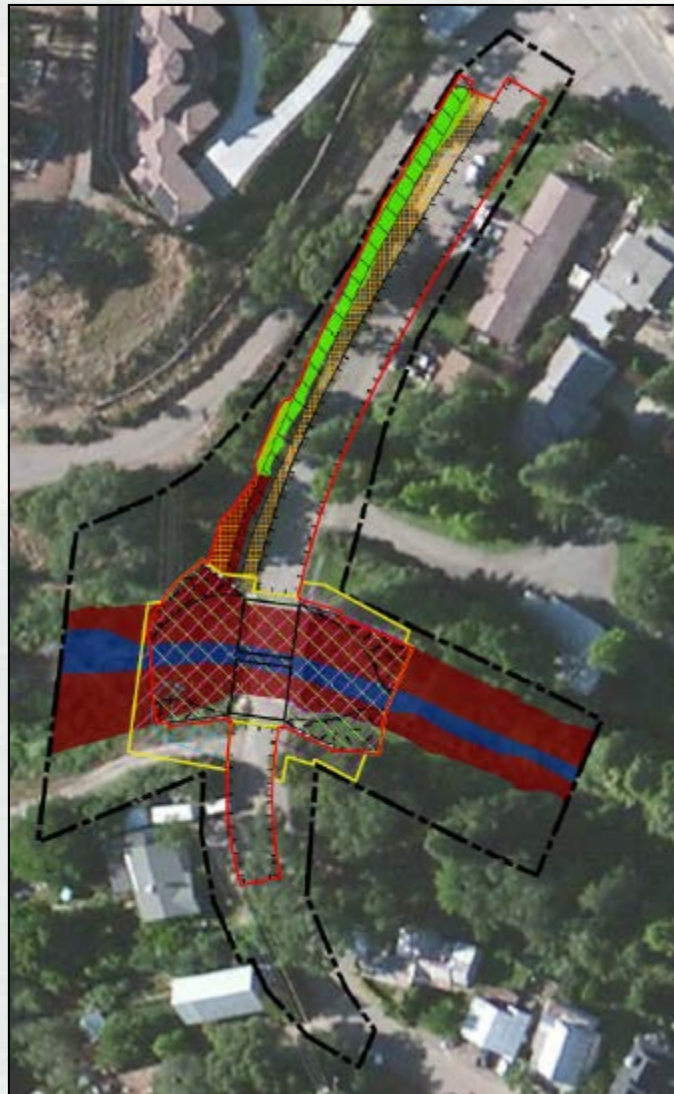
2012-106



Map Date: 3/24/2013
Coordinate System: NAD 1983 StatePlane California II FIPS 4602 Feet



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Map Features



Project BSA ¹



Culvert



Bridge Location (Span)

Temporary Impact Areas



Proposed Work Area



Proposed Staging Area



Construction Creek Access

Permanent Impact Areas



Approach Roadway Work



Storm Drain



Bridge Footing



Bridge Wingwalls



Fill



Dredging Limits



Rock Slope Protection

Wetlands

Riparian Scrub Wetland

Other Waters

Perennial Creek

Intermittent Drainage

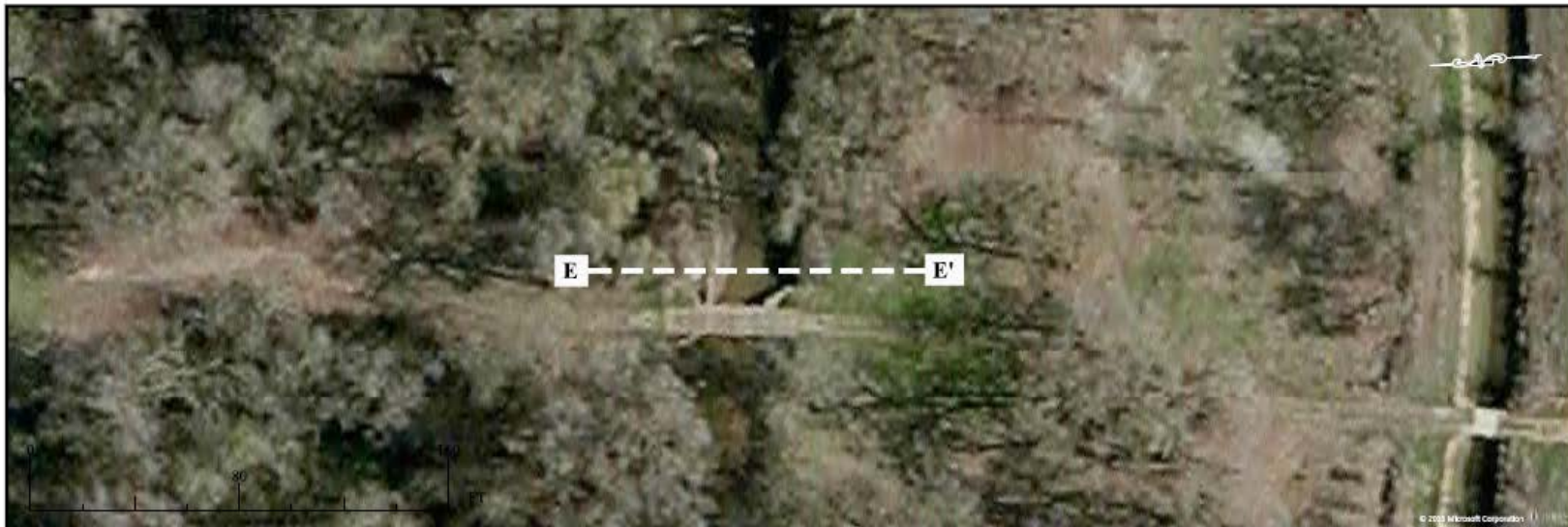
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¹ Boundary Source: City of Sutter Creek, with edits based on additional project components
Photo Source: Microsoft 2011 (ESRI World Imagery layer accessed 3/24/2015)

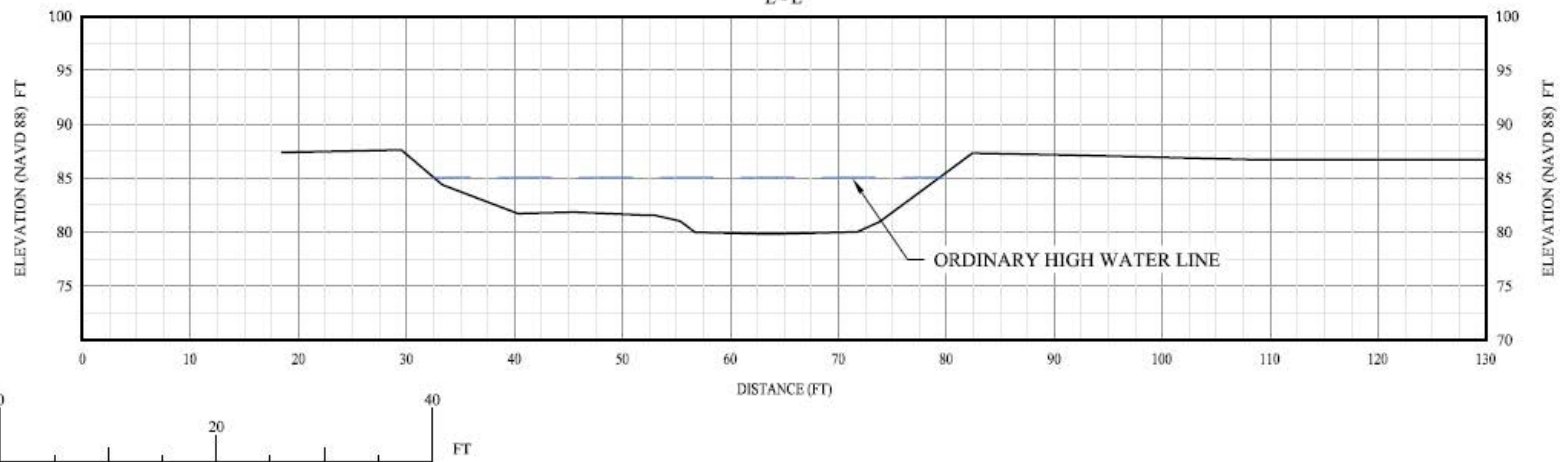
USGS 7.5' Topographic Quadrangle: Amador City
1:24,000



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CROSS SECTION
E - E'



NO.	DATE	REVISION

E - E' PLAN AND PROFILE

SCALE: AS NOTED
JOB NO: 2760-5
BY: JB
CHECK: -
DATE: 02/19/2015
SHEET 8 OF 10 SHEETS

R:\Flood Control\2760.00 FWA\2015-01 Fish Screen Topo\ACAD\2015-01 Fish Screen Topo (NAVD88).dwg 2/20/2015 11:05 AM



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Specific Standards

- **Post-Construction Drawings (As-Builts)**

- ▶ Should be the same size and spatial alignment as the authorized grading plans
- ▶ Any deviations from fills and structures authorized as part of an approved pre-construction map must be indicated.



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Specific Standards

■ Delineation Maps

- ▶ Survey area boundary should be clearly symbolized, and should include all potential waters of the U.S.
- ▶ Location and extent of all areas meeting the three wetland criteria, and/or having an Ordinary High Water Mark, must be shown on the map, even if area is a potential “Preamble Water” (e.g., upland ditch)
- ▶ Each type of boundary (e.g., OHWM, wetland, high tide line) must be clearly symbolized and differentiated
- ▶ Each line or polygon representing a potential water of the U.S. must be labeled with a unique name



Specific Standards

- **Delineation Maps**

- ▶ Show locations of all data points, labeled according to their corresponding data sheets
- ▶ A wetland boundary should be based on at least one set of paired data points; one data point within the proposed wetland boundary, and one immediately outside of it.



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Specific Standards

▪ Delineation Maps

- ▶ Identify the Ordinary High Water Mark (OHWM)
 - Show representative widths between the OHWMs on opposing banks using a transect line labeled with the width in feet
 - An average width may be acceptable for uniform channel reaches
 - Cross section may be required by the PM. If required, indicate the OHWM elevation
- ▶ If there are tidal areas within the survey area, identify location and elevation of Mean High Water and High Tide Line on all maps and cross sections



Specific Standards

■ Mitigation Plans and Long-Term Preservation Maps

- ▶ Mitigation boundaries must be clearly differentiated based on mitigation type
 - Establishment
 - Re-establishment
 - Rehabilitation
 - Enhancement
 - Preservation
- ▶ Current Map and Drawing Standards ask that boundaries be differentiated using different kinds of dotted and dashed lines.



Specific Standards

■ Mitigation Plans and Long-Term Preservation Maps

- ▶ Updated Standards will require mitigation areas to be differentiated by using different hatched fill symbols, rather than by different border line types
- ▶ All mitigation sites and Long-Term Preservation boundaries must be clearly labeled with a unique name
- ▶ Locations of mitigation sites must be shown relative to other landscape features and habitat types (e.g., riparian corridor, wetland complex, etc.)



Specific Standards

■ Mitigation Monitoring Report Maps

- ▶ Ground photographs included in reports must be accompanied by a map of photo points
- ▶ Each photo point must be annotated with a number and an arrow indicating the compass direction in which it was taken
- ▶ The photo itself should have a legend indicating photo number, the compass direction in which it was taken, the photo's geographic coordinates, and a brief explanation of the photo's relevance



Specific Standards




- **Mitigation Monitoring Report Maps**

- ▶ Each discrete mitigation site must be shown on the map
- ▶ Each site should be annotated or symbolized to indicate the mitigation type and the target habitat type
- ▶ Any sampling presented in the monitoring report should be shown on the map








Legend

-  Project/Preserve Boundary (X.XX Acres)
-  Topography (10-foot Contour Interval)
-  Map Reference Point






Pre-project Delineation

Waters Type

-  Open Water (X.XX acres)
-  Vernal Pool (X.XX acres)
-  Wetland (X.XX acres)

Proposed Mitigation

Mitigation Type

-  Open Water Enhancement (X.XX Acres)
-  Vernal Pool Establishment (X.XX acres)
-  Wetland Establishment (X.XX acres)
-  Wetland Re-establishment (X.XX acres)
-  Wetland Rehabilitation (X.XX acres)



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US Army Corps of Engineers

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Useful Links

- Regulatory FAQs
- Public Notices
- Jurisdiction
- Aquatic Resources Delineation

The Regulatory Mission

The Department of the Army's Regulatory Program is one of the oldest in the federal government. Initially, it served a simple purpose: to protect and maintain the navigable capacity of the nation's waters. Changing public needs, evolving policy, court decisions and new statutory mandates have changed several aspects of the program including its breadth, complexity and authority.

The U.S. Army Corps of Engineers, through the Regulatory Program, administers and enforces Section 10 of the Rivers and Harbors Act of 1899 (RHA) and Section 404 of the Clean Water Act (CWA). Under RHA Section 10, a permit is required for work or structures in, over or under navigable waters of the United States. Under CWA Section 404, a permit is required for the discharge of dredged or fill material into waters of the United States. Many waterbodies and wetlands in the nation are waters of the United States and are subject to the Corps' regulatory authority.



Update & Preliminary vs Approved Jurisdictional Determinations

Kara Hellige

Durango Regulatory Office

Sacramento District

16 February 2016



US Army Corps of Engineers
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What's New?

- Definition of Waters of the U.S. regulation published 29 June 2015 (80 Fed. Reg. 37054-37127)
- Stayed



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Part II

Department of Defense

Department of the Army, Corps of Engineers

33 CFR Part 328

Environmental Protection Agency

40 CFR Parts 110, 112, 116, *et al.*

Clean Water Rule: Definition of "Waters of the United States"; Final Rule



What's New

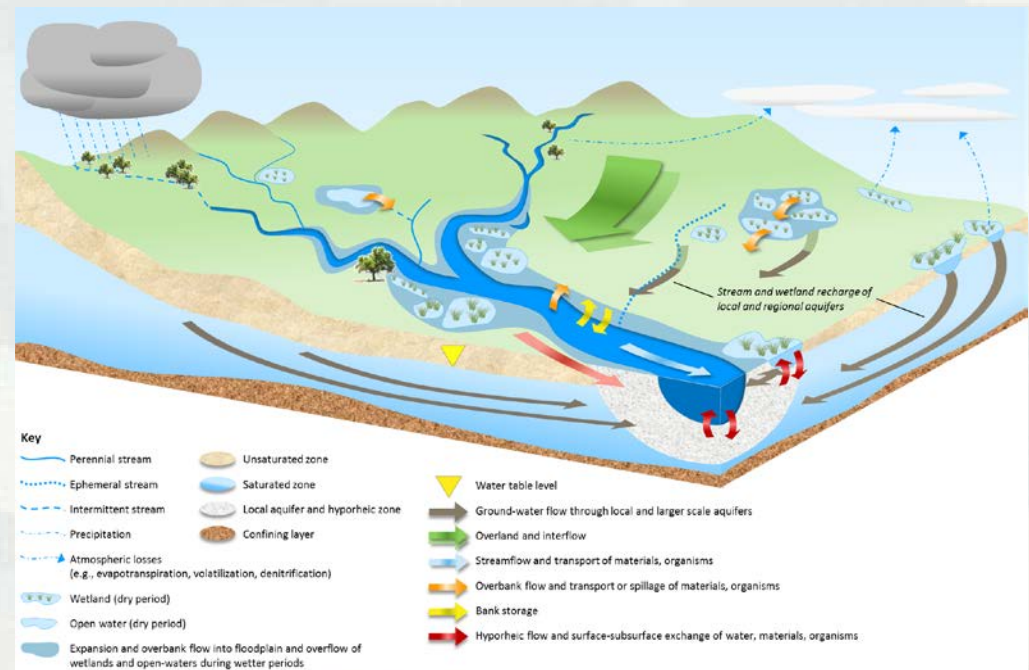
- Minimum Standards for the Acceptance of Aquatic Resources Delineation Reports, update effective January 2016



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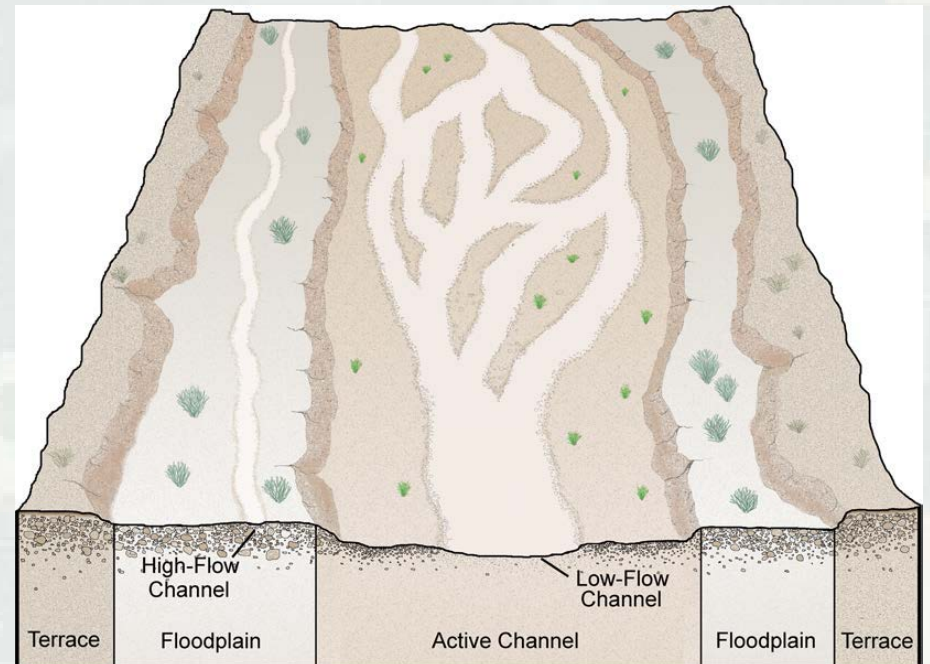
What's New

- **Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence**
January 2015



What's New?

- Guide to OHWM Delineation for Non-Perennial Streams in the Western Mountains Valleys and Coast



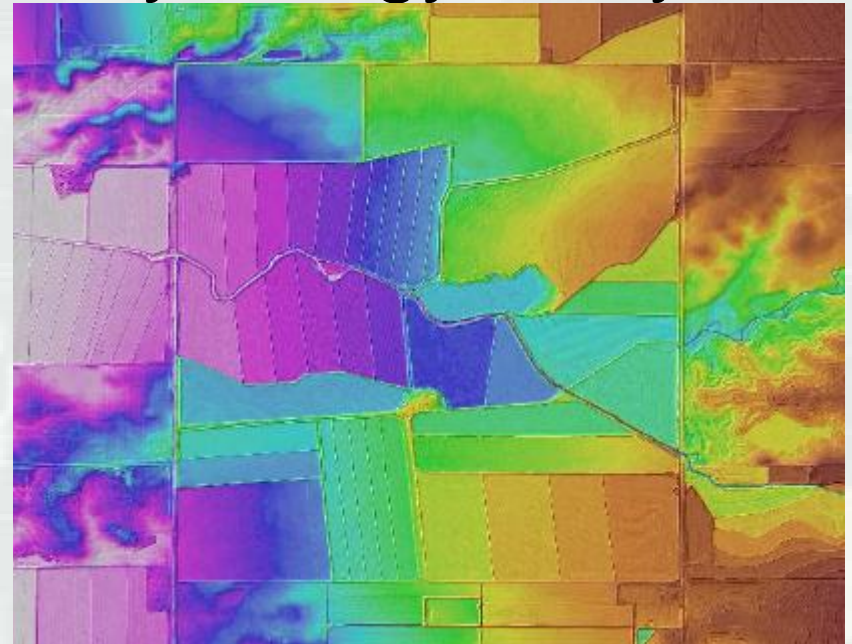
What's New?

- Proposed annual update to the National Wetland Plant List September 2015



What's New?

- SPD Irrigated Wetlands Delineation Procedures (12510-SPD)
- Formerly irrigated lands hydrology study, in progress



PJD vs. AJD

Preliminary Jurisdictional Determination	Approved Jurisdictional Determination
Not appealable (instead request an AJD)	Appealable
No set expiration date	Expires after 5 years
Cannot use to disclaim jurisdiction over an aquatic resource	Required to disclaim jurisdiction over an aquatic resource
Not posted on the web	Posted on the web
Sufficient for permitting	Sufficient for permitting



AJD/PJD FAQs

I have a non-tidal irrigation ditch excavated on dry land in my study area. Can I just leave it off the map and do a PJD?

No, if it's an aquatic resource it needs to be on the map. If it's a preamble excluded water then the Corps will need to do an AJD to disclaim jurisdiction.



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AJD/PJD FAQs

Does the Corps have to coordinate all Approved JDs with EPA?

No, the Corps is only required to coordinate isolated & significant nexus calls with EPA. Other non-jurisdictional findings (i.e., preamble excluded waters) do not required EPA coordination but do require an AJD.



AJD/PJD FAQs

What about puddles? The stayed rule talks about these in the same context as the 1986 preamble excluded waters. Do I have to map those?

No, puddles are not aquatic resources since they do not have an OHWM nor are they wet long enough to meet the definition of wetland.



AJD/PJD FAQs

What if I don't specify the type of jurisdiction determination.

Sacramento District's policy is to process a PJD if the request doesn't specify.



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AJD/PJD FAQs

How long is EPA's review of an Approved JD?

15 days for a significant nexus determination, 21 days for isolated



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AJD/PJD FAQs

Can the Corps issue an Approved JD when I asked for a Preliminary JD?

Yes, when jurisdiction is contested or when the Corps determines that it does not have jurisdiction over an aquatic resource (Regulatory Guidance Letter 08-02)



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AJD/PJD FAQs

Where can I find jurisdictional determinations on the web?

The Sacramento District publishes all of its approved jurisdictional determinations at <http://www.spk.usace.army.mil/Missions/Regulatory/Jurisdiction.aspx>



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