Minimum Standards for Wetland Delineations

Melissa France

Project Manager, California North Branch

Sacramento District Regulatory Program Workshop

22 January 2016

U.S.ARMY

US Army Corps of Engineers

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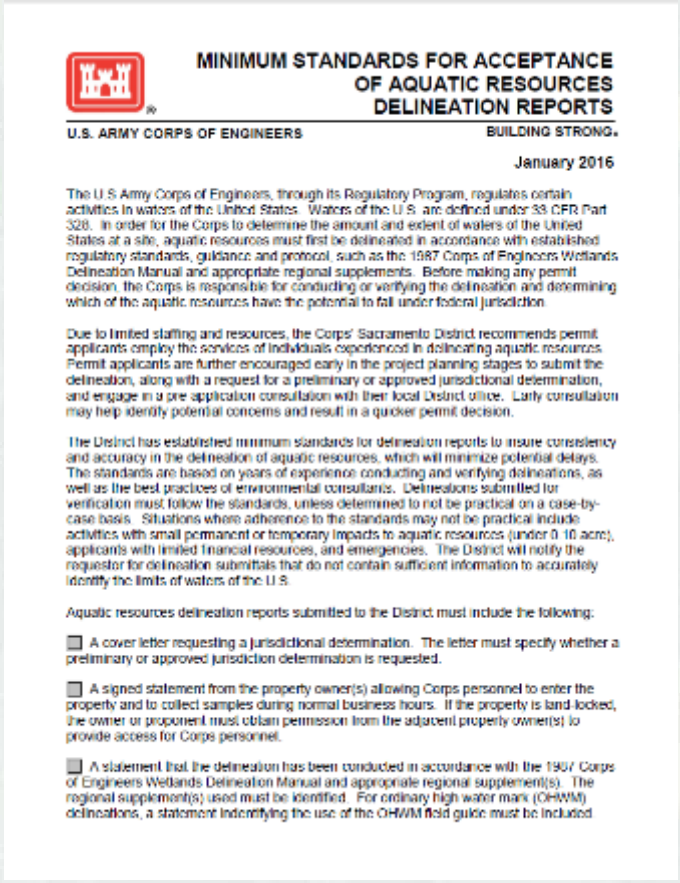
Delineation Report Minimum Standards

http://www.spk.usace.army.mil/Missions/Regulatory/Jurisdiction/WetlandDelineations.aspx



MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS

U.S. ARMY CORPS OF ENGINEERS — BUILDING STRONG®

January 2016

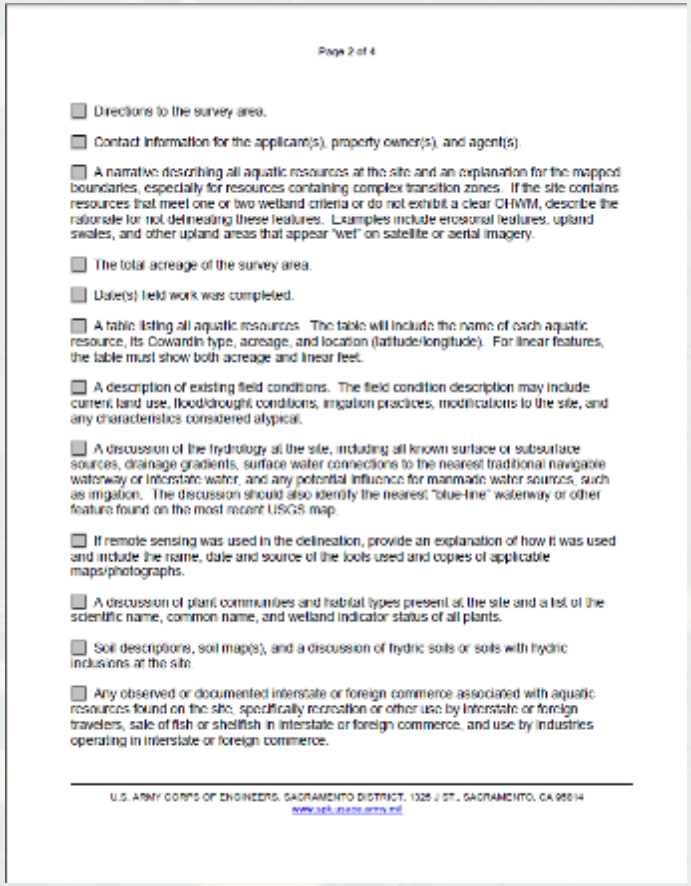
The U.S Army Corps of Engineers, through its Regulatory Program, regulates certain activities in waters of the United States. Waters of the U.S. are defined under 33 CFR Part 328. In order for the Corps to determine the amount and extent of waters of the United States at a site, aquatic resources must 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 submittals 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 jurisdiction 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 indentifying the use of the OHWM field guide must be included.



- ☐ 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.

How To...

Navigate Our Website

Useful Links

- Regulatory FAQs
- Public Notices
- Jurisdiction
- Aquatic Resources Delineation
- General Permits
- Nationwide Permits
- Letters of Permission
- Individual Permits
- Mitigation
- Endangered Species
- Cultural Resources
- Tribal Consultation
- Environmental Impact Statements
- Clean Water Act Section 404 Exemptions
- Section 214 of WRDA
- Six County Aquatic Resources Inventory

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 ubject to the Corps' regulatory authority.

The Regulatory Program is committed to protecting the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands

We value your input!

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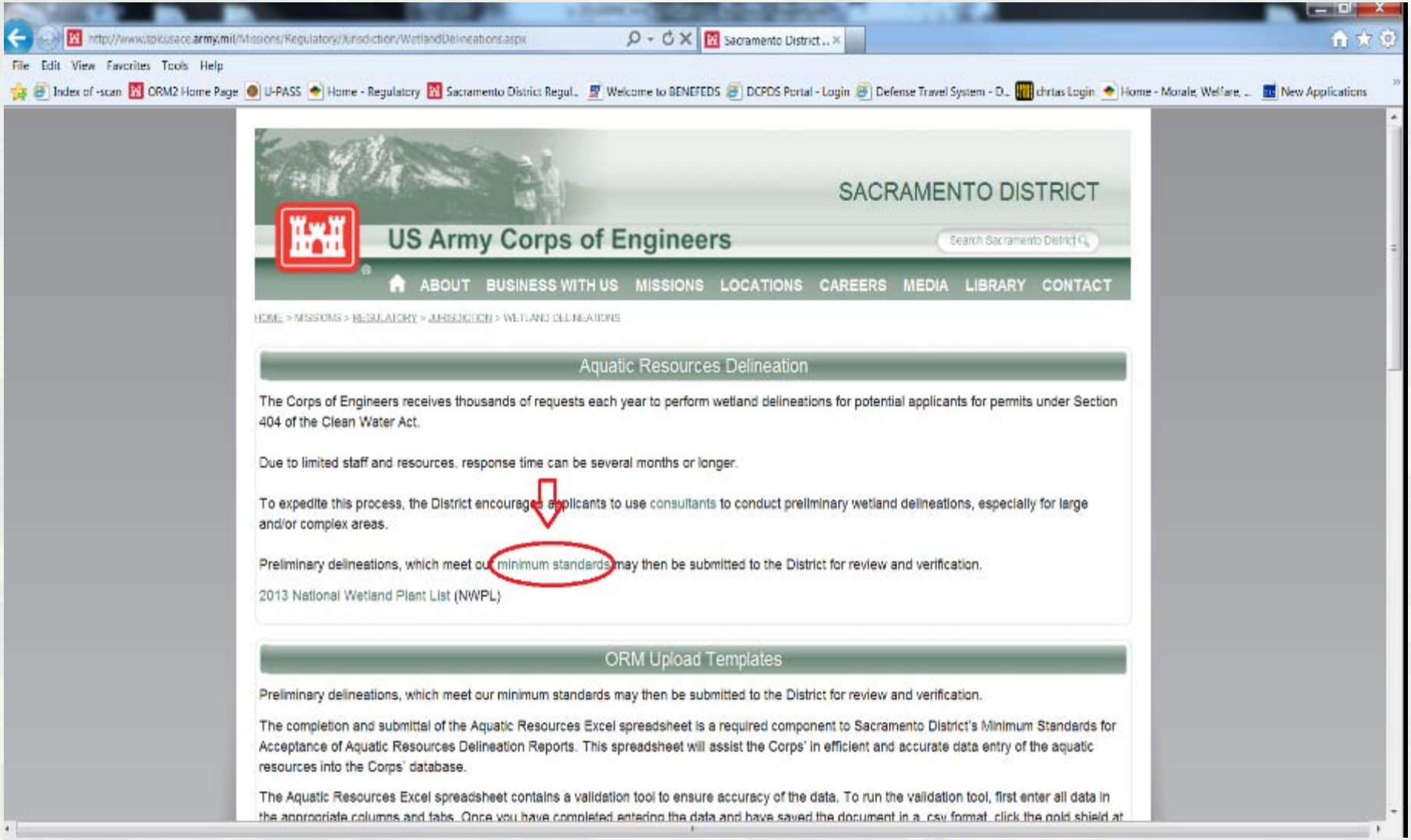
Our Commitment to Public Service

Public Service is a Public Trust. We, as Corps Regulators, Must Earn This Trust, and to Keep This Trust, We Must Conduct Ourselves in a Manner That Reflects the Following Principles:


Sacramento District
SACRAMENTO DISTRICT
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Aquatic Resources Delineation
The Corps of Engineers receives thousands of requests each year to perform wetland delineations for potential applicants for permits under Section 404 of the Clean Water Act.
Due to limited staff and resources, response time can be several months or longer.
To expedite this process, the District encourages applicants to use consultants to conduct preliminary wetland delineations, especially for large and/or complex areas.
Preliminary delineations, which meet our minimum standards may then be submitted to the District for review and verification.
2013 National Wetland Plant List (NWPL)
ORM Upload Templates
Preliminary delineations, which meet our minimum standards may then be submitted to the District for review and verification.
The completion and submittal of the Aquatic Resources Excel spreadsheet is a required component to Sacramento District's Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This spreadsheet will assist the Corps' in efficient and accurate data entry of the aquatic resources into the Corps' database.
The Aquatic Resources Excel spreadsheet contains a validation tool to ensure accuracy of the data. To run the validation tool, first enter all data in

Minimum Standards

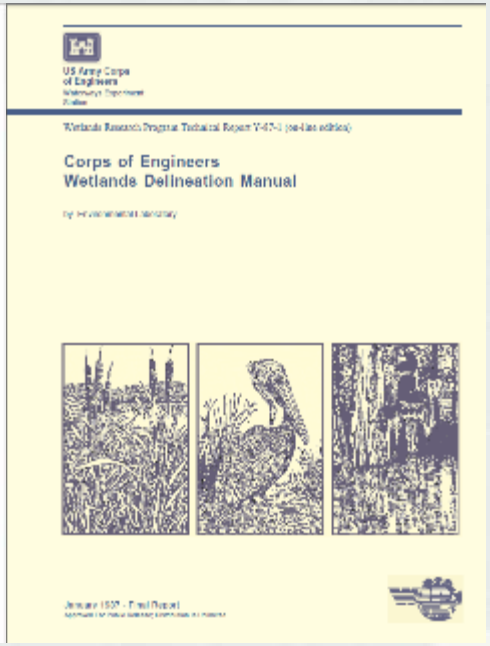
- New as of January 2016
- Necessary due to limited staff and resources
- Designed to improve quality and consistency of delineations
- Who, what, when, where and why.

What are the minimum standards?

- A cover letter requesting a jurisdictional determination
- A signed statement from property owners allowing Corps personnel to enter the property and collect samples

What are the minimum standards?

- The delineation must be done in accordance with the 1987 Corps of Engineers Wetland Delineation Manual



What are the minimum standards?

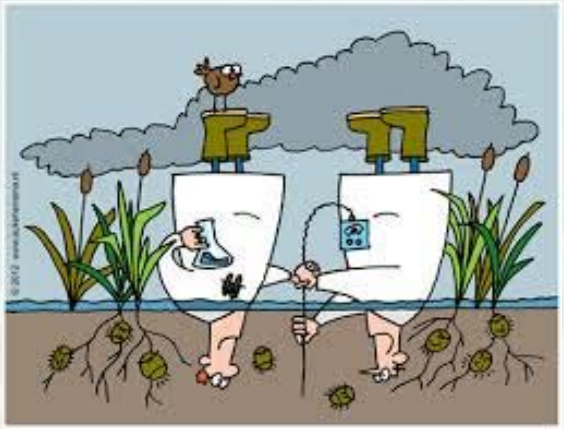
- Directions to survey area
- Total acres of survey area
- Date field work was completed
- Contact information for the applicant(s), property owner(s), and agent(s)

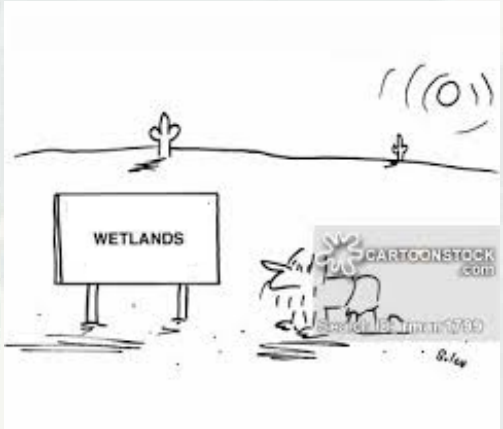
- Describe all aquatic resources on site and an explanation for the mapped boundaries
- A table listing all aquatic resources

Table 1. Aquatic Resources within the Survey Area

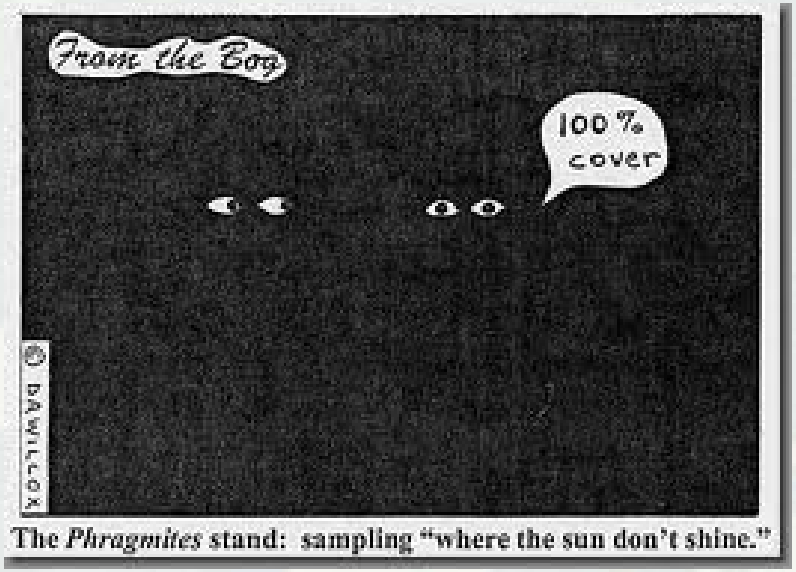
Aquatic Resource Name	Aquatic Resources Classification		Aquatic Resource Size (acre) Required for all resources	Aquatic Resource Size (linear feet) Required for only stream channels
	Cowardin	Location (lat/long)		
Total				

- A description of existing field conditions
- A discussion of the hydrology at the site
- A discussion of plant communities and habitat types present at the site
- Soil descriptions, soil map(s), and a discussion of hydric soils or soils with hydric inclusions at the site
- Completed data forms including all essential information to make a decision.





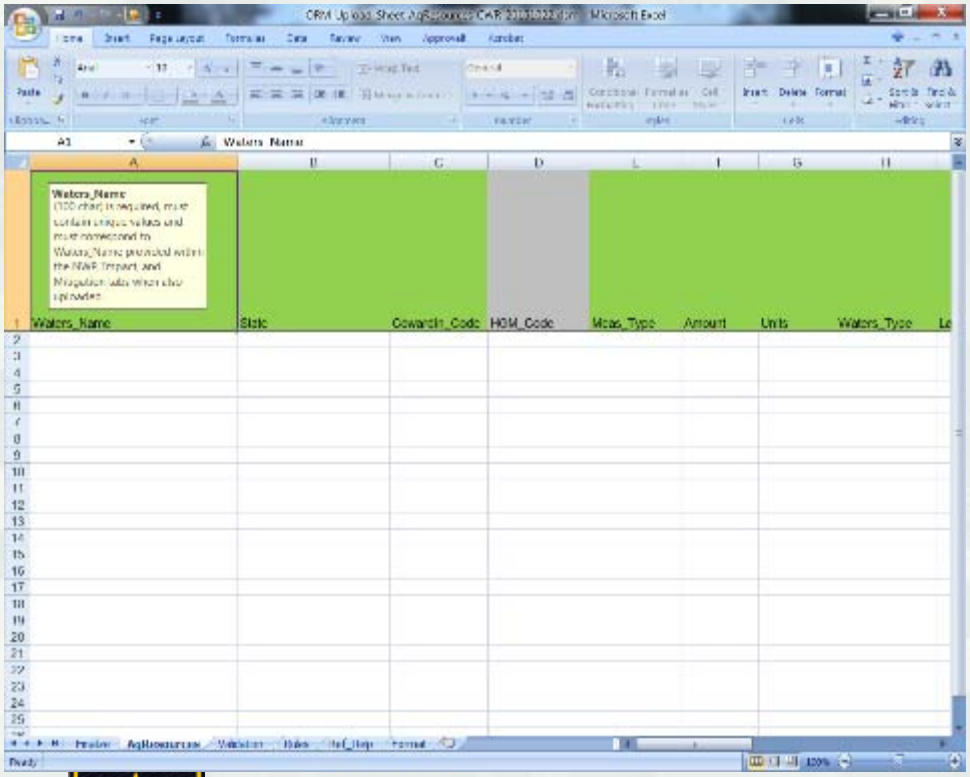
- If remote sensing was used in the delineation, provide an explanation of how it was used and include the name, date and source of the tools used and copies of applicable maps/photographs

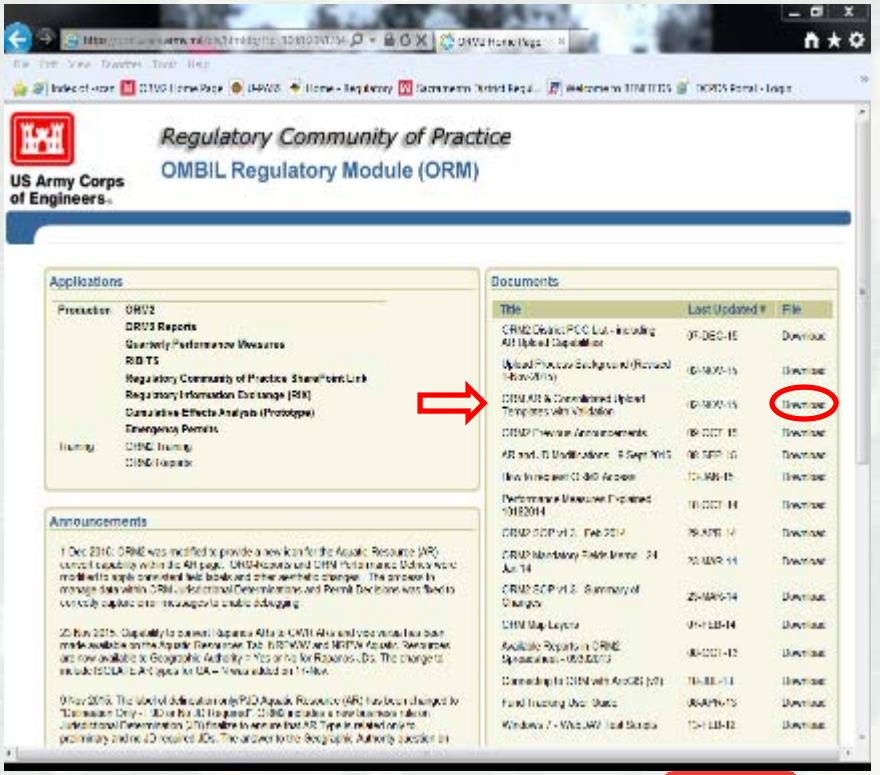


The *Phragmites* stand: sampling "where the sun don't shine."

- A completed copy of the *Aquatic Resources Excel spreadsheet must be submitted. The current version of the spreadsheet can be found at the following website:*

https://orm.usace.army.mil





- A site location map on a 7.5-minute USGS quadrangle. The map must provide the name of the USGS quadrangle, Section, Township, Range, the UTM or latitude and longitude
- A map of all delineated aquatic resources ("Aquatic Resouces Delineation Map") in accordance with the *Final Map and Drawing Standards for the South Pacific Division Regulatory Program (Mapping Standards) and showing the following:*
  - All aquatic resources delineated must be clearly shown on the map
  - At least one set of paired data points, documented in data forms, for each aquatic resource or complex. The paired data points must be located close to the delineated boundary
  - A reference block that identifies the site or project name, individual(s) who conducted the delineation, date of the map, and date(s) of any revisions

- A description of the methods used to survey the aquatic resource boundaries
- Digital data for the site, aquatic resource boundaries, and data point locations must be provided in a geographic information system (GIS) format, with ESRI Shape-files being the preferred format

A little extra help

- National Wetland Inventory (NWI)
- Light Detection and Ranging (LiDAR)
- Satellite, aerial, and ground photographs
- Floodplain maps

Questions?

Map and Drawing Standards for the South Pacific Division Regulatory Program

Melissa France

Project Manager, California North Branch

Sacramento District Regulatory Program Workshop

22 January 2016

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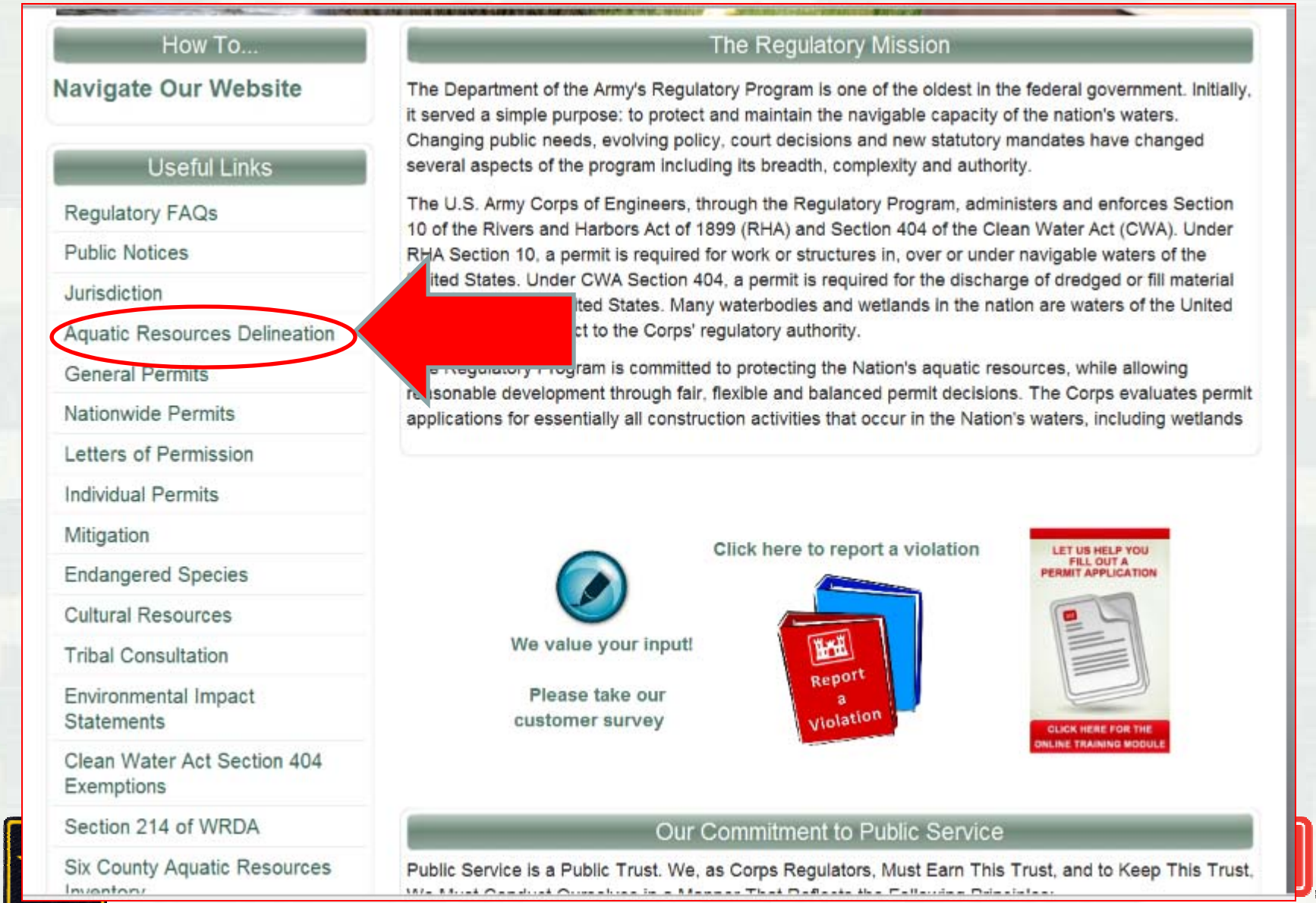
http://www.spk.usace.army.mil/Missions/Regulatory.aspx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Report a Violation
LET US HELP YOU FILL OUT A PERMIT APPLICATION
CLICK HERE FOR THE ONLINE TRAINING MODULE
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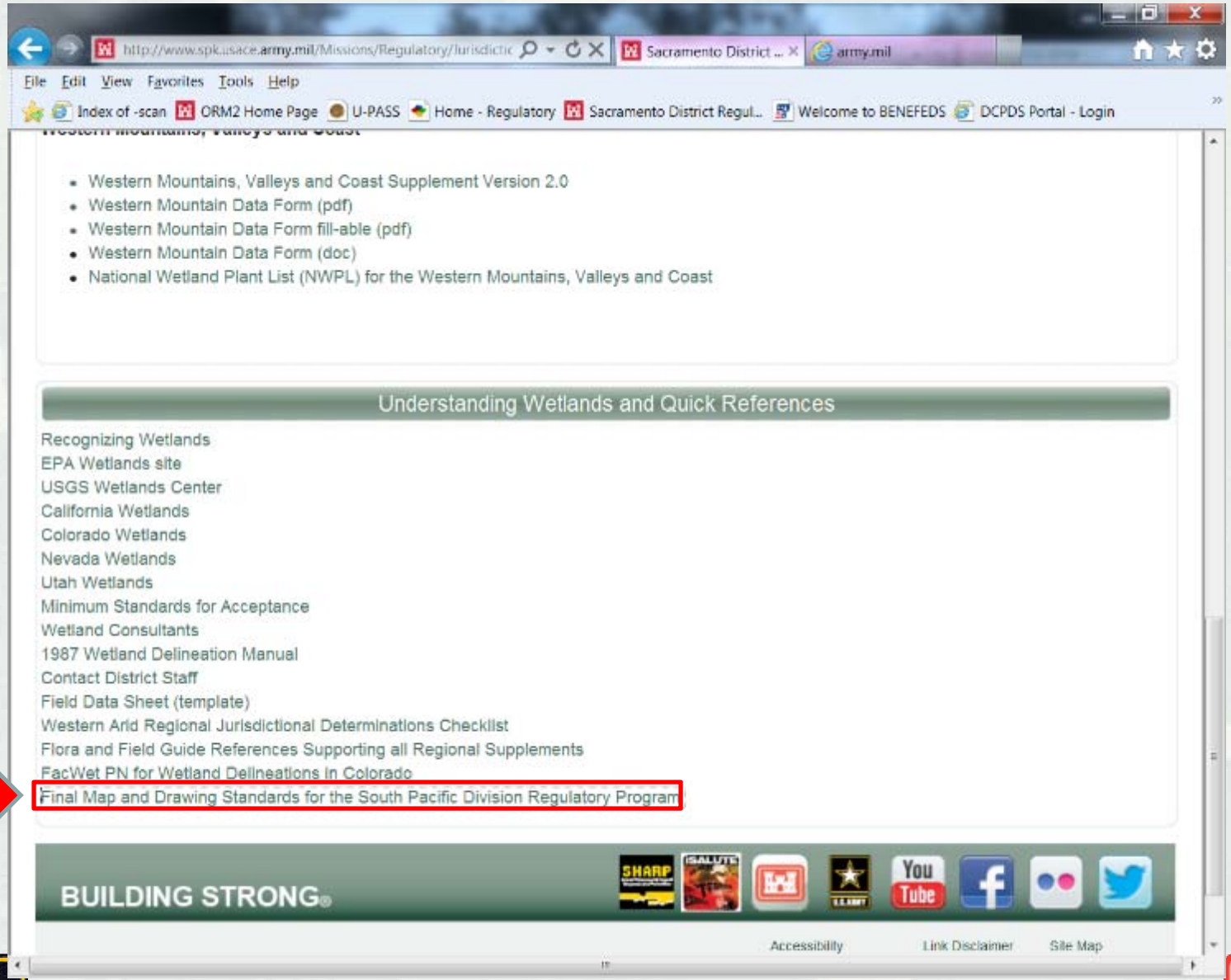
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U-PASS
Home - Regulatory
Sacramento District Regul...
Welcome to BENEFEDS
DCPDS Portal - Login
Western Mountains, Valleys and Coast Supplement Version 2.0
Western Mountain Data Form (pdf)
Western Mountain Data Form fill-able (pdf)
Western Mountain Data Form (doc)
National Wetland Plant List (NWPL) for the Western Mountains, Valleys and Coast
Understanding Wetlands and Quick References
Recognizing Wetlands
EPA Wetlands site
USGS Wetlands Center
California Wetlands
Colorado Wetlands
Nevada Wetlands
Utah Wetlands
Minimum Standards for Acceptance
Wetland Consultants
1987 Wetland Delineation Manual
Contact District Staff
Field Data Sheet (template)
Western Arid Regional Jurisdictional Determinations Checklist
Flora and Field Guide References Supporting all Regional Supplements
FacWet PN for Wetland Delineations in Colorado
Final Map and Drawing Standards for the South Pacific Division Regulatory Program
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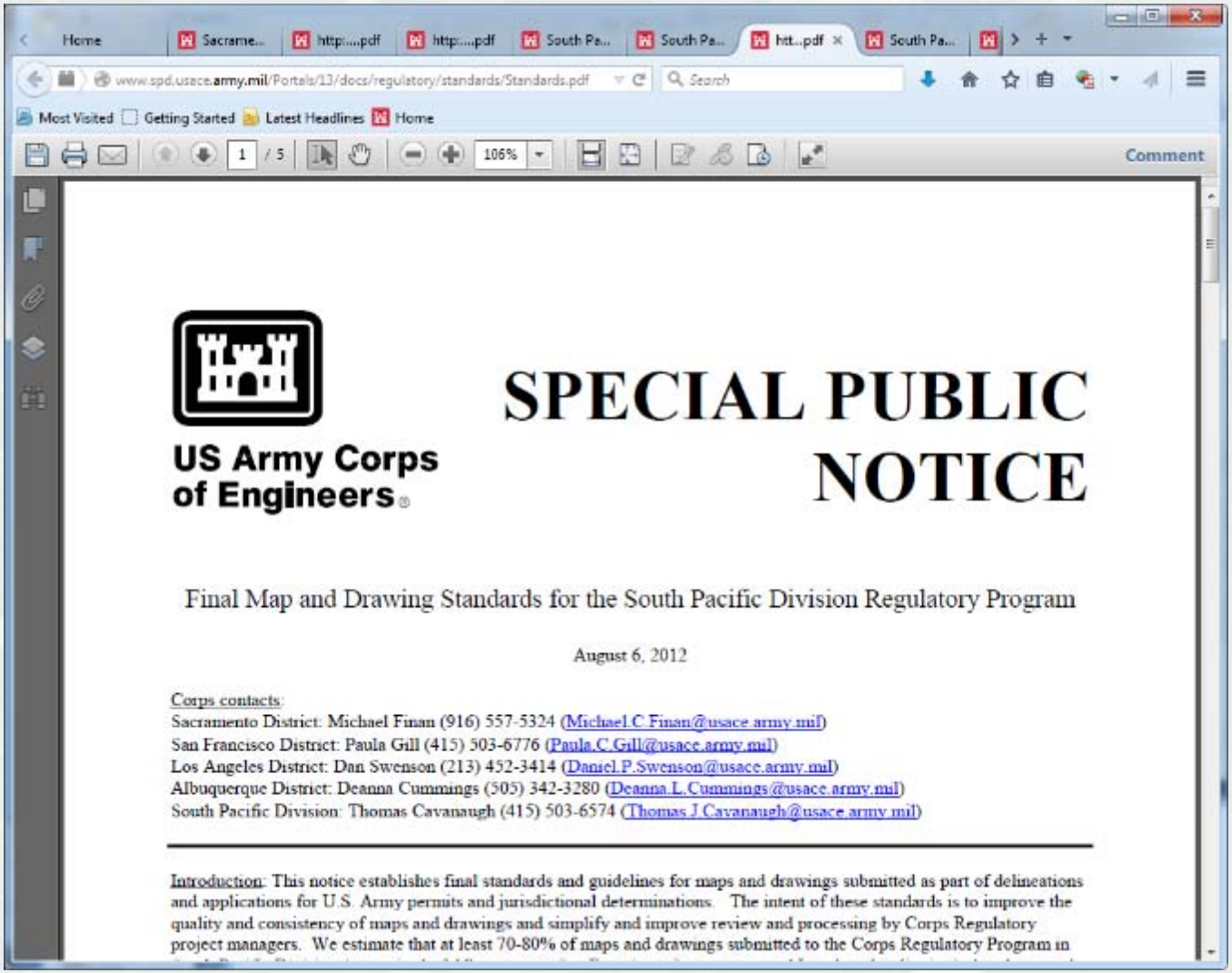
August 06, 2012 Public Notice



US Army Corps of Engineers®

SPECIAL PUBLIC NOTICE

Final Map and Drawing Standards for the South Pacific Division Regulatory Program

August 6, 2012

Corps contacts:
Sacramento District: Michael Finan (916) 557-5324 (Michael.C.Finan@usace.army.mil)
San Francisco District: Paula Gill (415) 503-6776 (Paula.C.Gill@usace.army.mil)
Los Angeles District: Dan Swenson (213) 452-3414 (Daniel.P.Swenson@usace.army.mil)
Albuquerque District: Deanna Cummings (505) 342-3280 (Deanna.L.Cummings@usace.army.mil)
South Pacific Division: Thomas Cavanaugh (415) 503-6574 (Thomas.J.Cavanaugh@usace.army.mil)

Introduction: This notice establishes final standards and guidelines for maps and drawings submitted as part of delineations and applications for U.S. Army permits and jurisdictional determinations. The intent of these standards is to improve the quality and consistency of maps and drawings and simplify and improve review and processing by Corps Regulatory project managers. We estimate that at least 70-80% of maps and drawings submitted to the Corps Regulatory Program in

Applicability

- **Standards apply to all submittals to Regulatory Divisions within the Districts of the Corps' South Pacific Division**
  - Delineation maps
  - Proposed projects (impact maps)
  - Mitigation plan and long-term preservation maps
  - As-built plans (post-construction drawings)
  - Mitigation monitoring report maps

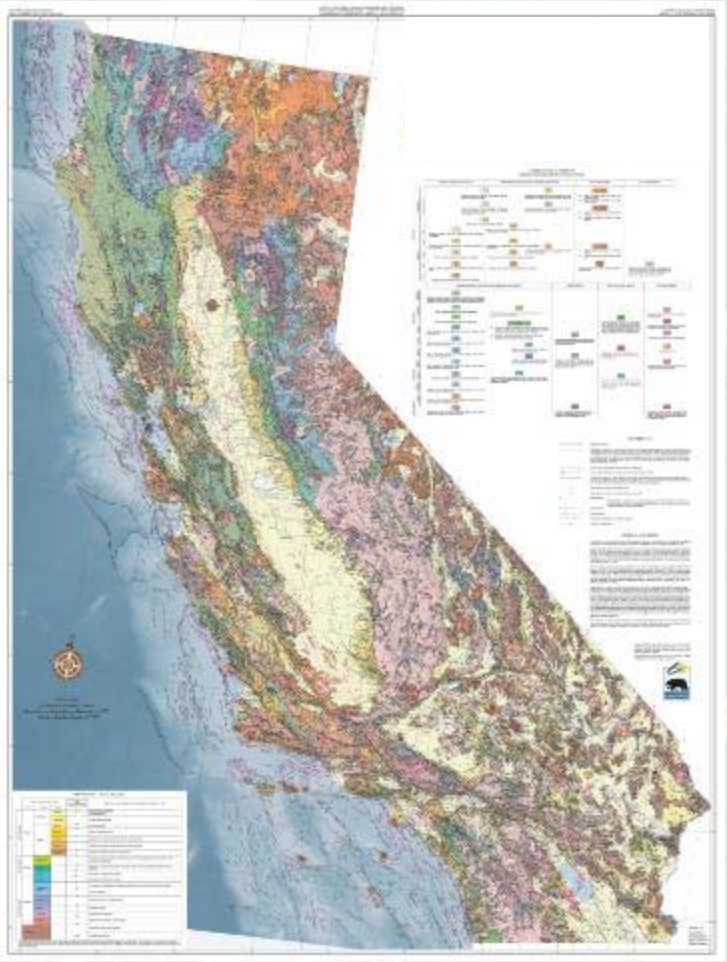
Applicability

- **Standards can be modified or waived at Corps' discretion**
  - Small or temporary impacts
  - Applicant has limited financial resources
  - Emergencies
  - Restorations with limited funding
  - Reauthorizations or maintenance, repair, rehabilitation, where original authorization included adequate drawings

- **Compensatory Mitigation Plan drawings/maps**
  - Must adhere to the Standards even if Standards are waived for the overall project

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



Map and Drawing Standards Organization

- **General Standards section**
  - The broadest of the map and drawing requirements
  - Specifies format and required elements for ALL maps submitted

- **Additional sections focused on specific types of maps or plans**
  - e.g., for proposed projects, delineations, impacts maps, mitigation maps, etc…
  - Specify format and required elements for specific map types

General Standards

- **Format of submittal**
  - Both paper and electronic versions are required
  - PDF is the preferred electronic document format
  - Electronic document requirement may be waived for applicants without software access
  - Shapefiles
    - GIS files submitted should be in the preferred format is ESRI shapefile. Metadata needs to include at a minimum, datum(s) used, coordinate system, projection, and cartographer contact information
  - Please submit electronic files on CD/DVD, or via links to a secure FTP site. No flash drives!!

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')

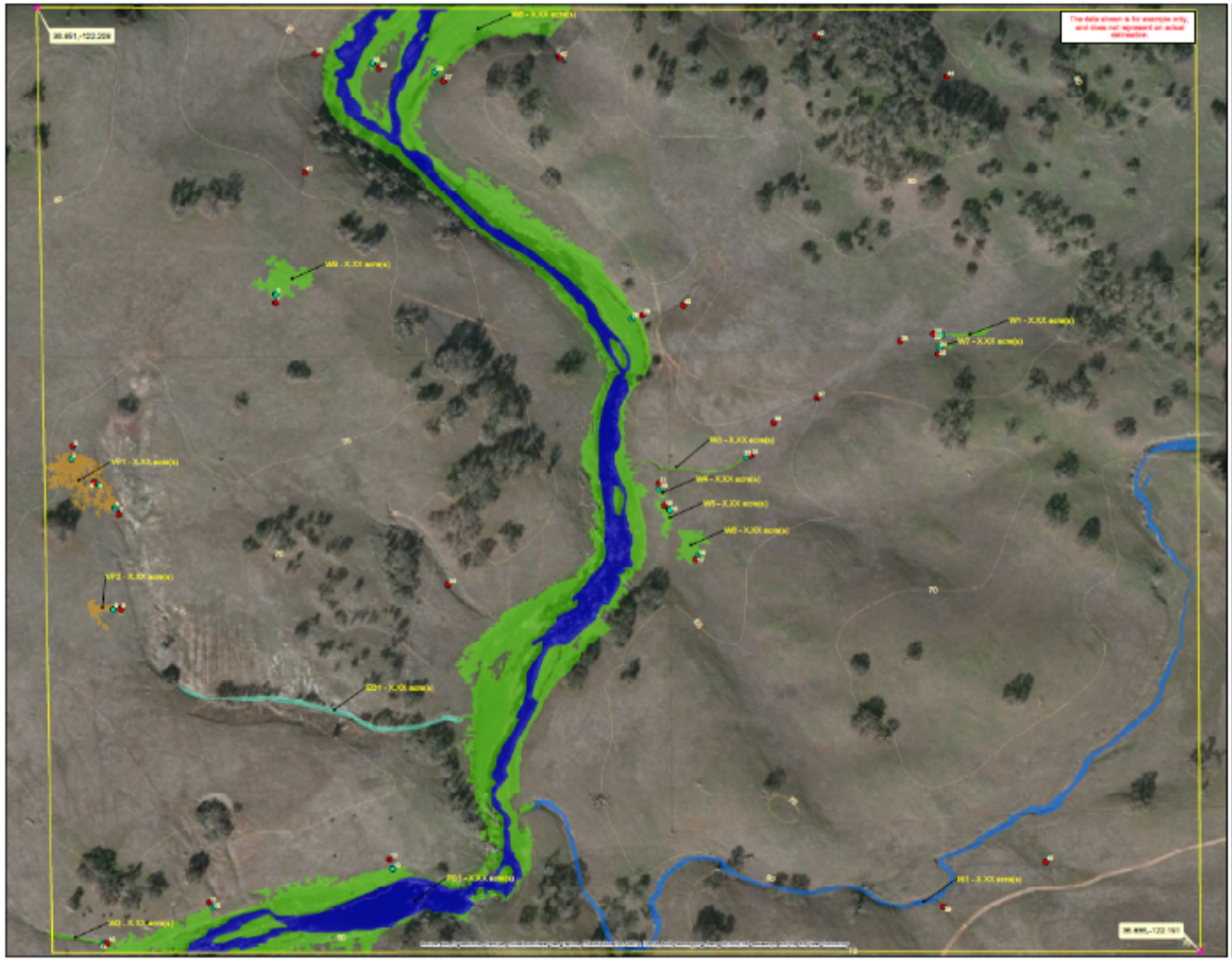


Figure X:
Delineation of Wetlands and Other Waters of the U.S. for the Hypothetical Project Site

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)

N
W E
S

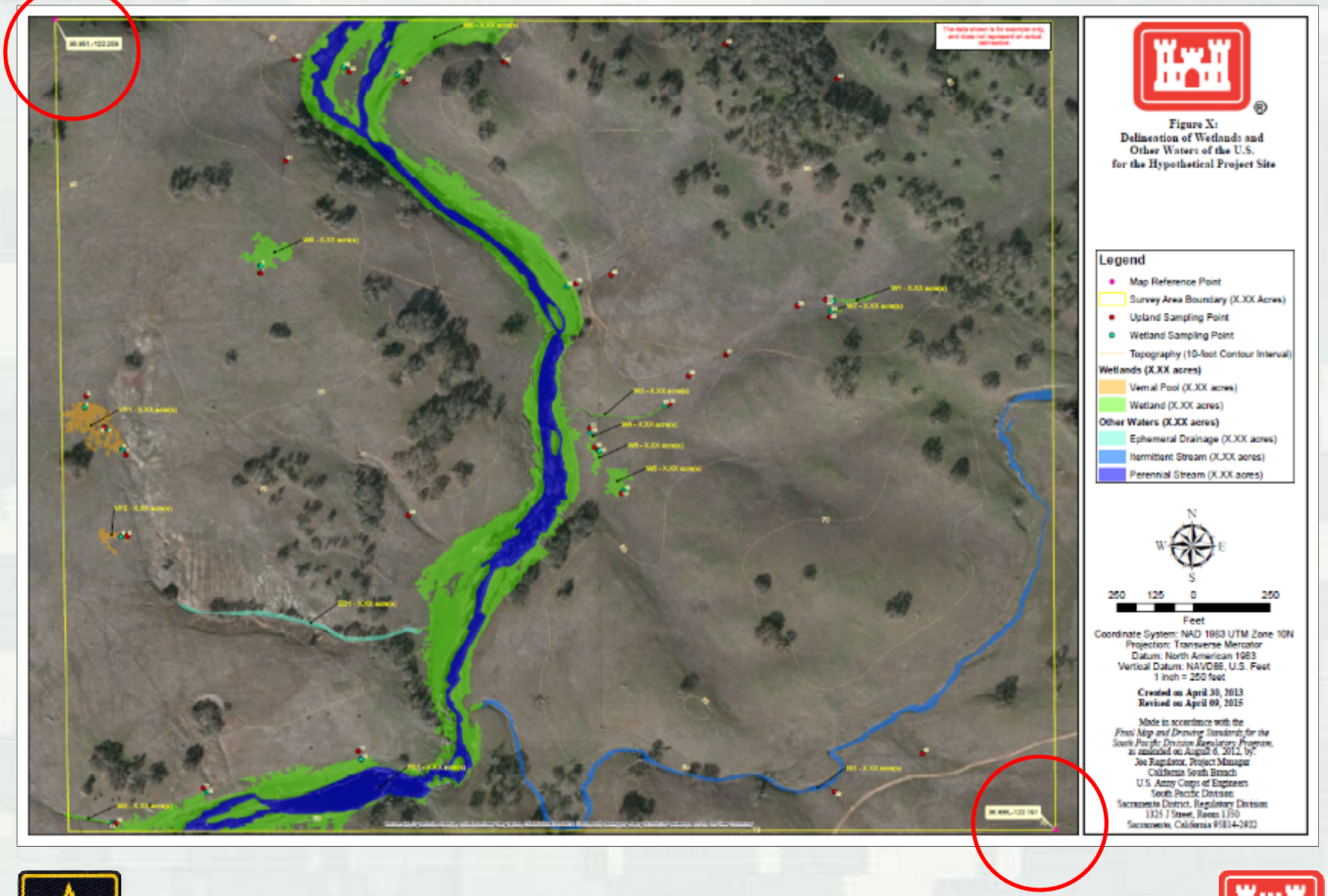
250 125 0 250
Feet

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 April 09, 2015

Made in accordance with the *Final Map and Drawing Standards for the South Pacific Division Regulatory Program*, as amended on August 6, 2012, by:

Joe Regulator, Project Manager
California South Branch
U.S. Army Corps of Engineers
South Pacific Division
Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922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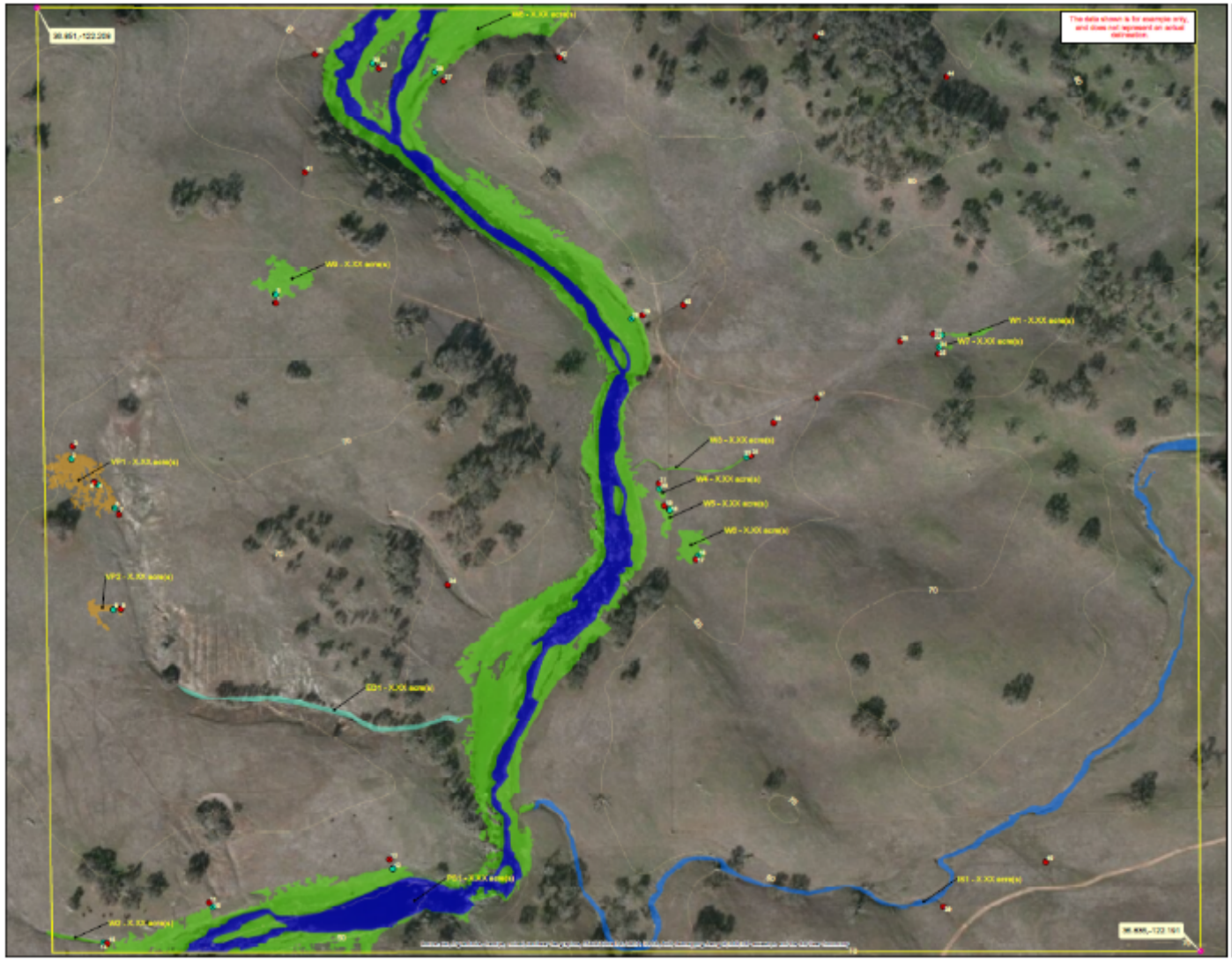

Figure X:
Delineation of Wetlands and Other Waters of the U.S. for the Hypothetical Project Site

Coordinate System: NAD 1983 UTM Zone 10N
Projection: Transverse Mercator
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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)


37
38
W3 - X.XX acre(s)
30
31
W4 - X.XX acre(s)
W5 - X.XX acre(s)
W6 - X.XX acre(s)
16
17
70
60

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-Builts / 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

Attachment 1.
Proposed Wetland Impacts

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

	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

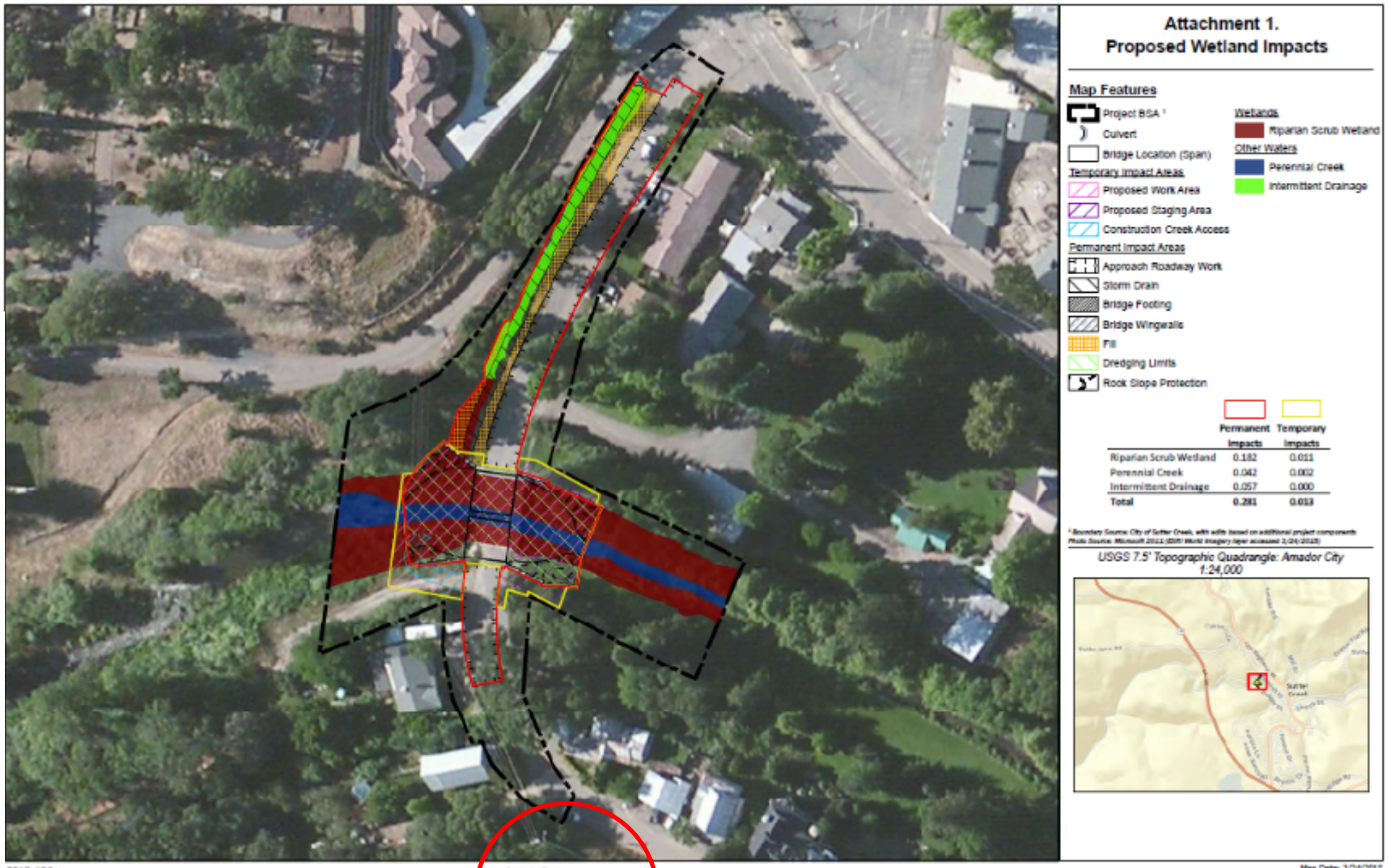
[1] Boundary Source: City of Sutter Creek, with edits based on additional project components
Photo Source: Microsoft 2011 (ESRI World Imagery layer accessed 3/24/2015)

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

2012-106 |

Scale in Feet
0 70

Map Date: 3/24/2015
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet


Attachment 1.
Proposed Wetland Impacts
Map Features
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Culvert
Bridge Location (Span)
Temporary Impact Areas
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2012-106 :
Scale in Feet
0
70
Map Date: 3/24/2015
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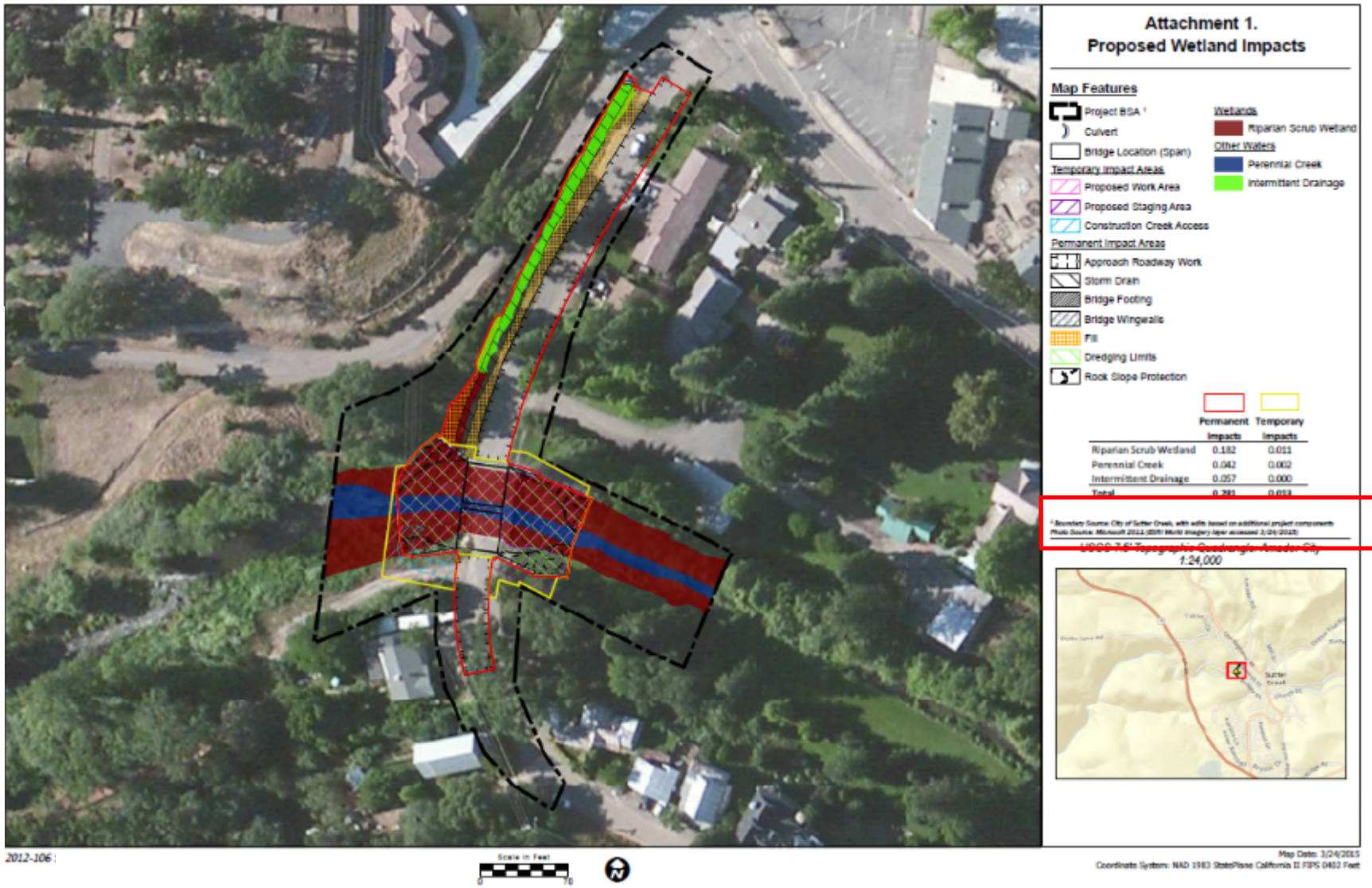

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Attachment 1.
Proposed Wetland Impacts

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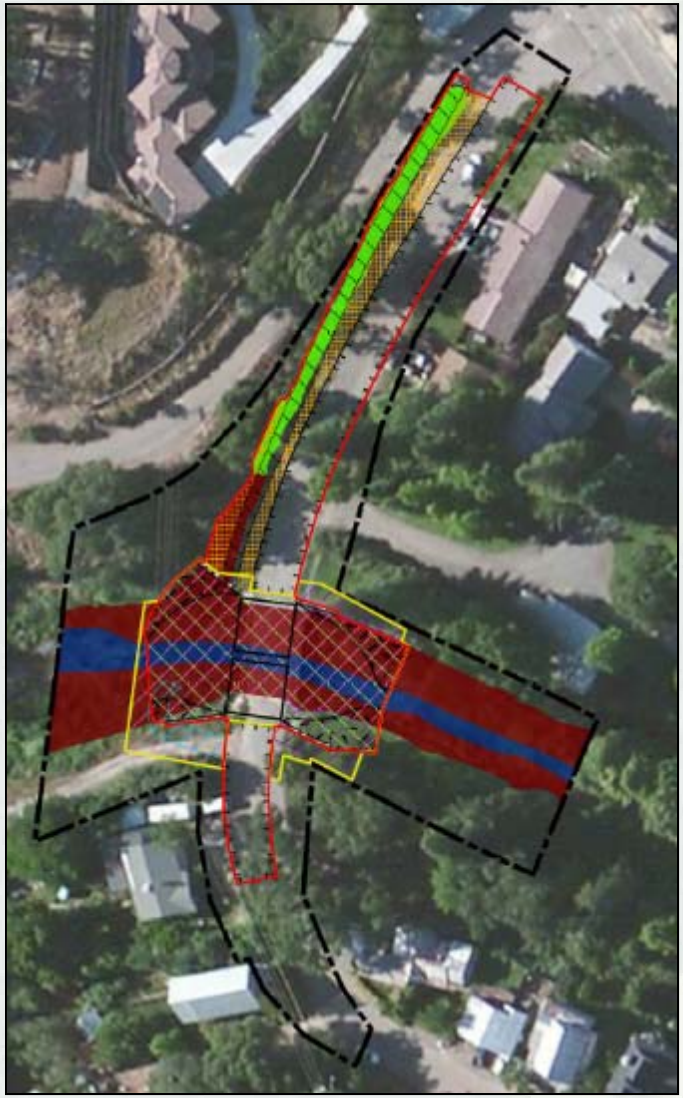
2012-106 |

Scale in Feet

Map Date: 3/24/2015
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet



Map Features

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[1] *Boundary Source: City of Sutter Creek, with edits based on additional project components*
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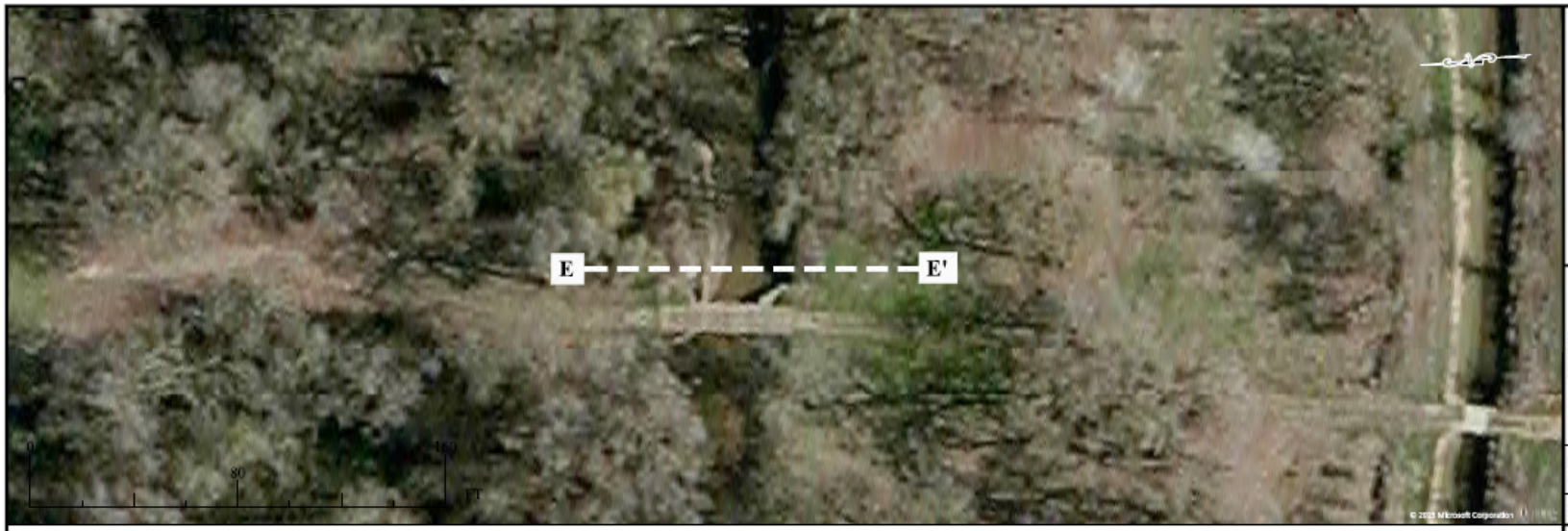
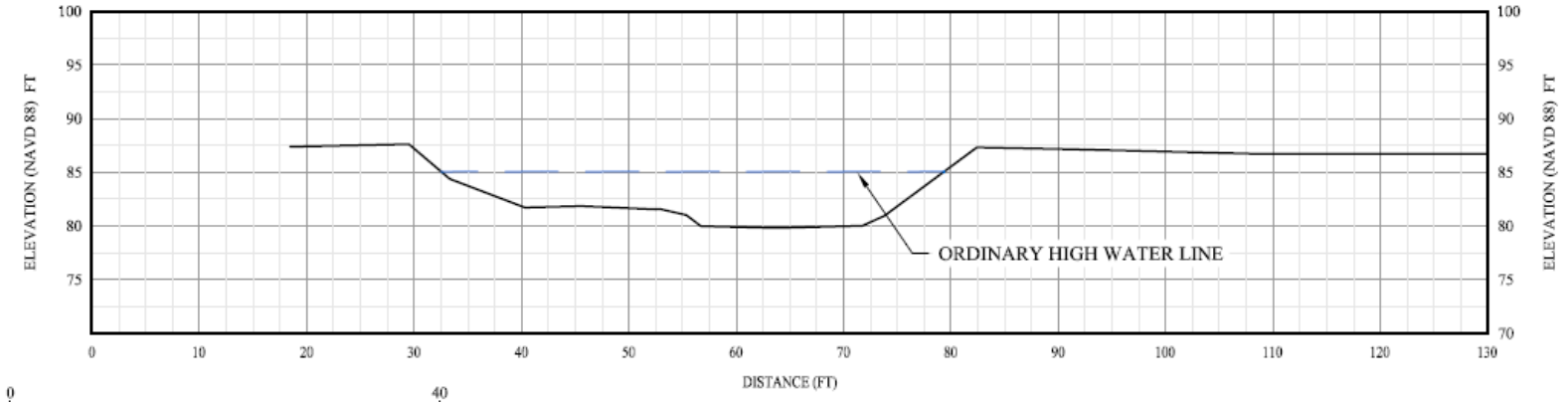
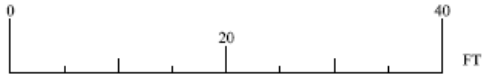
USGS 7.5' Topographic Quadrangle: Amador City 1:24,000



CROSS SECTION
E - E'





NO	DATE	REVISION

E - E' PLAN AND PROFILE

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

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

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.

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.

Specific Standards

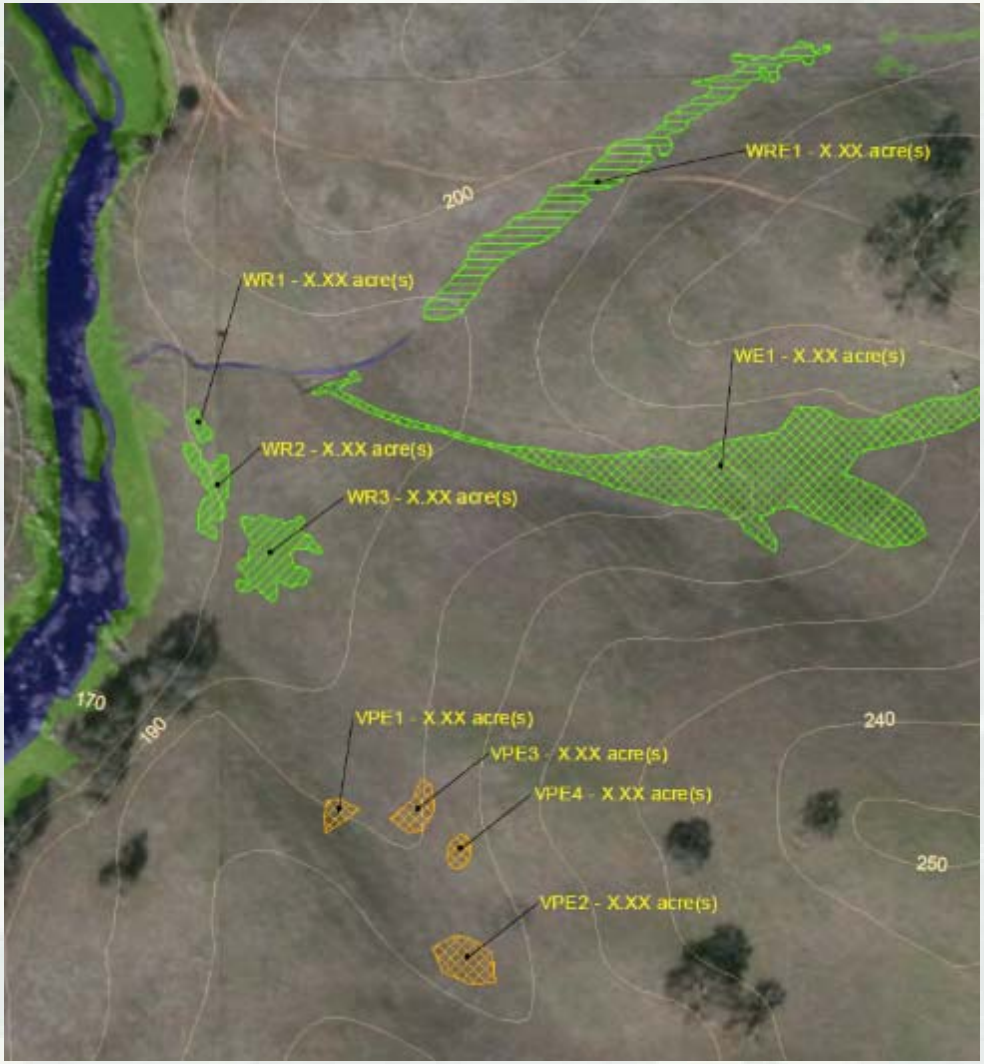
- **Delineation Maps**
  - Identify the Ordinary High Water Mark (OHWM)
    - Show representative widths between the OHWMs on opposing banks using a transect line labeled with the width in feet
    - An average width may be acceptable for uniform channel reaches
    - Cross section may be required by 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.)



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)

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

Questions?

Common Wetland Delineation Pitfalls

Kaitlyn Pascus

Project Manager

Sacramento District Regulatory Program Workshop

22 January 2016

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US Army Corps of Engineers

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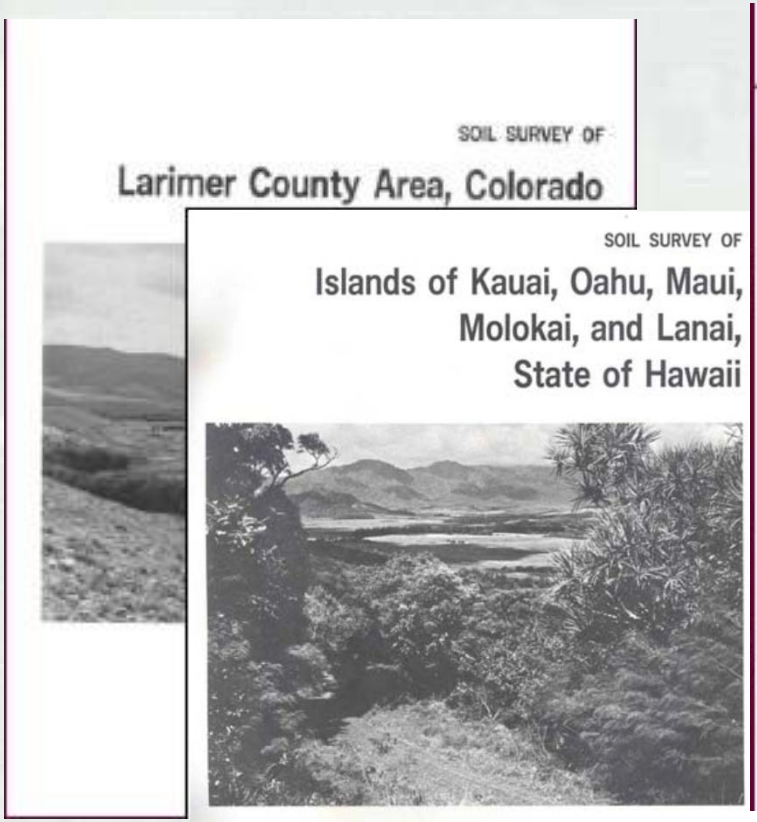
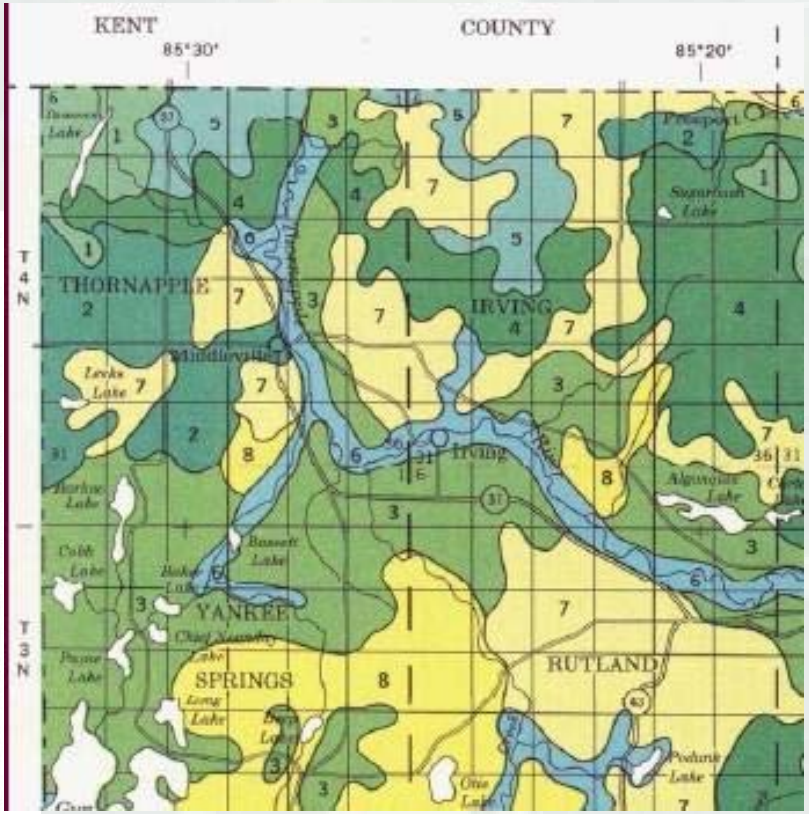
Preliminary Data Gathering

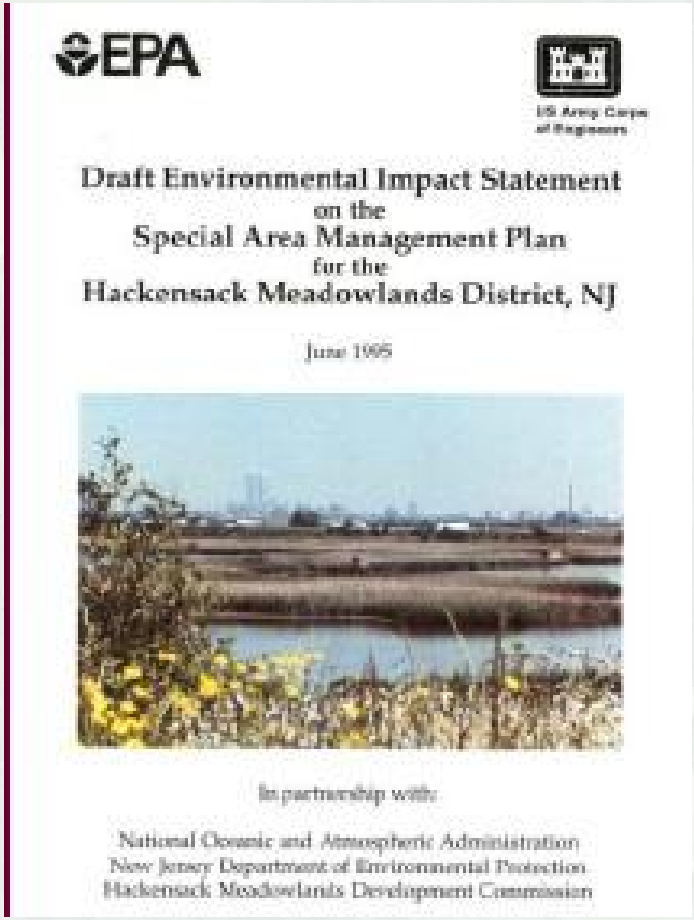
Soil Survey Reports

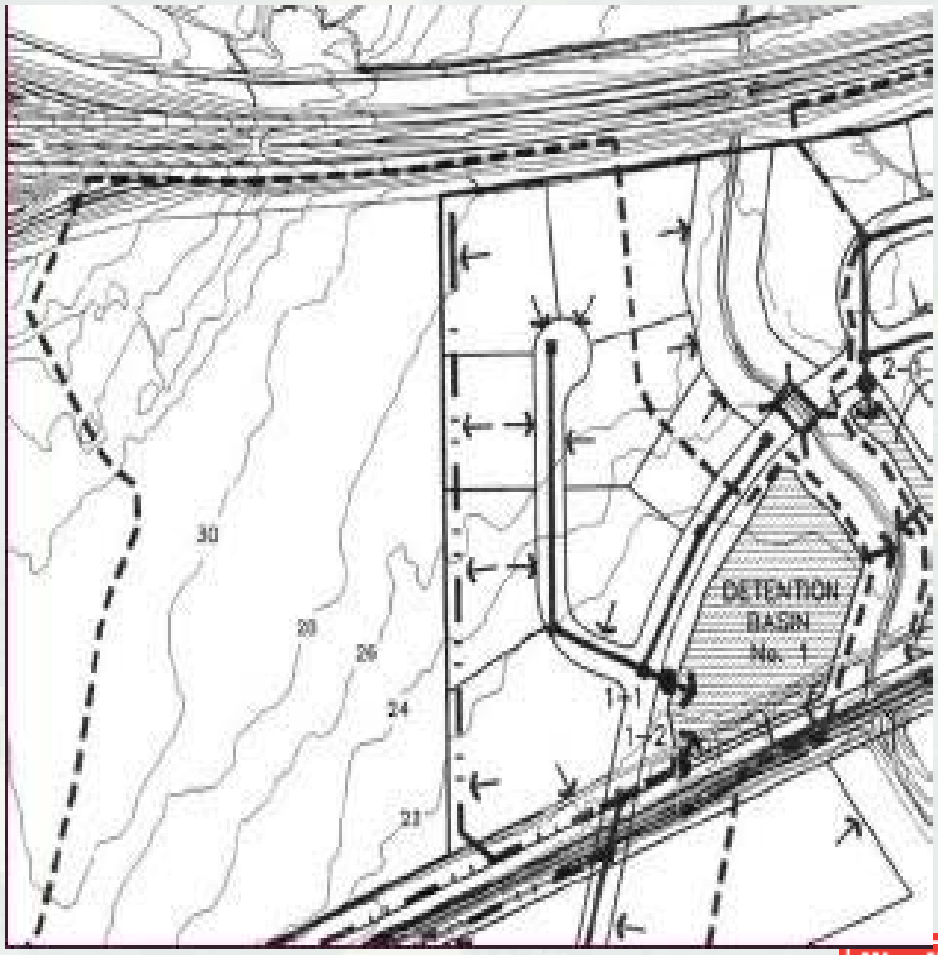




General soils map

Preliminary Data Gathering





Existing environmental impact statements

Engineering plans

Preliminary Data Gathering

- USGS Topographic, soil survey reports, and NWI Maps
- Light Detection and Ranging (LiDAR)- Remote sensing method that uses light in the form of a pulsed laser to measure ranges and generate precise, 3D information about the shape of the Earth's surface
  - Limited due to cost and knowledge
- Google Earth: Historical Imagery to show various years of aerial photographs (typically 1993-2015)
  - Past land use
  - Trends
  - Changes
  - Provides a date

Data Sources on the Web

- USGS maps, photos, data:
  http://ask.usgs.gov/
- NWI maps:

http://www.fws.gov/wetlands/Data/Mapper.html

- Soil survey reports and data:

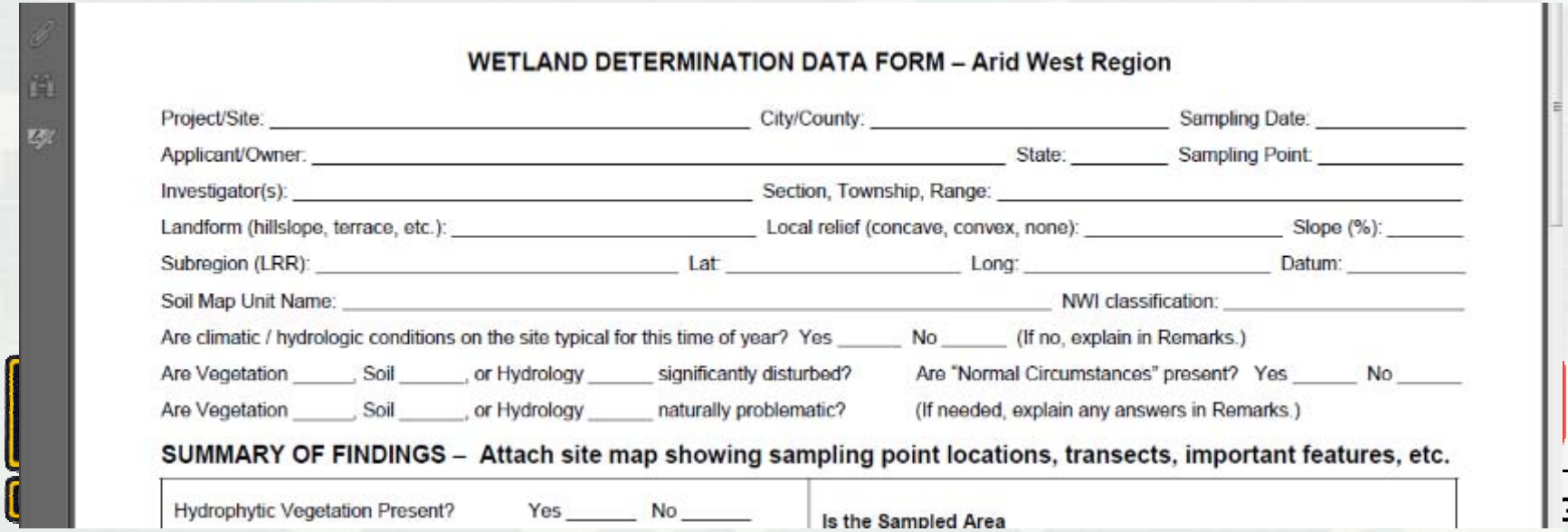
http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

Data Points

- Lack of data points is common
  - ► *How many do I need? "One **pair** per aquatic resource or complex*"

- Why does a feature suddenly stop? Explain.

- Chose an appropriate location on the map for the data points and appropriate aerial map



WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: _____ City/County: _____ Sampling Date: _____

Applicant/Owner: _____ State: _____ Sampling Point: _____

Investigator(s): _____ Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

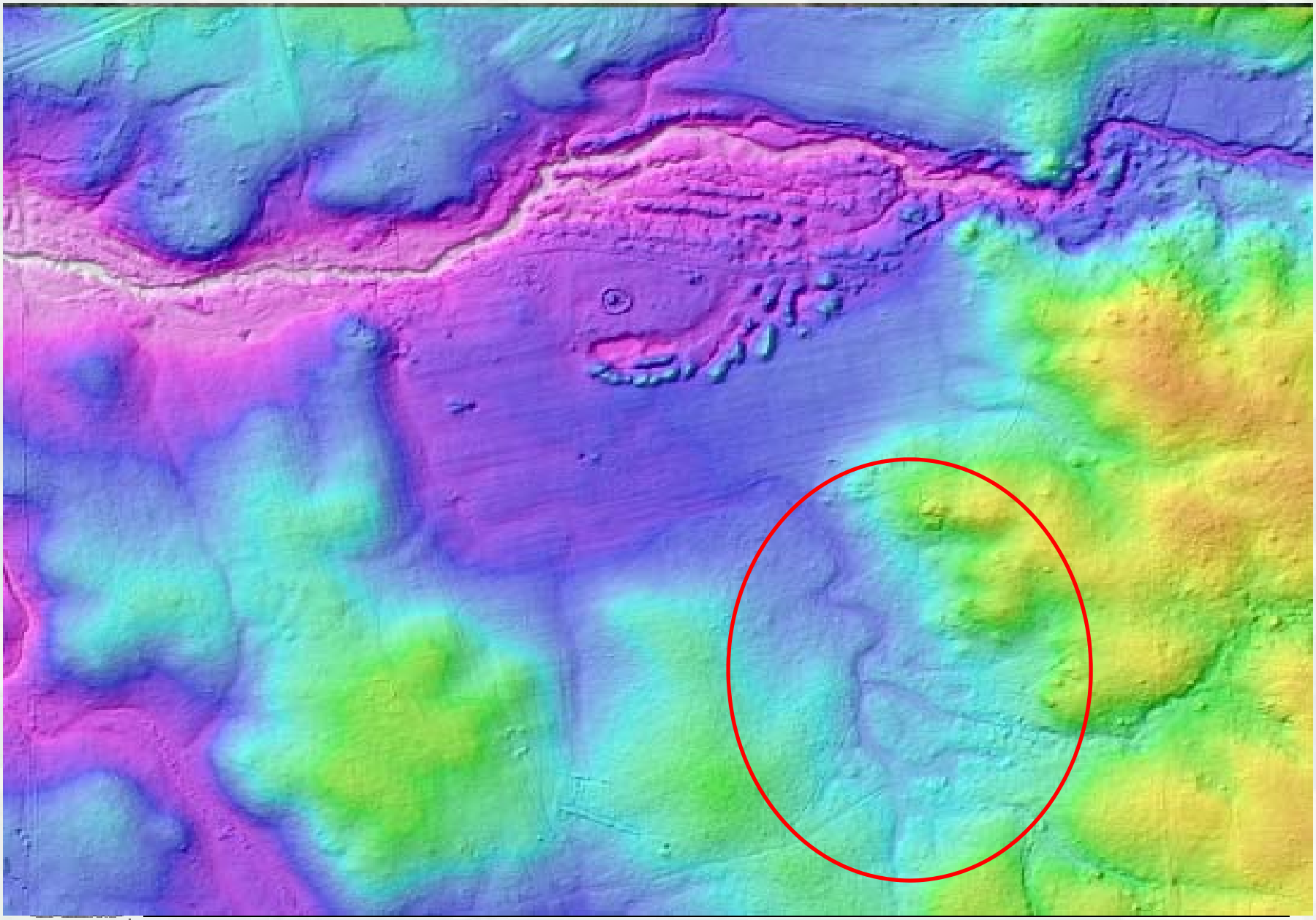
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area

OHWM Discussion

- Again, why does a feature suddenly stop? Explain.
- Discussion and rationale for the mapped OHWM is often missing from report - include it!



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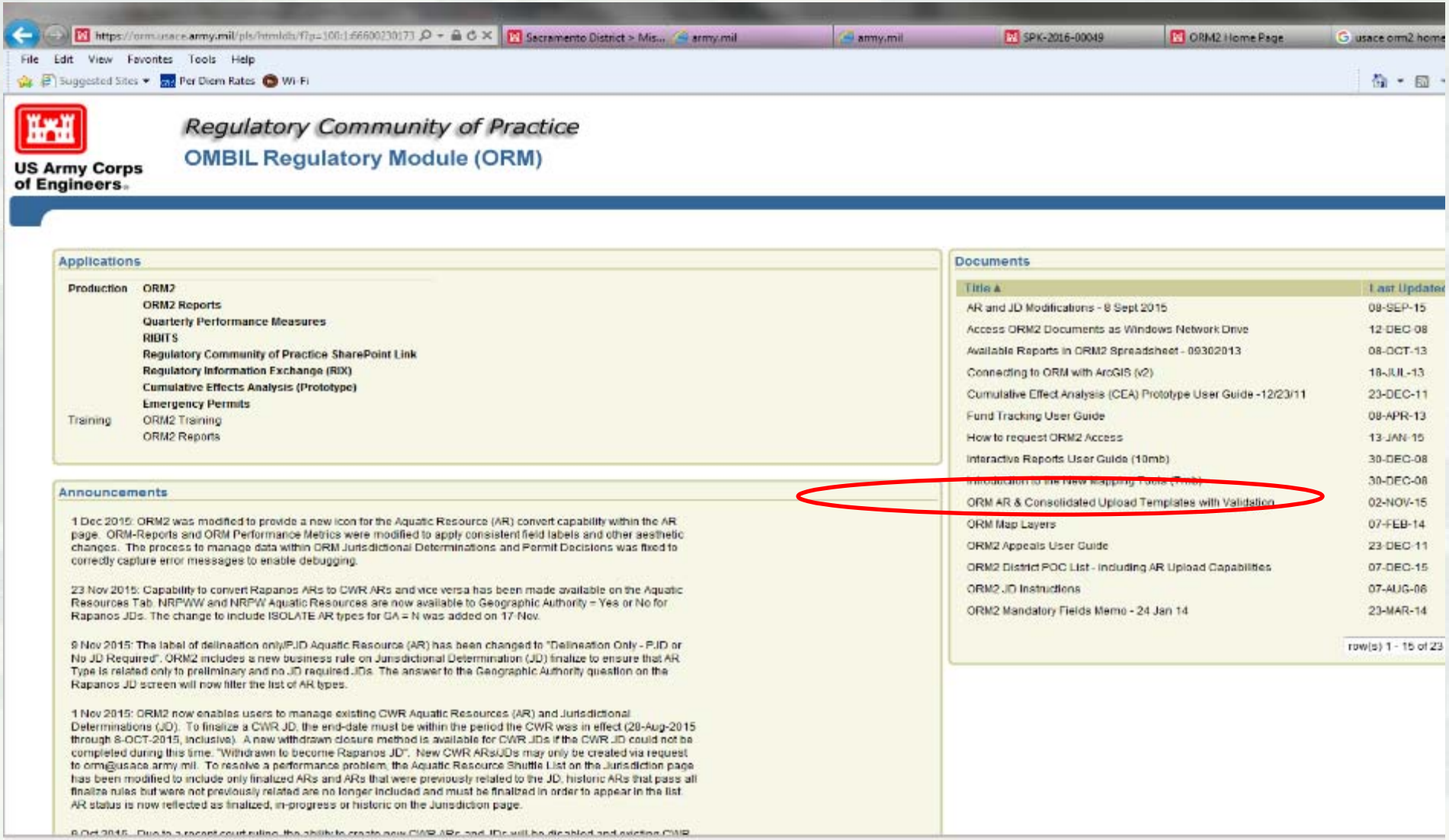
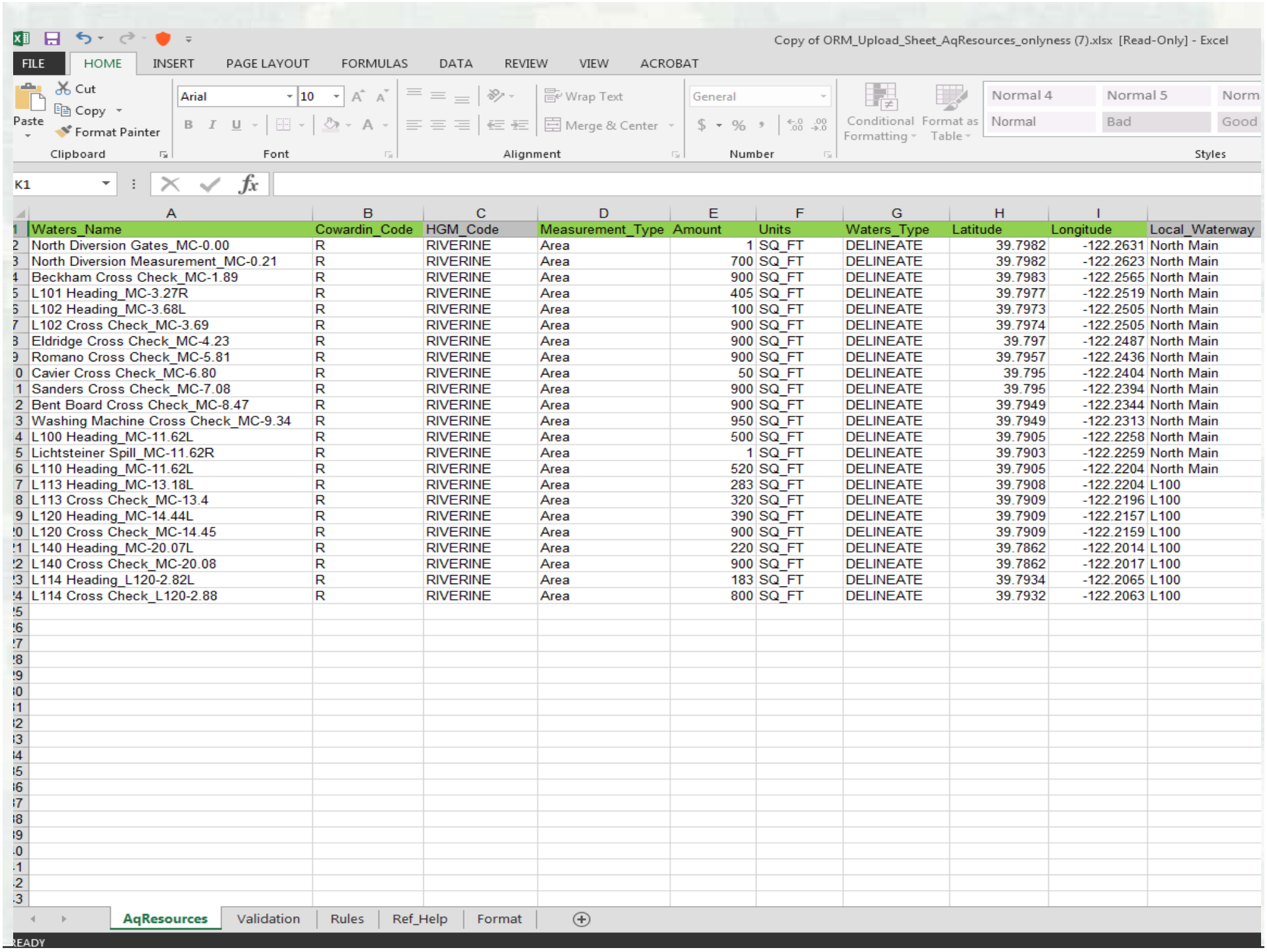
Aquatic Resources Excel Spreadsheet

- A completed copy of the *Aquatic Resources Excel* spreadsheet must be submitted. The current version of the spreadsheet can be found at the following website: *https://orm.usace.army.mil/*
  - *(*Required per the January 2016 *Minimum Standards for Acceptance of Aquatic Resources Delineation Report)*

- Ongoing Trend: PM discretion with low number of AR
- Filling this out (correctly..) will speed things up!


File Edit View Favorites Tools Help
Suggested Sites
Per Diem Rates
Wi-Fi
US Army Corps of Engineers
Regulatory Community of Practice
OMBIL Regulatory Module (ORM)
Applications
Production
ORM2
ORM2 Reports
Quarterly Performance Measures
RIBITS
Regulatory Community of Practice SharePoint Link
Regulatory Information Exchange (RIX)
Cumulative Effects Analysis (Prototype)
Emergency Permits
Training
ORM2 Training
ORM2 Reports
Announcements
1 Dec 2015: ORM2 was modified to provide a new icon for the Aquatic Resource (AR) convert capability within the AR page. ORM-Reports and ORM Performance Metrics were modified to apply consistent field labels and other aesthetic changes. The process to manage data within ORM Jurisdictional Determinations and Permit Decisions was fixed to correctly capture error messages to enable debugging.
23 Nov 2015: Capability to convert Rapanos ARs to CWR ARs and vice versa has been made available on the Aquatic Resources Tab. NRPWW and NRPW Aquatic Resources are now available to Geographic Authority = Yes or No for Rapanos JDs. The change to include ISOLATE AR types for GA = N was added on 17-Nov.
9 Nov 2015: The label of delineation only/PJD Aquatic Resource (AR) has been changed to "Delineation Only - PJD or No JD Required". ORM2 includes a new business rule on Jurisdictional Determination (JD) finalize to ensure that AR Type is related only to preliminary and no JD required JDs. The answer to the Geographic Authority question on the Rapanos JD screen will now filter the list of AR types.
1 Nov 2015: ORM2 now enables users to manage existing CWR Aquatic Resources (AR) and Jurisdictional Determinations (JD). To finalize a CWR JD, the end-date must be within the period the CWR was in effect (28-Aug-2015 through 8-OCT-2015, inclusive). A new withdrawn closure method is available for CWR JDs if the CWR JD could not be completed during this time: "Withdrawn to become Rapanos JD". New CWR ARs/JDs may only be created via request to orm@usace.army.mil. To resolve a performance problem, the Aquatic Resource Shuttle List on the Jurisdiction page has been modified to include only finalized ARs and ARs that were previously related to the JD; historic ARs that pass all finalize rules but were not previously related are no longer included and must be finalized in order to appear in the list. AR status is now reflected as finalized, in-progress or historic on the Jurisdiction page.
Documents
Title
Last Updated
AR and JD Modifications - 8 Sept 2015 08-SEP-15
Access ORM2 Documents as Windows Network Drive 12-DEC-08
Available Reports in ORM2 Spreadsheet - 09302013 08-OCT-13
Connecting to ORM with ArcGIS (v2) 18-JUL-13
Cumulative Effect Analysis (CEA) Prototype User Guide -12/23/11 23-DEC-11
Fund Tracking User Guide 08-APR-13
How to request ORM2 Access 13-JAN-15
Interactive Reports User Guide (10mb) 30-DEC-08
30-DEC-08
ORM AR & Consolidated Upload Templates with Validation 02-NOV-15
ORM Map Layers 07-FEB-14
ORM2 Appeals User Guide 23-DEC-11
ORM2 District POC List - including AR Upload Capabilities 07-DEC-15
ORM2 JD Instructions 07-AUG-08
ORM2 Mandatory Fields Memo - 24 Jan 14 23-MAR-14
row(s) 1 - 15 of 23



	A	B	C	D	E	F	G	H	I	
1	Waters_Name	Cowardin_Code	HGM_Code	Measurement_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
2	North Diversion Gates_MC-0.00	R	RIVERINE	Area	1	SQ_FT	DELINEATE	39.7982	-122.2631	North Main
3	North Diversion Measurement_MC-0.21	R	RIVERINE	Area	700	SQ_FT	DELINEATE	39.7982	-122.2623	North Main
4	Beckham Cross Check_MC-1.89	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.7983	-122.2565	North Main
5	L101 Heading_MC-3.27R	R	RIVERINE	Area	405	SQ_FT	DELINEATE	39.7977	-122.2519	North Main
6	L102 Heading_MC-3.68L	R	RIVERINE	Area	100	SQ_FT	DELINEATE	39.7973	-122.2505	North Main
7	L102 Cross Check_MC-3.69	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.7974	-122.2505	North Main
8	Eldridge Cross Check_MC-4.23	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.797	-122.2487	North Main
9	Romano Cross Check_MC-5.81	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.7957	-122.2436	North Main
10	Cavier Cross Check_MC-6.80	R	RIVERINE	Area	50	SQ_FT	DELINEATE	39.795	-122.2404	North Main
11	Sanders Cross Check_MC-7.08	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.795	-122.2394	North Main
12	Bent Board Cross Check_MC-8.47	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.7949	-122.2344	North Main
13	Washing Machine Cross Check_MC-9.34	R	RIVERINE	Area	950	SQ_FT	DELINEATE	39.7949	-122.2313	North Main
14	L100 Heading_MC-11.62L	R	RIVERINE	Area	500	SQ_FT	DELINEATE	39.7905	-122.2258	North Main
15	Lichtsteiner Spill_MC-11.62R	R	RIVERINE	Area	1	SQ_FT	DELINEATE	39.7903	-122.2259	North Main
16	L110 Heading_MC-11.62L	R	RIVERINE	Area	520	SQ_FT	DELINEATE	39.7905	-122.2204	North Main
17	L113 Heading_MC-13.18L	R	RIVERINE	Area	283	SQ_FT	DELINEATE	39.7908	-122.2204	L100
18	L113 Cross Check_MC-13.4	R	RIVERINE	Area	320	SQ_FT	DELINEATE	39.7909	-122.2196	L100
19	L120 Heading_MC-14.44L	R	RIVERINE	Area	390	SQ_FT	DELINEATE	39.7909	-122.2157	L100
20	L120 Cross Check_MC-14.45	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.7909	-122.2159	L100
21	L140 Heading_MC-20.07L	R	RIVERINE	Area	220	SQ_FT	DELINEATE	39.7862	-122.2014	L100
22	L140 Cross Check_MC-20.08	R	RIVERINE	Area	900	SQ_FT	DELINEATE	39.7862	-122.2017	L100
23	L114 Heading_L120-2.82L	R	RIVERINE	Area	183	SQ_FT	DELINEATE	39.7934	-122.2065	L100
24	L114 Cross Check_L120-2.88	R	RIVERINE	Area	800	SQ_FT	DELINEATE	39.7932	-122.2063	L100
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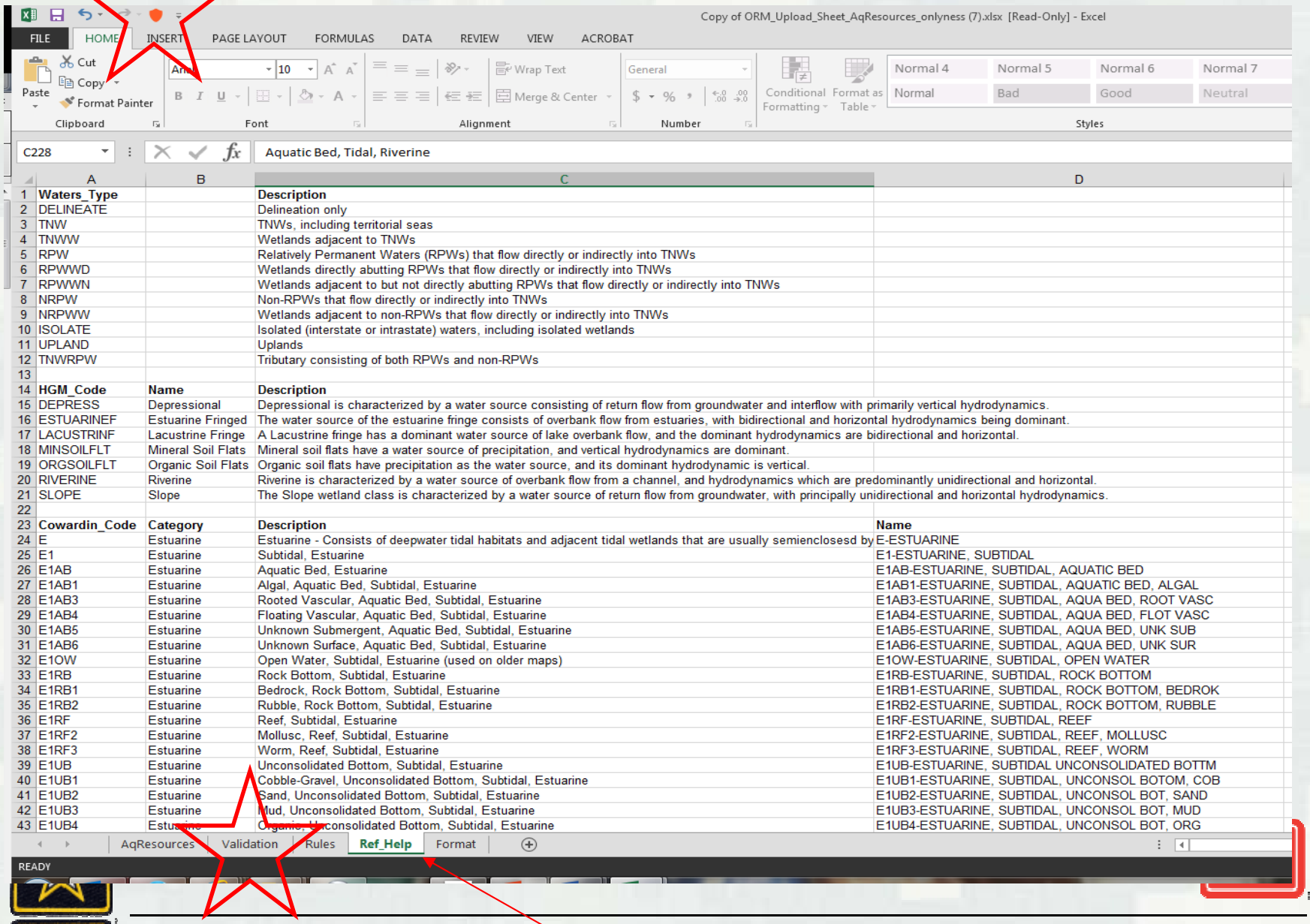
Validation tool



	A	B	C	D
1	**Waters_Type**		**Description**	
2	DELINEATE		Delineation only	
3	TNW		TNWs, including territorial seas	
4	TNWW		Wetlands adjacent to TNWs	
5	RPW		Relatively Permanent Waters (RPWs) that flow directly or indirectly into TNWs	
6	RPWWD		Wetlands directly abutting RPWs that flow directly or indirectly into TNWs	
7	RPWWN		Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs	
8	NRPW		Non-RPWs that flow directly or indirectly into TNWs	
9	NRPWW		Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs	
10	ISOLATE		Isolated (interstate or intrastate) waters, including isolated wetlands	
11	UPLAND		Uplands	
12	TNWRPW		Tributary consisting of both RPWs and non-RPWs	
13				
14	**HGM_Code**	**Name**	**Description**	
15	DEPRESS	Depressional	Depressional is characterized by a water source consisting of return flow from groundwater and interflow with primarily vertical hydrodynamics.	
16	ESTUARINEF	Estuarine Fringed	The water source of the estuarine fringe consists of overbank flow from estuaries, with bidirectional and horizontal hydrodynamics being dominant.	
17	LACUSTRINF	Lacustrine Fringe	A Lacustrine fringe has a dominant water source of lake overbank flow, and the dominant hydrodynamics are bidirectional and horizontal.	
18	MINSOILFLT	Mineral Soil Flats	Mineral soil flats have a water source of precipitation, and vertical hydrodynamics are dominant.	
19	ORGSOILFLT	Organic Soil Flats	Organic soil flats have precipitation as the water source, and its dominant hydrodynamic is vertical.	
20	RIVERINE	Riverine	Riverine is characterized by a water source of overbank flow from a channel, and hydrodynamics which are predominantly unidirectional and horizontal.	
21	SLOPE	Slope	The Slope wetland class is characterized by a water source of return flow from groundwater, with principally unidirectional and horizontal hydrodynamics.	
22				
23	**Cowardin_Code**	**Category**	**Description**	**Name**
24	E	Estuarine	Estuarine - Consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semienclosesd by	E-ESTUARINE
25	E1	Estuarine	Subtidal, Estuarine	E1-ESTUARINE, SUBTIDAL
26	E1AB	Estuarine	Aquatic Bed, Estuarine	E1AB-ESTUARINE, SUBTIDAL, AQUATIC BED
27	E1AB1	Estuarine	Algal, Aquatic Bed, Subtidal, Estuarine	E1AB1-ESTUARINE, SUBTIDAL, AQUATIC BED, ALGAL
28	E1AB3	Estuarine	Rooted Vascular, Aquatic Bed, Subtidal, Estuarine	E1AB3-ESTUARINE, SUBTIDAL, AQUA BED, ROOT VASC
29	E1AB4	Estuarine	Floating Vascular, Aquatic Bed, Subtidal, Estuarine	E1AB4-ESTUARINE, SUBTIDAL, AQUA BED, FLOT VASC
30	E1AB5	Estuarine	Unknown Submergent, Aquatic Bed, Subtidal, Estuarine	E1AB5-ESTUARINE, SUBTIDAL, AQUA BED, UNK SUB
31	E1AB6	Estuarine	Unknown Surface, Aquatic Bed, Subtidal, Estuarine	E1AB6-ESTUARINE, SUBTIDAL, AQUA BED, UNK SUR
32	E1OW	Estuarine	Open Water, Subtidal, Estuarine (used on older maps)	E1OW-ESTUARINE, SUBTIDAL, OPEN WATER
33	E1RB	Estuarine	Rock Bottom, Subtidal, Estuarine	E1RB-ESTUARINE, SUBTIDAL, ROCK BOTTOM
34	E1RB1	Estuarine	Bedrock, Rock Bottom, Subtidal, Estuarine	E1RB1-ESTUARINE, SUBTIDAL, ROCK BOTTOM, BEDROK
35	E1RB2	Estuarine	Rubble, Rock Bottom, Subtidal, Estuarine	E1RB2-ESTUARINE, SUBTIDAL, ROCK BOTTOM, RUBBLE
36	E1RF	Estuarine	Reef, Subtidal, Estuarine	E1RF-ESTUARINE, SUBTIDAL, REEF
37	E1RF2	Estuarine	Mollusc, Reef, Subtidal, Estuarine	E1RF2-ESTUARINE, SUBTIDAL, REEF, MOLLUSC
38	E1RF3	Estuarine	Worm, Reef, Subtidal, Estuarine	E1RF3-ESTUARINE, SUBTIDAL, REEF, WORM
39	E1UB	Estuarine	Unconsolidated Bottom, Subtidal, Estuarine	E1UB-ESTUARINE, SUBTIDAL UNCONSOLIDATED BOTTM
40	E1UB1	Estuarine	Cobble-Gravel, Unconsolidated Bottom, Subtidal, Estuarine	E1UB1-ESTUARINE, SUBTIDAL, UNCONSOL BOTOM, COB
41	E1UB2	Estuarine	Sand, Unconsolidated Bottom, Subtidal, Estuarine	E1UB2-ESTUARINE, SUBTIDAL, UNCONSOL BOT, SAND
42	E1UB3	Estuarine	Mud, Unconsolidated Bottom, Subtidal, Estuarine	E1UB3-ESTUARINE, SUBTIDAL, UNCONSOL BOT, MUD
43	E1UB4	Estuarine	Organic, Unconsolidated Bottom, Subtidal, Estuarine	E1UB4-ESTUARINE, SUBTIDAL, UNCONSOL BOT, ORG

Reference help

Difficult Wetland Situations in the Arid West

(Sept 2008, Regional Supplement to USACE Delineation Manual)

- Lacking one factor:
  - Problematic Hydrophytic **Vegetation** (grazing, managed plant communities, riparian areas, sparse and patchy vegetation, etc.)
  - Problematic Hydric **Soils**
  - Wetlands that Periodically Lack Indicators of Wetland **Hydrology**

- Disturbance, normal seasonal or annual variability, or permanent changes
- Essentially, lacking one of the three criteria does not exclude the Aquatic Resource from being a wetland

Continued…

Weather and Site Condition Considerations:

- What time of year are you visiting the site?
- Consider recent rain events. Did it rain immediately before your site visit and how much has it rained?
- Has long-term precipitation been normal?
- Is the site irrigated?

Evaluating Normal Rain Fall

WETS tables

- USDA National Water and Climate Center (http://www.wcc.nrcs.usda.gov/climate/navigate_wets.html)
- Analyze monthly precipitation data from >8,000 National Weather Service stations
- Based on a standard 30 years of rainfall data
- Provide monthly and annual thresholds for:

  Below normal rainfall (lowest 3 years in 10)
  Above normal rainfall (highest 3 years in 10)

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Wetlands Regulatory Assistance Program

Accessing and Using Meteorological Data to Evaluate Wetland Hydrology

Steven W. Sprecher and Andrew G. Warne

April 2000

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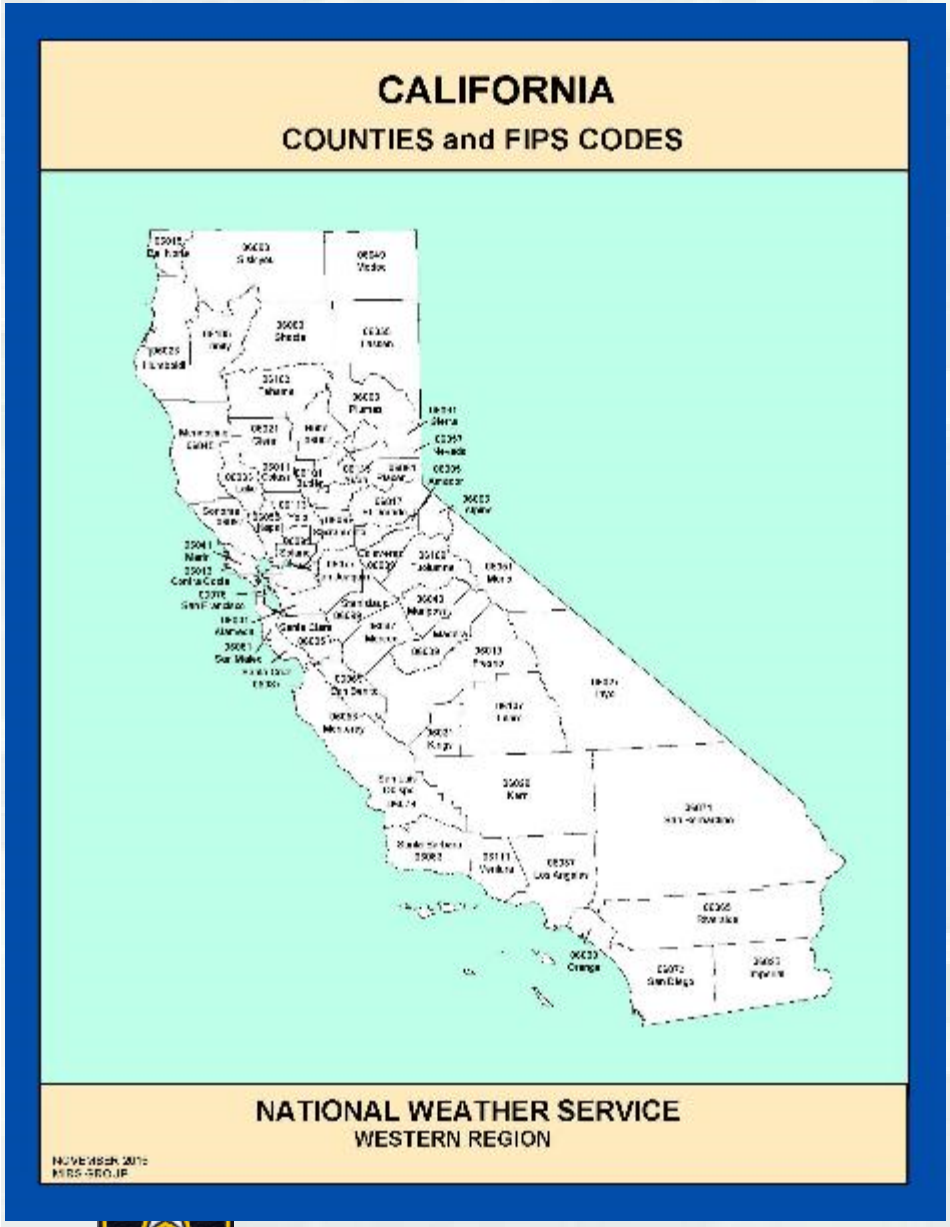
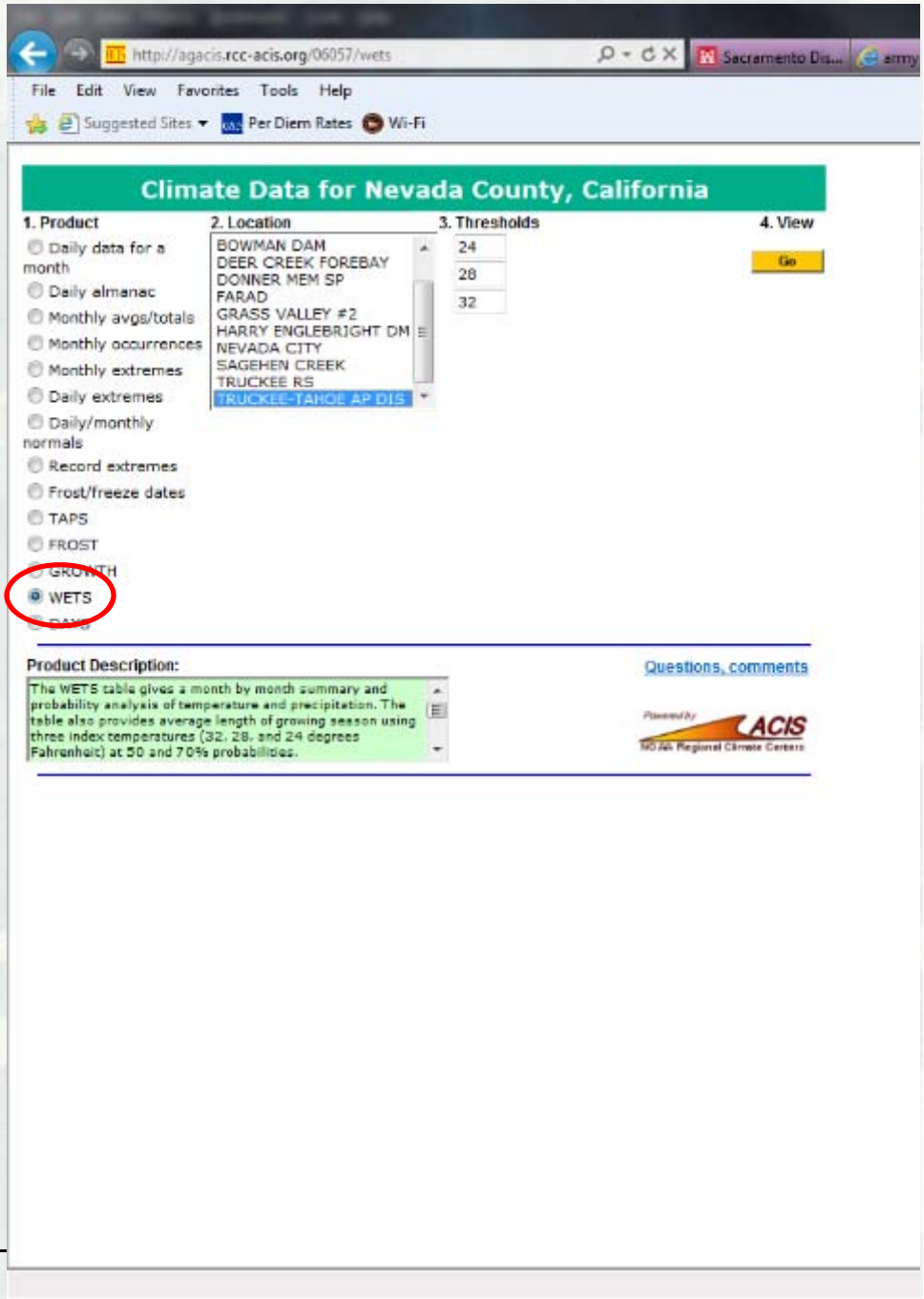
https://efotg.sc.egov.usda.gov/efotg_locator.aspx?map=US





U.S.ARMY

WETS Table - Windows Internet Explorer

http://agacis.rcc-acis.org/06057/wets/results

File Edit View Favorites Tools Help

USDA F

WETS Station : BOWMAN DAM, CA1018 Creation Date: 01/1
Latitude: 3927 Longitude: 12039 Elevation: 05385
State FIPS/County(FIPS): 06057 County Name: Nevada
Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.) avg daily max	avg daily min	avg	Precipitation (Inches) avg	30% chance will have less than	more than	avg # of days w/.1 or more
January	45.0	26.4	35.7	12.04	5.20	14.67	9
February	45.8	25.9	35.9	11.04	5.80	13.49	9
March	47.5	27.8	37.7	10.34	5.48	12.63	11
April	53.8	31.6	42.7	4.49	2.54	5.47	7
May	62.3	38.2	50.3	3.35	1.33	4.66	6
June	72.1	45.8	59.0	1.22	0.41	1.47	2
July	79.4	51.8	65.6	0.37	0.00	0.29	0
August	79.6	52.3	66.0	0.57	0.00	0.59	1
September	73.9	47.9	60.9	1.56	0.23	1.88	2
October	64.3	40.6	52.5	4.22	1.25	5.04	5
November	51.2	31.4	41.3	9.04	4.12	11.04	8
December	45.5	26.7	36.1	9.73	3.81	11.92	9
Annual	-----	-----	-----	------	54.06	78.03	
Average	60.0	37.2	48.6	------	------	------	
Average	-----	-----	-----	67.97	------	------	

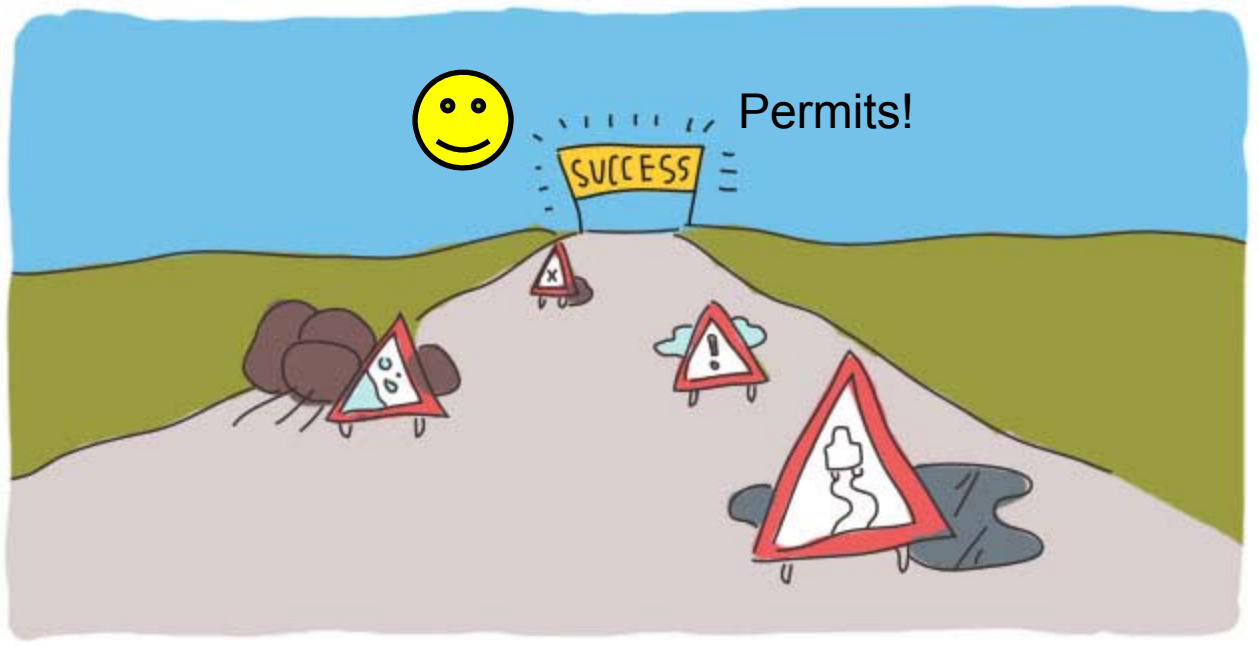
GROWING SEASON DATES

Probability	Temperature 24 F or higher	28 F or higher	3
	Beginning and Ending Dat Growing Season Length		
50 percent *			
70 percent *			152

Three months prior to date of data collectio

Minor Pitfalls

- Missing the Date and full legend on your map
- Not Showing a clearly defined study area boundary on the map
- Not putting the acreage of your study area boundary
- Not using unique Aquatic Resource feature names



Update & Preliminary vs Approved Jurisdictional Determinations

James Robb

Wetland Specialist

Sacramento District Regulatory Program Workshop

22 January 2016

US Army Corps of Engineers
BUILDING STRONG®

What's New?

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

FEDERAL REGISTER

Vol. 80 Monday,
No. 124 June 29, 2015

Part II

Department of Defense
Department of the Army, Corps of Engineers
33 CFR Part 328

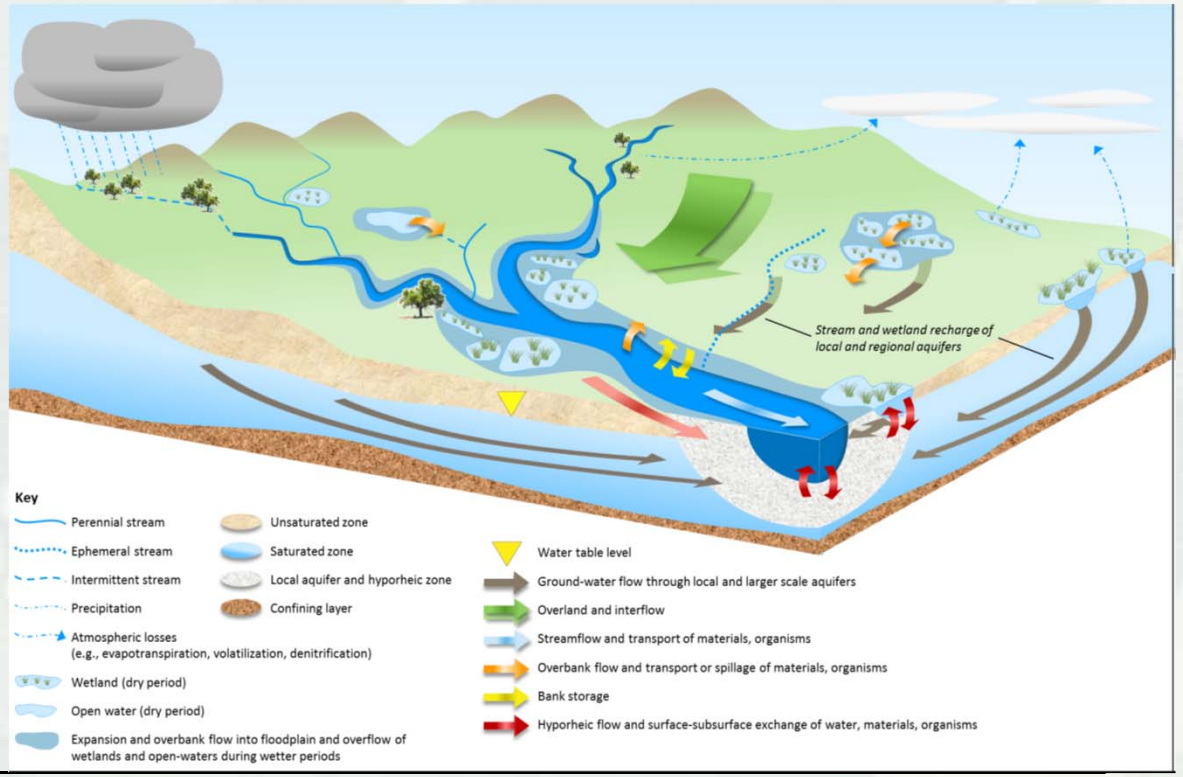
Environmental Protection Agency
40 CFR Parts 110, 112, 116, *et al.*
Clean Water Rule: Definition of "Waters of the United States"; Final Rule

What's New

- Minimum Standards for the Acceptance of Aquatic Resources Delineation Reports, update effective January 2016
  - http://1.usa.gov/1V68IYa

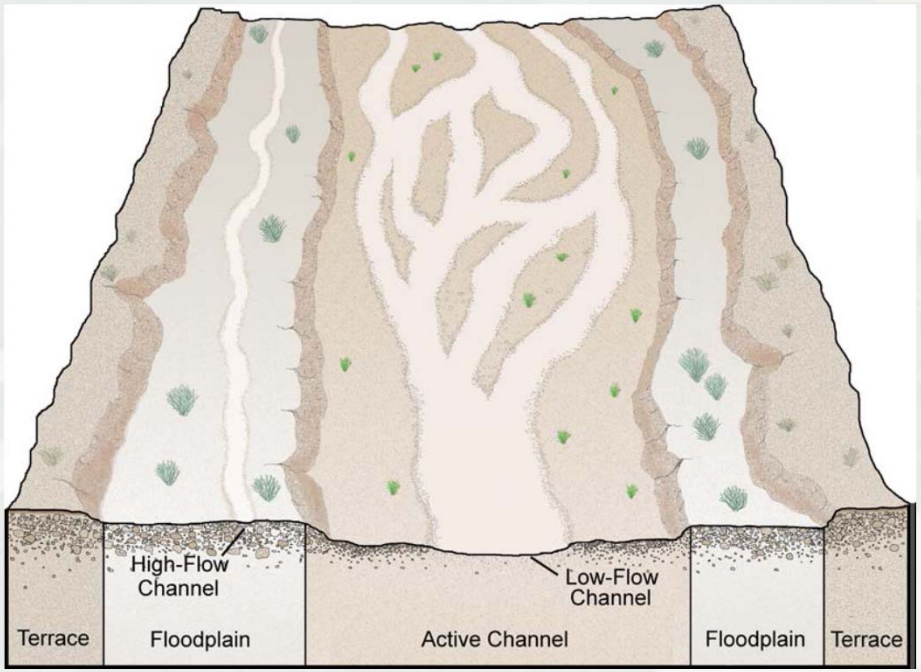
What's New

- Connectivity literature review published January 2015



What's New?

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

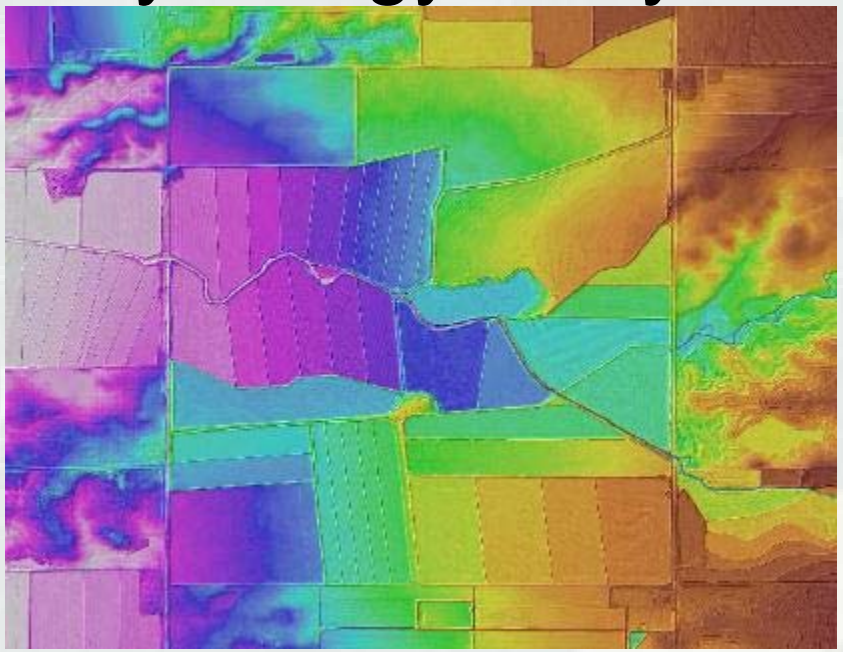


What's New?

- 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.

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

I requested a PJD but the Corps decided to do an AJD. Can they do that?

Yes, the type of jurisdictional determination the Corps verifies is their decision to make

AJD/PJD FAQs

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

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

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)

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