

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

**Aaron Park**

Project Manager, Nevada/Utah Section

Sacramento District Regulatory Program  
Workshop



30 July 2019



US Army Corps of Engineers  
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## Questions about the Regulatory Program or 408 Program?

Call: (916) 557-5250

Email: [CESPK-REGULATORY-INFO@usace.army.mil](mailto:CESPK-REGULATORY-INFO@usace.army.mil)

## WE'VE GONE PAPERLESS

All project related documents (permit applications, aquatic resource delineations, jurisdictional determinations, agency requests, etc.) should be submitted electronically to the following email address:  
[SPKRegulatoryMailbox@usace.army.mil](mailto:SPKRegulatoryMailbox@usace.army.mil)

Instructions for submitting requests electronically  
General questions and inquiries about the Regulatory Program or 408 Program?  
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## The Regulatory Program



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## Quick Reference

[Application Form \(ENG 4345\)](#)

[NWP Information](#)

[Delineation Minimum Standards](#)

[Request for Aquatic Resources](#)

[Delineation Verification or](#)

[Jurisdictional Determination](#)

[Aquatic Resources ORM Upload  
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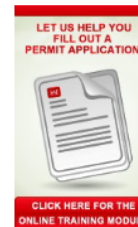
structures in, over or under navigable waters of the United States. Under CWA Section 404, a permit is required for the discharge of dredged or fill material into waters of the United States. Many waterbodies and wetlands in the nation are waters of the United States and are subject to the Corps' regulatory authority.

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



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## Latest News

- 10 June 2019 - The U.S. Army Corps of Engineers, as part of an interagency effort with the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture - Natural Resources Conservation Service, announces the draft biennial update to the National Wetland Plant List (NWPL) for 2018 in the Federal Register (84 Fed. Reg. 26824-26, 10 June 2019). The Corps encourages public input in the form of data, comments, literature references, or field experiences, to help clarify the status of the species reviewed for this update, as well as public input on the NWPL process. The public will have the opportunity to comment on the proposed update or addition of wetland indicator status ratings for 20 plant species in select Corps wetland regions. These 20 reviewed species and their draft 2018 wetland ratings by region, as well as the FR notice, can be viewed at the NWPL homepage, <http://wetland-plants.usace.army.mil/> under "2018 NWPL



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# 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



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# 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



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# 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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# 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



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# General Standards

## ▪ Format of submittal

- ▶ 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, via email, or via links to a secure FTP site. No flash drives!!



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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 the names of adjacent local roadways
- ▶ North arrow



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# 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



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# General Standards

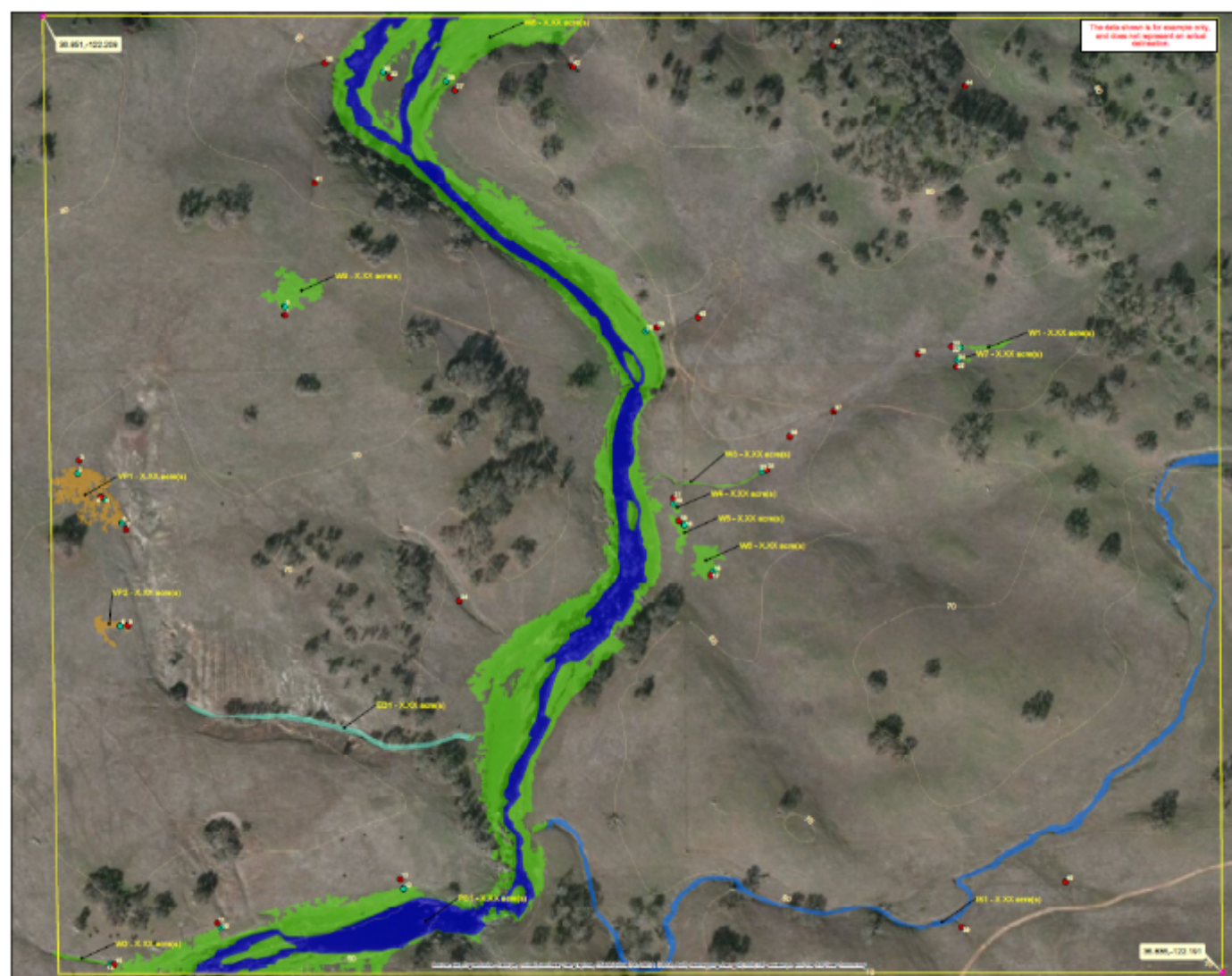
*Submission of both a location (vicinity) map AND plan view map is a minimum requirement*

## ■ 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')



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**Figure X1**  
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)



250 125 0 250  
Feet

Coordinate System: NAD 1983 UTM Zone 10N  
Projection: Transverse Mercator  
Datum: North American 1983  
Vertical Datum: NAVD83, U.S. Feet  
1 inch = 250 feet

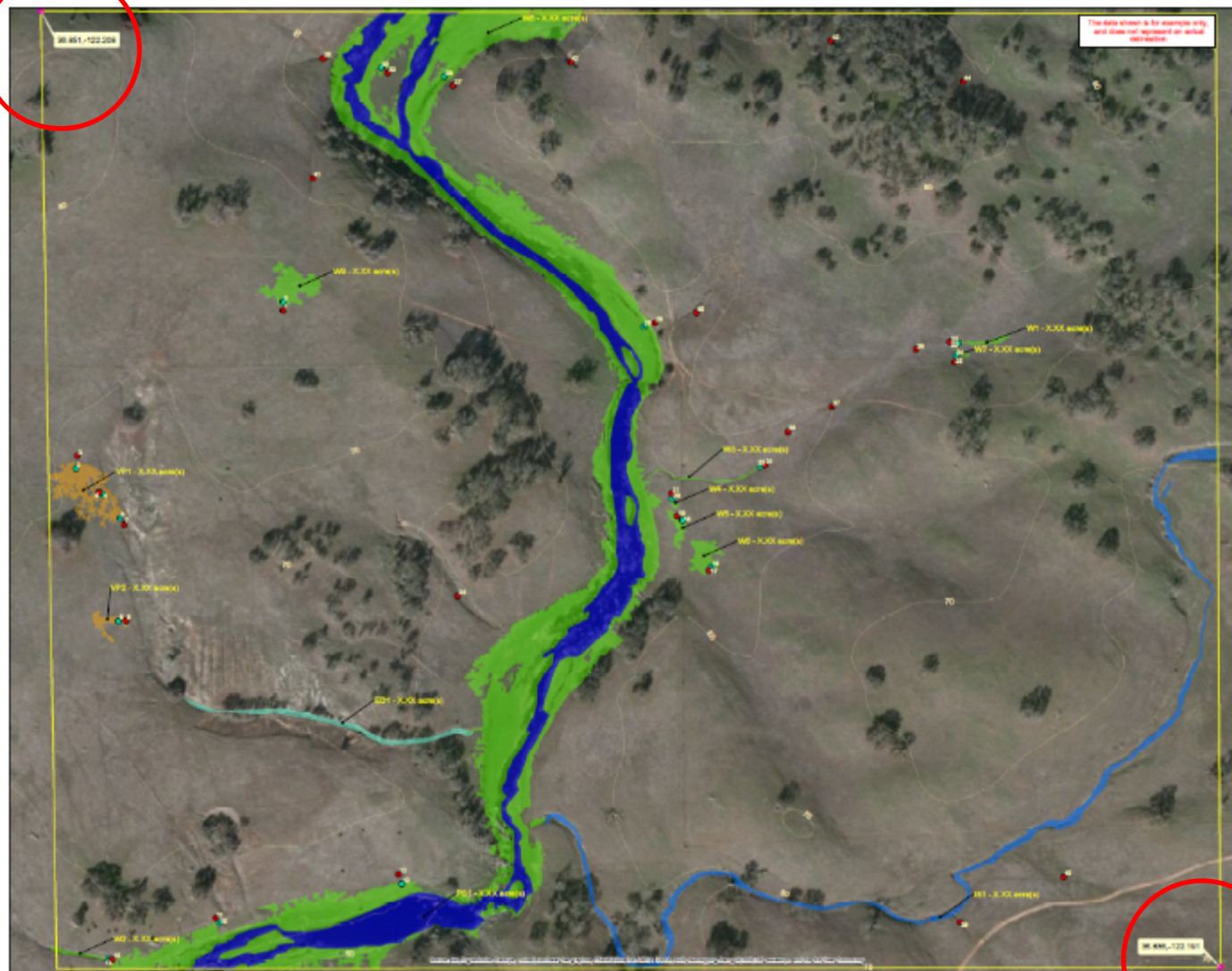
Created on April 30, 2013  
Revised on April 09, 2015

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 Regalado, Project Manager  
California South Branch  
U.S. Army Corps of Engineers  
South Pacific Division  
Sacramento District, Regulatory Division  
1325 J Street, Room 1150  
Sacramento, California 95814-3422



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**Figure X1**  
**Delineation of Wetlands and**  
**Other Waters of the U.S.**  
**for the Hypothetical Project Site**

- Legend**
- Map Reference Point
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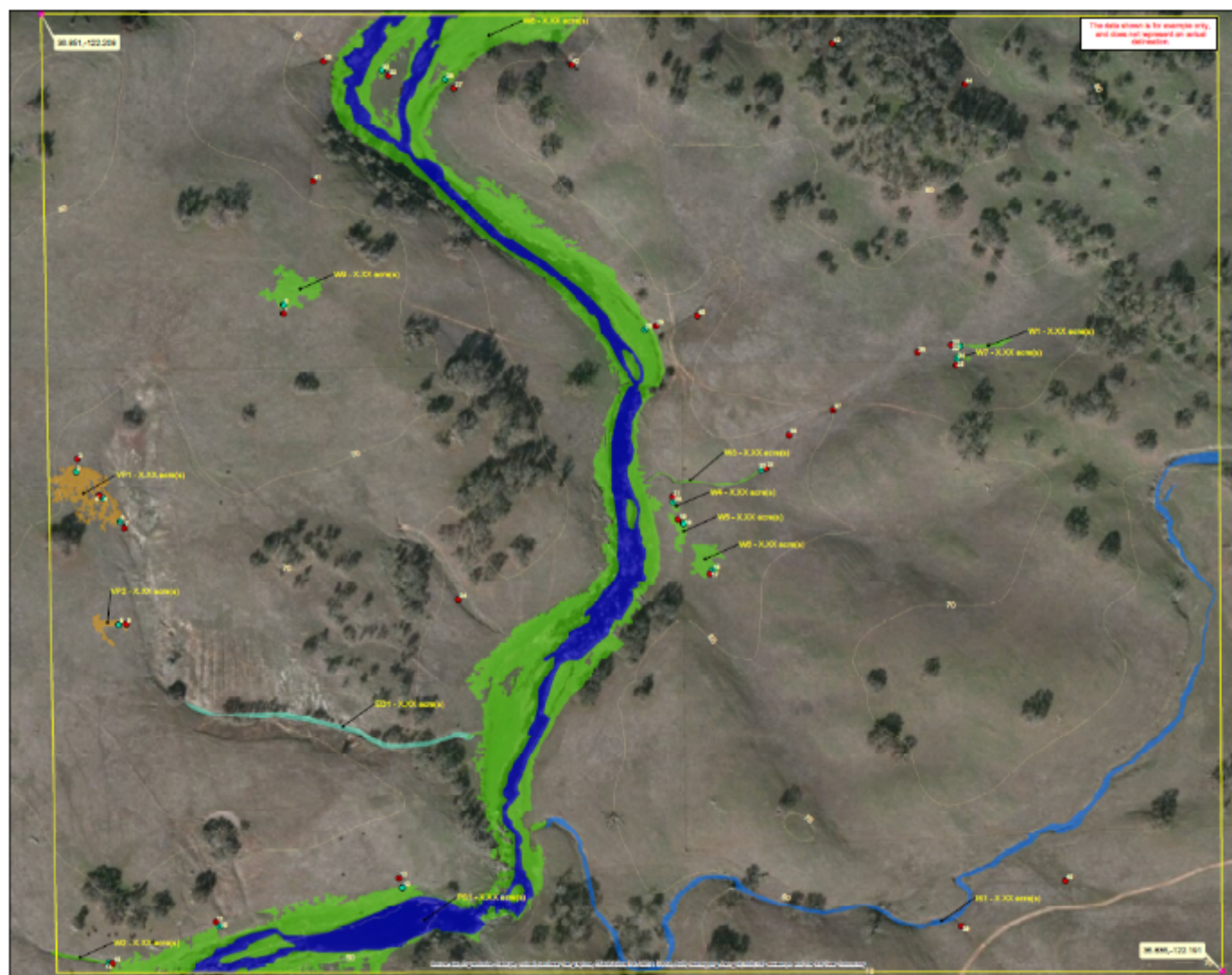
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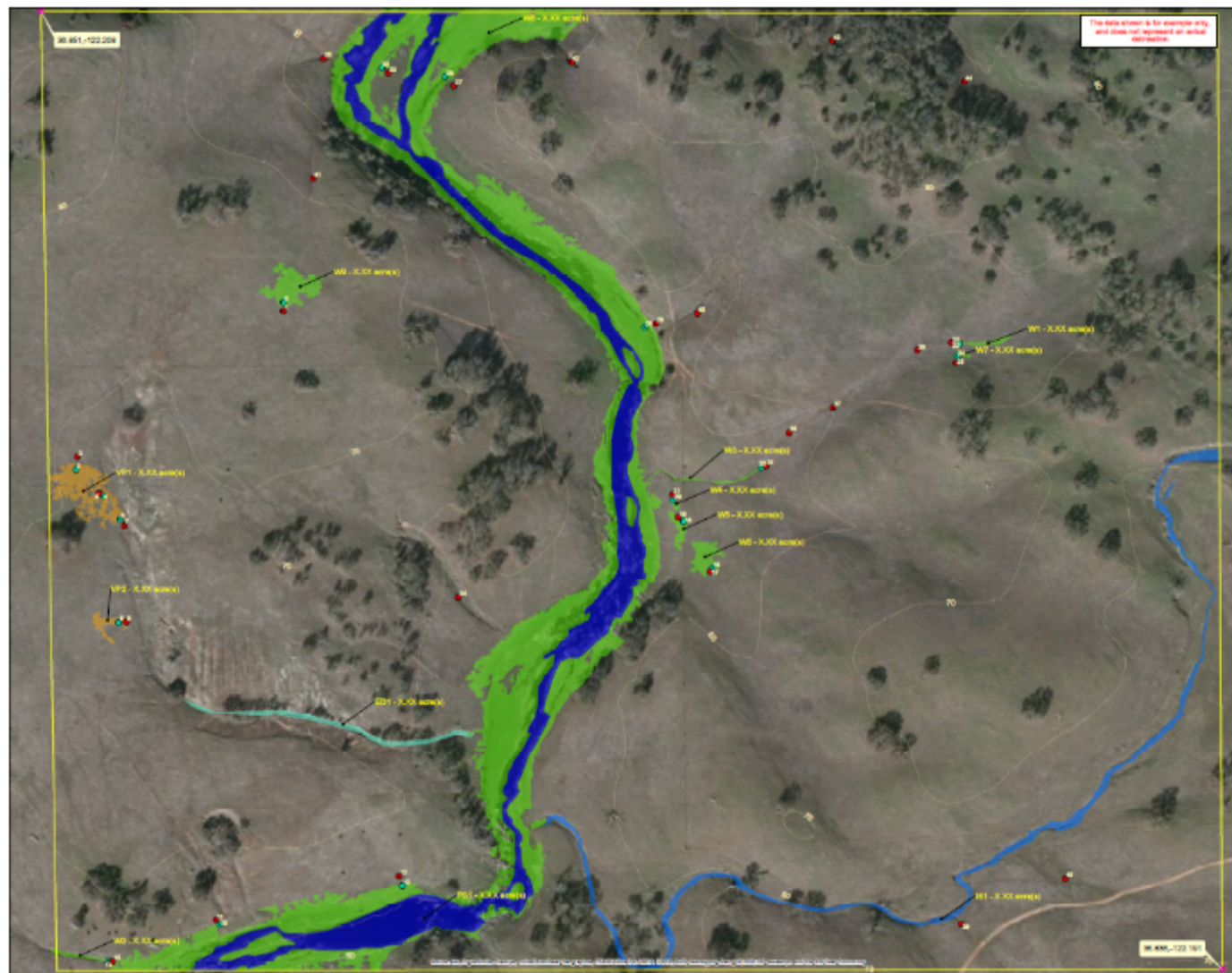
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# General Standards

## ■ 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)



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# 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
- ▶ Cross-Sectional Views are required for:
  - Identifying the location of OHWM for stream on delineation maps
  - Proposed Projects / Construction Drawings
  - Mitigation Plans / Long Term Preservation Maps
  - As-Builts / Post-Construction Drawings



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# 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 BSA <sup>1</sup>
- 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

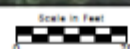
	Permanent Impacts	Temporary Impacts
Riparian Scrub Wetland	0.182	0.011
Perennial Creek	0.042	0.002
Intermittent Drainage	0.057	0.000
<b>Total</b>	<b>0.281</b>	<b>0.013</b>

<sup>1</sup> Boundary Source: City of Sutter Creek, with title based on additional project components.  
Photo Source: Microsoft 2012 (2011 World Imagery layer accessed 2/24/2015)

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



2012-106



Map Date: 3/24/2015  
Coordinate System: NAD 1983 StatePlane California II FIPS 4602 Feet



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# **Attachment 1.** **Proposed Wetland Impacts**

## **Map Features**

- Project BSA <sup>1</sup>
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- Riparian Scrub Wetland
- Other Wetlands
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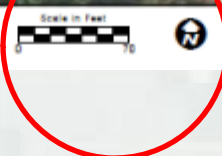
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USGS 7.5' Topographic Quadrangle: Amador City  
1:24,000



2012-1061



Map Date: 3/24/2015  
Coordinate System: NAD 1983 StatePlane California II FIPS 4602 Feet



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USGS 7.5 Topographic Quadrangle, American City

1:24,000



2012-1061

Scale in Feet  
0 70



Map Date: 3/24/2015  
Coordinate System: NAD 1983 StatePlane California II FIPS 4602 Feet



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2012-1061

Scale in Feet  
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 Photo Source: Microsoft 2011 (ESRI World Imagery layer accessed 3/24/2015)

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 1:24,000



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# Specific Standards

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

- ▶ Should be the same size and spatial alignment as the authorized 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, type of 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 and include the acreage or linear feet



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# 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.
- ▶ 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



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# 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



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# Specific Standards

## ■ Mitigation Plans and Long-Term Preservation Maps




- ▶ Standards 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.)



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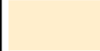



## Legend

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




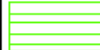

## Pre-project Delineation

### 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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# 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



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# 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



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# Questions?



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