



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.

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

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

A map of all delineated aquatic resources (“Aquatic Resources 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. Because only the Corps determines the regulatory status of each aquatic resource, the map must not include any labeling about jurisdiction. If the requestor believes one or more aquatic resources are not jurisdictional, the rationale should be included in the delineation report and the resource(s) should be identified 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. Additional data points may be necessary, and should be shown on the map, depending on various factors including the size and shape of the aquatic resource, changes in vegetation communities, and slope.

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.

Completed data forms including all essential information to make a decision.

A description of the methods used to survey the aquatic resource boundaries. For most delineations, the Sacramento District requires GPS equipment for the collection of data. At a minimum the GPS equipment must have the capability of sub-meter (≤ 1 meter) level accuracy. If other methods are used, the report must contain a rationale for this deviation.

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. Each GIS data file must be accompanied by a metadata file containing the appropriate geographic coordinate system, projection, and datum. If GIS data is unavailable or otherwise cannot be produced and the Corps determines a site visit is necessary, the aquatic resource boundaries must be physically marked with numbered flags or stakes before the Sacramento District can complete a delineation verification.

Often, additional information can expedite the verification of a delineation. Particularly helpful data includes site specific topographic maps, National Wetland Inventory (NWI), Light Detection and Ranging (LIDAR), satellite, aerial and ground photographs, floodplain maps, and related reports.

The Corps' Sacramento District developed a suggested format for aquatic resources delineation reports, which is attached to this document. This format is not required but rather is intended to assist requestors with the preparation of a delineation report in accordance with these minimum standards.

More information regarding aquatic resource delineations, including reference materials, the *Aquatic Resources Excel* spreadsheet, and the suggested format for the aquatic resources delineation report can be found on our website at:

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

**DRAFT/FINAL AQUATIC RESOURCE DELINEATION
REPORT**

Survey Name
Date

Prepared By:

Author's Name, Title
Consulting Company /Region/Cooperating Agency Name
Address
Phone Number
email

Prepared For:

Name (Role)
Company
Address
Phone Number
email

Executive Summary

Provide the following information:

- A statement that the delineation has been conducted in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual" and appropriate regional supplement(s), with the identification of what supplement was used.
AND/OR
- A statement that the delineation has been conducted in accordance with the 2008 "A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States"
 - One paragraph summary of aquatic resource findings including:
 - Number and total area of aquatic resources within project area.
 - Total acreage of the survey area
 - Dominant aquatic resource classifications and general condition of aquatic resources.

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Acronyms and Abbreviations

BMP	best management practice
cfs	cubic feet per second
LIDAR	Light Detection and Ranging
LWD	large woody debris
MP	Mile Post
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
OHWM	ordinary high water mark
PEM	palustrine emergent
PFO	palustrine forested
PSS	palustrine scrub-shrub
ROW	right-of-way
SR	State Route
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UTM	Universal Transverse Mercator coordinate system
WRIA	Water Resource Inventory Area

[add or delete acronyms and abbreviations as needed]

Chapter 1. Introduction

- Identify contact information for the applicant(s), property owner(s), and agent(s).
- Survey area description
- The purpose of this report is to identify and describe aquatic resources and, to identify known possible sensitive plant, fish, wildlife species, and cultural/historic properties in the survey area. This report facilitates efforts to:
 1. Avoid or minimize impacts to aquatic resources during the design process.
 2. Document aquatic resource boundary determinations for review by regulatory authorities.
 3. Provide early indications of known sensitive species and historic/cultural properties within the survey area.
 4. Provide background information.

Chapter 2. Location

Identify the county and state where the project is located. Also include nearest town, as well as the street address or nearest intersection, and the Section, Township and Range the UTM or latitude and longitude. Provide driving directions to the survey area.

Chapter 3. Methods

- Describe all methods used to delineate and survey aquatic resources.
- Include any deviations from standard methods. Make sure methods comply with appropriate U.S. Army Corps of Engineers Guidelines.
- If remote sensing tools were used to aid in delineation, list what tools were used and provide a copy of the maps if possible.

Chapter 4. Existing Conditions

4.1 Landscape Setting

Describe in 1-2 paragraphs the topography, geological features, major water bodies, surface water flow, community types, existing vegetation, current land use, and major recent or historical disturbances – such as logging, mining, and farming.

Include:

- The total acreage of the survey area.
- A description of existing field conditions including current land use, time of season the site visit(s) were conducted, flood/drought conditions, irrigation practices, modifications to the site, and any characteristics considered atypical.
- A discussion of whether the entire survey area was field verified. If entire survey area was not visited, identify which areas were visited and a rationale for why the entire site was not visited.

4.2 Aquatic Resources

4.2.1 Overview

Provide brief overview of the existing aquatic resource conditions:

Include the following information:

- Describe all aquatic resources depicted on the Aquatic Resources Delineation Map within the survey site (Appendix A). Provide 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.
- Provide a table listing all Aquatic Resources (Table 1). The table will include the name of each aquatic resource, its Cowardin type, acreage and location (latitude/longitude). For linear features, such as stream channels and ditches, the table must show both acreage and linear feet.
- Discuss site hydrology, including any 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.
- Describe soils including a discussion of hydric soils and soils with hydric inclusions (Appendix B).
- Provide a general discussion of plant communities and habitat types, including both scientific and common names, and the wetland indicator status of all plants (Appendix D).
- Describe 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.

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				

Chapter 5. References

Books, Journal Articles, Reports: [Author(s). YEAR Title. Publisher/Source. Volume: Page begin-Page end].

Correspondence: [Author(s). Date. Subject. Agency/Company. Pp. (pages)].

Phone: [Contact Name. Date. Subject. Agency/Company. Phone Number. Result/Action].

E-mail: [Contact Name. Date. Subject. Agency/Company. E-mail address. Result/Action].

Appendix A - Aquatic Resource Delineation Maps

A map of all delineated aquatic resources (“Aquatic Resources 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. Because only the Corps determines the regulatory status of each aquatic resource, the map must not include any labeling about jurisdiction. If the requestor believes one or more aquatic resources are not jurisdictional, the rationale should be included in the delineation report and the resource(s) should be identified on the map.
- Location of all data and photo points.
- 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.

Appendix B - Supporting Maps

This appendix must include a 7.5 USGS quadrangle location map and a soil survey map. Other helpful data should be included, such as a NWI map, site specific topographic maps, LIDAR map, satellite/aerial/ground photographs, floodplain maps, and other related maps. The survey area should be identified on all maps.

Appendix C - Photographs

All photographs should be referenced with the location and the direction the photograph was taken, along with identifying the resources present within the photograph.

Appendix D - Plant List

Plant species found within the survey area.

Use USDA Plants Database and National Wetland Plant List for the most up-to-date scientific name and Wetland Indicator Status.

Genus	Species	Common Name	WIS*

* Wetland Indicator Status (WIS):

- OBL = occurs in aquatic resources > 99% of time
- FACW = occurs in aquatic resources 67-99% of time
- FAC = occurs in aquatic resources 34-66% of time
- FACU = occurs in aquatic resources 1-33% of time
- UPL = occurs in uplands > 99% of time
- NI = indicator status not known in this region
- ~ = unsure as to FAC or FACU

Appendix E - Wetland Data Sheets

This appendix must contain 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. Additional data points may be necessary, and should be shown on the map, depending on various factors including the size and shape of the aquatic resource, changes in vegetation communities, and slope.

Data forms may be modified from the Corps' standard form but must contain all essential information to make a decision.

Appendix F - OHWM Data Sheets

This appendix includes the OHWM data sheets. Please insure to include a map identifying the location of the data points. Data forms may be modified from the Corps' standard form but must contain all essential information to make a decision.

Appendix G - A signed statement from the property owner(s) allowing access

This appendix must contain a signed statement from the property owner(s) allowing Corps personnel to enter the property and 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) in order to provide access.

Appendix H — Aquatic Resource Excel Sheet

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 current version of the spreadsheet can be found at the following website:

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

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 the appropriate columns and tabs. Once you have completed entering the data and have saved the document in a .csv format, click the gold shield at the top of the workbook window. The tool has a tooltip showing "Validate Worksheets." After clicking this button, validation of data is performed and any possible errors are added to the Validation tab. This tab is opened after the process is complete to allow the user to see the output. The validation output includes the tab (data type), column, and cell for where the possible error was found and a brief explanation of the issue.

Appendix I — Aquatic Resource Functional Assessment Forms (If Applicable)

If a functional assessment was completed, this appendix includes the aquatic resources functional assessment form of each aquatic resource delineated along with a description of the results of the assessment.