Jurisdictional Determinations and Delineating Waters of the United States, including Wetlands

Ramon Aberasturi, Jason Deters and Michael Finan

Sacramento District

October 10, 2014, Regulatory Program Workshop

ramon.aberasturi@usace.army.mil jason.deters@usace.army.mil michael.c.finan@usace.army.mil

(916) 557-5250





BUILDING STRONG_®

Commerce Clause 1789

ARTICLE I, SECTION 8, CLAUSE 3: THE CONGRESS SHALL HAVE POWER]

TO REGULATE COMMERCE WITH FOREIGN NATIONS, AND AMONG THE SEVERAL STATES, AND WITH THE INDIAN TRIBES;

a Lugle heations request

110 ordoin and

9. The House of Representation





Early Navigation Issues







H.W.H

Rivers and Harbors Act of 1899

- Navigable waters of the United States:
 - "...waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to <u>transport</u> interstate or foreign **commerce**."
 - Jurisdiction applies laterally over the entire surface of the waterbody.
 - Jurisdiction is not extinguished by later actions or events which impede or destroy navigable capacity.



1948 Federal Water Pollution Control Act

- 1956 Water Pollution Control Act
- 1961 Federal Water Pollution Control Act
- 1965 Water Quality Act
- 1966 Clean Water Restoration Act
- 1970 Water Quality Improvement Act



Cuyahoga River Fire





BUILDING STRONG®

ĬĸĬ

Clean Water Act Jurisdiction 33 CFR 328.3 (a)

- Waters currently used, used in past, or susceptible for use in interstate or foreign commerce, including waters subject to ebb and flow of the tide
- 2. Interstate waters and wetlands
- 3. Intrastate waters where destruction or degradation could affecting interstate or foreign **commerce** (HQ approval required)
 - Waters used for recreation or other purposes
 - Waters with fish or shellfish sold in interstate or foreign commerce
 - Waters used for industrial purposes
- 4. Impoundments of waters of the U.S.
- 5. Tributaries to waters in categories 1 4
- 6. Territorial seas (3 miles from shore)

7.







CORPS OF ENGINEERS REGULATORY JURISDICTION



Section 103

Ocean Disposal of Dredged Material

Typical examples

of regulated activities

Ocean discharges of dredged material

Section 404

Discharge of Dredged or Fill Material (all waters of the U.S.)

All filling activities, utility lines, outfall structures, road crossings, beach nourishment, riprap, jetties, some excavation activities, etc.

Section 10

All Structures and Work (navigable waters)

Dreding, marinas, piers, wharves, floats, intake / outtake pipes, pilings, bulkheads, ramps, fills, overhead transmission lines, etc.



Who Does Jurisdictional Determinations?

- District engineers determine:
 - Navigable waters of the U.S. (§10)
 - ► Waters of the U.S. (§404)
- Exceptions:
 - Division engineer makes navigability determinations
 - EPA makes a §404 jurisdictional determination
- 1989 Army-EPA Jurisdiction MOA
 - Based on 1979 Attorney General opinion
 - EPA has ultimate authority to determine geographic jurisdiction under §404 of the Clean Water Act



Landward Limits of Waters of the United States



1986 Migratory Bird Rule

- Habitat for birds protected under the Migratory Bird Treaties.
- Habitat supporting migratory birds crossing state boundaries
- Habitat for Endangered Species
- Irrigate crops sold in Interstate Commerce





1986 Jurisdictional Wetland







U.S. Supreme Court Cases Shaping Clean Water Act Jurisdiction

- U.S. v. Riverside Bayview (1985)
 - Michigan
 - Wetlands adjacent to a navigable waterbody are subject to CWA jurisdiction

Solid Waste Agency of Northern Cook County (SWANCC) v. USACE (2001)

- Illinois
- No CWA jurisdiction over isolated, intrastate, non-navigable waters based on use by migratory birds alone
- Rapanos v. U.S. and Carabell v. U.S. (2006)
 - Michigan
 - CWA jurisdiction applies to relatively permanent waters connected to traditional navigable waters, plus wetlands with a continuous surface connection to those relatively permanent waters (Plurality opinion)



CWA jurisdiction requires finding of significant nexus to traditional navigable waters (Kennedy opinion)



Riverside Bayview Adjacent Wetlands







SWANCC Guidance

- Issued on January 15, 2003
- Do not assert CWA jurisdiction over isolated, intrastate, non-navigable waters when sole basis is use by migratory birds
- Field staff need to seek formal, project-specific Headquarters approval before asserting jurisdiction over waters based on (a)(3) factors
 - Other waters (usually intrastate), where their degradation or destruction could affect interstate or foreign commerce
 - Recreation
 - Fish and shellfish
 - Industrial use
- Continue to assert jurisdiction over traditional navigable waters and adjacent wetlands, and generally their tributaries (and adjacent wetlands)



New data forms





SWANCC & Rulemaking

Jan 03: ANPRM solicited public comments on issues associated with CWA jurisdiction

- Water body reach
- Artificial features
- Adjacent wetlands
- 130,000 comments received on notice; majority opposed rulemaking
- Dec 03: Announcement to discontinue rulemaking



Rapanos-Carabell Guidance

- Issued June 5, 2007
- Revised December 2, 2008
- Joint guidance issued by Army and EPA
- Retains key principles provided in 2003 SWANCC guidance
 - ► HQ approval needed to assert (a)(3) jurisdiction
 - Intrastate waters where destruction or degradation could affecting interstate or foreign commerce



Rapanos-Carabell Guidance

- Jurisdictional waters (categorical findings of CWA jurisdiction):
 - Traditional navigable waters
 - Wetlands adjacent to traditional navigable waters
 - bordering, contiguous, neighboring
 - Non-navigable tributaries of traditional navigable waters that have relatively permanent flow
 - Flow year round
 - Flow seasonally (e.g., 3 months)
 - Wetlands that directly abut these non-navigable
 tributaries with relatively permanent flow



Rapanos-Carabell Guidance

- Jurisdictional waters (case-specific significant nexus analysis needed to determine if there is CWA jurisdiction):
 - Non-navigable tributaries that do not have relatively permanent flow
 - e.g., ephemeral streams
 - Wetlands adjacent to non-navigable tributaries that do not have relatively permanent flow
 - Wetlands adjacent to, but not directly abutting, a nonnavigable tributary with relatively permanent flow



CWA TNW Designations

- September 24, 2008, directive from ASA(CW)
- Additional guidance issued on October 16, 2008
- Stand-alone CWA TNW designations under §328.3(a)(1) must be elevated to Division Commanders
- ASA(CW) directive only addresses procedures
- Substantive criteria for what constitutes a CWA TNW provided by:
 - Appendix D of the Rapanos-Carabell guidance
 - December 2, 2008, Rapanos-Carabell guidance (footnote 20)



Revised Rapanos-Carabell Guidance

- December 2, 2008, revision
- Focused on three issues:
 - Clean Water Act Traditional Navigable Waters (§328.3(a)(1))
 - Definition of "adjacent"
 - Identifying the "relevant reach"





Clean Water Act Traditional Navigable Waters

- Broader than RHA §10 waters
- They include:
 - Waters determined to be navigable-in-fact by a federal court
 - Waters historically or currently used for commercial navigation
 - e.g., boat rentals, guided fishing trips, water ski tournaments
 - Evidence of susceptibility for use in future commercial navigation
 - Must be more than speculative or insubstantial
 - Clear documentation required (e.g., development plans)
 - Use caution when assessing average annual flows in "flashy waters" – daily gage data provides better representation



Adjacent Wetlands

- Regulatory definition (§328.3(c)) unchanged
- ...bordering, contiguous, or neighboring.
 Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."





Adjacent Wetlands

Three criteria clarifying "adjacent wetlands"

- 1. Wetlands with unbroken hydrologic connection;
 - Connection may be surface or shallow subsurface
 - Connection may be intermittent

or

- 2. Wetlands separated by berm or similar feature(s) from a jurisdictional water;
 - Man-made dikes or barriers, natural river berms, beach dune and the like

or

- 3. Wetlands in reasonably close physical proximity to a jurisdictional water
 - Science-based inference that wetlands have ecological interconnection with jurisdictional waters



Adjacent Wetlands with Hydrologic Connection





Adjacent Wetlands separated by berm or similar features





Adjacent Wetlands in Close Proximity









BUILDING STRONG®



Wetland Definition. The CE (Federal Register 1982) and the EPA (Federal Register 1980) jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Explicit in the definition is the consideration of three environmental parameters: hydrology, soil, and vegetation. Positive wetland indicators of all three parameters are normally present in wetlands.

Although vegetation is often the most readily observed parameter, sole reliance on vegetation or either of the other parameters as the determinant of wetlands can sometimes be misleading.





Types of Wetlands

Examples of types of wetlands include perennial or tidal marsh, seasonal wet meadows, seeps, forested wetlands, farmed wetlands and vernal pools.



Why Delineate Wetlands and Other Waters of the U.S.

- Help to define the limits of CWA jurisdiction, in accordance with current laws, regulations, and policy.
- Determine the boundary of the wetland, ditch, stream, river, lake, reservoir, playa, mudflat that may be affected by a project, as a first step in impact assessment, alternatives analysis, and mitigation.



Delineation

- Drawing waters of the United States, including wetlands, on a scaled map.
 - Minimum standards
- Majority of all wetland delineations are consultant prepared and Corps verified.
- First step in process should be a delineation
 ified by the Corps.



Wetland Delineation Manuals

Corps of Engineers Wetlands Delineation Manual

rch Program Technical Report Y-87-1 (en-line edition

by Environmental Laboratory

January 1987 - Final Report

Arid West Region (Version 2.0)



 Corps of Engineers wetland **Delineation Manual (1987) Technical Report Y-87-1**



Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region and Western Mountain






Premise for use of the manual

18. Three key provisions of the CE/EPA definition of wetlands include:

a. **Inundated or saturated soil conditions** resulting from permanent or periodic inundation by ground water or surface water.

b. A prevalence of vegetation typically adapted for life in saturated soil conditions (hydrophytic vegetation).

c. The presence of "normal circumstances."

USER NOTES: "Normal circumstances" has been further defined as "the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed." The determination of whether normal circumstances exist in a disturbed area "involves an evaluation of the extent and relative permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation" and consideration of the "purpose and cause of the physical alterations to hydrology and vegetation." (RGL 90-7, 26 Sep 90; HQUSACE, 7 Oct 91)





Wetland Characteristics 3 - Parameters

Hydrophytic Vegetation

- Dominated by species that are tolerant of prolonged inundation or soil saturation

Soils

- Exhibit characteristics that develop under permanent or periodic soil saturation

Hydrology

- Evidence of ongoing wetland conditions, typically



about 2 weeks in this region



3 – Parameter Approach





Steps to Delineate a Wetland

- Collect Background Information
- Prepare Equipment and Materials
- Conduct Site Visit
- Prepare Report & Drawings
- Submit to Army Corps for Jurisdictional Determination Letter



Delineation Report Minimum Standards http://www.spk.usace.army.mil/

MINIMUM STANDARDS FOR ACCEPTANCE OF PRELIMINARY WETLANDS DELINEATIONS

November 30, 2001

The Regulatory Branch of the Sacramento District, U.S. Army Corps of Engineers (District), receives numerous requests to perform wetlands delineations for potential applicants for permits under Section 404 of the Clean Water Act. Due to limited staff and resources, the response time can be several months or longer. To expedite this process, the District encourages applicants to use consultants to conduct preliminary wetlands delineations, especially for large and/or complex areas. Preliminary delineations may then be submitted to the District for review and verification.

While accurate delineations by qualified individuals have resulted in a quicker review and response from the District, substandard or inaccurate delineations have resulted in unnecessary time delays for applicants. These delays are due to insufficient, incomplete, or conflicting data, which prevent the District from verifying the proposed wetland boundaries. Such delineations must be returned by the District to the applicant or consultant for revision.

To improve the quality and consistency of delineations, the District has developed minimum standards necessary for accepting a delineation for verification of the jurisdictional boundaries. Any submittal that does not meet these requirements will be returned to the applicant or consultant. All deficiencies must be corrected by the applicant or a consultant prior to re-submittal.

A. MINIMUM REQUIREMENTS

The preliminary wetlands delineation report shall include:

- A statement that the delineation has been conducted in accordance with the 1987 "Corps of Engineers Wetlands Delineation Manual."
- A narrative describing the wetlands.
- Justification for the wetlands boundaries.
- The total acreage of the project site.
- Existing field conditions such as season and flood/drought conditions.
- A discussion of the hydrology source(subsurface or surface, including potential irrigation influence) and drainage gradients.
- A site location map, preferably outlined on a 7.5-minute USGS quadrangle, along with any other pertinent maps of the site. The map must provide the name of the USGS quadrangle, Section, Township, Range, and UTM or latitude and longitude.
- Directions to the site.
- Contact information for the applicant(s) and property owner(s).
- A discussion of plant communities and habitat types present on the site and a list of the scientific name, common name(s), and indicator status of all plants.
- □ Soil descriptions, soil map(s), and a list of hydric soils or soils with hydric inclusions on the site.
- Any observed and/or documented examples of an interstate or foreign commerce connection. Examples include, but are not limited to:
 - · Recreational or other use by interstate or foreign travelers.
 - · Sale of fish or shellfish in interstate or foreign commerce.
 - Use by industries, including agriculture, operating in interstate or foreign commerce.
- □ A delineation map at an appropriate scale (for most projects, a scale of one inch to 100 or 200 feet).

MINIMUM STANDARDS FOR ACCEPTANCE OF PRELIMINARY WETLANDS DELINEATIONS

The map should not exceed one inch to 400 feet unless there are extenuating circumstances. (Note: map scales must be accurate and in round numbers, any maps using a photographic base must be corrected for distortions, and any overlays must be of identical scale) The map must include:

- · The boundary of the entire project area.
- · All features which meet the criteria for wetlands or other waters of the United States.
- · Color or thatched coding of the different wetlands types present.
- Topography.
- Clearly and accurately identified data point locations and the location and identification number of surveyed or GPS established flags, stakes, or wetland boundaries.
- All waters of the U.S., including but not limited to, interstate waters, tributaries, wetlands, and all other waters such as intrastate lakes, rivers, streams, and mudflats as described in 33 CFR 328.3, must be shown on the delineation map. Those features which meet wetlands criteria or are potential waters of the U.S., but which may be isolated and lacking an interstate or foreign commerce connection or non-jurisdictional for other reasons must still be shown on the map. Any justification for the Corps to make a non-jurisdictional determination should be provided in the report.
- Standard mapping conventions (e.g., north arrow, location map, etc.) and other identifying features which facilitate the correlation of map locations with ground features (e.g., buildings, fence lines, roads, right-of-ways, trees, streams, topographic features, etc.).
- A reference block which identifies the project, the delineators, surveyors, date of initial
 preparation and date(s) of any revisions.
- Individual numbers or other designations for each water feature identified.
- A table displaying the respective size (in acres) of each water and the cumulative acreage of each type of water.
- Data sheets completely and appropriately filled out. Data forms may be modified from the Corps' standard version, but they must present all essential information necessary to make a wetlands/nonwetlands determination.
- At least one set of paired data points documented for each feature or complex. Additional data forms may be necessary depending on various factors including the size and shape of the wellands on the site, difficulty in identifying a precise wetlands/uplands boundary, and the width of any transition zones.

Additionally, before the Corps can complete its verification of the delineation, wetland boundaries must be marked with flags or stakes. Flags or stakes must be individually numbered and surveyed by traditional methods or by GPS equipment accurate to less than one meter. The survey data must specify the geographic coordinate system used in referencing the data, including projection and datum (e.g., Latitude-Longitude : NAD-27 or UTM - Zone 10 : NAD83). Data should be provided in a digital geographic information system (GIS) format to expedite review, with ESRI Shapefiles being the preferred format. The Corps also strongly recommends that property boundaries be flagged or staked and surveyed.

Additional information often can expedite a wetland verification. Particularly helpful data includes topographic maps, aerial and ground photographs, and related reports. Expanded narrative reports may also clarify the investigation. However, the Corps emphasizes that these reports should be succinct with only the relevant information presented. Irrelevant, verbose, or perfunctory information will only delay the Corps' evaluation.

41

Minimum Standards for Wetland Delineations

- Wetland delineation reports should justify and document the rationale for the wetland boundaries drawn on the map.
 - At least one set of paired points documented for each feature or complex in the right places!
 - All info used in the delineation should be included in the report (e.g. Aerial & topographic maps)



Davenport - Juniper



Background Information

- Manuals Identifying Protocol
- USGS Maps
- Aerial Photos: Google and Bing Maps now have bird's eye view photos
- National Wetland Inventory (NWI Maps)
- NRCS Soils Maps Web Soils Surveys
- FEMA Flood Insurance Rate Maps



Off-Site Methods

Available office data can be used:

- To provide background and supporting information to plan and carry out an onsite wetland delineation
- To determine presence of wetlands and draw approximate wetland boundaries when it is not possible to visit the site or when study objectives are limited





Off-Site Methods

Off-site procedures are described in:

- Corps of Engineers Wetlands Delineation Manual (Part IV, Section D, Subsection 1)
- National Food Security Act Manual (Parts 513 and 514) in combination with state wetland mapping conventions





Off-site sources of information are used to plan and carry out an onsite investigation



Aerial photography (e.g. Google Earth, Bing Maps)











Î. M



BUILDING STRONG_®





USGS topographic maps











BUILDING STRONG®

Consolidated Farm Services Agency annual cropcompliance slides



BUILDING STRONG®



15 Areis Corps al Pagiosors

Draft Environmental Impact Statement on the Special Area Management Plan for the Hackensack Meadowlands District, NJ

June 1995



is partneship with

National Counic and Atmospheric Administration New Jensey Department of Environmental Protection Hackensack Meadowlands Development Commission



xisting environmental impact ^L atements



Soil Survey Reports







United States Department of Agriculture Soil Conservation Service n cooparation with The University of Hawaii Agricultural Experiment Station swed August 1372

General soils map



BUILDING STRONG®

Data Sources on the Web

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

Page.htm

- http://www.fws.gov/wetlands/Data/Mapper.ht ml
- Soil survey reports and data:

http://websoilsurvey.nrcs.usda.gov/app/Hom









BUILDING STRONG®





Equipment and Materials for the Field

- Base Map or Aerial Photo
- Copies of Wetland Data Sheet
- National List of Plant Species that Occur in Wetlands
- Hydric Soils List
- Spade, Auger, Probe
- Spray Water Bottle to Moisten Soils
- Munsell Color Book
- Tape Measure
- Flagging





O, NRCS



Field Indicators of

Hydric Soils in the





Wetland Delineation Methods

 Routine – In general based on visual estimates of percent cover of plant species made either within the vegetation unit as a whole or within one or more sampling plots in representative locations

 Comprehensive – A detailed delineation requiring the collection of quantitative data





Routine Methods

- Use the routine method for small areas when:
- Project area is small (<5 acres)
- Plant communities are homogeneous
- Plant community boundaries are abrupt
- Project is not controversial





Routine Method Steps

- Step 1. Locate the project area
- Step 2. Is the area disturbed such that procedure for Atypical Situations must be used?
- Step 3. Select a sampling approach (small or large area)
- Step 4. Identify and map the plant community types
- Step 5. Determine whether "normal environmental conditions" are present (i.e., is it a potential Problem Area wetland?)
- Step 6. Select a representative observation point in each plant community



Paved Road (Rt. 45)



Routine Method Steps cont.

- Step 7. Visually select dominant species from each stratum of the community
- Step 8. Record the indicator status of each dominant species
- Step 9. Determine whether the vegetation is hydrophytic







US Army Corps of Engineers North American Digital Flora: National Wetland Plant List



<u>The NWPL has been made available for use.</u> <u>Click here to download NWPL 2012 Plant Lists</u>

Version 3.0 of the NWPL website is now available for use. Please bookmark: http://wetland_plants.usace.army.mil

ABOUT NWPL OVERVIEW NWPL NOMENCLATURE ACKNOWLEDGEMENTS CITATION INFORMATION

PROPOSE NEW SPECIES

ALL BOTANICAL SEARCHES

DOWNLOAD PANEL MEMBERS R3 EXTERNAL BOTANIST VOTERS FWS 1988 AND 1996 LISTS

NWPL and NTCWV Documents

ADMINISTRATION

HELP USING THIS WEBSITE

Final Federal Register Notice NWPL Release Announcements.

Questions or Comments? Contact us!















Images courtesy of BONAP et. al.

Quaking Aspen



ľнĭ

US Army Corps

of Engineers

Partners



Wetland Vegetation Is Present When...

 More than 50% of dominant species across all strata are OBL, FACW, or FAC

or

The prevalence index is 3.0 or less

or

 There are morphological adaptations and problematic conditions explained in the remarks section of the data sheet

Remember '+' and '-' modifiers are not used in hydrophytic vegetation indicators and hydric soils and hydrology must be present to use the

prevalence index unless the site is problematic



Regional Supplement Data Form

VEGETATION - Use scientific names of plants.

	Absolute	Domi	nant Indicator	Dominance Test workshee	et:	
Tree Stratum (Plot size:)	% Cover	Speci	ies? <u>Status</u>	Number of Dominant Specie	es	
1				That Are OBL, FACW, or FA	AC:	(A)
2.						
3	125			Species Across All Strate:		
				Species Across Air Strata.		(D)
4		· · · ·		Percent of Dominant Specie	25	
Sapling/Shrub Stratum (Plot size:)		= Tote	al Cover	That Are OBL, FACW, or FA	AC:	(A/B)
1.				Prevalence Index workshe	et:	
2.			1.06M //1	Total % Cover of:	Multiply by:	
3			×	OBL species	x 1 =	_
4.				FACW species	x 2 =	_
5.				FAC species	x 3 =	
2m		= Tota	al Cover	FACU species	x 4 =	
Herb Stratum Reed Canar (Phalaris arun) dinacea)	50	Yes	OBI	UPL species	x 5 =	_
1Narrowleaf Cattail (Typha angustifolia)		Y es		Column Totals:	(A)	(B)
2Annual ragweed (Amborsia artemisiifolia)	10	No				
3Rabbitsfoot grass (Polynogon monspeliensis)		No		Prevalence Index = B	/A =	
4			<u> </u>	Hydrophytic Vegetation In	dicators:	
5				Dominance Test is >50	%	
6.				Prevalence Index is ≤3.	.0 ¹	
7	- 101	. 200		Morphological Adaptati	ons ¹ (Provide suppo	rting
e	050/			data in Remarks or o	on a separate sheet)	
o	- - 85%			Problematic Hydrophyti	c Vegetation ¹ (Expla	in)
Moody Vine Stratum (Plot size:	· · · · · · · · · · · · · · · · · · ·	$_{=}$ lota	al Cover			
				¹ Indicators of hydric soil and	wetland bydrology	must
				be present, unless disturbed	d or problematic.	nast
2		A-A				
		_ = Tota	al Cover	Hydrophytic X		
% Bare Ground in Herb Stratum % Cover of Biotic Crust			Present? Yes	No		
Wetland vegetation near edge of a la	aroe marsh	Veget	ation is robust			
Remarks. Howand regelation near eage of a k	arge maren	, rogot				
US Army Corps of Engineers Arid West – Version 2.0						

Routine Method Steps cont. for Hydrology

- Step 10. Record indicators of wetland hydrology
- Step 11. Determine whether wetland hydrology is present





Wetland Hydrology Indicators

Primary Indicators: 1 required – Surface Water, High Water Table, Saturation, Water Marks, Sediment Deposits, Drift Deposits, Surface Soil Cracks, Inundation Visible on Aerial Imagery, Water Stained Leaves, Salt Crust, Biotic Crust, Aquatic Crust, Aquatic Invertebrates, Hydrogen Sulfide Odor, Oxidized Rhizospheres, Presence of Reduced Iron, Recent Iron Reduction in Tilled Soils, Thin Muck Surface



Wetland Hydrology Indicators

 Secondary Indicators: 2 or more required – Water Marks (riverine), Sediment Deposit (riverine) Drift Deposit (riverine), Drainage Patterns, Dry-season Water Table, Crayfish Borrows, Saturation Visible on Aerial Imagery, Shallow Aquitard, FAC-Neutral test (OBL + FACW) > (FACU + UPL)





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 Rainfall

WETS tables

- USDA National Water and Climate Center
- 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)


Hydrology Section of Datasheet

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)				
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Thin Muck Surface (C7) Other (Explain in Remarks) 	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ng Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) X		
Field Observations:				
Surface Water Present? YesNo Water Table Present? Yes X No Saturation Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monito Aerial photos	Depth (inches): Depth (inches): <u>12 inches</u> Depth (inches): <u>8 inches</u> ring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes X No No		
Remarks: Soils saturated in upper part of profile. Surface water was observed near the sample point approximately 25 feet to the north.				

US Army Corps of Engineers

Arid West - Version 2.0



BUILDING STRONG_®

Routine Wetland Method Cont. for Hydric Soils

- Step 12. Determine whether the soil must be characterized. The soil is assumed to be hydric if:
 - All dominant species are OBL, or
 - All dominants are OBL or FACW and the wetland boundary is abrupt
- Step 13. If needed, dig a soil pit (at least 20 inches deep)



Hydric Soils

 Hydric soil – is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Saturation or inundation, when combined with microbial activity in the soil, causes the depletion of oxygen. This promotes certain biogeochemical processes, such as the accumulation of organic matter, and the reduction, translocation, or accumulation of iron and other reducible elements.



Soils



Conservat

Field Indicators of Hydric Soils in the United States A Guide for Identifying and Delineating Hydric Soils, Version 7.0, 2010



NRCS Field Guide



Depleted Soil



Redoxomorphic features



BUILDING STRONG®



Soil Profile Description

- Matrix Soil Color All Soil must be moist (Hue value/chroma)
- Matrix Percent What percent of the soil profile is that color
- Redox Features If present record the color of the redox feature
- Redox Percent Record the percent of redox features in the soil
- Redox Type Location Concentration, depletion, reduced matrix, covered or coated sand grains and location either in the matrix or pore lining of roots

Consuling Daint

Texture – Loamy, Sandy or Clayey

			Redox Features			Matrix			epth
-	Remarks	<u> </u>	Loc ²	Type	%	Color (moist)		Color (moist)	inches)
		Loamy				· · · · · · · · · · · · · · · · · · ·	100	10YR 3/1	0-9
	Redox Prominent	Loamy	Μ	С	5	10YR 5/6	95	10YR 4/1	9-20
-		<u></u>			<u>- 191</u>		- <u></u>	<u>,</u>	
		 (2	·		
- Ww				2	-10			~	
-				· · · · · · · · · · · · · · · · · · ·			• ST	-	

Soil Indicators

 Once you have the soil description read through the soil indicators to see it one or more fit the soil profile description. Be sure to include if any restrictive layers were present and remarks that further describe the soil.

Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) 	 Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) 	 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
 Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) 	Redox Depressions (F8) Vernal Pools (F9)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present): Type: <u>None</u>		Hudria Sail Present? Vac X
Remarks: Soil meets indicator criteria	a. In addition, soil is in OBL domin	ated vegetation sample point.

Finalizing the Datasheet

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Big Development	City/County: Utah		Sampling Date ne 12, 2011		
Applicant/Owner: Mr. Big	5.5 94	State: UT	Sampling Poi <mark>f</mark> t:		
Investigator(s): Mr. Consulting	Section, Township, Ra	nge: <u>10, T 5 South, R</u>	2 East		
Landform (hillslope, terrace, etc.):Hillslope	Local relief (concave,	convex, none): <mark>CONCAVE</mark>	Slope (%) <mark>2</mark>		
Subregion (LRR): D Interior desert Lat:	41.1234	Long: <u>-111.1234</u>	Datum:		
Soil Map Unit Name: Ironton Silt Loam		NWI classific	ationPEM		
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No_	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are '	'Normal Circumstances" p	oresent? Yes No		
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If ne	eded, explain any answe	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sampled within a Wetlar	Area X nd? Yes	No		
Remarks:					

U.S.ARMY

Wetlands Delineations Cont.

- Step 14. Flag the site
- Step 15. Survey or GPS locate the wetland flagging and create a wetland delineation map
- Step 16. Prepare a delineation report
- Step 17. Submit to the Corps for verification



Finalizing and Flagging the Wetland Line



U.S.ARM

BUILDING STRONG®

Delineation Map



Routine Method for Large Areas

Establish a baseline

Determine the number and position of transects

Sample points along the first transect:

- Determine whether "normal environmental conditions" are present
- Establish an observation point in the first plant community, characterize vegetation, soil, and hydrology, and record Make the wetland determination at that point Sample remaining points on that transect Determine the wetland boundary between points Sample the remaining transects, synthesize data mine the wetland boundary between transects



Additional Sample Points Depending on Site Complexity



U_S_ARM`

BUILDING STRONG

Is this a seasonal wetland or a vernal pool?





Goldfields, Lasthenia fremontii



Horned downingia Downingia bicornuta



Wooly marbles Psylocarphys sp.

Species



Common Vernal Pool Plant

Vernal pool monkeyflower Mimulus tricolor



Blow wives Achyrachaena mollis



Coyote thistle Eryngium vaseyi



Butter and eggs Tryphysaria eriantha



Blennosperma nannum



Field owl's clover Castilleja campestris



VP buttercup

Ranunculus

bonariensis

Popcorn flower Plagiobothrys stipitatus



Vernal pool dodder Cuscuta howelliana



Lasthenia glaberima



White-tipped clover Trifolium variegatum



Navarretia leucocephala





Spikerush, Eleocharis



White meadowfoam Limnanthes alba







Tidy-tips

Lavia fremontii



Problem Areas/Atypical Situations

<u>Atypical Situations</u>: Wetlands affected by or induced by recent human activities or natural events.

May include unauthorized activities (e.g., filled wetlands), natural events (e.g., beaver dams) and man-induced wetlands (e.g., road fill impounds water)

Problem Areas: Wetland types or conditions which make application of one or more parameter difficult.

Includes periodic lack of parameter (e.g., hydrology) due to <u>normal</u> seasonal or annual variations in environmental conditions which result from causes other than human activities or catastrophic events (e.g., seasonal wetlands, cluding vernal pools)



Common Atypical/Difficult Situations

- Wetlands in irrigated areas
- Drainage ditches
- Channelized streams
- Isolated wetlands
- Farmed wetlands







US Army Corps of Engineers 12510-SPD SOUTH PACIFIC DIVISION REGULATORY PROGRAM WETLANDS DETERMINATION AND DELINEATION PROCEDURES FOR IRRIGATED LANDS



South Pacific Division

Table of Contents

- 1.0 Purpose
- 2.0 Applicability
- 3.0 References
- 4.0 Related Procedures
- 5.0 Definitions
- 6.0 Responsibilities
- 7.0 Procedures
- 8.0 Records & Measurements
- 9.0 Attachments
- 10.0 Flow Chart

1.0 Purpose.

To provide guidance for determining whether, and to what extent, wetlands occurring on irrigated land would persist in the absence of irrigation and meet the definition of wetlands under the 1987 Corps of Engineers (Corps) Wetland Delineation Manual (1987 Manual) and the appropriate regional supplement.

12500-SPD SOUTH PACIFIC DIVISION REGULATORY PROGRAM IRRIGATED WETLANDS DELINEATION PROCEDURES

1.0 Purpose.

To provide guidance for determining whether, and to what extent, wetlands occurring on irrigated land would persist in the absence of irrigation and meet the definition of wetlands under the 1987 Corps of Engineers Wetland Delineation Manual, including the appropriate regional supplement, and thus be potentially subject to jurisdiction under Section 404 of the Clean Water Act (CWA).

2.0 Applicability.

This memorandum applies to jurisdictional determinations made by South Pacific Division (SPD) subordinate Districts for wetlands which may be supported in whole or in part by irrigation water ("irrigated wetlands"). This includes, but is not limited to areas in rice production and irrigated pastureland.



IRRIGATED WETLANDS

This guidance is intended solely to address identifying wetlands that would exist, absent irrigation. It is not intended to address the jurisdictional status of any wetlands nor issues relative to permitting work in such wetlands or mitigating impacts to such wetlands.

This guidance is intended to be consistent with all applicable Corps of Engineers delineation standards. Delineations, verifications and subsequent jurisdictional determinations within SPD are based on a preponderance and a synthesis of all of the available data in accordance with Corps regulations and standards, including those listed below. If any conflict arises, existing Corps regulations, guidance and standards take precedence.







Resources



Dat Le Property 1937 Aerial 1" = 1000'



Dat Le Property 1957 Aerial 1" = 1000'

BUILDING STRONG®



Kinds of Hydrologic Data

Groundwater wells 6" RISER 12-18" SCREEN 3" AUGER HOLE

U.S.ARMY

BUILDING STRONG®

CAP

BENTONITE AND SOIL MIXTURE

GROUT SEAL BENTONITE SEAL

SAND PACK

WELL POINT





ntt





pret

- - mount

What is the Ordinary High Water Mark?

"The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." 33 CFR 328.3(e)





CORPS OF ENGINEERS REGULATORY JURISDICTION



Section 103 Ocean Disposal

of Dredged Material

Typical examples

of regulated activities

Ocean discharges of dredged material

Section 404

Discharge of Dredged or Fill Material (all waters of the U.S.)

All filling activities, utility lines, outfall structures, road crossings, beach nourishment, riprap, jetties, some excavation activities, etc.

Section 10

All Structures and Work (navigable waters)

Dreding, marinas, piers, wharves, floats, intake / outtake pipes, pilings, bulkheads, ramps, fills, overhead transmission lines, etc.

RGL 05-05

- a. Purpose. To provide guidance for identifying the ordinary high water mark.
- b. Applicability. This applies to jurisdictional determinations for non-tidal waters under Section 404 of the Clean Water Act and under Sections 9 and 10 of the Rivers and Harbors Act of 1899.



In making OHWM determinations, Corps districts generally rely on physical evidence to ascertain the lateral limits of jurisdiction, to whatever extent physical evidence can be found and such evidence is deemed reasonably reliable.

Physical indicators include the features listed in the definitions at 33 CFR Sections 328.3(e) and 329.11(a)(1) and other appropriate means that consider the characteristics of the surrounding areas.



The following **physical characteristics** should be considered when making an OHWM determination, to the extent that they can be identified and are deemed reasonably reliable:

- Natural line impressed on the bank
- Shelving
- Changes in the character of soil
- Destruction of terrestrial vegetation
- Presence of litter and debris





- Wracking
- Vegetation matted down; bent, or absent
- Sediment sorting
- Leaf litter disturbed or washed away
- Scour
- Deposition
- Multiple observed flow events
- Bed and banks
- Water staining



Change in plant community



Photo 28. Ephemeral tributary, Converse County, WY. White lines mark approximate location of OHWM.



Photo 22. Desert ephemeral tributary, Los Angeles County, CA.



Photo 20. Unnamed ephemeral tributary, TX. Water flows typically during and after storm events. Yellow lines mark approximate location of OHWM.





Photo 37. Wetland is adjacent to a non-RPW, AR. Red lines mark approximate location of OHWM.

Photo 29. Ephemeral tributary, a concrete flood control channel, Santa Barbara, CA.



Photo 27. Red Stone Creek (ephemeral tributary), Larimer County, CO. White line marks approximate location of OHWM.





Photo 42. Impoundment on an RPW, South Atlantic Division. Water flows into a TNW; water is jurisdictional under the CWA. Red lines mark the approximate location of the OHWM.



Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition	the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting scour multiple observed or predicted flow events
sediment deposition	multiple observed or predicted flow events abrupt change in plant community
 other (list): Discontinuous OHWM.⁷ Explain: 	

Where is the Ordinary High Water Mark?





BUILDING STRONG®

OHWM Delineation Manuals





BUILDING STRONG®

OHWM Delineation Manuals

Arid West





Western Mountains







www.erdc.usace.army.mil/ohwm

BUILDING STRONG®

The Active Channel



- The area of a stream system within which the local hydrologic regime and geomorphic processes are effective in maintaining a linear topographic depression on the landscape, typically characterized by the presence of a bed and banks
- Note changes in terminology since the 2008 manual:
 - bankfull channel now referred to as the low-flow channel
 - active floodplain now referred to as the active channel
 - low terrace now referred to as the floodplain







At OHW	L	 Benches Formed by the removal of previously aggraded sediment Located near the below/at OHW boundary and potentially near the at/above boundary (Fig. 13)
	K	 Drift (organic debris larger than twigs) Tends to be oriented in the direction of flow (Lichvar et al. 2006) Often collects behind/in obstructions or is simply deposited by receding flow
	L	 Exposed root hairs below intact soil layer Exposed by erosion of sediment Tend to be located along the above/at OHW boundary or where benches have formed
	M	Change in particle size distribution - Transition from coarser to finer sediment common - Likely to occur near the at/below OHW boundary (Fig. 13)
	- A CARD A AND A	108
At OHW	 Germination of seedlings after drawdown of recent event May be either wetland or upland species 	
--------------	---	
	 Intermittently active inside meander bar above bankfull Zonation of vegetation varies from devoid at bottom, where it's most active, to sparse on the intermittently active bar and fully vegetated outside active area 	
	 Most active area is barren in foreground Above OHW is a thick shrub zone in background lacking physical removal from higher discharge events 	
Above OHW	 Vegetation thickens above OHW zone due to lack of disturbance from moderate events 	
	 Old incised channel with active and bankfull zones Light green shrubs located on upper active zone Upper active zone maintained as evidenced by exposed soil surfaces Majority of all events sizes retained within the incised channel walls 	

OHWM Concept

CFR definition potentially vague, but we know...

- Average flow < OHWM flow < Extreme flow
 - Recurring flow levels
 - But no strict flow definition
- A Geomorphic, not hydrologic, approach
 - Physical expression on landscape the Active Channel
 - ► The "active channel signature"
 - Break in slope
 - Change in sediment characteristics
 - Change in vegetation characteristics
- OHWM ideally associated with indicators that are relatively stable/consistent over time







- In some cases, the physical characteristics may be misleading and would not be reliable for determining the OHWM. For example, water levels or flows may be manipulated by human intervention for power generation or water supply.
- For such cases, districts should consider using other appropriate means to determine the OHWM.



- Such other reliable methods that may be indicative of the OHWM include, but are not limited to:
- Iake and stream gage data
- elevation data
- spillway height
- flood predictions
- historic records of water flow
- statistical evidence.





To the maximum extent practicable, districts generally **use more than one** physical indicator or other means for determining the OHWM.











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

<u>Introduction</u>: 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 South Pacific Division (comprised of Albuquerque, San Francisco, Sacramento, and Los Angeles districts) already meet the majority of these standards. By adhering to a single standard for maps and drawings, applicants and consultants should have a clear and concise product, and project managers should be able to provide permit decisions and jurisdictional determinations in a more consistent and timely manner. In addition, electronic mapping of permit-related maps and



BUILDING STRONG_®

5) Delineations of waters of the U.S .:

- a. Plan view maps must be provided.
- b. Cross-sectional view drawings must be provided at the Corps project manager's discretion. Examples of when cross-sectional view drawings would be appropriate include stream or wetland restorations, stream crossings, proposed structures, and delineations of tidal areas.
- c. Clearly show location and extent of all areas potentially meeting the criteria for waters of the U.S., including special aquatic sites (e.g., wetlands, sanctuaries and refuges, mudflats, vegetated shallows, and riffle and pool complexes), and/or navigable waters. Each type of boundary (for example, ordinary high water mark, mean high water, wetlands or other special aquatic sites, and high tide line) must be clearly annotated and/or symbolized to ensure they are differentiable on the map..
- d. The survey area boundary must be clearly annotated and/or symbolized and must include all potential waters of the U.S. The survey area boundary encloses the spatial area for which a Corps jurisdictional determination is being requested. Show locations of any wetland delineation or ordinary high water mark data points, labeled according to the number of the corresponding wetland delineation form or ordinary high water mark data sheet. Generally, a wetland boundary must be based on sets of at least two wetland delineation data points, one within the proposed wetland boundary and one outside it.
- e. Include representative ordinary high water mark (OHWM) widths where measured in the field (averages may be acceptable for uniform channel reaches). OHWM widths must be shown with a transect/profile line (e.g., A-A') labeled with the corresponding width measurement in feet. In some cases, a corresponding cross section may be required, in which case the cross section must include the corresponding OHWM elevations.
- f. Include information not directly related to a delineation of waters of the U.S. on a separate map(s).
- g. If there are tidal areas within the survey area, identify the location and elevation of Mean High Water and the High Tide Line on all maps and cross-section drawings.
- Each line or polygon representing a water of the U.S. must be labeled with a unique name (for example, WL1, WL2, VP1, VP2, STR1, STR2, etc.). The delineation report must be accompanied by the attached <u>Aquatic Resources.xlsx</u> table (Excel file format).
- If impact areas within waters of the U.S. are shown, those must also be labeled with a unique name (for example,). In this case, the delineation report must also be accompanied by the attached <u>Impacts.xlsx</u> table (Excel file format).
- j. If submitted, delineation-related GIS data must use the unique names as described above and conform to the Aquatic Resources.xlsx and Impacts.xlsx data tables and must include a text file of metadata, including datum, projection, and mapper contact information.



BUILDING STRONG®

Aquatic-Resources-SPK-190109804-Delta Wetlands.xlsx

	A	В	C	D	E	F	G	Н		
1	Waters_Name	Cowadin_Code	HGM_Code	Measurement_Type	Amount	Units	Waters_Types	Latitude	Longitude	Local_Waterway
2	Bacon - Drainage Ditch	R4SB	RIVERINE	Linear	3.71	FOOT	RPW	37.996265	-121.560381	Middle River
3	Bacon - Canal/Ditch	R4SB	RIVERINE	Linear	23.51	FOOT	RPW	37.956247	-121.556070	Middle River
4	Bacon - Tidal Channel	E2US	RIVERINE	Area	3.14	ACRE	TNW	37.996711	-121.529226	Middle River
5	Bacon - Farmed Wetland	PEM	DEPRESS	Area	406.47	ACRE	RPWWN	37.953724	-121.535231	Middle River
6	Bacon - Forested Wetland	PF01	DEPRESS	Area	17.99	ACRE	RPWWN	37.998476	-121.546447	Middle River
7	Bacon - Freshwater Marsh	PEM	DEPRESS	Area	116.91	ACRE	RPWWN	38.000184	-121.566410	Middle River
8	Bacon - Open Water/Pond	L2EM	DEPRESS	Area	0.2	ACRE	RPWWN	37.967539	-121.571718	Middle River
9	Bacon - Tidal Marsh	E2EM	ESTUARINEF	Area	0.76	ACRE	TNWW	37.996711	-121.529226	Middle River
10	Webb - Drainage Ditch	R4SB	RIVERINE	Linear	3.38	FOOT	RPW	38.065367	-121.631908	San Joaquin River
11	Webb - Canal/Ditch	R4SB	RIVERINE	Linear	30,19	FOOT	RPW	38.077479	-121.586598	San Joaquin River
12	Webb - Tidal Channel	E2US	RIVERINE	Area	3.24	ACRE	TNW	38.064658	-121.597148	San Joaquin River
13	Webb - Farmed Wetland	PEM	DEPRESS	Area	1100.46	ACRE	RPWWN	38.081673	-121.614515	San Joaquin River
14	Webb - Forested Wetland	PF01	DEPRESS	Area	203.92	ACRE	RPWWN	38.053165	-121.629587	San Joaquin River
15	Webb - Freshwater Marsh	PEM	DEPRESS	Area	158.97	ACRE	RPWWN	38.053547	-121.629913	San Joaquin River
16	Webb - Open Water/Pond	L2EM	DEPRESS	Area	83.3	ACRE	RPWWD	38.084232	-121.584928	San Joaquin River
17	Webb - Tidal Marsh	E2EM	ESTUARINEF	Area	0.15	ACRE	TNWW	38.064658	-121.597148	San Joaquin River
18	Bouldin - Drainage Ditch	R4SB	RIVERINE	Linear	14.97	FOOT	RPW	38.116884	-121.559659	South Fork Mokelun
19	Bouldin - Canal/Ditch	R4SB	RIVERINE	Linear	30.7	FOOT	RPW	38.102839	-121.530677	South Fork Mokelun
20	Bouldin - Farmed Wetland	PEM	DEPRESS	Area	494.99	ACRE	RPWWN	38.093642	-121.517204	South Fork Mokelun
21	Bouldin - Forested Wetland	PFO	DEPRESS	Area	12.67	ACRE	RPWWN	38.093477	-121.570063	South Fork Mokelun
22	Bouldin - Freshwater Marsh	PEM	DEPRESS	Area	144.75	ACRE	RPWWN	38.112051	-121.579375	South Fork Mokelun
23	Bouldin - Open Water/Pond	L2EM	DEPRESS	Area	1.04	ACRE	RPWWN	38.108001	-121.550471	South Fork Mokelun
24	Holland - Drainage Ditch	R4SB	RIVERINE	Linear	2.89	FOOT	RPW	37.995136	-121.595796	Holland Cut
25	Holland - Canal/Ditch	R4SB	RIVERINE	Linear	15.39	FOOT	RPW	37.999544	-121.599213	Holland Cut
26	Holland - Farmed Wetland	PEM	DEPRESS	Area	625.17	ACRE	RPWWN	38.011262	-121.597151	Holland Cut
27	Holland - Forested Wetland	PFO	DEPRESS	Area	111.41	ACRE	RPWWN	38.024097	-121.588974	Holland Cut
28	Holland - Freshwater Marsh	PEM	DEPRESS	Area	166.46	ACRE	RPWWN	38.006213	-121.618740	Holland Cut
29	Holland - Open Water/Pond	L2EM	DEPRESS	Area	74.96	ACRE	RPWWD	38.014838	-121.593999	Holland Cut



BUILDING STRONG®

Are these Features Waters of the United States?



Significant Nexus Evaluation

Assessment of:

- Flow characteristics and functions of the tributary
- Functions performed by all wetlands adjacent to the tributary
 - Tributary is defined as a stream reach of the same order
- Determine if the tributary and any adjacent wetlands significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Relates to the goal of the Clean Water Act
 - "Restore and maintain the chemical, physical, and biological integrity of the Nation's waters."



Significant Nexus Evaluation 7+ page data form with all supporting information for every aquatic resource feature

- Hydrologic factors:
 - Volume, duration, and frequency of flow
 - Proximity to the traditional navigable water
 - Size of the watershed
 - Average annual rainfall
 - Average annual winter snow pack

Physical Factors: Landscape Position, Sediment, Bedload (e.g., hydraulic mining issues)



Significant Nexus Evaluation

- Ecological factors:
 - Potential of tributaries to carry nutrients, pollutants, and flood waters to traditional navigable waters
 - Potential of adjacent wetlands to:
 - Trap and filter nutrients and pollutants
 - Trap sediments
 - Store flood waters
 - Maintain water quality in traditional navigable waters (e.g.,303 d list tributaries; 2-way street)
 - Tributaries and their adjacent wetlands that provide habitat (e.g., places for feeding, nesting, spawning, or rearing young) for many aquatic species that also live in traditional navigable waters



Rapanos-Carabell Guidance

- These features are generally not jurisdictional
 - Upland swales or gullies
 - Ditches (including roadside ditches) excavated in and draining only uplands and that do not carry a relatively permanent flow of water
 - HOWEVER on P.12 "Certain ephemeral waters in the arid west are distinguishable from the geographic features described above where they HAVE a significant nexus to downstream traditional navigable waters."
 - This guidance does not provide authority to assert jurisdiction over waters deemed non-jurisdictional by SWANCC



JD Coordination Processes

- Applies only to approved jurisdictional determinations
- If significant nexus determination, draft JDs e-mailed to EPA Regional Office
 - EPA Region has 15 days to make special case recommendation to EPA HQ (1989 JD MOA)
 - EPA HQ has 10 working days to decide if it is a special case
 - If isolated waters determination, coordination process continues with 21-day time frame
 - 7+ page data form with all supporting information



Landward Limits of Waters of the United States



Helped relieve JD log jam for permitting

- When to do a Preliminary JD
 - Landowner, permit applicant, or other affected party voluntarily wants to set aside questions of jurisdiction to expedite obtaining permit authorization
 - Enforcement situations where site access is impractical or unauthorized, or if approved JD cannot be completed in a timely manner
 - Delineation/mapping of potential waters, including wetlands, remains the same for preliminary JDs as for approved JDs



Preliminary JDs

- For permit decisions, include all potential waters, including wetlands, when determining impacts and compensatory mitigation
- Corps is not making a legally-binding determination whether CWA/RHA jurisdiction exists
- Affected party can later request an approved JD
 - Transmittal letter should advise affected party not to start work in waters if he or she intends to request an approved JD at a later time



No expiration date



Approved Jurisdictional Determinations

- Official Corps determination that jurisdictional waters are present or absent on a site
- Valid for 5 years (RGL 05-02), unless new information or changing environmental conditions warrant a revision
- May also identify the limits of jurisdictional waters
- ► Can be appealed
- Districts continue to post on their web pages



When to do an Approved JD

- Landowner, permit applicant, or other affected party requests an approved JD
- Landowner, permit applicant, or other affected party contests jurisdiction over a particular waterbody or wetland (and allows property access to provide an approved JD)
- Corps determines that jurisdiction does not exist over a particular waterbody or wetland
- Enforcement actions, where practicable
- At district engineer's discretion, when it is warranted in a particular case



- When <u>not</u> to do an Approved or Preliminary JD
 - When the person is seeking a JD for another purpose, such as:
 - Section 402 of the Clean Water Act (NPDES)
 - Section 311 of the Clean Water Act (oil and hazardous substances spills)



References

Corps of Engineers Wetland Delineation Manual, January 1987 Regional Supplement to the Corps of Engineers Delineation Manual: Arid West Region (Version 2.0) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) Regulatory Guidance Letter (RGL) 90-7, 26 Sep 90 Clarification of the Phrase "Normal Circumstances" as it Pertains to Cropped Wetlands; National Food Security Act Manual, Fifth Edition "Joint Guidance from the Natural Resources Conservation Service (NRCS) and the Army Corps of Engineers (COE) ConcerningWetland Determinations for the Clean Water Act and the Food Security Act of 1985", dated 25 February 2005. Corps Technical Standard for Water-Table Monitoring of Potential Wetland Sites, June 2005 (Technical Standard)



WETS Tables



Questions?

