



# Changes in the FGDC Wetland Classification Standard – Cowardin 2.0

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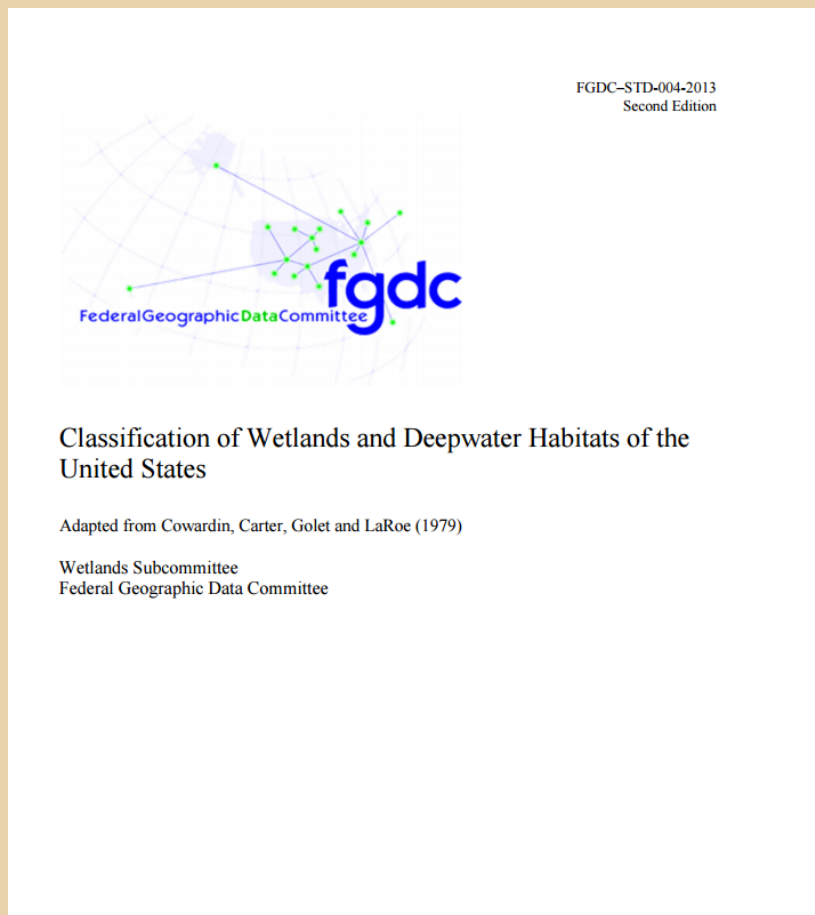


# Wetland Mapping Training

- <http://www.aswm.org/wetland-science/wetlands-one-stop-mapping/5041-wetland-mapping-training>
- Past and future webinars
  - Standards
  - Data Requirements
  - Mapping Conventions
  - Interaction with NWI



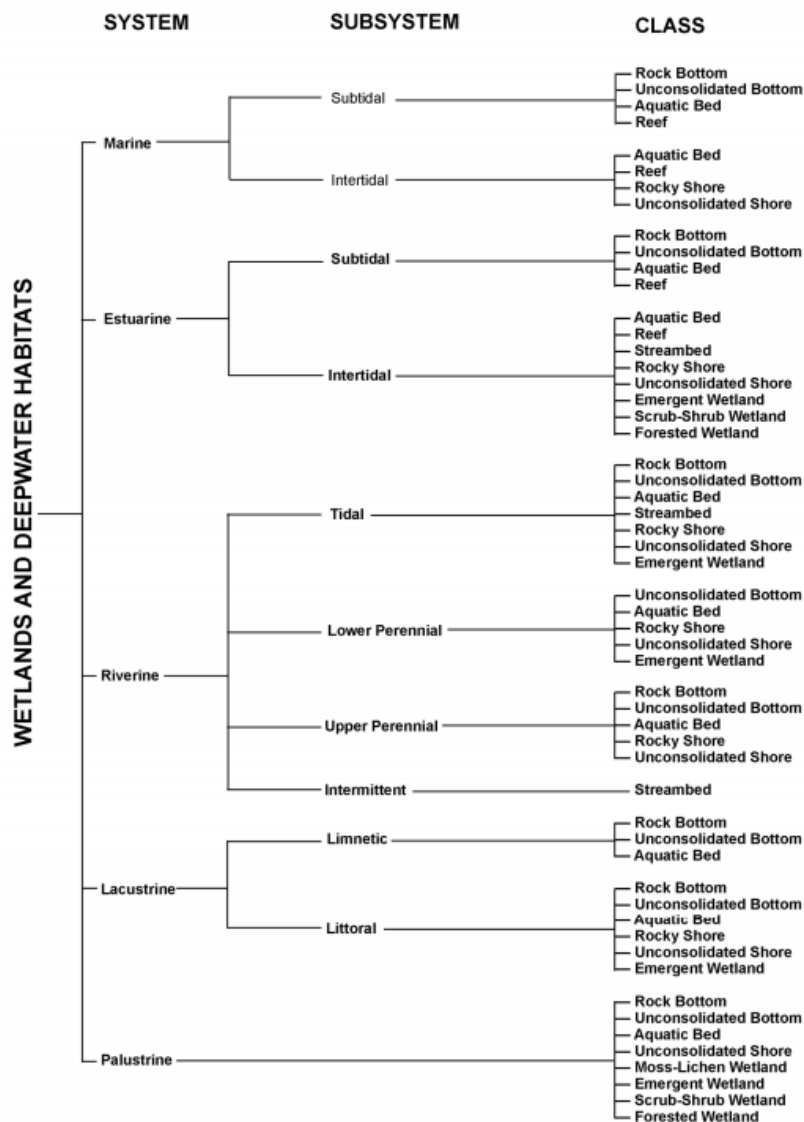
# FGDC Standard (2013)



- Second edition adopted as the federal standard in August 2013
- Changes written by Bill Wilen and Frank Golet
- Purpose behind the update was to clarify and clean up the original 1979 version but not to introduce major differences



# Overview



- System
- Subsystem
- Class
- Subclass



# Water Regimes and Modifiers

## MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy.

Water Regime			Special Modifiers	Water Chemistry		Soil
Nontidal	Saltwater Tidal	Freshwater Tidal		Halinity/Salinity	pH Modifiers for Fresh Water	
A. Temporarily Flooded	L. Subtidal	S. Temporarily Flooded-Fresh Tidal	b Beaver	1 Hyperhaline / Hypersaline	a Acid	g Organic
B. Seasonally Saturated	M. Irregularly Exposed	Q. Regularly Flooded-Fresh Tidal	d Partly Drained/Ditched	2 Eubaline / Eusaline	t Circumneutral	n Mineral
C. Seasonally Flooded	N. Regularly Flooded	R. Seasonally Flooded-Fresh Tidal	f Farmed	3 Mixohaline / Mixosaline (Brackish)	i Alkaline	
D. Continuously Saturated	P. Irregularly Flooded	T. Semipermanently Flooded-Fresh Tidal	m Managed	4 Polyhaline		
E. Seasonally Flooded/ Saturated		V. Permanently Flooded-Fresh Tidal	h Diked/Impounded	5 Mesohaline		
F. Semipermanently Flooded			r Artificial Substrate	6 Oligohaline		
G. Intermittently Exposed			s Spoil	0 Fresh		
H. Permanently Flooded			x Excavated			
J. Intermittently Flooded						
K. Artificially Flooded						

- Description of hydrologic characteristics requires detailed knowledge of the duration and timing of surface inundation, both yearly and long-term, as well as an understanding of groundwater fluctuations. Because such information is seldom available, the Water Regimes that, in part, determine characteristic wetland and deepwater plant and animal communities are described here in only general terms. Water Regimes are grouped under three major headings, Tidal Salt, Nontidal, and Tidal Fresh.



# Classification Breaks

- System

- Marine/Estuarine
  - Imaginary Line closing the mouth of a river
- Riverine/Estuarine
  - Salt break during average annual low flow
- Lacustrine/Palustrine
  - 20 acres – combine unconsolidated shores, bottoms, and aquatic beds.
  - Depth – 2.5 m at low water

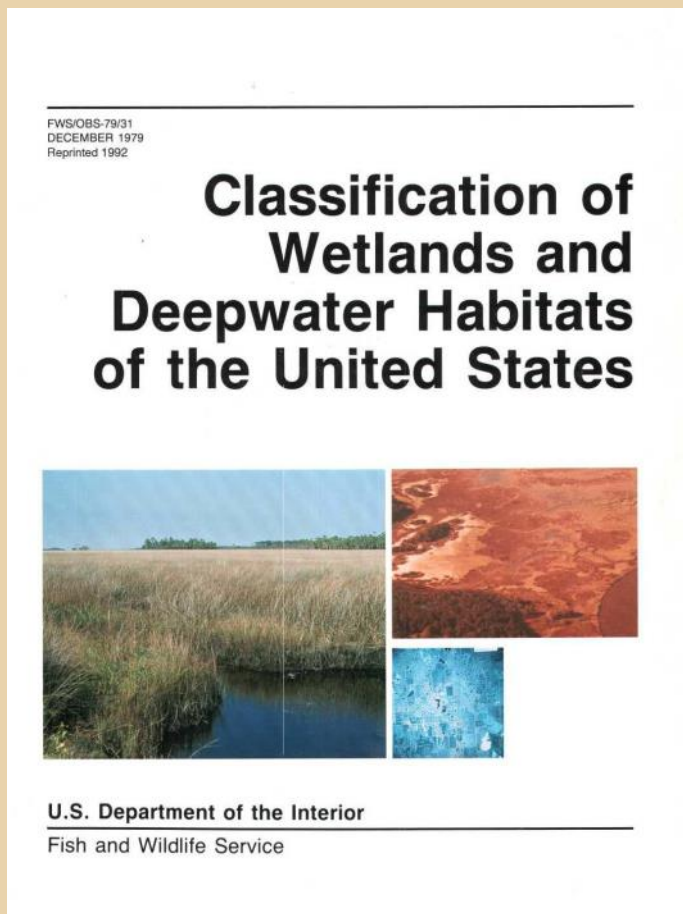
- Classes

- Scrub Shrub/Forested (6m)
- Class is distinguished on the basis of the life form of the plants that constitute the uppermost layer of vegetation and that possess an areal coverage 30 percent or greater.
  - Example
    - 50% trees/60% shrubs = Forested wetland
    - 20% trees/60% shrubs = Scrub Shrub wetland
- Can add trees and shrubs together to reach the 30% - classify as Scrub Shrub





# Wetland Definition

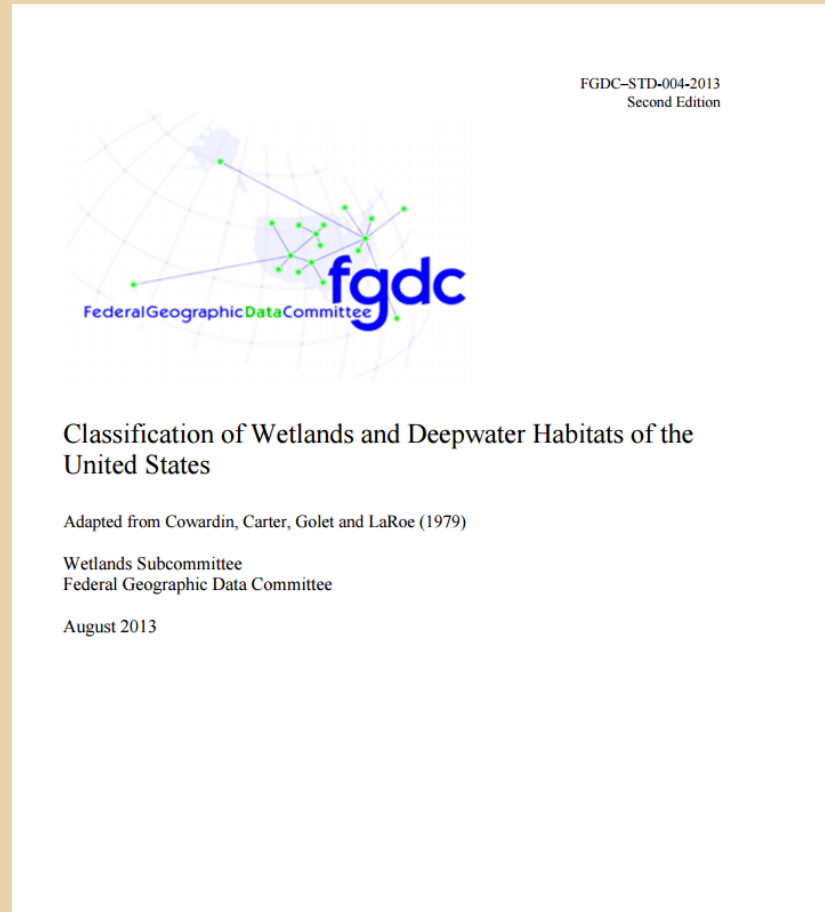


- WETLANDS are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have **one or more of the following three attributes**: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.



# Wetland Definition Clarified

- ...three (3) indicators – hydrophytic vegetation, undrained hydric soil, and wetland hydrology; two (2) indicators—hydrophytic vegetation and wetland hydrology or undrained hydric soil and wetland hydrology; and one (1) indicator— wetland hydrology, respectively, would be used to make the identification, based on the features available at the particular site.







# Major Classification Additions

- Water Regimes
  - Seasonally Saturated
  - Continuously Saturated
  - Seasonally Flooded/Saturated
  - Regularly Flooded – Tidal Fresh
- Formal Definitions
  - All Tidal Fresh water regimes
- Special Modifier
  - Managed



# Saturated Water Regimes

## 1979 Cowardin

- Saturated

## Cowardin 2.0 (2013)

- Seasonally Saturated
- Continuously Saturated
- Seasonally Flooded-Saturated



# Seasonally Saturated

- **Definition:**
  - The substrate is saturated at or near the surface for extended periods during the growing season, but unsaturated conditions prevail by the end of the season in most years. Surface water is typically absent, but may occur for a few days after heavy rain and upland runoff.





# Continuously Saturated



- Definition
  - The substrate is saturated at or near the surface throughout the year in all, or most, years. Widespread surface inundation is rare, but water may be present in shallow depressions that intersect the groundwater table, particularly on a floating peat mat.



# Seasonally Flooded-Saturated



- **Definition**
- Surface water is present for extended periods (generally for more than a month) during the growing season, but is absent by the end of the season in most years. When surface water is absent, the substrate typically remains saturated at or near the surface.



# Regularly Flooded – Tidal Fresh

- **Definition**

- Tides alternately flood and expose the substrate daily for variable periods (from a few weeks to several months) during the growing season. This Modifier is used for Riverine and Lacustrine habitats.



Photo Courtesy of SWCA, Portland, Oregon.



# Managed



- **Definition**

- This modifier is used to identify wetlands where water inputs are controlled to achieve a specific water regime or habitat type. Water control structures in combination with dikes and impoundments are common.



# Summary

- FGDC Endorsed Cowardin 2.0
- Clarified wetland definition regarding 3 parameters
- Additional Water Regimes
- Formalized definitions
- New Special Modifier
- Mapping Conventions for “new” component have been finalized and will be presented February 17<sup>th</sup>.





# Contact Information

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# Questions?

