

Wetland Types (Lentic)



Nonjurisdictional

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Jurisdictional

Jurisdictional being those sites that meet the legal requirements of a wetland as defined by the Wetland Delineations Manual (US Army COE 1987) subject to section 404 of the Clean Water Act.

Jurisdictional wetlands:

- Defined by the Wetland Delineations Manual (US Army COE 1987)
- Subject to section 404 of the Clean Water Act
- Diagnostic environmental characteristics
 - Vegetation – hydrophytic
 - Soil – hydric
 - Hydrology – inundation/saturation
- Traditionally Navigable Water (TNW)

Classification Systems

Corwardin - NWI Mapping, DOI Standard

HGM - Hydrogeomorphic

Numerous Vegetation Systems - Windell
et. al. 1986

Classification of Wetlands and Deepwater Habitats of the United States



Cowardin et al. 1979
(Classification of
Wetlands and
Deepwater Habitats of
the United States)

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- Plants (hydrophytes)
- Soils (hydric)
- Flooding frequency and periodicity

Cowardin system used by US
F&WS for the National Wetlands
Inventory (NWI)



US Army Corps
of Engineers
Waterways Experiment
Station

Wetlands Research Program Technical Report WRP-DE-4

A Hydrogeomorphic Classification for Wetlands

by Mark M. Brinson



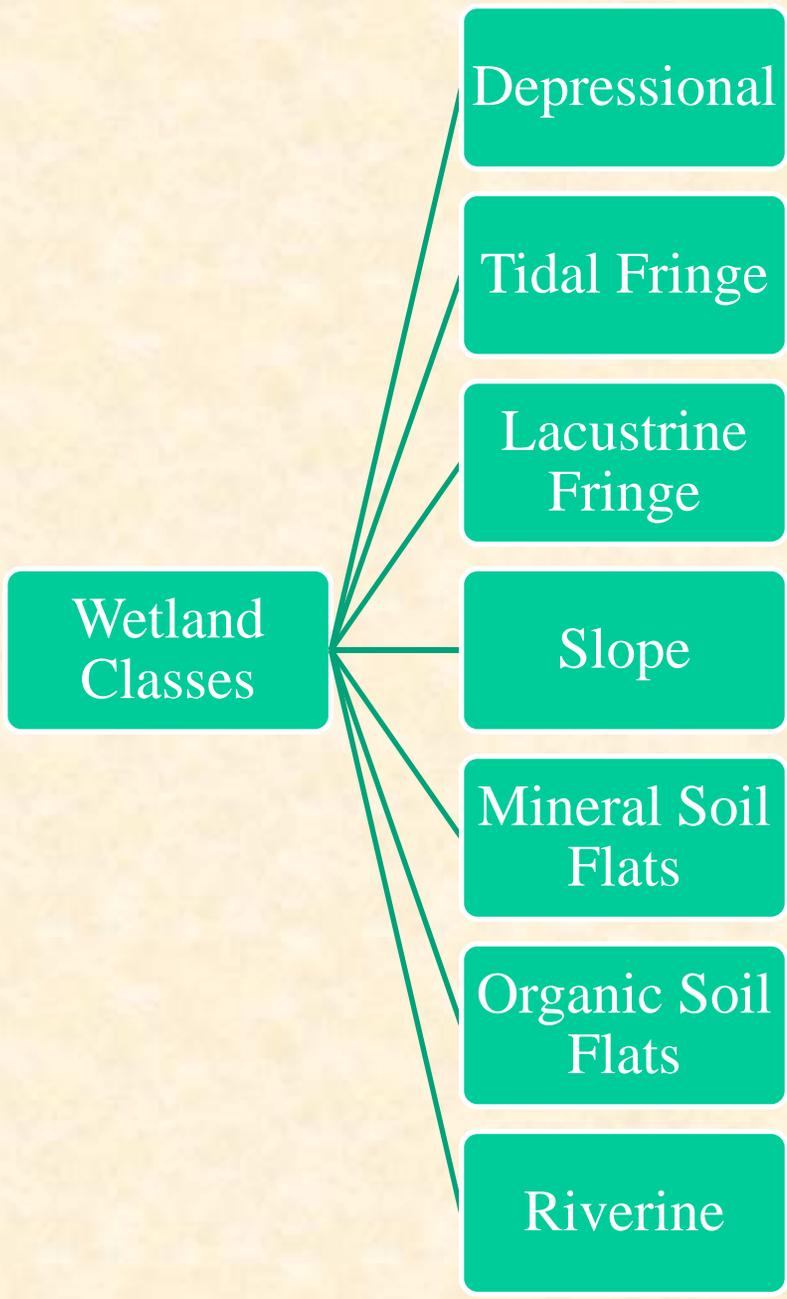
August 1993 – Final Report
Approved For Public Release; Distribution Is Unlimited



HGM (Hydrogeomorphic)

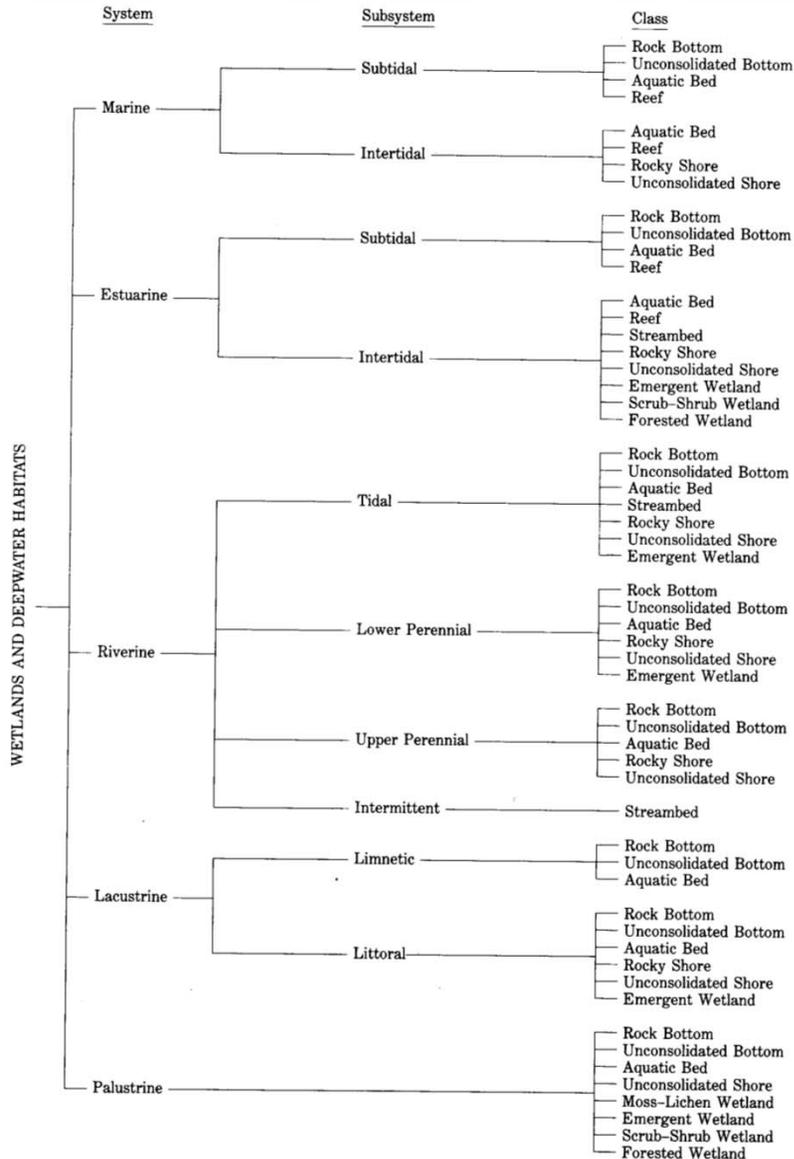
Hydrogeomorphic Approach to Assessing Wetland Functions (HGM)

- Reference Wetlands data provide an index from 0.0 to 1.0 to represent the level of wetland condition for each function.
- Regional Guidebooks to assess specific subclasses of the seven HGM classes of wetlands.



Cowardin

Classification hierarchy of wetlands and deepwater habitats, showing Systems, Subsystems, and Classes. The Palustrine System does not include deepwater habitats.



HGM

Key to Hydrogeomorphic Wetland Classes and Regional Subclasses

1. Wetland is under the influence of tides 2
1. Wetland is not under the influence of tides 4
2. Salinity greater than 30 ppt Tidal Fringe (Euhaline)
2. Salinity less than 30 ppt 3
3. Salinity 5-30 ppt Tidal Fringe (Mixohaline)
3. Salinity less than 5 ppt Riverine (Tidal)
4. Wetland is topographically flat and has precipitation as a dominant source of water 5
4. Wetland is not topographically flat and does not have precipitation as a dominant source of water 6
5. Wetland has a mineral soil Mineral Soil Flats
5. Wetland has an organic soil Organic Soil Flats
6. Wetland is associated with a stream channel, floodplain, or terrace 7
6. Wetland is associated with a topographic depression or on a topographic slope or flat 9
7. Stream is intermittent or ephemeral Riverine (Nonperennial)
7. Stream is perennial 8
8. Stream is 1st or 2nd order Riverine (Upper perennial)
8. Stream is 3rd order or higher Riverine (Lower perennial)
9. Wetland located in a natural or artificial (dammed) topographic depression 10
9. Wetland located on a topographic slope 13
10. Topographic depression has permanent water >2 meters deep, and wetland is restricted to the margin of the depression Lacustrine Fringe
10. Topographic depression does not contain permanent water >2 meters deep 11
11. Topographic depression closed without discernable surface water inlets, outlets, or other connections Depression (Closed)
11. Topographic depression open with discernable surface water inlets, outlets, or other connections 12
12. Primary source of water is ground water Depression (Open, Ground Water)
12. Primary source of water is precipitation, overland flow, or interflow Depression (Open, Surface Water)
13. Primary source of water is ground water Slope
13. Primary source of water is precipitation Organic Soil Flats

* Hydrogeomorphic classes are followed by regional subclass in parenthesis

Lacustrine - Cowardin Lacustrine Fringe - HGM



Palustrine - Cowardin Slope - HGM



Palustrine - Cowardin Depressions - HGM



Palustrine - Cowardin Slope - HGM



Palustrine – Cowardin Slope - HGM



Palustrine - Cowardin Slope - HGM



Palustrine - Cowardin Slope - HGM



Palustrine - Cowardin Depression - HGM



Riverine - Cowardin

Riverine - HGM



Problem Wetlands

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Palustrine - Cowardin Depressions - HGM



Palustrine - Cowardin Depressions - HGM

