



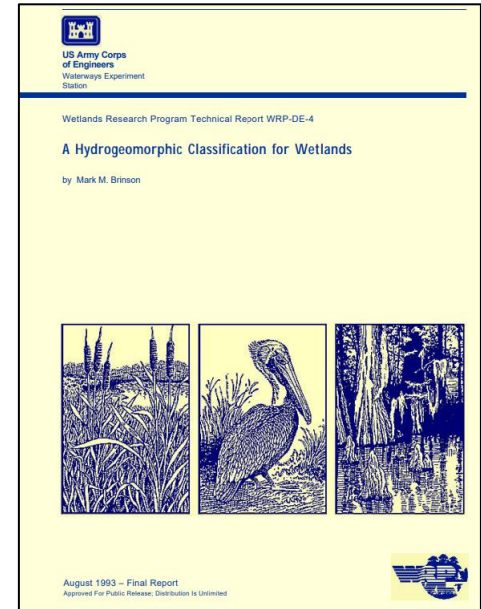
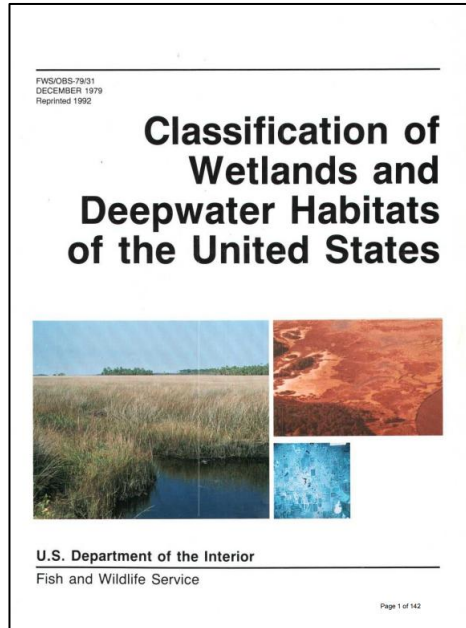
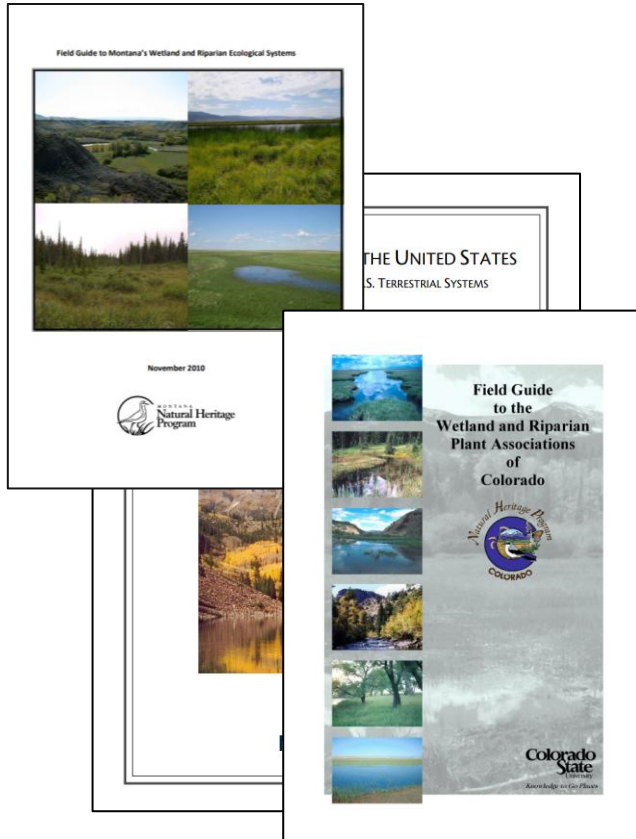
***From Fens to Floodplains:
Novel Applications of LLWW
Classification in Wetland
and Riparian Areas of the
Western US***

Introduction to the LLWW Classification
Jennifer Jones and Eric Dressing

Why Classify?



Wetland Classification



LLWW - Landscape Position, Landform, Water Flow Path, and Waterbody Type

NWI CODE

R3UBH

R	System	Riverine
3	Subsystem	Upper Perennial
UB	Class	Unconsolidated Bottom
H	Water Regime	Permanently flooded



LLWW CODE

LOR1THgf

LO	Landscape Position	Lotic
R1	Waterbody Flow Duration	Perennial flow
TH	Flow Path	Throughflow
gf	Modifier	Geomorphic floodplain

PEM1A

P	System	Palustrine
EM	Class	Emergent
1	Subclass	Unconsolidated Bottom
A	Water Regime	Temporarily flooded

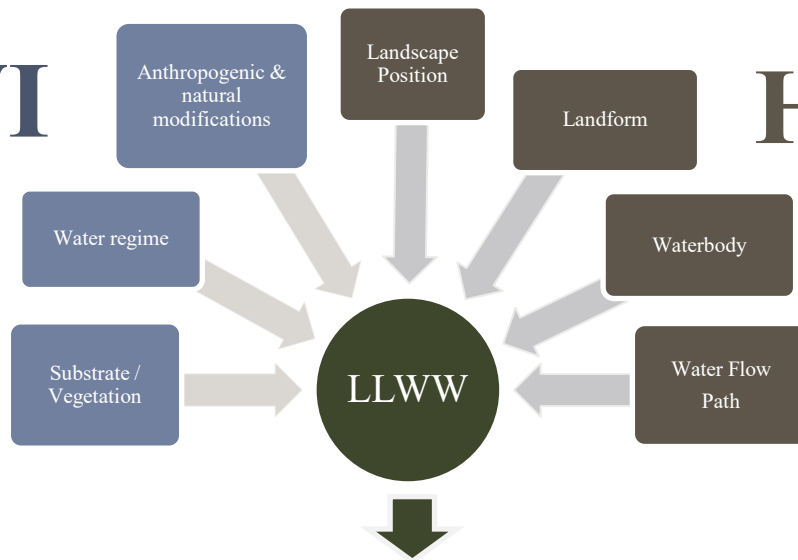


LOBATHgf,it,ox

LO	Landscape Position	Lotic
BA	Landform	Basin
TH	Flow Path	Throughflow
gf	Modifier	Geomorphic floodplain
it	Modifier	Temporary Intermittent Flow
ox	Modifier	Oxbow

NWI

HGM



Potential Wetland Functions



LLWW - Landscape Position, Landform, Water Flow Path, and Waterbody Type



High: Other Wildlife Habitat, Bank and Shore Stabilization, Sediment Retention, Streamflow Maintenance

Moderate: Carbon Sequestration, Nutrient Transformation, Surface Water Detention

LLWW Keys for Inland Wetlands of the Western US

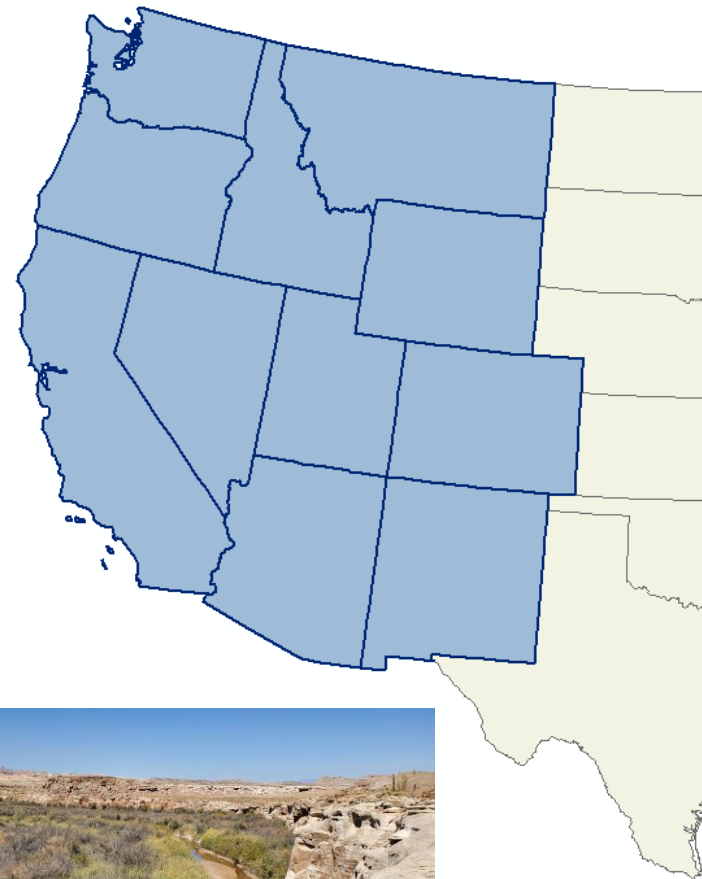
Keys to LLWW for Inland Wetlands of the Western United States

Version Date: December 10, 2018

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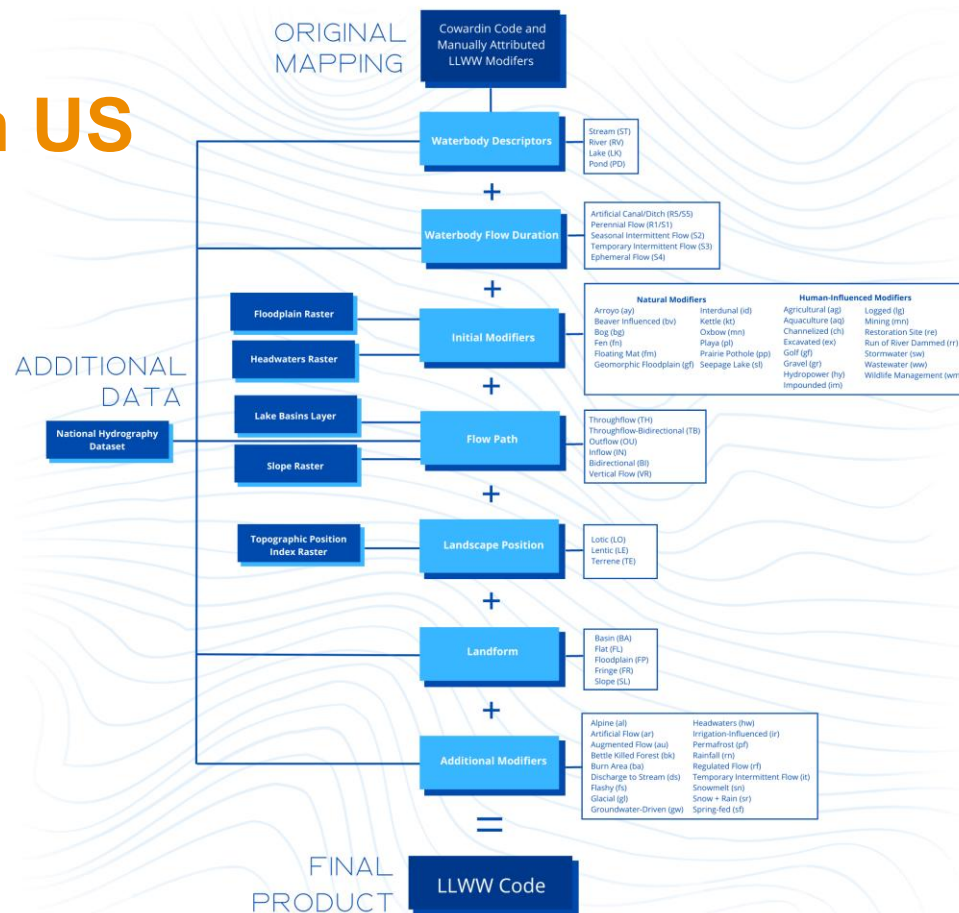
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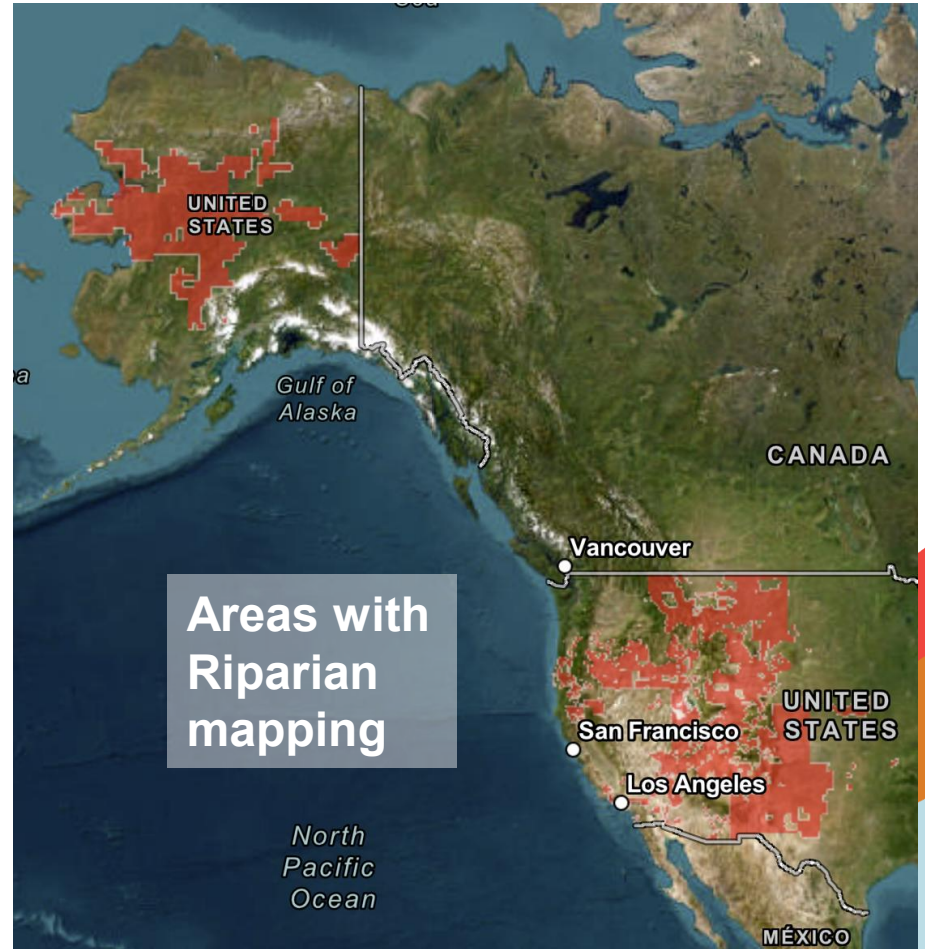
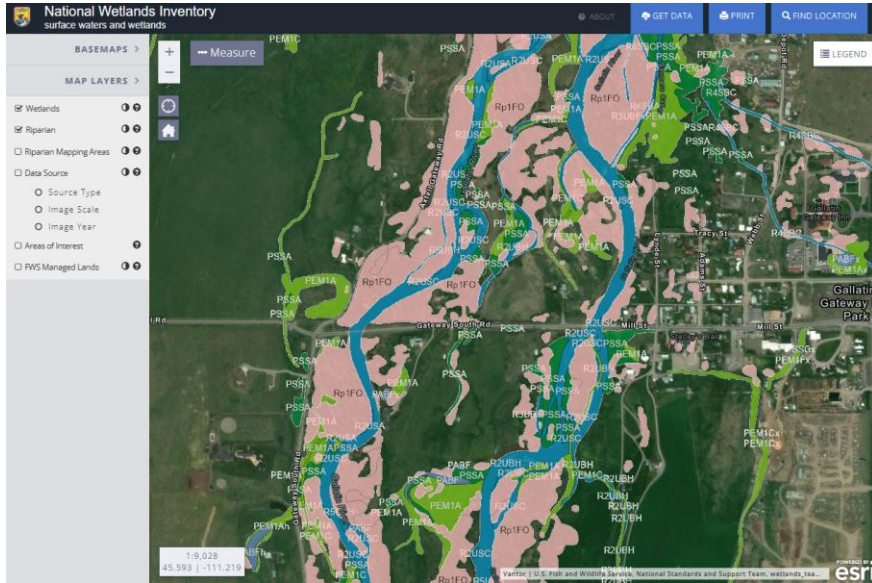


LLWW Keys for Inland Wetlands of the Western US

- Collaborative effort between multiple organizations
- Requires base NWI mapping, ancillary datasets, and patience
- Models created in model-builder



Limitations of the Wetland and Waterbody LLWW Automated Model



Limitations of the Wetland and Waterbody LLWW Automated Model

Riparian Definition - Plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic or lentic water bodies (rivers, streams, lakes or drainageways).

Riparian areas have one or both of the following characteristics:

- 1. Distinctly different vegetative species than adjacent areas or*
- 2. Species similar to adjacent areas but exhibiting more vigorous or robust growth forms. (USFWS 2019)*



Limitations of the Wetland and Waterbody LLWW Automated Model





Thank you

