



National Wetlands Inventory: Overview

**EPA Tribal Workshop
September 27, 2021**

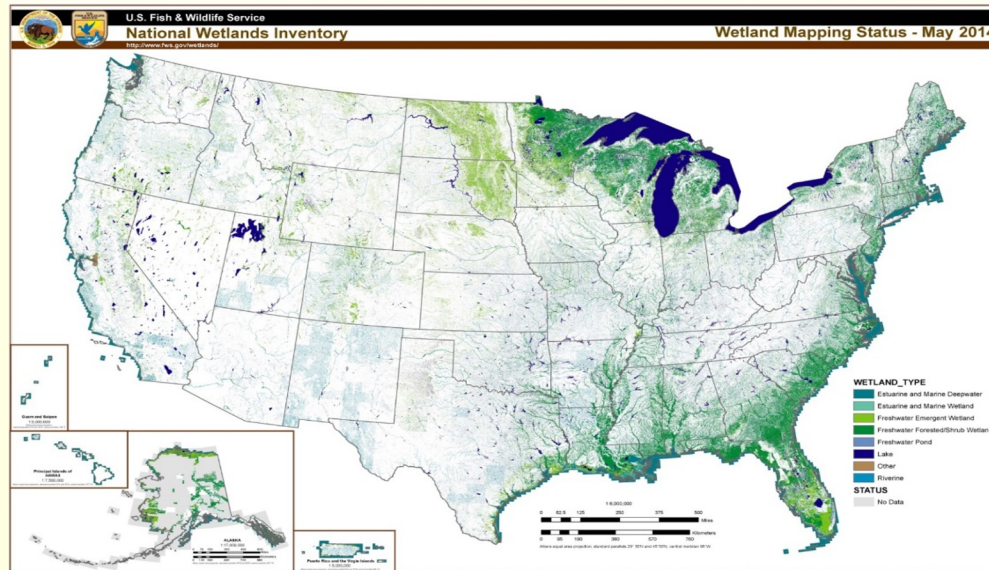
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NWI Field Operations Lead**



NWI Mandated to Map and Maintain Wetland Data for the Nation

- Emergency Wetlands Resources Act of 1986 requires the Secretary of the Interior to:
 - **Map wetlands of the U.S.**
 - **Provide 10 year reports on the status and trends of the Nation's wetlands**
- OMB Circular A-16 requires the Service to support the production of and maintain the Wetlands Layer of the National Spatial Data Infrastructure.
 - **Federal Geographic Data Committee (FGDC) National Geospatial Data Asset**

NWI Wetlands Geospatial Dataset



- Over 33 million polygons
- 40+ years and \$220+ million
- NOT a Jurisdictional Wetland Map
- FGDC standard to map wetlands using Federal \$'s



Wetlands Definition

- Simply put....

“Wetlands are lands transitional between terrestrial and aquatic systems....”

EPA NRC C-CAP
BMP's NRCS State
FWS State Tribes NHD
State ACOE State BMP's NLCD

Ramsar

Terrestrial

Aquatic



USFWS Wetland Definition

- **Definition = Description + Methodology**
- **Description:**
 - **Biologically / Ecologically** describes the wetland types.
 - Classification of Wetlands and Deepwater Habitats (Cowardin, et. al 1979 - 2nd edition 2013)
 - (First Edition, 1979) 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..



USFWS Wetland Definition

- **Definition = Description + Methodology**
- **Methodology:**
 - **FGDC Wetlands Mapping Standard**
 - **Image Interpretation**
 - Location, size, shape, shadow, tone/color, texture, pattern, height/depth and site/situation/association
 - Polygonal Geospatial Dataset
 - Target Mapping Unit (TMU) = 0.5 acres (CONUS) 5 acres (AK)

FGDC Wetlands Mapping Standard

FGDC Document Number FGDC-STD-015-2009



Wetlands Mapping Standard

FGDC Wetlands Subcommittee

July 2009

- **1.3 Scope:** The FGDC Wetlands Mapping Standard directs the incorporation of federally-funded wetlands data into the Wetlands Geodatabase (under direction of the FWS) and the Wetlands Data Layer of the NSDI.
- **1.4 Applicability:** This standard is intended for all Federal or federally-funded wetlands inventory mapping including those activities conducted by Federal agencies, states, and federally-recognized tribal entities, non-governmental organizations, universities, and others. Specifically, if Federal funding is used in support of wetlands inventory mapping activities, then use of this standard is mandatory.
- **Standard Exemption 4:** The Standard is neither designed, nor intended, to support legal, regulatory, or jurisdictional analyses of wetland mapping products, nor does it attempt to differentiate between regulatory and non-regulatory wetlands.



FGDC Wetlands Mapping Standard

■ FGDC Requirements and Quality Components:

- Source Imagery
- Classification
- Accuracy
- TMU (Targeted Mapping Unit) and Producer's Accuracy
- Horizontal Accuracy
- Data Verification
- Logical Consistency
- Edge Matching
- Attribute Validity
- Datum and Projection
- Metadata
- FWS Coordination and Quality Control

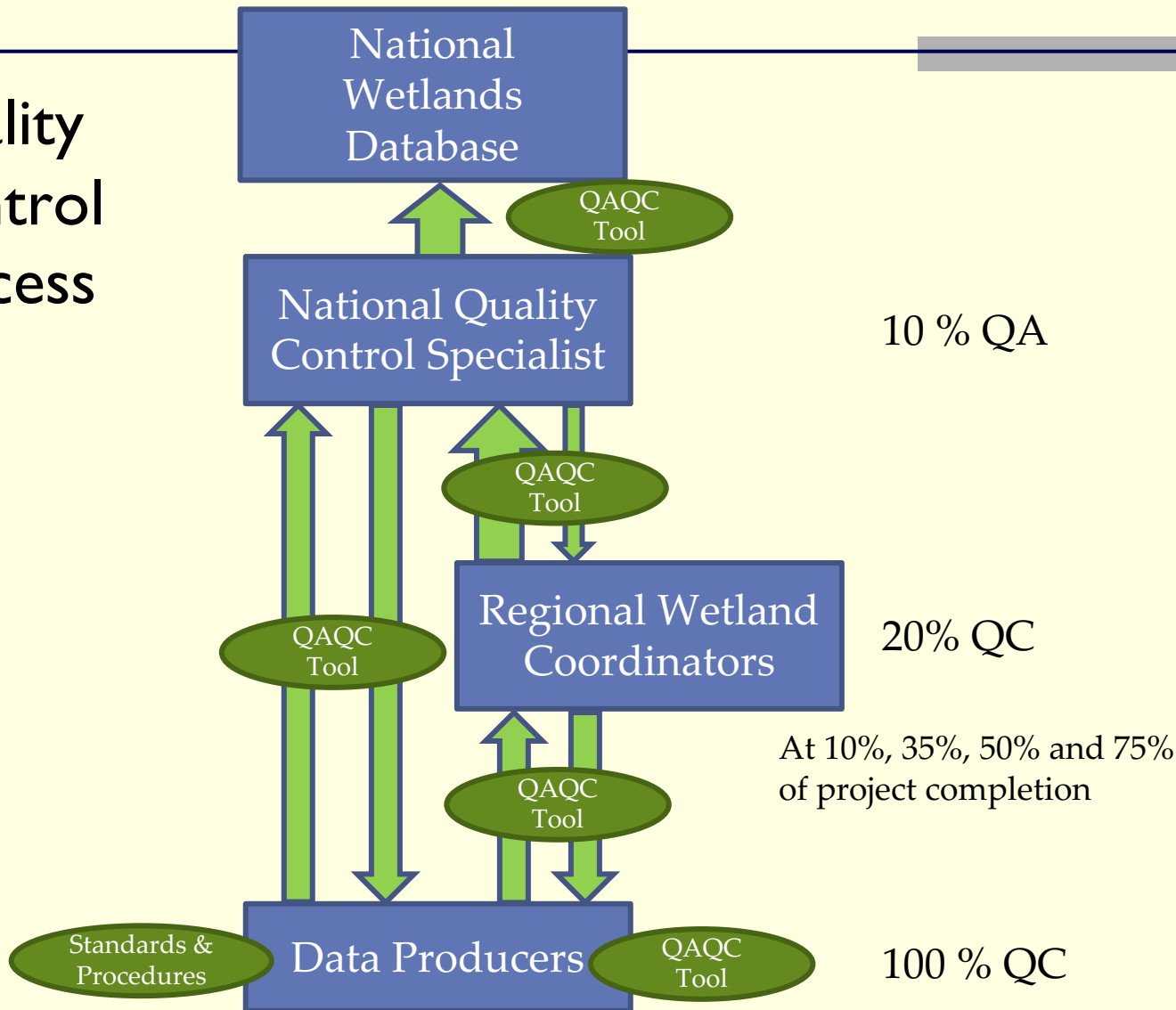
■ Tables:

- Spatial Resolution Requirements of Base Imagery
- Classification Levels Required Based on Habitat Type
- TMU and Producer Accuracy Requirements
- Horizontal RMSE Accuracy Requirements



FGDC Wetlands Mapping Standard

Quality Control Process





NWI Data Inclusion Process

NWI has partnered with federal, state, tribal and non-profit agencies interested in pursuing wetland information and mapping.

Expertise

- Wetland science and habitat mapping
- Cowardin Classification System
- Digital data creation techniques

Training

- On site training
- Field verification training
- Online videos and documentation

Quality Control

- Quality Control Plan development
- Data Verification Tools
- Iterative data review with feedback
- Fieldwork collaboration

Data Management

- Data storage and archiving
- Data management best practices
- Data distribution solutions

Contracting Support

- Identification of potential contractors
- Assist with contract or cooperative agreements
- Statements of Work (SOW) development

Analysis Tools

- NWI code/habitat translation
- GIS Wetland Analytical Tools
- NWI Code Definitions Table
- GIS strategy development



NWI Data Limitations

■ **NOT** a Jurisdictional Dataset

- The Service's objective of mapping wetlands and deepwater habitats is to produce **reconnaissance level** information on the location, type and size of these resources.
- The data at this site show wetland type and extent using a **biological definition** of wetlands. There is **no attempt to define the limits of proprietary jurisdiction** of any Federal, state, or local government, or to establish the geographical scope of the regulatory programs of government agencies.
- <http://www.fws.gov/wetlands/Data/Limitations.html>

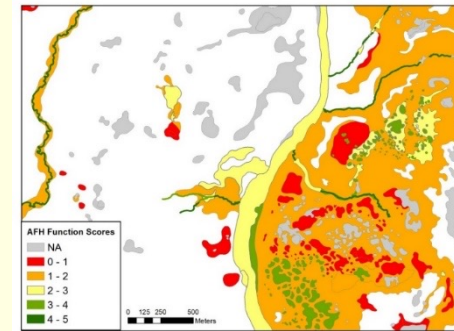
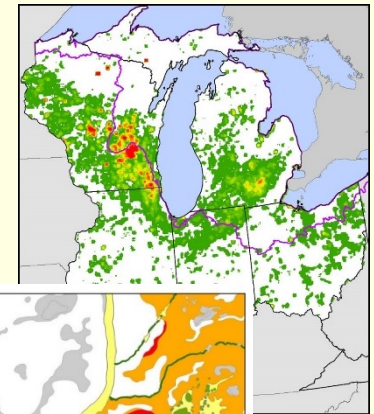


NWI Analysis - Conservation

Analysis requires understanding of Definition, Classification, Methodology and Limitations

NWI data as an input for Modeling and Decisions
Support Tools

- Population Estimates
- Habitat Conservation
- Management Actions
- Functional Assessments
- Infrastructure Cost Avoidance





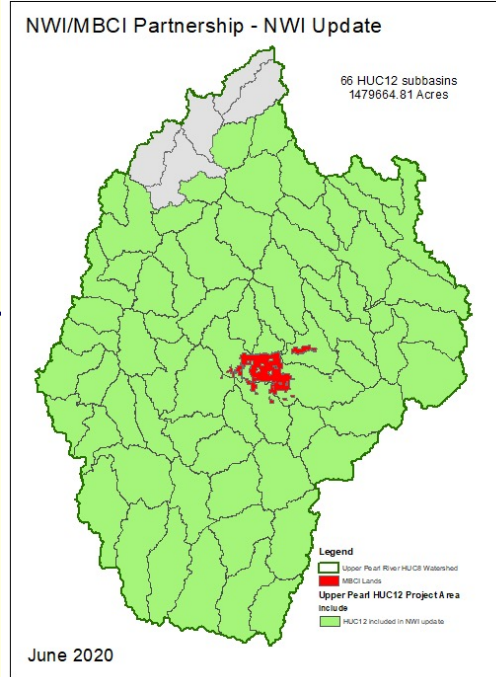
Collaborative Effort

Mississippi Band of Choctaw Indians

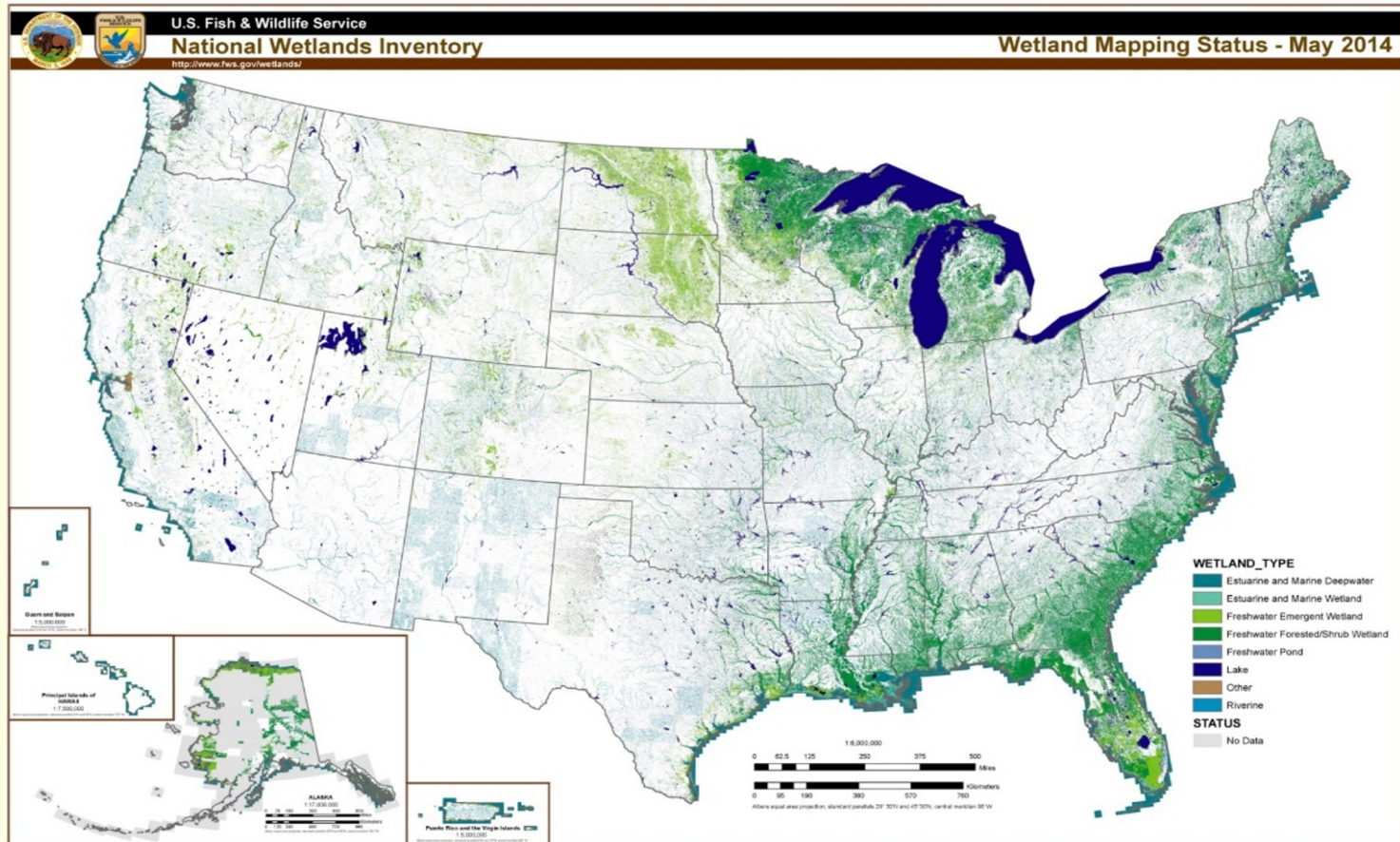
Upper Pearl River Watershed (~1.7M acres)

- Partnership in conservation
 - Building trust through inclusion, transparency and respect
- Recognition that impacts to the natural world “know no boundaries”
- Importance of wetland conservation is a common language we can speak
- What happens outside tribal land boundaries impacts land within
- Project furthered MBCI’s interests while meeting USFWS NWI mapping goals

Provided NWI mapping for both inside and outside the MBCI lands
Allowed for LLWW classifications and functional assessment information to be created.



QUESTIONS?





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