Capitalizing on an Opportunity: An Example of a Multiple Collaborator Endeavor Formed Around the National Wetland Condition Assessment in North Dakota

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National Wetland Condition Assessment - Overview

• Assessment of wetlands of the contiguous United States and Alaska
• First ever national survey of the condition of the nation’s wetlands
• 1,179 total wetland sites were visited in 2011
National Wetland Condition Assessment – Why?

• Determine the ecological integrity of the nations wetlands
• Build state and tribal capacity for wetland monitoring and analyses
• Promote collaboration across jurisdictional boundaries
• Achieve a robust, statistically-valid set of wetland data
• Develop baseline information to evaluate wetland trends
National Wetland Condition Assessment – Intensification Projects

- Gulf of Mexico Coastal Wetlands Pilot Survey
- Mid-Atlantic Inland Wetlands Survey
- California Estuarine Assessment
- Minnesota Statewide Wetlands
- Ohio Wetlands Monitoring Program
- New England Coastal Wetlands
- North Dakota Prairie Potholes
- Southeast Isolated Wetland Assessment
National Wetland Condition Assessment – Intensification Projects

• Funding for the intensification projects was given by the National EPA to Regional EPA branches via Wetlands Program Development Grants

• NDSU received funding from one of these grants through the NDDH
National Wetland Condition Assessment - Design

- Design was developed as a collaboration between the EPA and the US Fish and Wildlife Service.
- All sites were a part of the US FWS Status and Trend Plots.
- Generalized Random Tessellation Stratified survey of the wetland resources within the 2 mile X 2 mile plots.
National Wetland Condition Assessment - Methods

- Vegetation
- Soils
- Hydrology
- Water Quality
- Algae
- Buffer
North Dakota NWCA and Intensification

- North Dakota Team Development
  - Botanist
  - Soil Scientist
  - Water quality specialist
  - Statistical and modeling expertise
  - Organizer
North Dakota Intensification

• EPA Interests
  – Adequate sample size (State and Prairie Pothole Region)
North Dakota Intensification

• NDSU Research Interests –
  – Mercury
  – Nutrient cycling (ecosystem services, modeling)
  – Regionally developed methods versus national methods
  – Statewide assessment method (tool)
North Dakota Intensification

- ND Department of Health, Division of Water Quality
  - NDDH personnel – water quality sampling
  - Water chemistry
  - Algae samples
North Dakota Intensification

- Natural Resource Conservation Service
  - Described wetland soils at every site visited
  - Senior personnel trained junior personnel
  - Reviewed, tested, and validated hydric soil indicators for our region
North Dakota Intensification

- NDSU Department of Biological Sciences – Wet Ecosystems Laboratory
  - Multi-elemental fingerprinting
    - Continue prior wetland research
    - Selenium / mercury
North Dakota Intensification

- EPA Western Ecology Division
  - $N_{15}$ research – nitrogen cycling
  - Ecosystem services
North Dakota Intensification

• North Dakota Department of Agriculture – Water Quality Advisory Committee
  – Pesticide sampling
North Dakota Intensification Summary

- North Dakota
  - NDSU – 20
  - NDDH – 6; + Lab
  - NRCS – 13
  - NDDA – 1

- Nationally ?