

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



North Dakota
Department of Agriculture



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**National
Wetlands
Condition
Assessment**

Assessing the Nation's Waters

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**

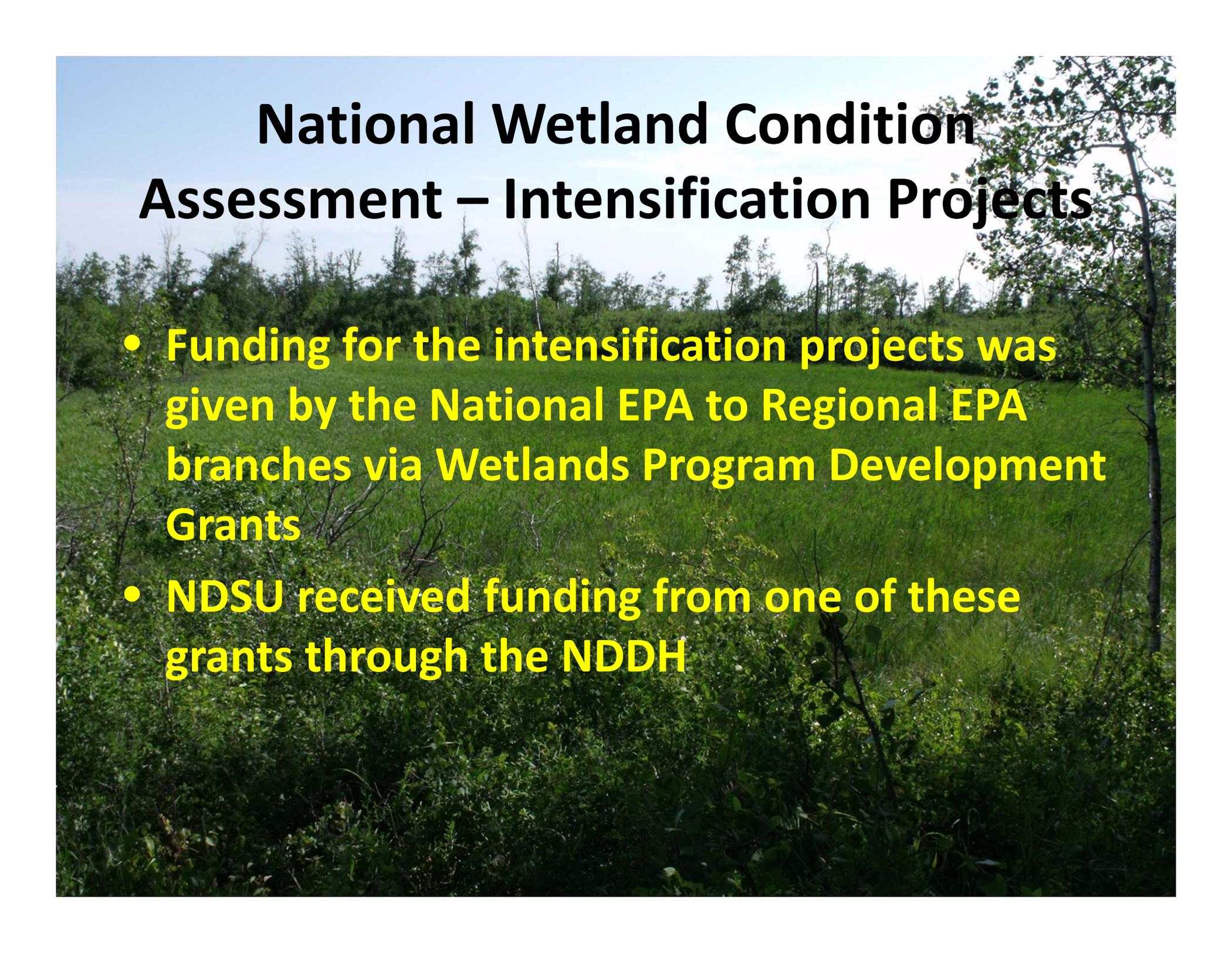
National Wetland Condition Assessment – Why?

- 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

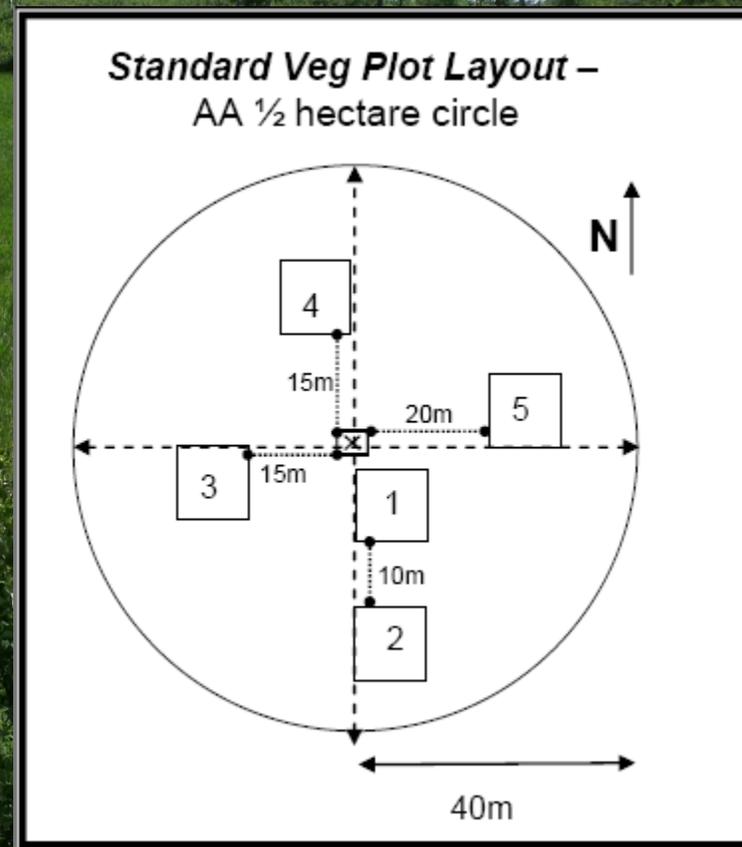
National Wetland Condition Assessment - Design

- 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**

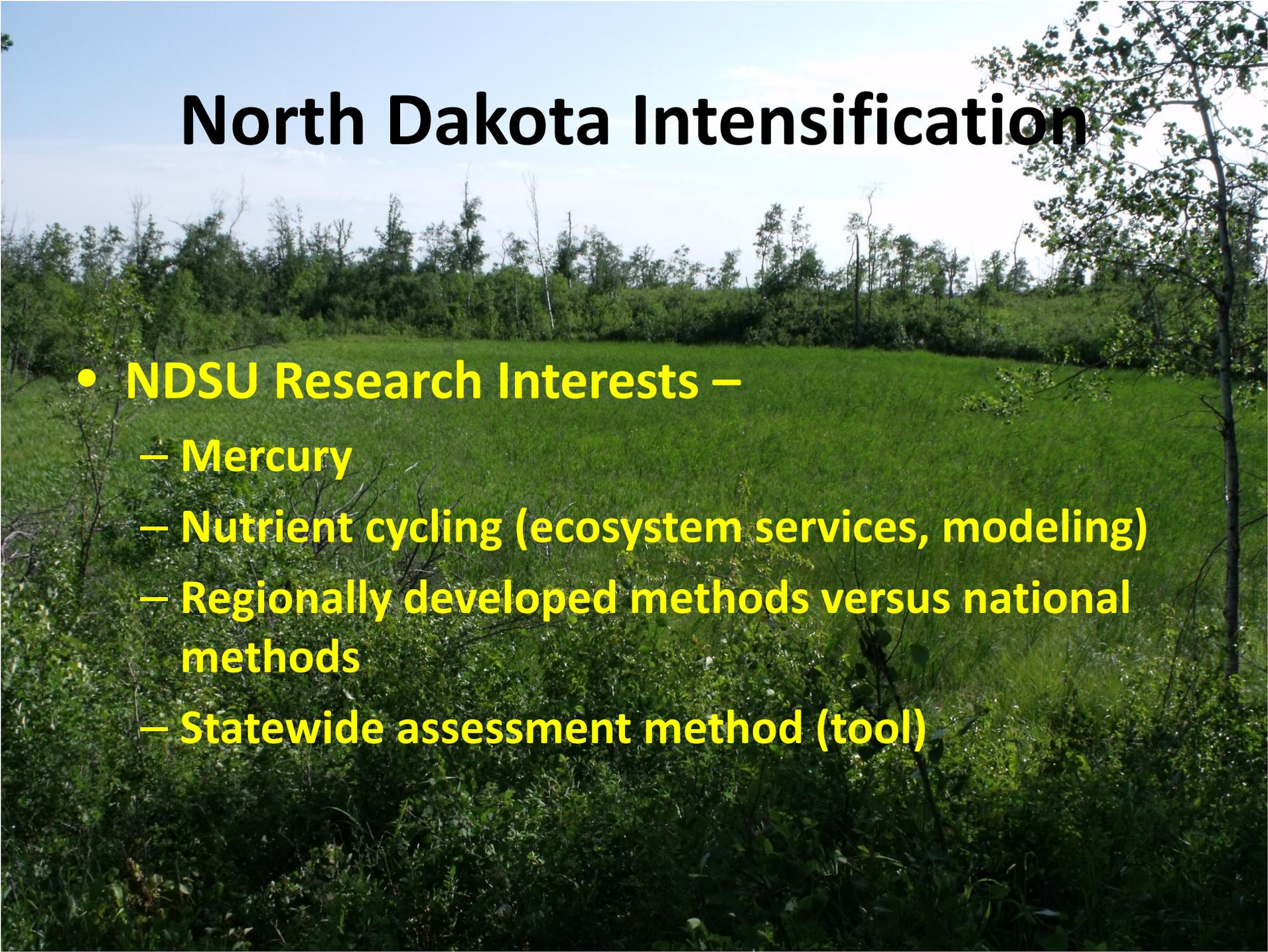
North Dakota Intensification

A photograph of a lush green field, likely a prairie or agricultural landscape, with a line of trees in the background under a blue sky. The field is filled with tall, vibrant green grasses and some smaller plants in the foreground. The trees in the background are a mix of deciduous and coniferous species, some with bare branches and others with full green foliage. The sky is a clear, pale blue with a few wispy clouds.

- **EPA Interests**

- **Adequate sample size (State and Prairie Pothole Region)**

North Dakota Intensification

A photograph of a lush green field, likely a cornfield, with a line of trees in the background under a blue sky. The text is overlaid on the image.

- **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

The background of the slide is a photograph of a natural landscape. It shows a wide, green field in the foreground, possibly a wetland or a grassy area. In the middle ground, there is a dense line of trees and shrubs. The sky is a clear, light blue. The overall scene is bright and natural.

- **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

A photograph of a lush green field, likely a prairie or grassland, with a dense line of trees in the background under a clear blue sky. The field is vibrant green, and the trees are a mix of deciduous and coniferous species. The overall scene is bright and natural.

- **EPA Western Ecology Division**
 - **N₁₅ research – nitrogen cycling**
 - **Ecosystem services**

North Dakota Intensification

A photograph of a lush green field, likely a grassland or pasture, with a dense line of trees in the background. The sky is clear and blue. The text is overlaid on the image.

- **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 ?**

