Wetland Mitigation

Wetlands and Permitting

OPD Conference 2014

NDDOT
North Dakota
Department of Transportation

Wetland Mitigation

- Mitigation Sequencing
- On-site Mitigation
- Mitigation Banks

Wetland Mitigation

- **What is mitigation?**
  - Actions taken to avoid, minimize, or deter the need to adversely affect existing wetlands
  - Mitigation deals in three primary areas
    - Avoidance
    - Minimization
    - Compensation

Wetland Mitigation

Mitigation Sequencing

- The process of **avoiding** impacts to wetlands, **minimizing** impacts that cannot be avoided and then **compensating** for unavoidable impacts

- Mitigation sequencing will be used to mitigate impacts to all natural and/or jurisdictional wetlands (natural and artificial) permanently impacted by highway projects.

Wetland Mitigation

Mitigation Sequencing Steps

1. **<u>Avoidance</u>** - Adverse impacts to wetlands are to be avoided if there is a practicable alternative with less adverse impact. Avoid adverse impacts by not placing road fill into a wetland, other water, or stream if there is a practicable alternative with less adverse impacts

- ✓ Example: Adjusting the geometry or alignment of the road to avoid wetland impacts

Wetland Mitigation

Mitigation Sequencing Steps

2. <u>Minimization</u> - If impacts cannot be avoided, appropriate and practicable steps to minimize adverse impacts must be taken to the extent possible. Examples:

- ✓ Lowering the profile of the road
- ✓ Steepening inslopes
- ✓ Following existing land contours to minimize grading
- ✓ Span as much of the wetland as possible
- ✓ Sinking box culverts below the bottom elevation of the channel to allow for aquatic species movement

Wetland Mitigation

Mitigation Sequencing Steps

3. **<u>Compensation</u>** - Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts that remain after avoidance and minimization

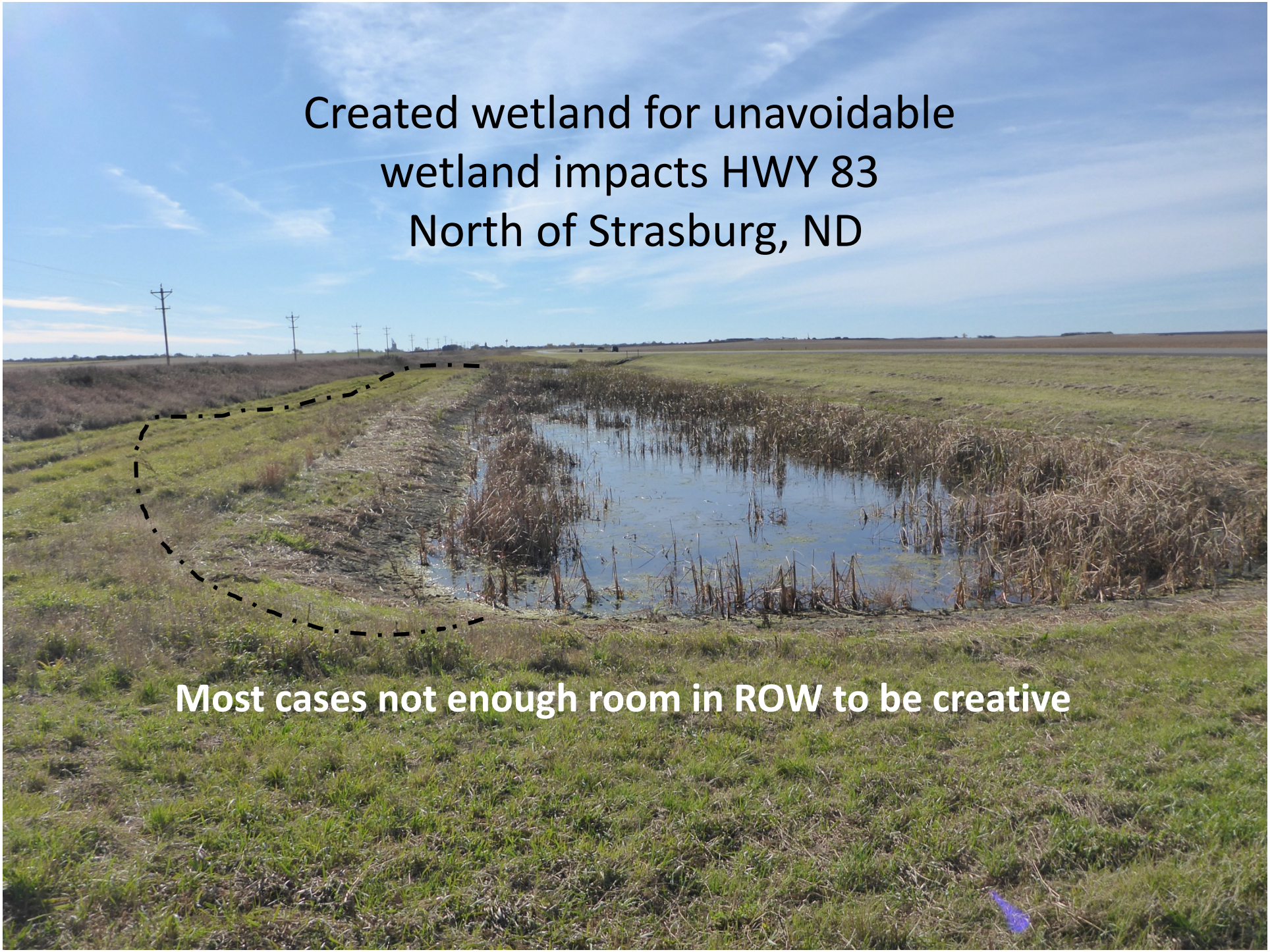
Wetland Mitigation

On-Site Wetland Mitigation
Vs.
Mitigation Banks

On-Site Wetland Mitigation

<u>Mitigation Sites</u> –

- Mitigation developed in conjunction with specific project impacts and usually located adjacent to those impacts
- Wetland mitigation sites may be located within existing or newly purchased ROW
- Need to be created prior to or concurrent with the wetland impacts


Created wetland for unavoidable
wetland impacts HWY 83
North of Strasburg, ND
Most cases not enough room in ROW to be creative

Wetland Mitigation Banks

- Developed by NDDOT through fee title purchase or easement
- Preferred mitigation type
- Wetland and surrounding upland are restored and preserved
- Credits are determined via the mitigation banking process as outlined in the North Dakota Interagency Review Team (NDIRT) Wetland Mitigation Banking Guidance Document

Wetland Mitigation

- **1:1** Restoration of a completely drained or filled wetlands by plugging the outlet and/or removing sediment
- **1:1** Restoration of the outer ring, completely drained portion of a partially drained wetland, removing accumulated sediment
- **2:1** Restoration of the inner ring (deeper portion of a partially drained wetland basin) that continued to pond water after completion of the drainage project
- **2:1** Restoration of an impaired wetland by removing the sediment

Wetland Mitigation

- **2:1** Creation of a new wetland by excavation or construction of small dams across non-wetland drainageways
- **5:1** Establishing and maintaining a 50-foot vegetated, upland buffer around the perimeter of each mitigation wetland
- **10:1** Preservation of existing wetland habitat as a minor component of a mitigation bank featuring restored and/or created wetlands
- **20:1** Enhancement of a mitigation tract by establishing permanent grassland on the upland outside of the 50-foot buffer to square off the boundaries of a mitigation bank and develop a reasonable land use plan for the surrounding property

Wetland Mitigation

- **Wetland Mitigation Banks**
  - The goal of a mitigation bank site
    - A diverse wetland complex of temporary, seasonal and semi-permanent wetlands with associated grassland buffers and upland to replace unavoidable wetland losses with wetlands that provide similar functions
  - Mitigation banks are also developed to mitigate impacts to USFWS grassland easements and fee title lands

Ditch Block

Prairie
Cordgrass

Ditch Block

Sediment Removal

Questions??

David Dewald

Wetland Mitigation Specialist

ddewald@nd.gov

701.328.4484

NDDOT
North Dakota
Department of Transportation