



# Reclamation: Developing a Checklist for Better Communications

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about the new store locating on  
Lower Third Street.

Debra Jackson said she likes shopping at the Dollar Palace because it is convenient and casual.

"I don't have to get all dressed up like I'm going to Wal-Mart or something," she said, adding she shops at Williams' store "to

# Today's Discussion!

- What is the Issue?
- Preparing a Reclamation Plan
- Determining the success of a reclamation project

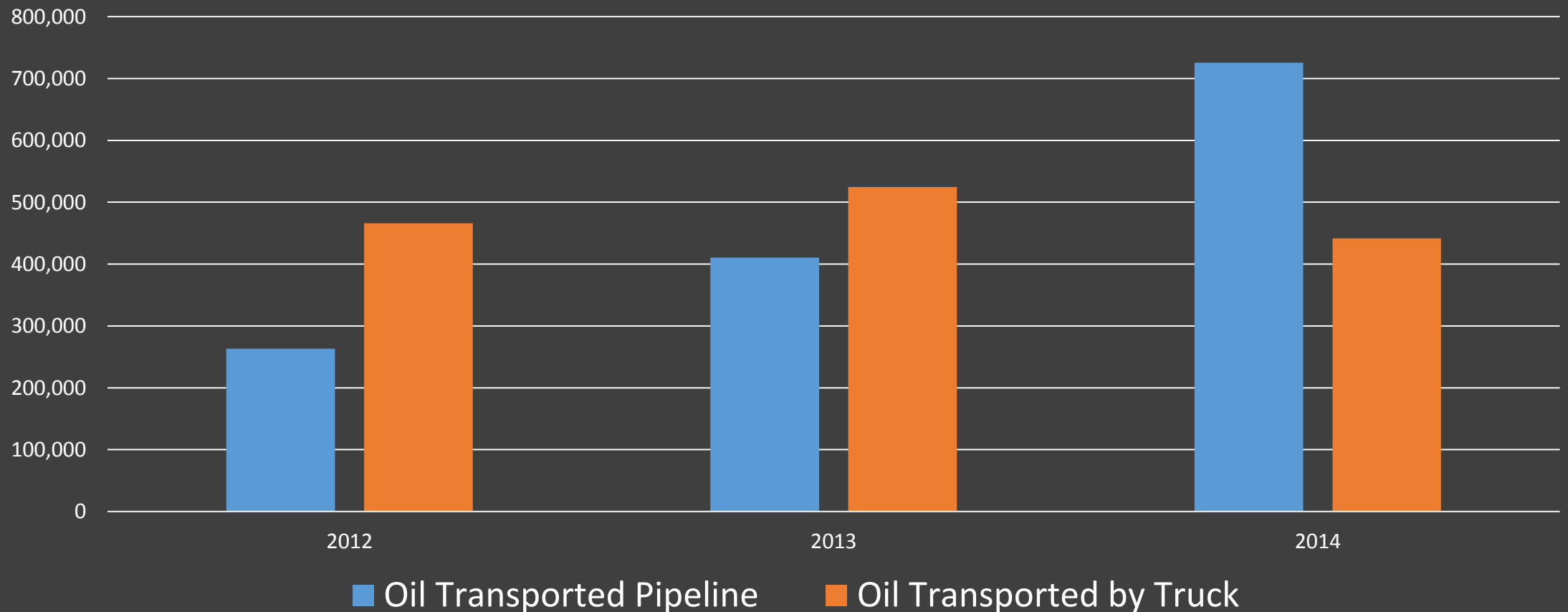


# NDSU Extension Service's Role in Programming

- Educate surface owners and managers, and companies on Proper Reclamation
- Better understand what it takes to create a successful reclamation plan and outcome
- Help surface owners understand their rights and create a document or “checklist” to develop this reclamation plan
- Help create a positive dialog through better communication with companies and surface owners

# Issue: Related to New Disturbances

## Estimated Transport, BOPD





# Oil and Gas Pipelines

## — including gathering lines

- 18,000 miles of pipeline buried in North Dakota
- **2015 - 2020 Projected:**
  - 35,700 miles
  - **17,700 “new” miles**
    - 107,420 acres impacted
    - **Burleigh County – 106,899 acres**



# Reclamation Planning – Be Prepared

- Need to address before signing an easement
  - Create a reclamation plan before construction occurs
    - Within the easement
    - Often a separate agreement
      - Provide a checklist and step-by-step process of the reclamation



**Reclamation of Oil and Gas Industry-impacted Land**  
**A Guide and Checklist**

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The final phase of most oil- and gas-related pipeline and well pad development is reclamation. The success of a reclamation project has many variables, but the primary causes of difficulties are a lack of knowledge of surface owners' rights and poor planning before signing an easement that pertains to an oil- and gas-related project.

When negotiations occur to develop a pipeline, well pad, or any oil- and gas-related project, discuss the reclamation component while you discuss an easement or contract for construction. You don't need to agree upon who performs the reclamation task, but you should agree on what the land should look like once the project is complete and who is responsible for achieving that outcome.

This publication provides a checklist for landowners and companies to promote trust and cooperation. The checklist provides a list of procedures that should be addressed to assure the land will be returned, as close as possible, to its agronomic productivity level and ecological function.

- For cropland: Soil layers (top soil, subsoil, etc.) need to be replaced in the proper order and the original depths if possible.
- For range and pasture land: The plant community ecological function should include reseeding of appropriate plant species, reconstructing soil layers and horizons, grading, and developing.

The checklist will guide you through the reclamation process. Examples of land that should be included in the checklist are: cropland, range and pasture land, and riparian areas.

**Who Collects Data?**  
Baseline data will be collected by the landowner or the company. The report describing the reclamation should include a description of the land at the time of construction and the recommended soil layers and should be addressed to the landowner or the company.

**Reclamation**

- Define goals/timelines for successful land recovery
  - Vegetation restoration
  - Weed control
  - Topographic feature recovery
- Disturbed areas should be monitored and documented to ensure land recovery goals will be met
- Determine the duration and frequency of monitoring and maintenance

**Point of Contact**  
Clearly identify the pipeline company contact who will be working with you throughout the entire process.

To find pipeline company contacts, go to [www.ndoil.org](http://www.ndoil.org) → Oil Can! → Easement Information Center → Pipeline Company Contact Information.

To request gathering line data, go to [www.dmr.nd.gov](http://www.dmr.nd.gov) → Oil and Gas Division Website → Gathering Pipelines → Request Information About Gathering Lines On Your Land.



**Pipeline Reclamation Problems? WE CAN HELP!**

The North Dakota Department of Agriculture's pipeline and reclamation oversight pilot program connects landowners and surface tenants experiencing pipeline reclamation issues with an independent ombudsman. The role of the ombudsman is to help surface owners/tenants and pipeline companies identify and bring resolution to pipeline reclamation issues.

Pipeline reclamation problems addressed in the early stages have a higher degree of resolution and can often be resolved before further erosion of confidence and loss of productivity by all parties.

If you are not getting an adequate response for pipeline reclamation problems directly from the pipeline company, contact the North Dakota Department of Agriculture at 1-800-242-7535 or go to our website at [www.nd.gov/ndda](http://www.nd.gov/ndda) to request assistance in resolving them.

**NORTH DAKOTA**  
**DEPARTMENT OF AGRICULTURE**  
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(701) 328-2231  
(800) 242-7535  
FAX: (701) 328-4567  
[www.nd.gov/ndda](http://www.nd.gov/ndda)

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**LANDOWNER TIPS FOR SUCCESSFULLY WORKING WITH PIPELINE COMPANIES**

**NORTH DAKOTA**  
**DEPARTMENT OF AGRICULTURE**

**AGRICULTURE COMMISSIONER**  
DOUG GOEHRING

# Communication

- It is critical to be prepared “in the beginning” to discuss the reclamation process before construction!





# Checklist: Major Impacts that effect Reclamation

- Soil description and soil placement
- Poor reclamation
- Proper seeding mixture and timing when reseeded
- Erosion
- Grazing while planting becomes established
- Weeds



# Create a “Baseline” Data File

- **Determine the Land use type for each piece of land disturbed**
  - Rangeland
  - Hay land
  - Cropland
  - Pastureland
  - CRP
- **Understand your base “soils” to be disturbed by land use**
- **Know your plant species composition for range or pastureland**





# Fundamental Reclamation Process

- **Minimize impact area (foot print)**
  - Natural regeneration more likely
- **Plan for erosion control devices**
  - Topographical issues
  - Sandy soils
  - Seeding outside preferred seeding dates



# Fundamental Reclamation Process

- **Weed control**

- Noxious and invasive species documented during baseline survey
- Not all weeds are bad!





# Understanding the Soils: Depth of Horizons

- **Determine boundary (depth) between topsoil and subsoil**
- **Current Policy states scrape top 12 inches to represent topsoil**
  - This is flawed as topsoil may be much less than 12 inches, creating a mixing of top- and subsoil during the preparation phase



# Soil Placement during the Excavation Process

- **Separation usually occurs by placing on opposite sides of trench**
- Minimize the number of times you disturb the soil





# Seed Mixtures for Range Reclamation

- **Seed mixtures should match current plant community as close as possible**
  - Especially as relates to grasses
  - Add flowering plants as desired, but they usually invade from surrounding community



# Other Reclamation Issues to Monitor

- **Dealing with Fences**

- If fences are disturbed, monitor replacement of fence to meet your standards





# Monitor: Reclamation Success

- Successful reclamation on croplands “may” only take one year
- Successful reclamation on pasture and hay land may take 2 – 3 years, depending on plant mixtures and weather patterns
- Successful reclamation on rangeland will take 3 to 5 years, depending on weather patterns
- Compensation for lost income and access need to be reflex in time needed to reclaim

# Determining the Success of the Reclamation Projects

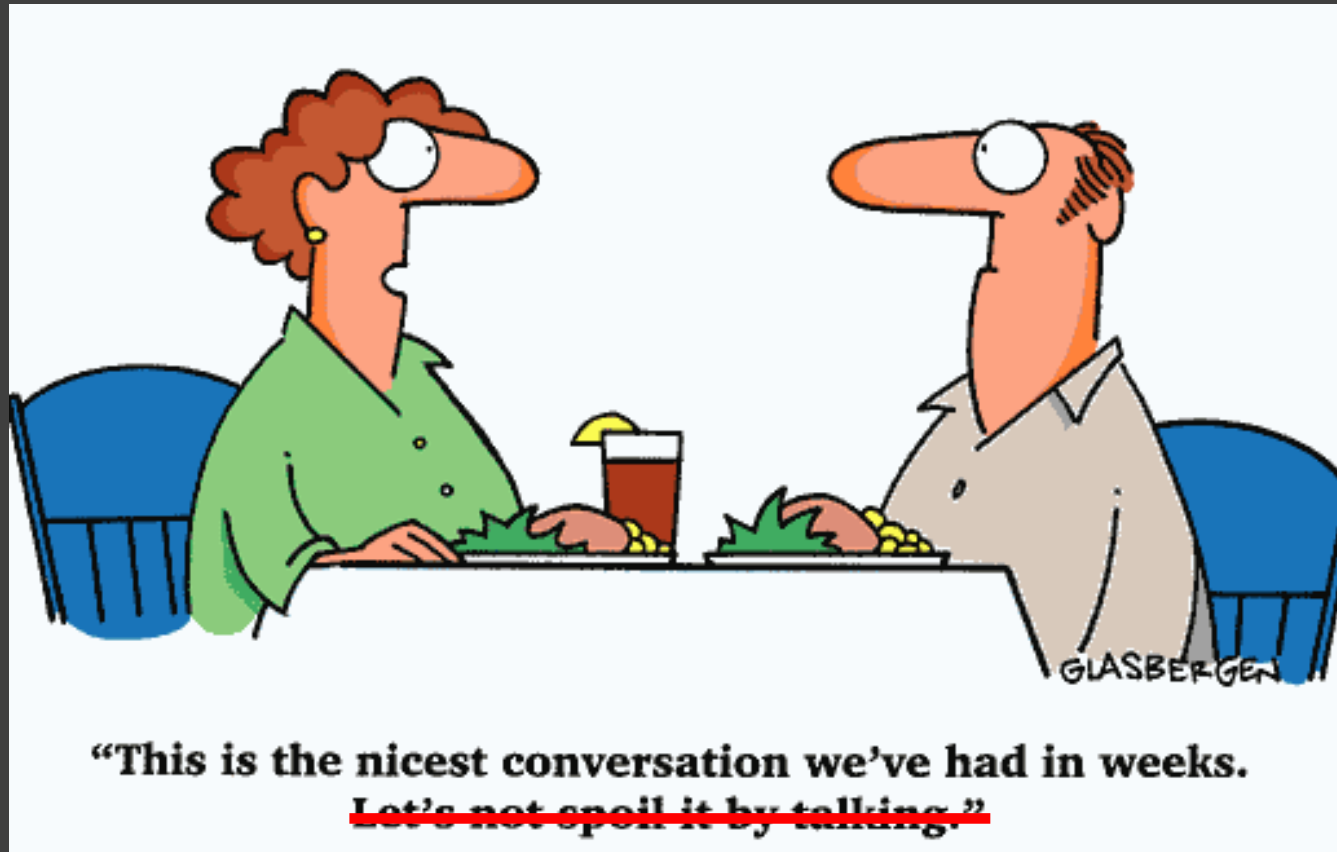


# Determining the Success of the Reclamation Projects on Rangeland

- Seedlings from the seeded plant species should be noticeable (rowed) in the 1<sup>st</sup> growing season
  - Presence of annual weeds throughout is common
- 2<sup>nd</sup> year, seeded plants should be common, in rows - annual weeds still present
- A Typical Successful Seeding is 3 to 5 established plants per ft<sup>2</sup>
  - In western North Dakota, 3-5 years
  - In Central North Dakota, 2-3 years

# SUMMARY

- Communicate!!!





# SUMMARY

- Communicate!!!
- Know what to ask when talking reclamation
- Use your checklist to guide you through the reclamation planning process
- Understand reclamation usually takes more than one year!
- Monitor



# Any Questions

