

# Improving Pipeline Reclamation

## Protecting our soil resource through education

### Public Value Statement

The oil and gas industry continues to develop pipeline infrastructure in western North Dakota. Hundreds of miles of gathering and transport lines have been installed in the past 10 years and more pipelines are planned. When pipeline-disturbed soil is properly reclaimed, desirable vegetation protects soil against erosion and prevents weed infestation. Landowners and the public benefit from increased soil quality and fewer weedy pests.

### The Situation

Oil and gas development continues in western North Dakota. In recent years, pipelines facilitating natural gas capture and transport have been built at a rapid pace. Most pipelines are installed via trenching and this disturbance too often results in unproductive sites characterized by erosion and weed infestation. Oil companies and their contractors do not often approach reclamation from an agronomic perspective and need information to assist them in improving reclamation practices.

### Extension Response

For the past five years, Extension Specialist Dr. Clair Keene and others at the Williston Research Extension Center have conducted on-station and on-farm research to improve pipeline reclamation practices in western North Dakota. Oil company employees familiar with these projects requested more information to better understand what they needed to do to improve their approach to reclamation. On January 28, 2020, Dr. Keene partnered with Dr. Tom DeSutter and Meredith Miller to offer a pipeline reclamation workshop to environmental and oil field services employees directly involved with reclamation decision making and execution. Fifty three people from 12 different companies attended. Dr. Keene discussed cover crop and perennial plant selection based on site characteristics. She emphasized the importance of matching plant species to the environment to improve the likelihood of achieving satisfactory outcomes.

### Impacts

After the workshop, Dr. Keene received several phone calls from different attendees seeking advice on plant species selection. One company requested several meetings with Dr. Keene and Ms. Miller and

used their recommendations to modify their soil sampling protocol for new site evaluation. The modified sampling procedures will allow them to gather agronomically relevant data which will help guide revegetation decisions.

### Feedback

“Very informative, provided real life examples as well as how the information can be used in the field.”

“I will use a penetrometer to determine if the subsoil is compacted and needs to be addressed.”



Meredith Miller discusses proper soil excavation and piling during the pipeline installation process.

### Primary Contact

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### Collaborators

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 Meredith Miller, WREC Research Specialist