



Informational Sheet

Phase 1 Easement Valuation Study & Next Steps

Agriculture Mitigation Planning Timeline over 10+ years

The Diversion Board of has been discussing mitigating impacts of the Project for many years. Every step built upon the prior step and the Board continues to develop answers for mitigation. Some of the steps taken include:

- The Final Environmental Impact Statement (FEIS) assumed a cost in the budget for the value for flowage easements
- The Ag Policy Subcommittee was created to collaborate and discuss agriculture impacts
- Watts & Associates was hired to study agriculture impacts, specifically crop insurance
- Tinjum & Associates was hired to conduct a sample flowage easement appraisal on parcel owned by the Project
- Steve Herzog was retained expertise to provide guidance on appraisal procedures
- NDSU Agriculture Economics Department was hired by Diversion Authority to study agriculture impacts caused by Project. The Department was also hired by State Water Commission to expand their initial study
- The Diversion Authority issued RFP for appraisal services for valuing flowage easements

Studying Data to Understand the Value of Flowage Easements

In 2018, the Diversion Board of Authority commissioned a study to guide how property rights owners in the Upstream Mitigation Area should be compensated. Property in the Upstream Mitigation Area would be impacted by temporary flood waters during times of extreme flooding when the FM Area Diversion Project would be used to prevent catastrophic property damage.

The Diversion Authority authorized Phase 1 of the study. The purpose of Phase 1 was to research and identify comparable market data to develop a baseline model that

How was the Phase 1 Study Prepared?

Statistical Analysis

Regression Analysis

- 1,600+ sales in the Red River Valley area
- Determined impact a flood had on the market value of a property or land sale

Paired Sales Analysis

Similar Areas & Properties

- Looked at land sales from North Dakota, Iowa, Missouri and Nebraska
- Determined the value impact of having an easement on a property

Phase 1 Report

Provides foundation for mitigation values
Categorized two types of impact



Easement Impact - 8% to 10%
Damage caused by development restrictions



Flood Impact - 7% to 25%
Damage caused by water on the property during extreme flooding events and Project operation

could be used in Phase 2 to form opinions about just compensation due to property rights owners. Phase 1 of the study was conducted by Crown Appraisals, Inc. and submitted on Nov. 30, 2018.

The baseline model developed in Phase 1 included both a regression analysis and a paired sales analysis. Future phases will use the regression analysis along with paired sales analysis to provide a platform for the valuation of easements on unique parcels.

Phase 1

Paired Sales Analysis

Looking at sales from a wider area, the study evaluated areas where land had flooded and then sold, or a flood-protection project had an impact on a property.

The Paired Sales Analysis gathered market data from land sales in the Mississippi River Valley in Missouri and the northern Red River Valley in North Dakota and Minnesota. These paired sales help establish the value change in having a flowage easement.

The data showed there was impact to property value if there was an impact by flooding, or if the property could not be developed anymore because it was near a project. There were more than 50 sales found that supported this section of Analysis.

Regression Analysis

The Regression Analysis simply means a large amount of data compiled and evaluated to develop some conclusions.

This Analysis started with 2,300 land sales in six counties; Cass, Clay, Norman, Richland, Traill and Wilkin.

Crown Appraisals utilized two approaches to develop the value impacts in Phase 1. First, a regression analysis evaluated data from more than 1,600 agriculture land sales over the past 26 years. The analysis evaluated market sales price, property characteristics from six counties in the Red River Valley and how properties in our community were impacted during the floods of 1997, 2001, 2006, 2009, 2010 and 2011.

Phase 2

Next Steps

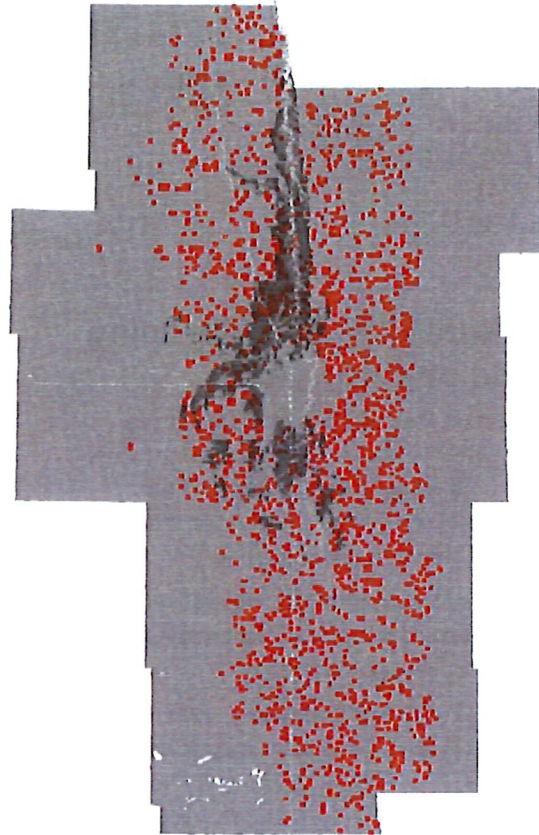
The purchase of property rights, or flowage easements, are one of the primary tools the Diversion Authority plans to use to mitigate impacts to farmland. There are additional steps that must be taken to implement mitigation protocols, including:

- Initiate Phase 2 study and finalize after completion
- Finalize hydraulic modeling (FEMA approval through CLOMR process)
- Update of NDSU agriculture impacts study
- Initiate acquisition of easements from property owners

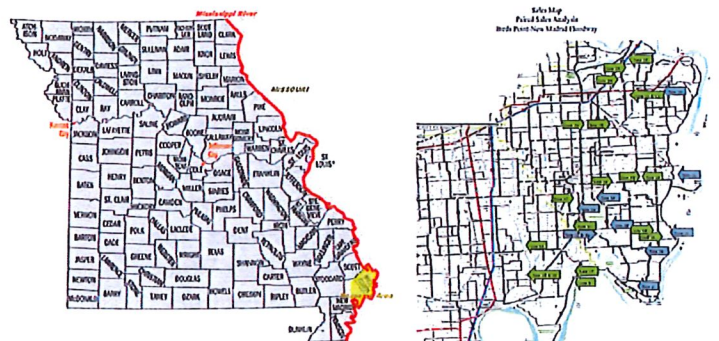
Cost Estimate

The guidance provided by Phase 1 gives the Diversion Authority more information about potential costs related to mitigating impacts. The cost estimate for the Project, released on Dec. 3, 2018, is consistent with the findings from the Phase 1 study.

Land Sales from the Red River Valley that were paired

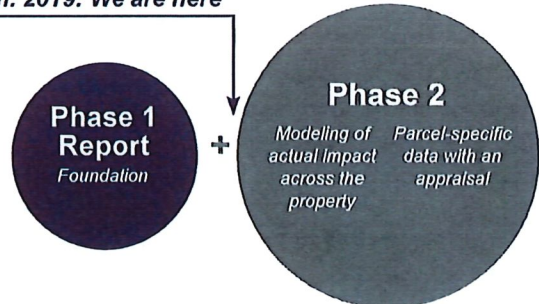


Land Sales from the Missouri River that were paired



- “Before” and “After” appraisal
- Final, hydraulic model
- FEMA approved

Jan. 2019: We are here



Payment to Property Owner for Property Right