



# Property Acquisition and Mitigation

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BRRWD Board Meeting

February 11, 2019



# Presentation Outline

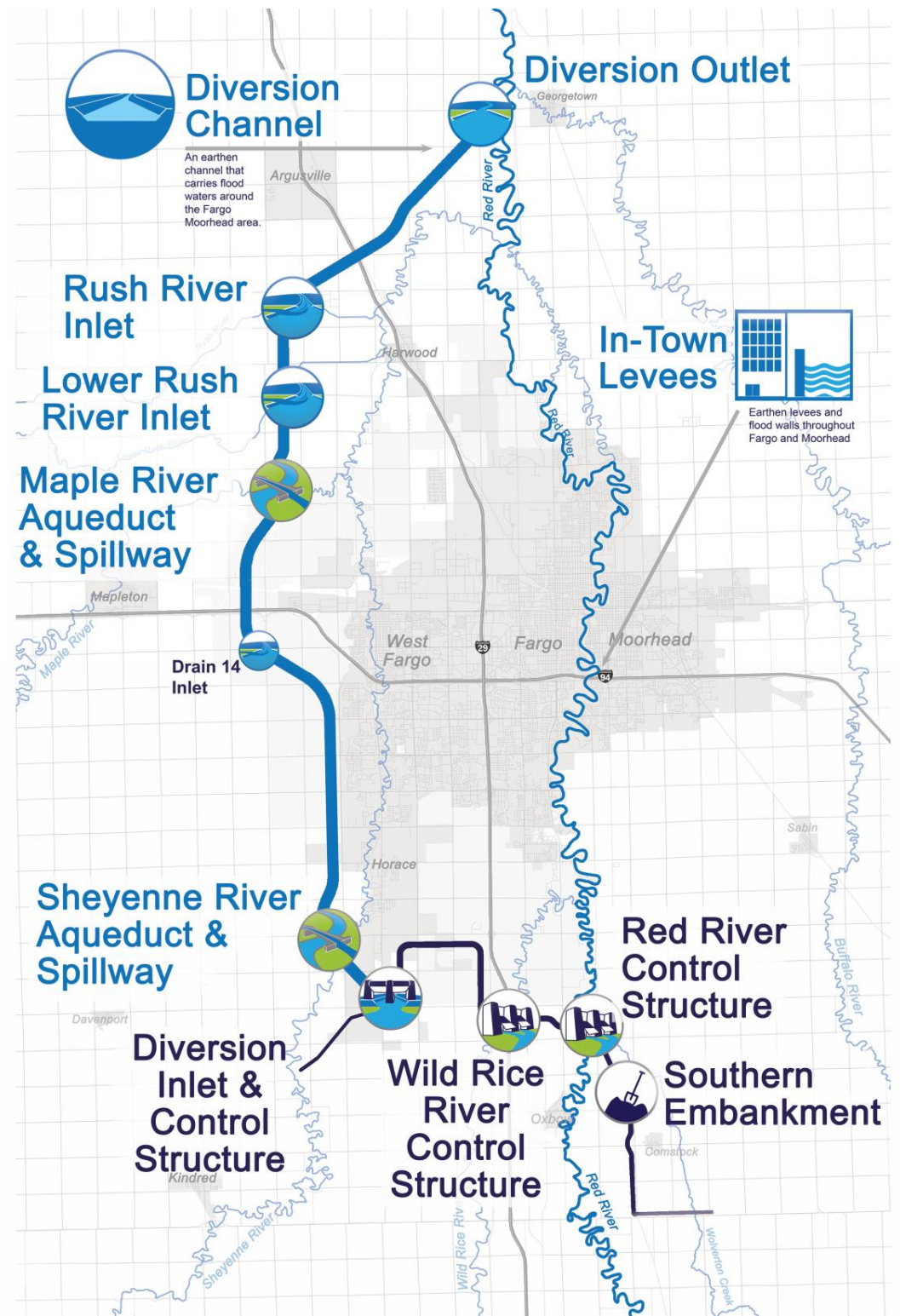
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- ▶ Project Overview
- ▶ Program and Structure
- ▶ Property Acquisition and Mitigation Plan
- ▶ Flowage Easement Study
- ▶ Sample Property Mitigation
- ▶ Next Steps

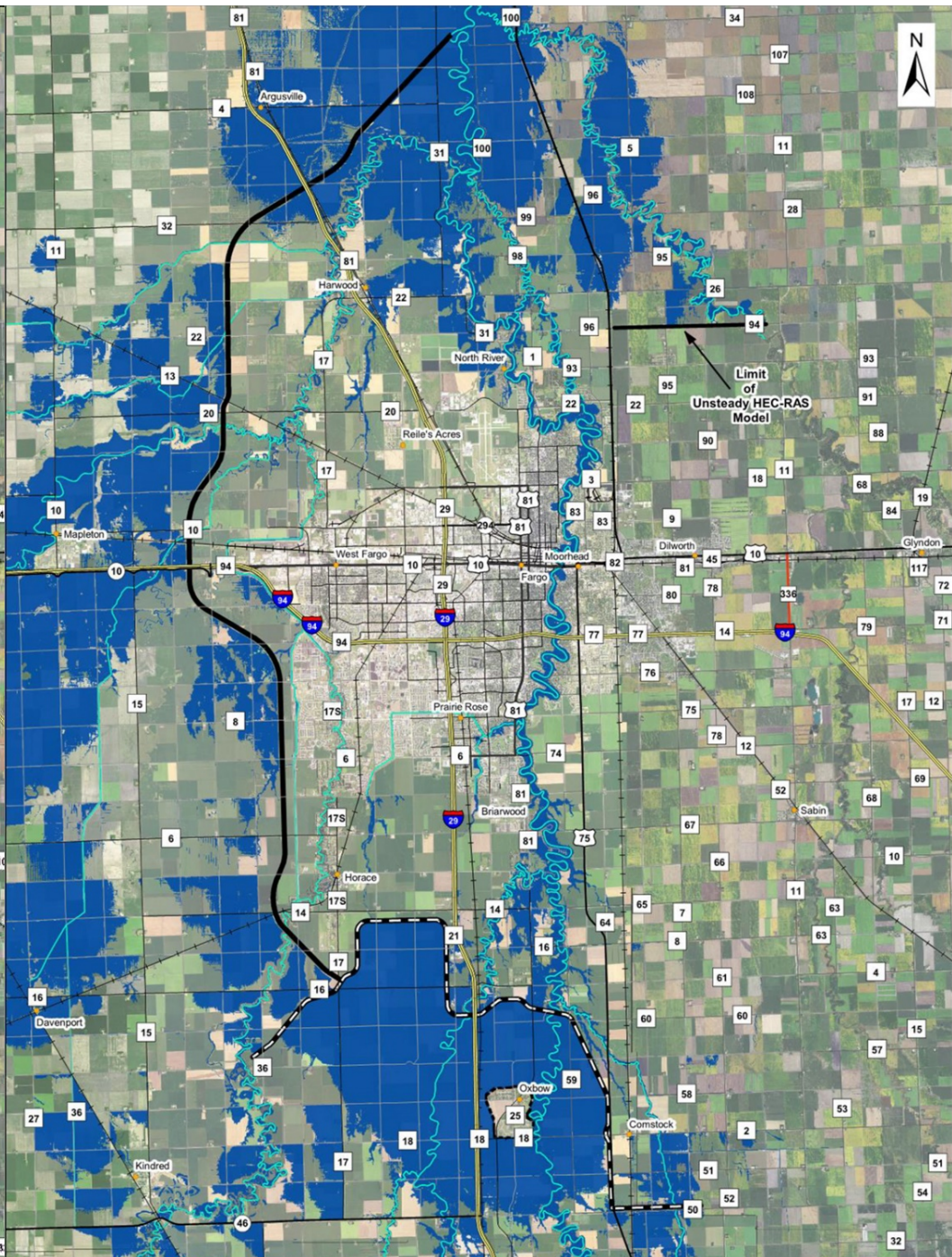
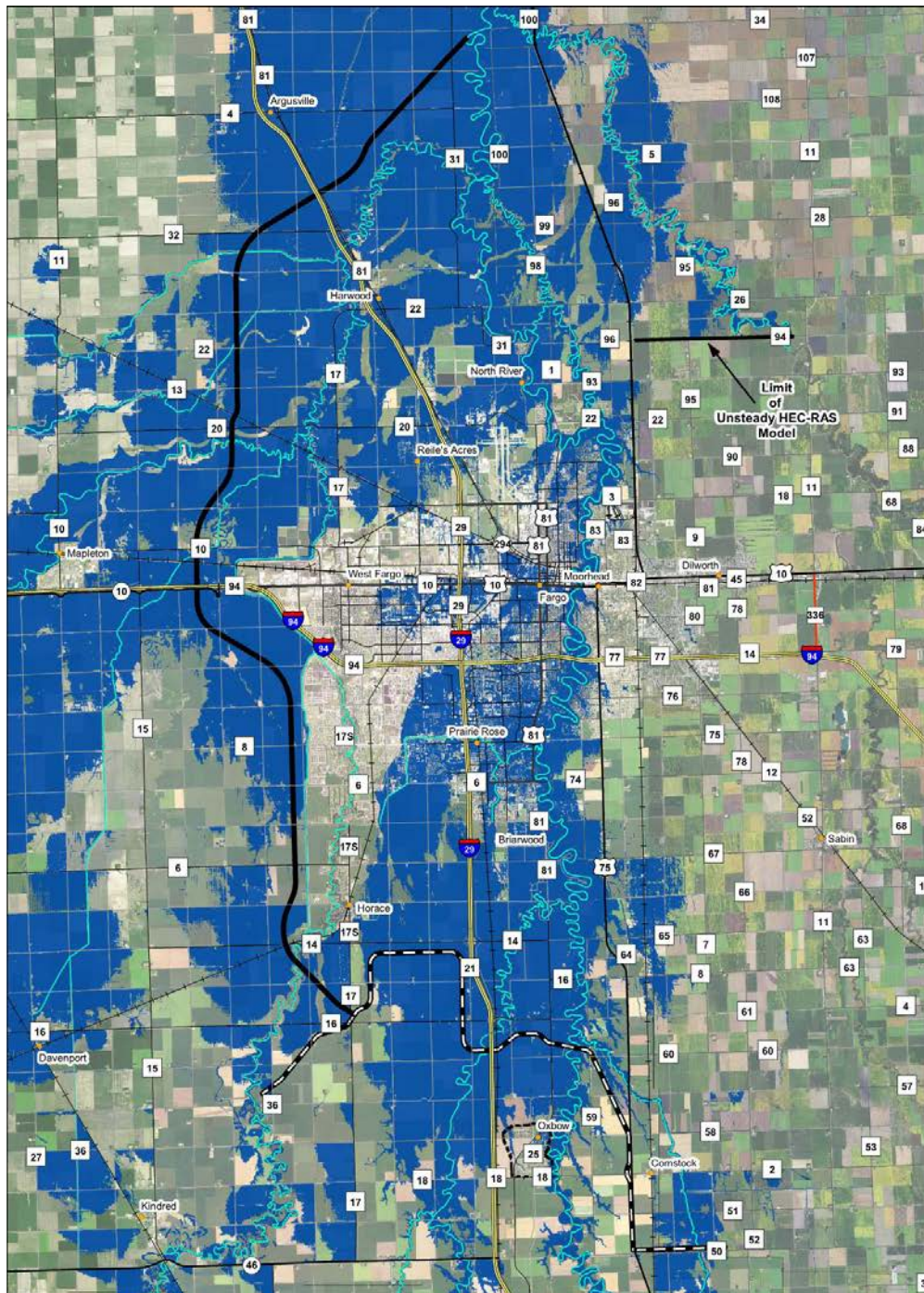


# Project Overview

- ▶ Diversion Channel
- ▶ In-Town Levees
- ▶ Southern Embankment with 3 Gated Control Structures
- ▶ Upstream Mitigation Area (temporary storage of floodwaters to mitigate downstream impacts)







**100-Year Event Without Project**

**100-Year Event With Project**





# Property Acquisition Program and Structure

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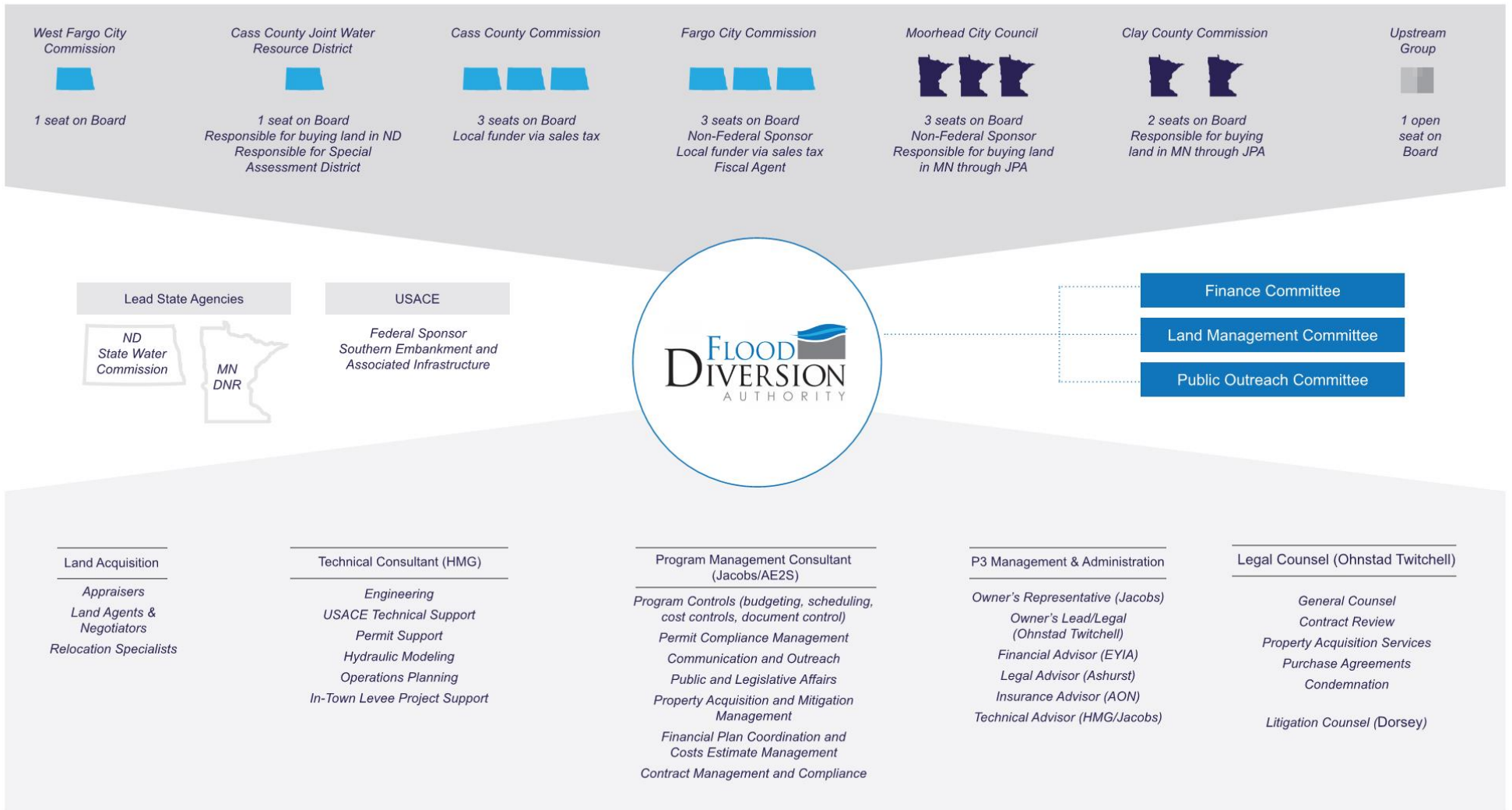
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# FM Area Diversion Project Organizational Structure

Draft - Jan. 15, 2019

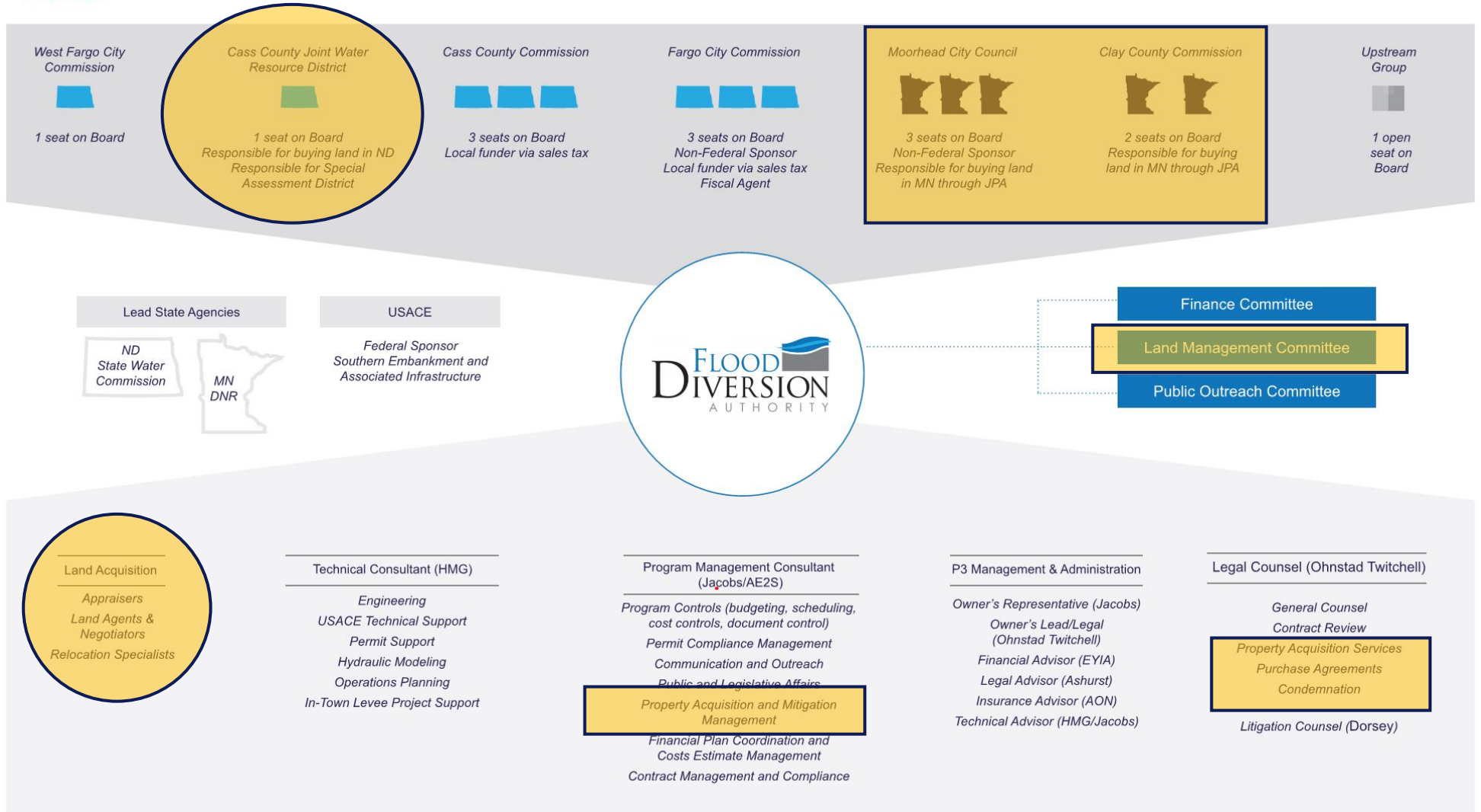


# Lands Related Components of Org Chart



## FM Area Diversion Project Organizational Structure

Draft - Jan. 15, 2019



# MCCJPA

Proposed Acquiring entity in MN

## OT

Legal Services  
Purchase Agreements  
Condemnation

## PMC

Manage property acquisition process  
Policy development  
Contracting management  
Reporting and cost controls  
Appraisal Review  
Relocation Coordination

## Appraisers

Property valuation

## HMG

Land Agents  
Relocation Specialists

## ProSource

Land Agents  
Relocation Specialists

## Ulteig

Land Agents  
Relocation Specialists







# Property Acquisition and Mitigation Plan Summary

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# Property Rights Acquisition and Mitigation Plan, v4

- ▶ The PRAM Plan was drafted in coordination with U.S. Army Corps and in consultation with the ND State Water Commission and the MN Department of Natural Resources
  - ▶ Version 4 submitted to MDNR with Permit Application
  - ▶ Update needed to reflect MDNR Permit Conditions

## *Table of Contents*

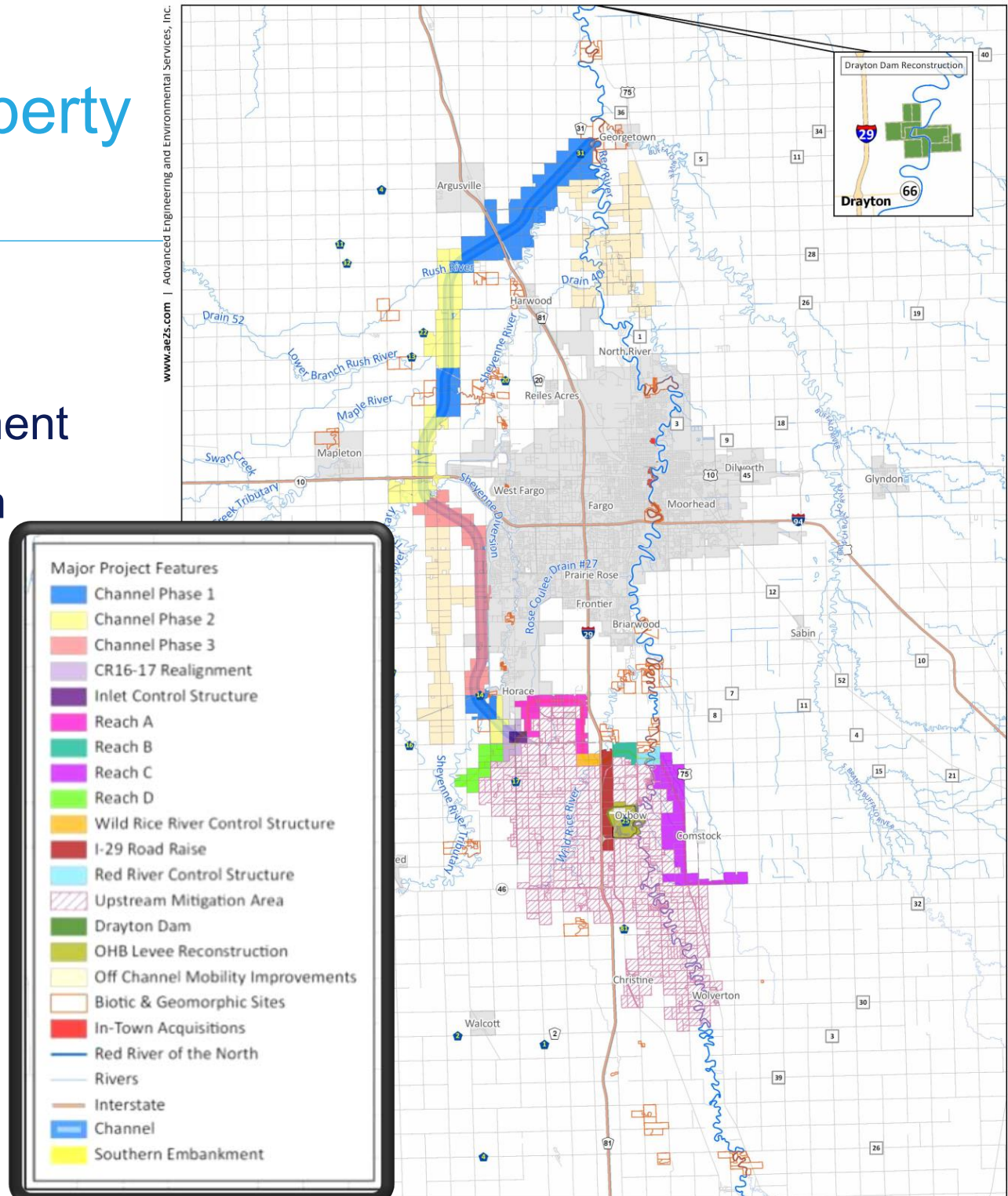
- Property Acquisition Philosophies
- **Typical Property Acquisition Process**
- Appraisal Review Plan
- Offer Presentation and Negotiation Process
- Property Rights Map
- Property Acquisition Schedule
- Early Property Acquisition Program
- Organic Farmland Acquisition Plan
- Disposal of Excess Property
- Mitigation of Properties Upstream
- USACE/FEMA Coordination Plan
- **Flowage Easement Plan**
- Sample Flowage Easement
- **Dispute Resolution Board**
- Cemetery Mitigation Plan
- Mitigation of Historic Places
- **Post-Operation Debris Clean-Up Plan: Private Lands**
- **Post-Operation Repair and Clean-Up Plan: Public Lands**
- **Summer Operation Supplemental Crop Loss Program**
- Financial Assurance Plan for O&M, On-going Mitigation
- Mitigation Communications Plan
- Oxbow-Hickson-Bakke Mitigation Project
- In-Town Levee Mitigation Projects
- Pre-PPA Medical Hardship Acquisition Program



# Necessary Property Rights

- ▶ Diversion Channel
- ▶ Southern Embankment
- ▶ Upstream Mitigation Area
- ▶ Environmental Mitigation
- ▶ 1,200+ Parcels
- ▶ \$500M
- ▶ 8-year

www.ae2s.com | Advanced Engineering and Environmental Services, Inc



# “Lands Program” is Critical Part of Project

Category	Current Opinion of Estimated Cost	Spent to Date (Dec 2018)	Remaining Costs
Lands/Impacted Properties Mitigation	\$502	\$179	\$323
Channel / P3	\$989	\$14	\$975
USACE / SEAI	\$703	\$41	\$662
Fargo and Moorhead In-Town Projects	\$266	\$81	\$185
Other/Mitigation Construction	\$44	\$24	\$20
Non-Construction Costs*	\$250	\$91	\$159
<b>TOTAL</b>	<b>\$2,754</b>	<b>\$430</b>	<b>\$2,324</b>

\*Legal/Financial/Designs/Studies/Procurement/PgM/CM/General Contingency



# Project Impacts & Upstream Mitigation Area

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- ▶ **Mitigation Available to Property Owners**
  - ▶ Project required to purchase “Property Rights”
  - ▶ Property Rights include:
    - ▶ Flowage Easements on Land
    - ▶ Buyout of Structures (or other mitigation)
  - ▶ Several other mitigation measures for Ag Impacts
    - ▶ Post-Operation Debris Clean-Up (private lands)
    - ▶ Post-Operation Repair and Clean-Up Program (public lands)
    - ▶ Supplemental Crop Loss
  - ▶ Dispute Resolution Board



# Acquisition Process

- ▶ Property rights determined by Project Design
- ▶ Valuation determined by Independent Appraisal following state law
- ▶ Property Owners receive
  - ▶ ‘Just Compensation’ = payment for real estate
  - ▶ ‘Relocation Benefits’ = moving, relocation, and re-establishment
- ▶ ~200 acquired to date

## Master Land Acquisition Workflow Diagram



January 2019

### Acronyms

DA - Diversion Authority  
LAD - Land Acquisition Directive





# Flowage Easements (pg 58)

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- ▶ The Diversion Project includes a mitigation area upstream of the Project, which is occasionally and temporarily used to store flood waters on average, once in 20 years.
- ▶ A Flowage Easement will be purchased and applied to properties upstream. Value of the easements will be determined through an appraisal that will consider the depth, duration, and frequency of flooding.
- ▶ The Diversion Authority has contracted with Crown Appraisals to develop the value of the easements. Phase 1 of the study was complete in Nov 2018. Phase 2 expected to start this spring, complete in 2019.



# Post-Operation Debris Clean-Up Program (Private Lands) (pg 97)

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- ▶ Concern from Producers about Debris Left on Fields after Project Operation
- ▶ Operation Anticipated ~20-year Return Frequency
- ▶ Flowage Easements Compensate Landowners for Impacts Associated with the Project
- ▶ Project may Cause Debris to Accumulate within the Upstream Mitigation Area, Impacting Producers
- ▶ Private Property Plan is Mirrored after “Clean-up Week”
  - ▶ Access to Private Property
  - ▶ Voluntary Right of Entry





# Post-Operation Repair and Clean-Up Program (Public Lands) (pg 98)

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- ▶ Concern from Twps, Cemeteries, Watershed Districts, etc damage caused by Project Operation
- ▶ Operation is Infrequent
  - ▶ Operation Anticipated ~20-year Return Frequency
  - ▶ Five Events in Recorded History would have Required Operation
- ▶ Public Property Plan is Mirrored after FEMA Disaster Assistance
- ▶ Allow Government Entities to Contract for Repair and Clean-up Work, then Submit for Reimbursement to Diversion Authority



# Supplemental Crop Loss Program (pg 99)

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- ▶ Summer Operation of the Project is Extremely Unlikely
  - ▶ Project Operation Begins at River Stage of 37-feet
  - ▶ Largest Summer Event in History (1975) = 33-feet
- ▶ But, Summer Flooding would likely Damage Growing Crops
- ▶ Diversion Authority will Provide a Program for Producers to Cover the Crop Loss Risks Associated with Project-Induced Flooding During Summer Months
- ▶ Utilize Federal Crop Re-Insurers and Existing Structure to Offer this Rider Product to Producers



# Dispute Resolution Board (pg 67)

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- ▶ Administrative Program for Properties that Believe they are Impacted by Project, but do not Receive Direct Mitigation
- ▶ Modeled after a Similar Process Created by the NDSWC for the Devils Lake Outlet Project
- ▶ Allows a Forum for Property Owners to File Claims and an Independent and Fair Process to Determine Damages from the Project
- ▶ Avoids Expensive Legal Action







# Phase 1 Flowage Easement Study – Summary of Findings

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# Ag Mitigation Planning Process

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- ▶ FEIS assumed a budgetary value for flowage easements
- ▶ Formation of Ag Policy Subcommittee – collaborate, discuss ag impacts
- ▶ Watts & Associates – hired consultant to study ag impacts, specifically crop insurance
- ▶ Tinjum & Associates – hired to conduct a sample flowage easement appraisal on parcel owned by the Project
- ▶ Steve Herzog – retained expertise to provide guidance on appraisal procedures
- ▶ NDSU Ag Econ department
  - ▶ Hired by Diversion Authority to study ag impacts caused by Project
  - ▶ Hired by State Water Commission to expand their initial study
- ▶ Value of Flowage Easements
  - ▶ Diversion Authority issued RFP for appraisal services for valuing flowage easements
  - ▶ DA retained Crown Appraisals, Inc. – Focus on Phase 1 given the project uncertainty
- ▶ Future efforts
  - ▶ Update NDSU Ag Impacts Study
  - ▶ Phase 2 Flowage Easement Valuation by Crown Appraisals, Inc.

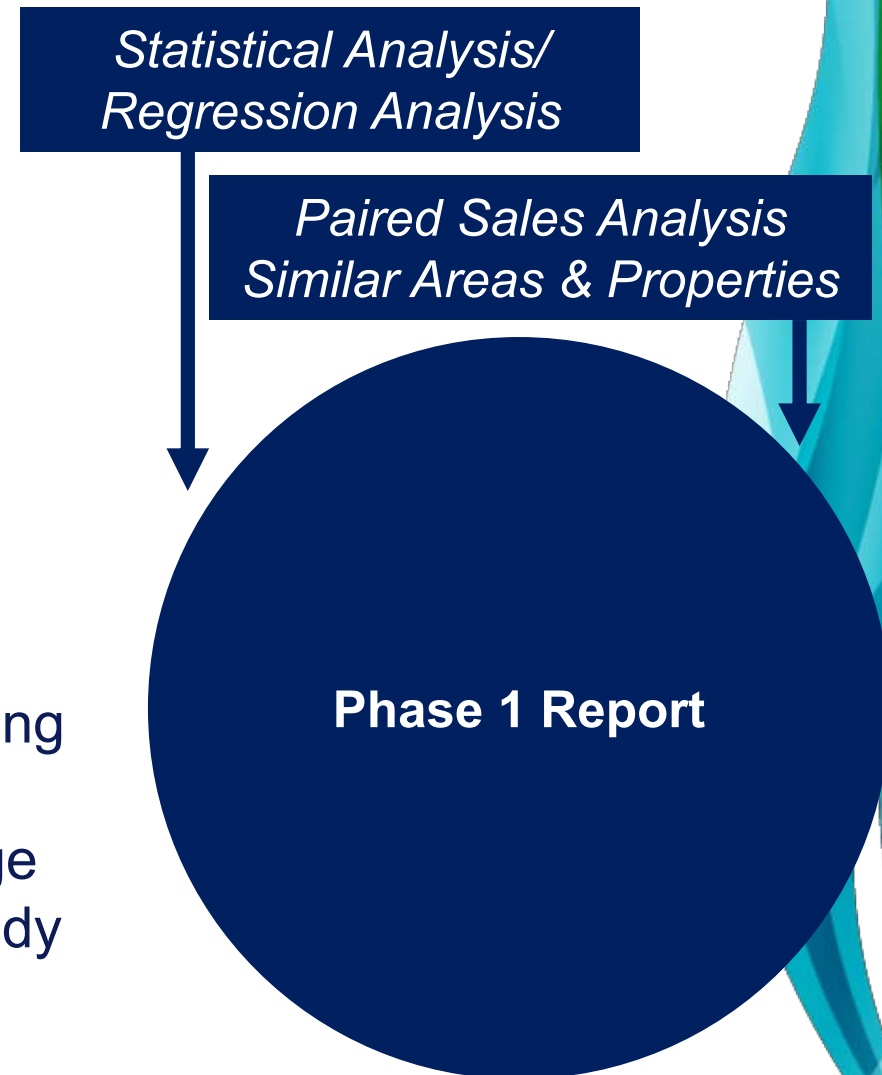


# Flowage Easement Study

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## Phase 1

- ▶ Initiated in January 2018
- ▶ Team of experts, led by Crown Appraisals, Inc.
- ▶ Focus on researching comparable sales data and building a regression model to analyze market value changes due to similar flood risk in other areas across the nation
- ▶ Findings from Phase 1 Study, including the Regression model, will be foundation for specific parcel Flowage Easement Valuations in Phase 2 Study





# Flowage Easement Study – Phase 1

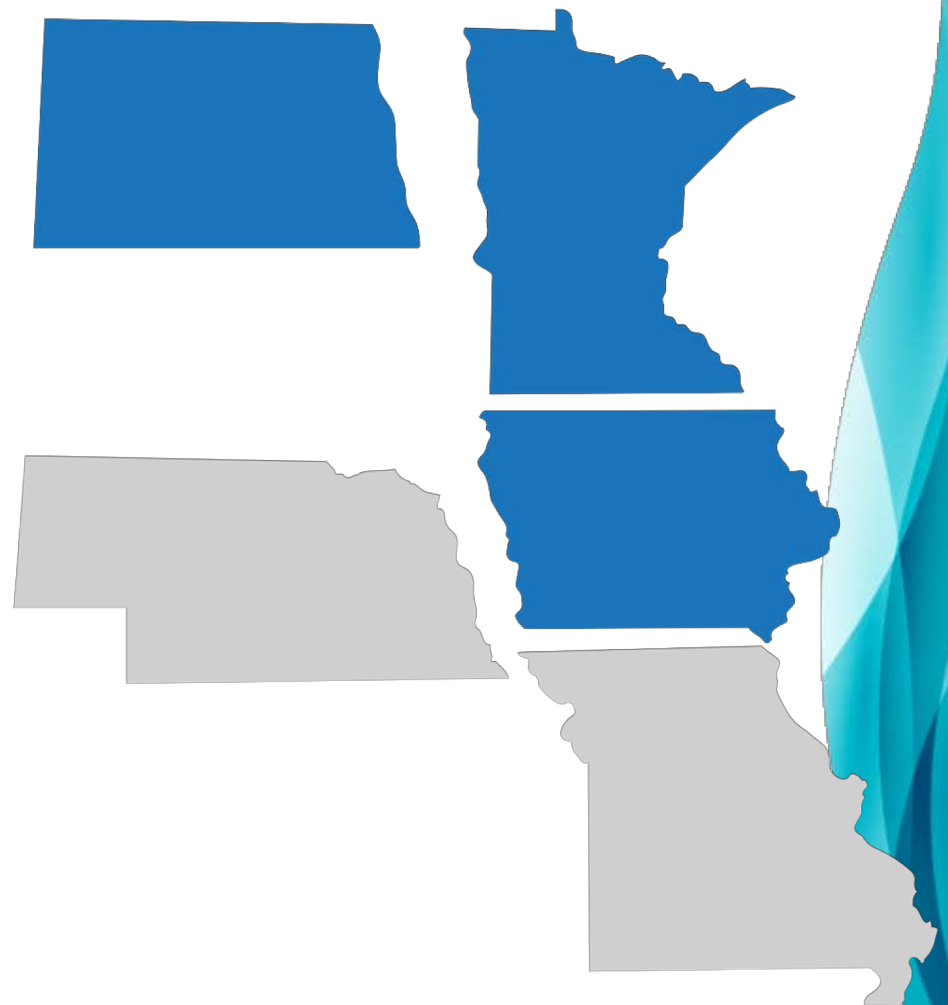
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Study confirmed that  
Market Data is available

- ▶ Nationwide investigation
- ▶ Identified market data in  
ND, MN, MO, NE, IA

Built a robust regression  
model using market data  
(1,644 sales) and 12  
attributes

Reflect market  
conditions to establish  
compensation for  
mitigation of impacts



# Flowage Easement Study – Phase 1

Temporary Flooding Separated into 2 Impacts:

1. Easement Impact
    - ▶ Development Rights
      - ▶ No development in “Operating Pool”
      - ▶ Restricted development outside of “Operating Pool”
    - ▶ Right to Not be Flooded
  2. Temporary Flood Impact
    - ▶ Additional flooding in some areas
    - ▶ New flooding in other areas
    - ▶ Potential loss of growing days
- ▶ Not all parcels will have the same impact

## Phase 1 Report



Easement Impact  
8% to 10%



Temporary Flood  
Impact  
7% to 25%

# Flowage Easement Study – Phase 1

## Easement Impact

- ▶ Based on examination of areas with similar flowage easements in MO
- ▶ Paired sales analysis concluded a value reduction in a range of 8% to 10%
- ▶ Range depends on location of parcel, location of floodway, and the impacts caused by the FM Diversion Project
- ▶ Some properties may not currently have all development rights





# Flowage Easement Study – Phase 1

## Temporary Flood Impact

- ▶ Based on:
  - ▶ Regression analysis of actual sales data within the 6 county area
  - ▶ Paired sales analysis from the northern Red River Valley
- ▶ Regression analysis examined 12 attributes to determine how flooding impacted market value
- ▶ 1,644 “arms length” sales from 27 years of data

## Temporary Flood Impact Summary

- ▶ Regression analysis concluded that increased flood risk reduces property value 7% to 10%
- ▶ Paired sales analysis concluded that increased flood risk reduces property value 11% to 36%
  - ▶ **Reconciled impact of 7% to 25%**

Figure 6: 1997 Flood and Agricultural Land Sales from 1992-2018



# Flowage Easement Study – Phase 1

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## Applying the Findings

Loss of property rights	8% to 10% (Missouri)
Plus increased flood risk	<u>+7% to 25%</u> (RRV)
TOTAL diminution in value	<u><b>15% to 35%</b></u>

## Budget Perspective

Easement cost estimates from Phase 1 study findings are consistent with Project Cost Estimate assumptions



# Flowage Easement Study

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## Phase 2 – Future Work

- ▶ Initiated if/when a Permit is issued
- ▶ Apply findings from Phase 1 Study
- ▶ Incorporate final Project configuration & hydraulic modeling
- ▶ Incorporate findings from updated NDSU Ag Impacts Study
- ▶ Will produce flowage easement compensation amounts for non-developed parcels in the Upstream Mitigation Area
- ▶ Results to include a “before” & “after” valuation
- ▶ Valuation will address the entire parcel (and potentially the “larger parcel”) not only the affected acres of each parcel
- ▶ The “after” valuation will be identified as a value reduction (percentage) from the “before” condition

```
graph TD; A((Phase 1 Report)) --> B((Phase 2 Report  
Detailed parcel  
information and  
specific values));
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**Phase 1 Report**

**Phase 2 Report**  
*Detailed parcel  
information and  
specific values*





# Sample Property Mitigation

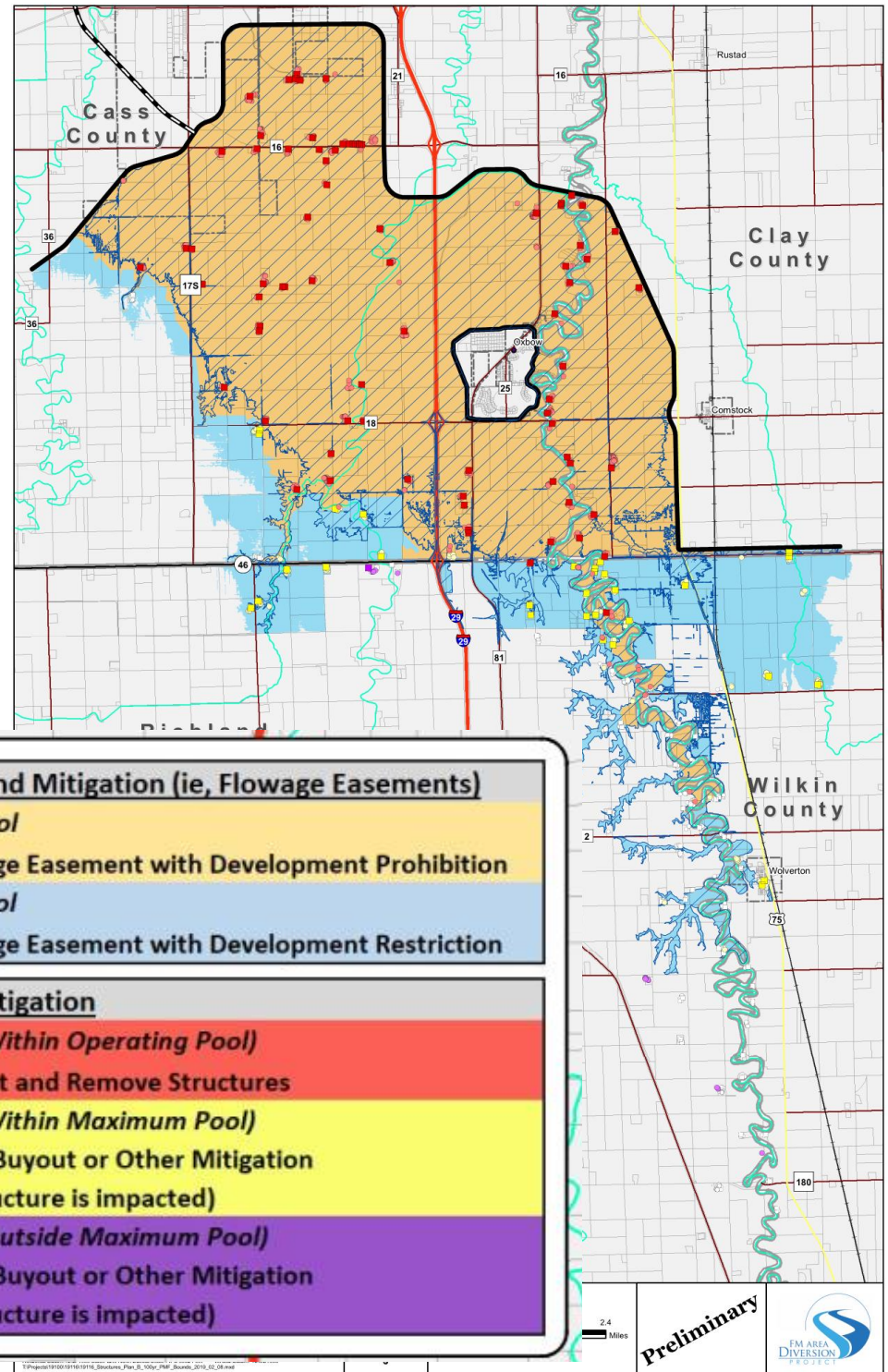
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# Upstream Mitigation Area – Updated

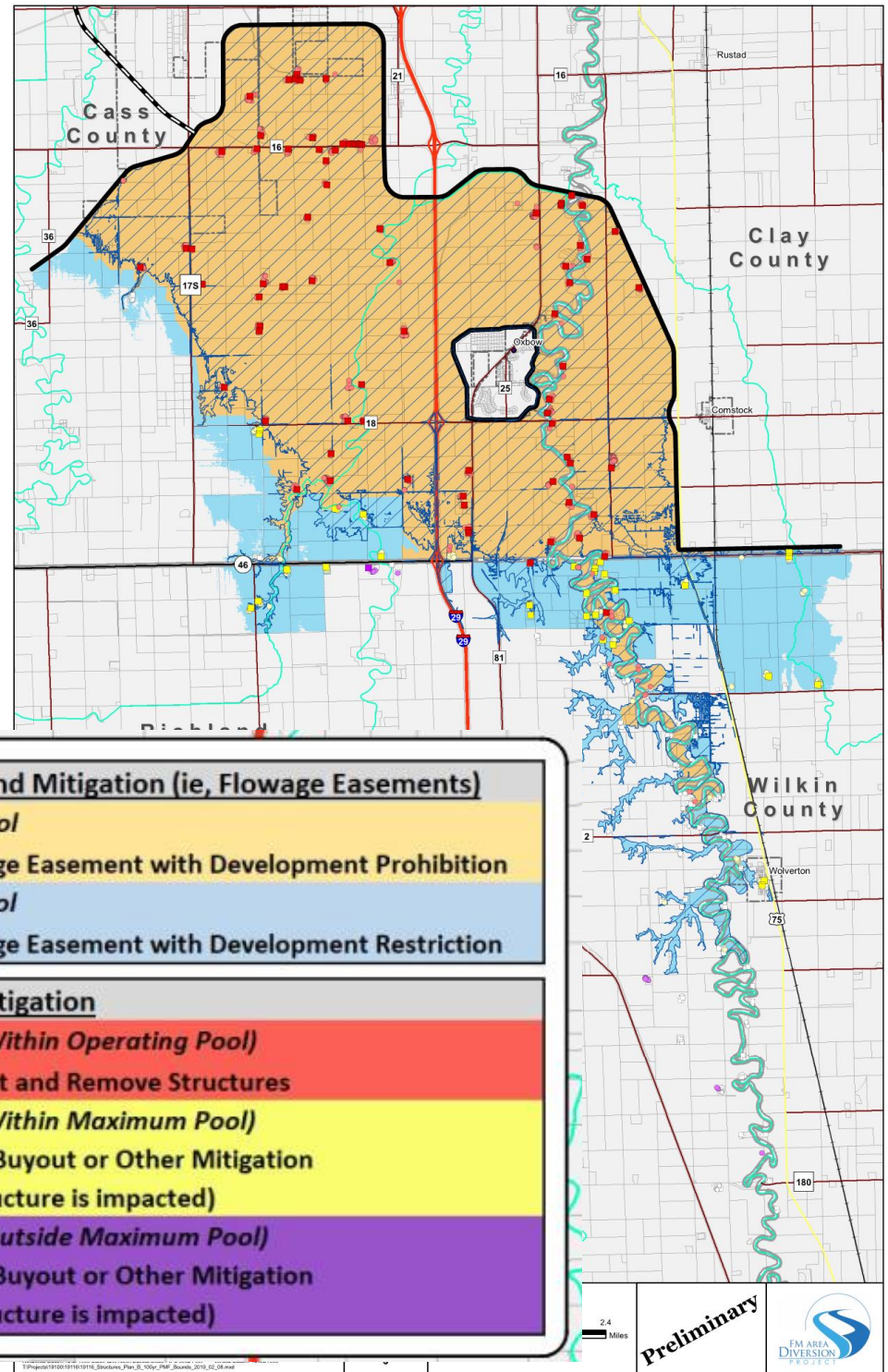
- ▶ The Upstream Mitigation Area is being updated to reflect the conditions of MDNR Dam Safety & Public Waters Work Permit 2018-0819
- ▶ Two “Pools” for Flowage Easements
  - ▶ Operating Pool
  - ▶ Maximum Pool
- ▶ Three “Categories” for Structure Mitigation





# Upstream Mitigation Area – Pools

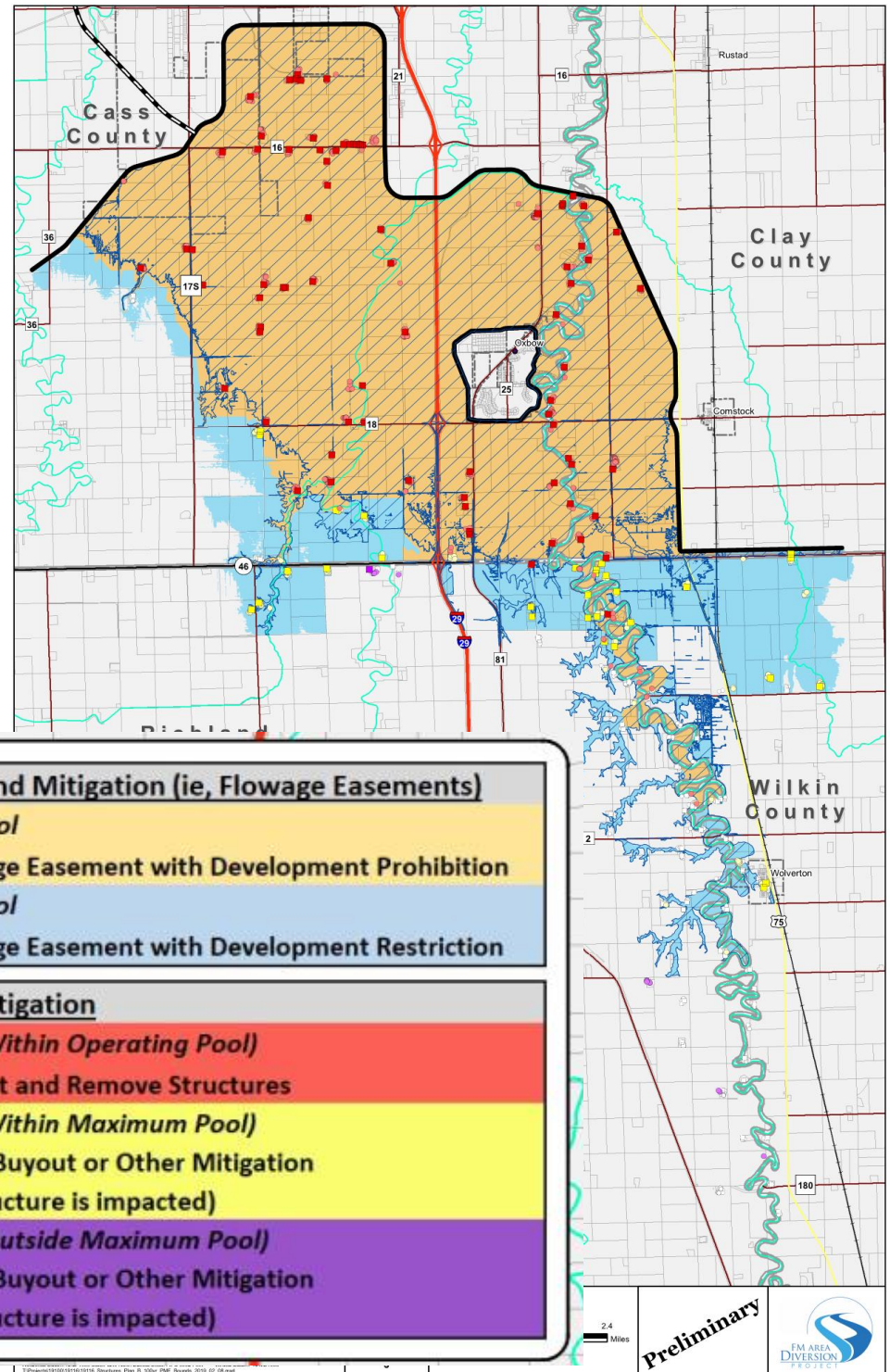
- ▶ **Operating Pool**
  - ▶ Required volume of flood water to safely operate the Project up to the 500-year flood event without causing downstream impacts
  - ▶ The Operating Pool will be treated as a floodway
  - ▶ Development Prohibited
- ▶ **Maximum Pool**
  - ▶ Flood water impacts from PMF event (204,000 cfs)
  - ▶ Revision Reach (FEMA)
  - ▶ Development Restrictions



<b>Impacted Land Mitigation (ie, Flowage Easements)</b>	
<b>Operating Pool</b>	- Flowage Easement with Development Prohibition
<b>Maximum Pool</b>	- Flowage Easement with Development Restriction
<b>Structure Mitigation</b>	
<b>Category 1 (Within Operating Pool)</b>	- Buyout and Remove Structures
<b>Category 2 (Within Maximum Pool)</b>	- Offer Buyout or Other Mitigation (If structure is impacted)
<b>Category 3 (Outside Maximum Pool)</b>	- Offer Buyout or Other Mitigation (If structure is impacted)

# Upstream Mitigation Area – Categories

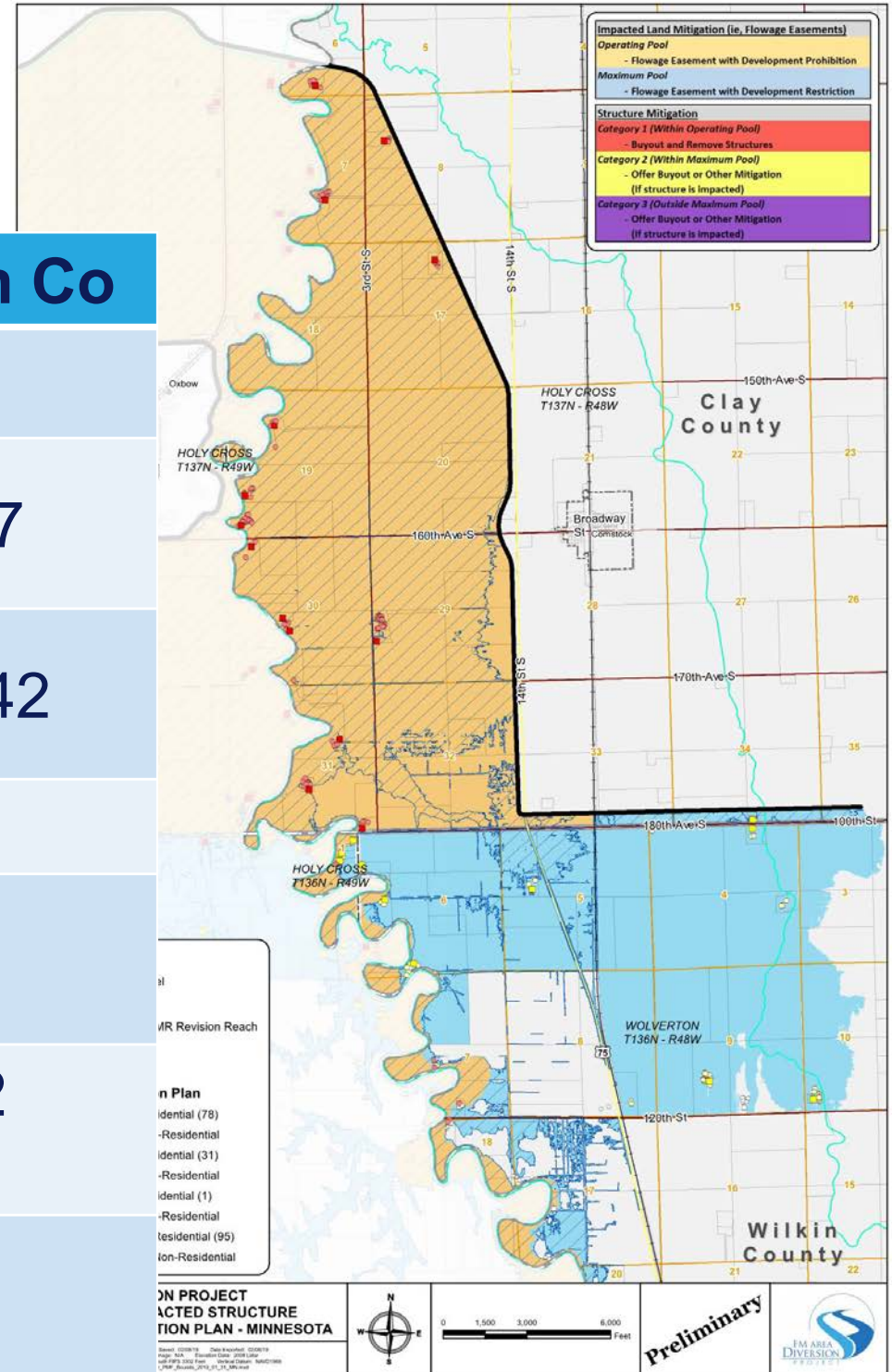
- ▶ **Category 1**
  - ▶ Within Operating Pool
  - ▶ Buyout and Remove
- ▶ **Category 2**
  - ▶ Within Maximum Pool
  - ▶ Offer Buyout, Consider Other Mitigation
- ▶ **Category 3**
  - ▶ Outside Maximum Pool
  - ▶ Offer Buyout, Consider Other Mitigation
  - ▶ If structure is Impacted





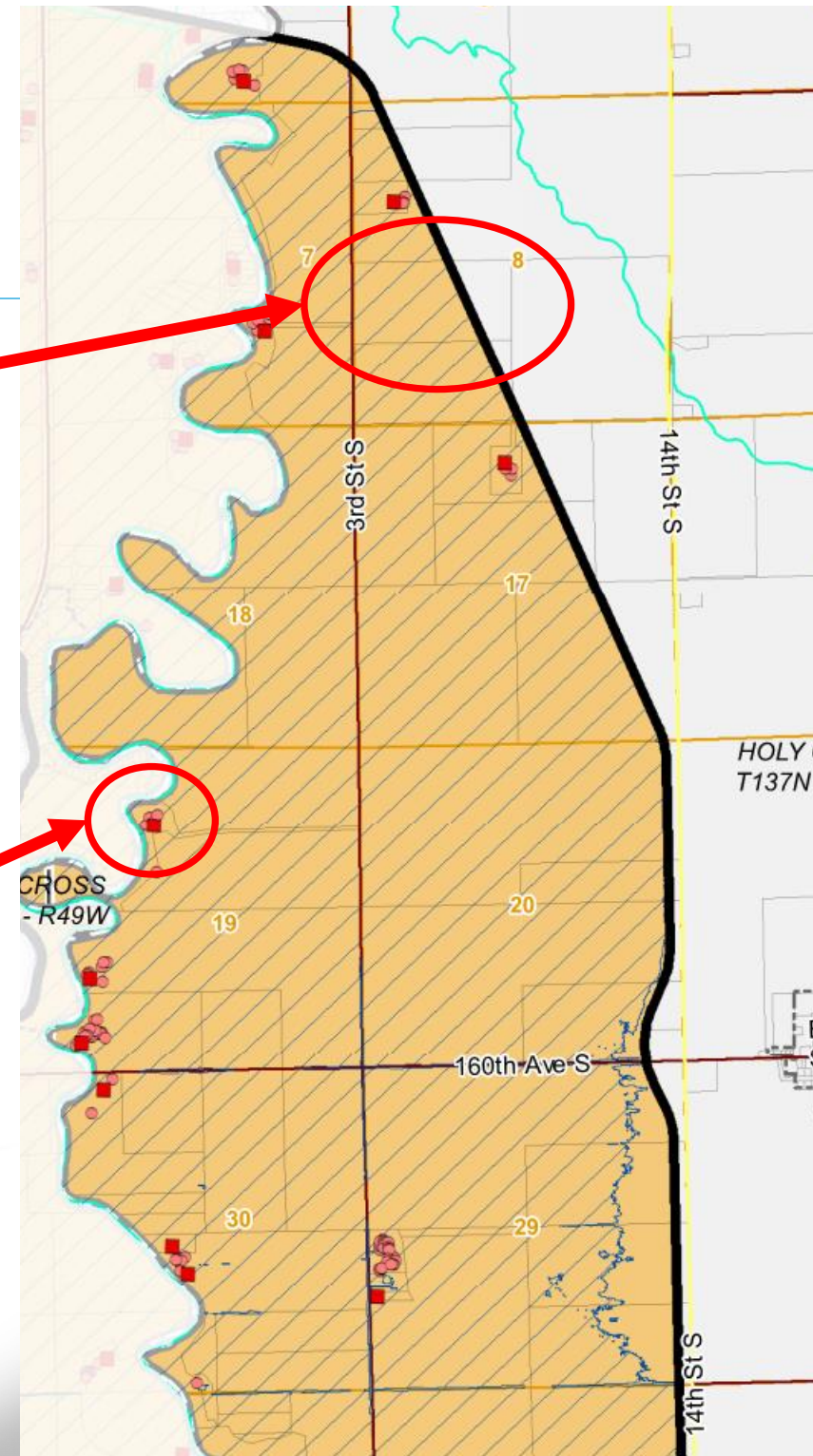
# Upstream Mitigation Area – BRRWD

	Clay Co	Wilkin Co
<b>Flowage Easements</b>		
Operating Pool Acres	4,233	427
Maximum Pool Acres	111	3,542
<b>Residential Sites</b>		
Category 1 Structures	14	0
Category 2 Structures	2	12
Category 3 Structures	0	0



# Upstream Mitigation Area – BRRWD

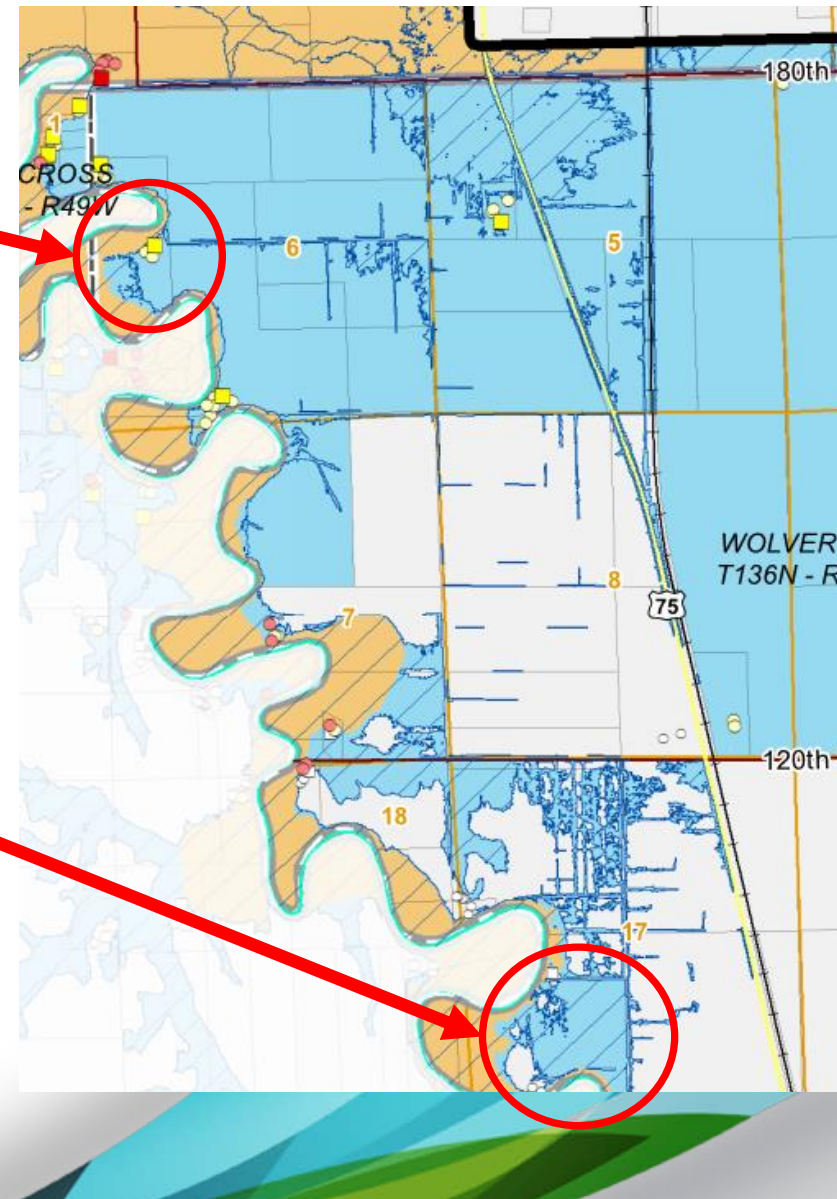
- ▶ **Sample Property 1**
  - ▶ Land impacted by Embankment Footprint and Operating Pool
  - ▶ Buyout land
  - ▶ Flowage easement with development prohibition
- ▶ **Sample Property 2**
  - ▶ Residential property in Upstream Operating Pool
  - ▶ Category 1 Structure
  - ▶ Buyout and Remove





# Upstream Mitigation Area – BRRWD

- ▶ Sample Property 3
  - ▶ Residential structure in Maximum Pool
  - ▶ Category 2 structure
  - ▶ Offer buyout, consider other structure mitigation
- ▶ Sample Property 4
  - ▶ Land in Maximum Pool
  - ▶ Flowage Easement with development restriction





# Next Steps

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# Property Acquisition and Mitigation Next Steps

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- ▶ Outreach to All Impacted Property Owners
- ▶ Phase 2 Flowage Easement Study
- ▶ Finalize Hydraulic Modeling  
(FEMA approval through CLOMR process)
- ▶ Update of NDSU Ag Impacts Study
- ▶ Design of Southern Embankment (USACE)
- ▶ Continue “Early” Acquisitions





# Questions & Discussion

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