



### Why are we here?

- ▶ Flood Protection for the Fargo-Moorhead Area
- ▶ A new Minnesota Permit Application
- ▶ How the Project has Changed

### Why did the Project change?

- The Richland/Wilkin County JPA filed a lawsuit against the U.S. Army Corps of Engineers in 2013. The lawsuit was later joined by the Fargo-Moorhead Diversion Authority and by the State of Minnesota.
- While the majority of claims were dismissed, an injunction stopping construction was ordered in Sept., 2017

*"It is time for all parties to work together to find common ground."*  
 - Chief Justice John A. Tunheim

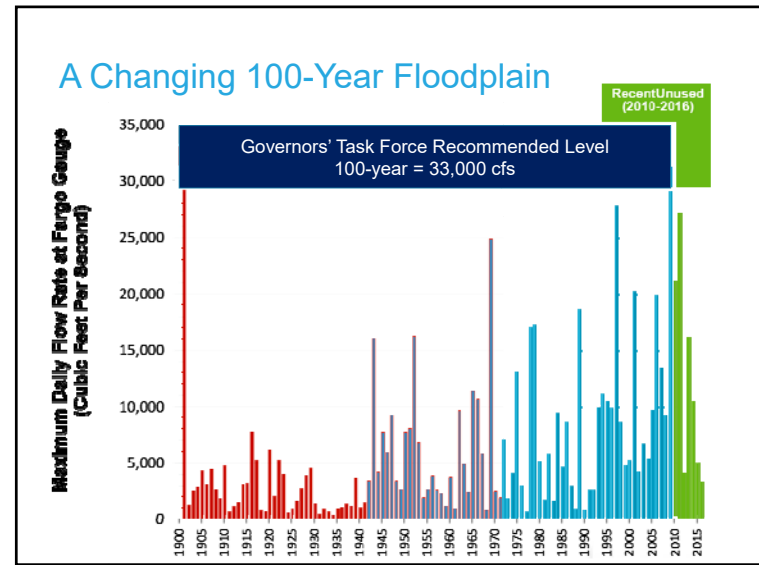
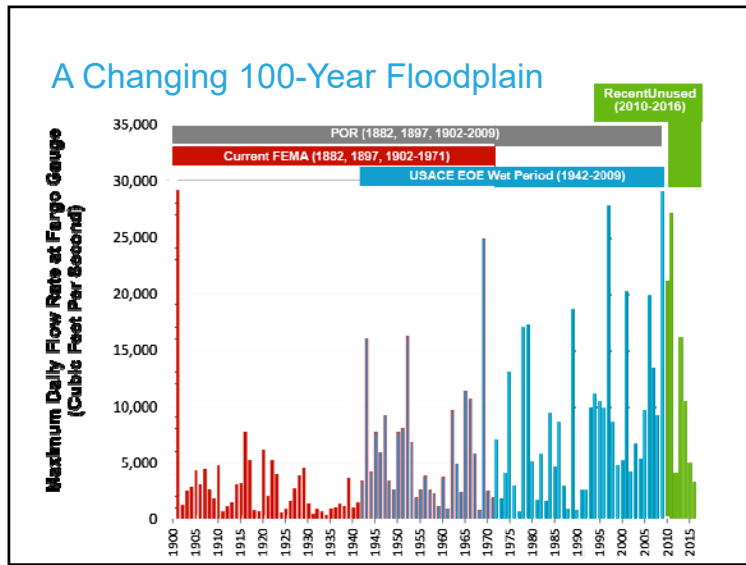
### Listening & Gathering Input

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**September 2017**
  - ▶ Gov. Burgum and Gov. Dayton meet in Moorhead to discuss the flood protection
- 
**Governor's Task force assembled**
  - ▶ Five meetings between Oct. and Dec. 2017
  - ▶ Wide geographic representation
- 
**Technical Advisory Group**
  - ▶ Diversion Authority, MDNR, USACE, and R/W JPA engineer
  - ▶ Further analysis and iteration of unresolved issues from the Task Force
- 
**Policy Group**
  - ▶ Leadership from the USACE, MDNR, Diversion Authority, and R/W JPA
  - ▶ Held four meetings



## Governors' Task Force

- **Purpose:** To develop design principles and concept-level engineering solutions to achieve balanced flood risk management
- **Key Parameters for the Task Force**
  1. Find solutions within the parameters established by applicable Minnesota, North Dakota and local law.
  2. Maintain federal authorization and associated funding for permanent flood protection...



## Formation of TAG



- ▶ **Technical Advisory Group (TAG) was formed**
  - ▶ Includes engineering representation from MDNR, the Diversion Authority, U.S. Army Corps of Engineers, and Richland/Wilkin JPA
- ▶ **Key Parameters for TAG**
  - ▶ Strive for balanced flood protection and impacts
  - ▶ Minimize acres removed from the floodplain
  - ▶ Minimize newly impacted acreage and structures
  - ▶ Minimize impacts in Wilkin and Richland County
    - ▶ Goal to reduce the newly impacted acreage to 640 acres or less
  - ▶ Consider economics – cost increases and reductions

## Task Force Consensus



- ▶ Utilize full Period of Record hydrology
  - ▶ 100-yr flood = 33,000 CFS
- ▶ Allow control of flood water flows through town to 37-feet during a 100-yr flood event
- ▶ New Western Tie-back Levee alignment in North Dakota
- ▶ Add an Eastern Tie-back Levee alignment in Minnesota

Governors' Flood Task Force

*Thank you for your service*

Front Row (l to r): Bernie Dardis – Greater North Dakota Chamber Board Chair, Lami Norgard – Natural resources attorney, Tim Fox – Former Wilkin County Attorney, Jenny Mongeau – Clay County Commissioner, Del Rae Williams – Mayor of Moorhead, MN, Gov. Mark Dayton – Governor of Minnesota, Gov. Doug Burgum – Governor of North Dakota, Heidi Durand – Moorhead City Council member, Barb Naramore – Minnesota Department of Natural Resources Assistant Commissioner, Mark Anderson – Treasurer of Buffalo-Red Waterbed District  
Back Row (l to r): Rik Cary Johansson – Mayor of Hendrum, MN, Ken Vein – Grand Forks City Council member, Craig Heringgaard – Richland County farmer, John Strand – Fargo City Commissioner, Tom Landwehr – Minnesota Department of Natural Resources Commissioner, Jason Benson – Cass County Engineer, Steve Jacobson – Norman County Commissioner, Nathan Bereth – Richland County Commissioner, Joel Paulsen – Moorhead City Council member, Ron Bergan – Fargo business leader and entrepreneur



*“The Diversion Authority now has the responsibility to take all of these views and recommendations and combine them into a permissible application to the Minnesota DNR.”*

*- Governor Dayton (MN)*



**FM AREA  
DIVERSION  
PROJECT**

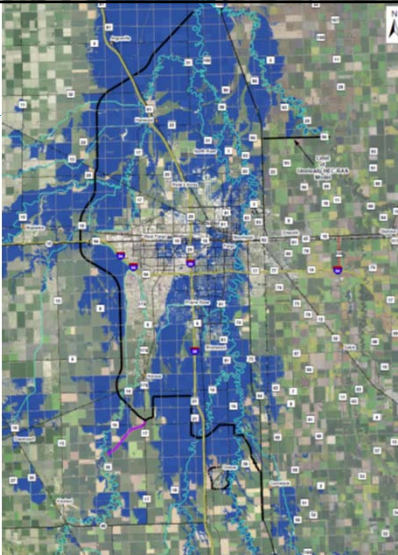
**New Permit Application (Plan B)**

### What is Plan B?

- ▶ Insert overall project map showing new alignment
- ▶ Diversion channel
- ▶ Southern embankment and control structures
- ▶ Temporary staging of flood waters upstream of the metropolitan area
- ▶ Levees along the river through the community

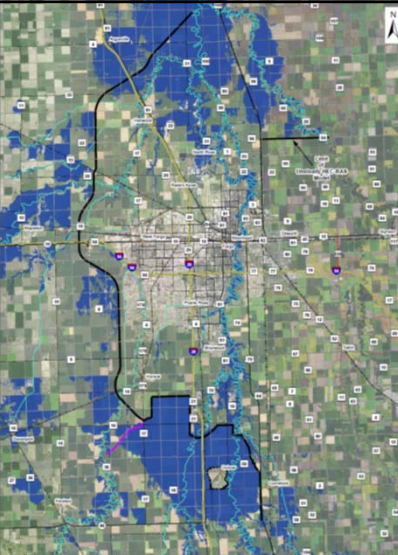
### Existing Conditions

- ▶ 100-year floodplain shown in Blue



### With Project

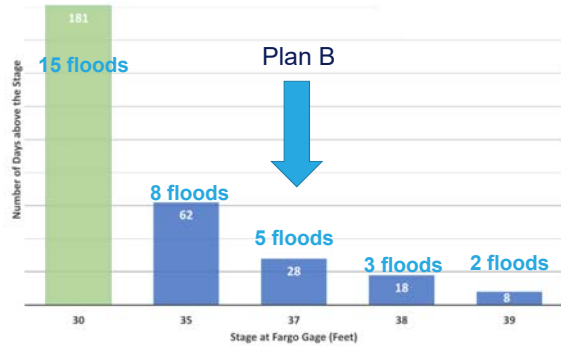
- ▶ 100-year floodplain with project shown in Blue



■ 1% Chance Floodplain With Project  
■ Diversion Channel and Southern Embankment  
■ Western Tieback Levee

### Increased flow through Fargo-Moorhead (37-feet)

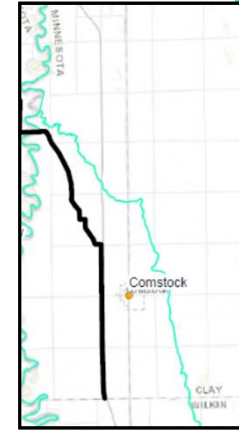
- ▶ Design will allow 37-feet through town (up from 35-feet)
- ▶ Project will only operate 1 in 20 years, on average



### Eastern Tie-Back Levee

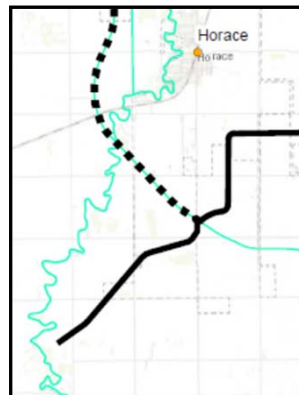
#### ▶ Limits the extent of impacts in Minnesota

- ▶ Eliminates any impacts to the City of Comstock, thus eliminating the need for a ring levee
- ▶ Eliminates the need to raise Hwy 75 or the BNSF railroad
- ▶ Impact to organic farms has been reduced nearly 90 percent from an estimated 2,900 acres to 300 acres



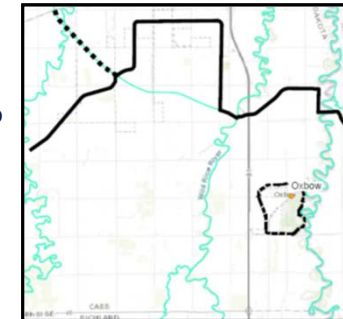
### Revised Western Tie-Back Levee

- ▶ Shifts the western tie-back levee south and west from Horace
- ▶ Helps balance the impacts between North Dakota and Minnesota
- ▶ Reduces the impacts to Richland and Wilkin counties



### Moving the Southern Embankment North

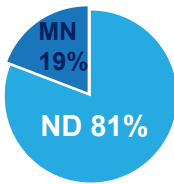
- ▶ Move the southern embankment north in balances the impacts between ND and MN
- ▶ Reduces the impacts to Richland and Wilkin counties
- ▶ Removes 5 of 11 cemeteries from the impacted area



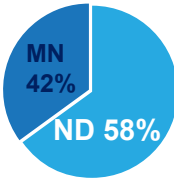
### Balanced Impacts between MN and ND

#### PRE-TASK FORCE

PROTECTED ACRES  
 • ND = 47,100  
 • MN = 11,000

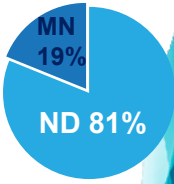


STAGING AREA ACRES  
 • ND = 20,700  
 • MN = 14,800

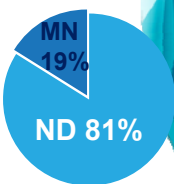


#### PLAN B

PROTECTED ACRES  
 • ND = 41,200  
 • MN = 9,500

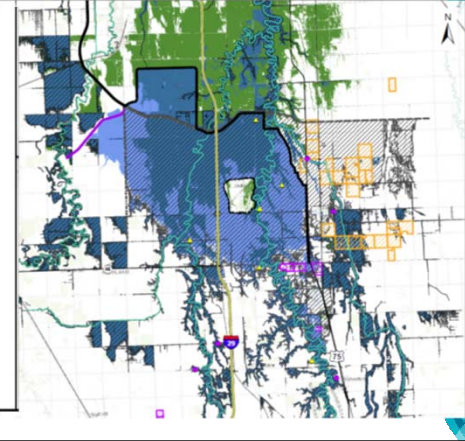


STAGING AREA ACRES  
 • ND = 22,600  
 • MN = 5,400

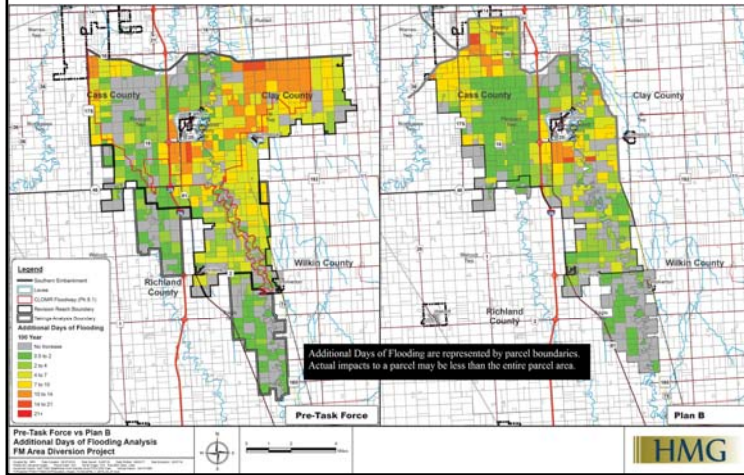


### Temporary Upstream Staging

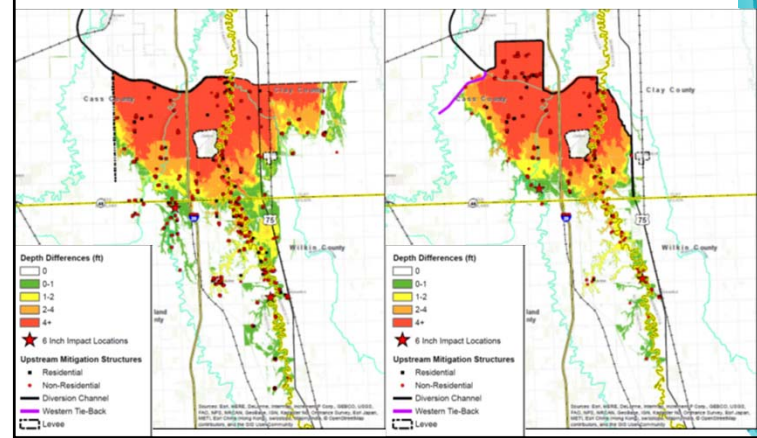
- Floodplain with or without Project
- New 100-year Floodplain with Project
- 100-year Floodplain Removed with Project (i.e., Benefitted Area)
- Pre-Task Force With Project 100-year Floodplain
- Cemetery Impact**
  - Impacted by Base Project, Not Impacted by Plan B
  - Impacted by Base Project and Plan B
- Upstream Mitigation Structures**
  - Residential
  - Non-Residential
  - Organic Farms (Impacts To Be Determined)
  - Organic Farms (No Longer Impacted)
  - Diversion Channel and Southern Embankment
  - Western Tie-Back
  - Pre-Task Force Southern Embankment Alignment
  - Levee
  - River



### Duration of Flooding (100-yr flood)



### Additional Depth of Water (100-yr flood)



## What's Next

### Process

-  September 2017
-  Task Force assembled
-  Technical Advisory Group
-  Policy Group
- Permit submittal
- Community Outreach
- Public Comment period as part of Permit

### Technical & Financial

- "Micro-siting" of Alignment
- New Cost Estimate
- Funding and Financial Planning

## Community Outreach

### Upcoming Presentations and Information Distribution

- ▶ Clay, Cass, and Wilkin Counties
- ▶ Cities of Fargo, Harwood, Horace, Oxbow, Reiles Acres, and West Fargo in ND
- ▶ Cities of Moorhead and Comstock in MN
- ▶ Townships:
  - ▶ Barnes, Berlin, Harwood, Mapleton, Pleasant, Raymond, Stanley, and Wiser in ND
  - ▶ Holy Cross in MN
- ▶ Buffalo Red River Watershed District
- ▶ Cass County Joint Water Resource District



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## End of Presentation