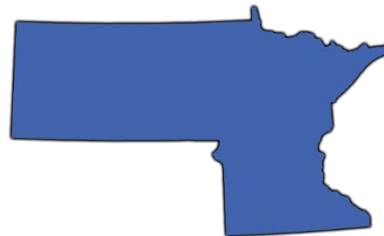


Alternative Analysis

**Presentation by:
Technical Advisory Group**

**Presentation to:
Fargo-Moorhead Area Flood Diversion Task
Force
November 29, 2017**



Technical Advisory Group

- Held two public meetings on Nov. 14 & Nov. 28
 - Meetings were well attended by Task Force members
- Defined criteria to evaluate alternatives and components
- Screened alternatives and components for further evaluation

Criteria

- List of Criteria A-J

Alternatives/Components

- List of 6 alternatives/components

WTBL as a component

- Map of WTBL component
- Alternatives 2 and 6 do not include a WTBL

DSA as a component

- All of these include DSA as a component

Consideration of Distributed Storage

- Basin-wide retention efforts can increase the overall level of flood protection for communities
- Task Force determined that distributed storage is a component for 100-year protection for Fargo-Moorhead only if they're completed and operational.
- Support for retention should continue as a long-term strategy to increase protection above the 100-year

Alternatives/Components 1a-1d: Additional Flows Through Town

- Additional flows through town reduces the frequency of staging area operation and size of the inundation area
- Original project (2011) had 30' through town in a 100-year flood
- Current project design (2013) has 35' through town in a 100-year flood
- Additional Analysis considered up to 39'

Alternatives/Component 1a-1d: Additional Flows Through Town

	Current 35' (baseline)	35' w/ WTBL	36'	37'	38'	39'
Return Frequency (Historical #) or CFS?			N/A			
Total Upstream Acres Impacted			N/A			
Newly Impacted Acres			N/A			
Total Structures Impacted Upstream			N/A			
Homes Impacted by Construction			N/A			
Cost (better define)			N/A			

Alternatives/Component 1a-1d: Additional Flows Through Town Histogram and Frequency Curve

Alternatives/Component 2: Levees Only

	Current 35' (baseline)	2				
Protected acres						
Structures protected						
Structures acquisition						
Additional impacted acres— ND/MN						
Upstream Impacted Structures						
Other?						

Alternatives/Component 3a-3c: Dam Alignments (35' gage stage)

	Current (baseline)	Current WTBL	3a	3b	3c
Newly Impacted Acres –ND/MN (total)					
Newly Impacted Acres –Rich/Wilk (total)					
Acres Protected					
Total Residential Structures Impacted—Rich (total)					
Total Residential Structures Impacted—Wilk (total)					

Alternatives/Component 4

	Current (baseline)	Current WTBL	4		
Newly Impacted Acres –ND/MN (total)					
Newly Impacted Acres –Rich/Wilk (total)					
Acres Protected					
Total Residential Structures Impacted—Rich (total)					
Total Residential Structures Impacted—Wilk (total)					

