

# Fargo In-Town Flood Projects Status Report

Presentation to:  
Water Topics Committee

June 15, 2016



## State Funding Authorization

- SB 2020
  - *Funding for Interior Flood Control*
- \$120 Million
  - *State of North Dakota Commitment*
- \$60 Million in 2015-16
  - *100% Funding Authorized*
- \$60 Million in 2017-2018
  - *50% Matching Funding*



## Summary of SB 2020 Funded Projects

- Current Contract Work Awarded           \$130,957,912
- Amount Paid to Date                         \$85,392,086
- Eligible Expenditures Since 5/13/2015   \$65,992,670
  
- **100% of 2015-2016 Legislative Authorization Spent Already**
  
- **100% of Future Funding Based on Legislative Intent Contracted or Planned Already**



## Future In-Town Flood Projects

- City Commission Approved Local Plan
  - *\$105 million over five year period*
- 2016 Project Areas
  - *Rose Creek, Southwood, Northside (Cass 20), Belmont, Acquisitions/Demolitions*
- 2017 Project Areas
  - *Harwood, Rosewood, Prairie Rose, Copperfield, Belmont Phase 2*
- 2018 Project Areas
  - *Edgewood, Belmont Phase 3, Lift Station Improvements*
- 2019 Lift Station Improvements/Modifications
- 2020 Lift Station Improvements/Modifications



# Current Project Listing

In-Town Levee Work as of May 31, 2016				
Vcode #	Vendor Name	Descriptions	Contract Amount	Amount Paid
V01703	Various	In-Town Property Purchases & Residential/Commercial Relocaiton Assistance	\$ 33,445,036.45	\$ 30,325,599.48
V02805	ICS	4th St Pump Station & Gatewell and 2nd St Floodwall S - WP-42A.1/A.3	17,364,663.63	14,192,634.80
V02812	Industrial Builders	2nd Street North Floodwall, South of Pump Station - WP-42F.1S	16,632,552.95	4,387,731.63
V02819	Industrial Builders	WP42F.1N	12,972,799.05	3,100.00
V02801	Industrial Builders	2nd Street North Pump Station - Work Package 42.A2	8,720,218.99	8,374,614.31
V02806	HMG	Services During Construction - Work Package 42	4,599,000.00	2,009,994.76
FM1402	R & R Excavating, Inc	4th Street Flood Risk Management - Phase 2	4,212,500.00	3,810,935.41
FM1461	ICS	Drain 27 - Prairie Rose Area Flood Risk Management - Phase 1	3,903,147.00	3,805,061.63
590202	Griffin Construction Co Inc	Mickelson Field Area Flood Risk Management	3,627,182.00	3,018,379.00
FM15F1	H & S Contracting Inc	River Drive Flood Risk Management	3,403,093.00	3,102,668.97
FM1403	ICS	4th Street Flood Risk Management - Phase 3	3,125,065.00	2,799,324.57
V02807	CCJWRD	In-Town Levee Work	2,797,345.29	2,797,345.29
V02815	Centurylink Communications	2nd Street Utility Relocation	2,660,937.92	74,195.92
FM1421	R & R Excavating, Inc	River Villi Area Flood Risk Management - Phase 2	1,847,093.00	1,752,093.00
V02803	Consolidated Communications	2nd Street Utility Relocation	1,846,997.62	1,033,018.04
V02817	Reiner Contracting, Inc	WP-42H.2 El Zagal Area Flood Risk Management	1,542,795.94	248,902.62
V02820	CH2M Hill	WP42 Construction Management Services	1,200,000.00	-
V02813	Landwehr Construction	Park East Apartments Demolition	1,177,151.74	1,169,651.74
V02811	Xcel Energy	2nd Street & 4th Street Utility Relocations	959,622.45	190,530.93
FM1462	Sellin Bros	Drain 27 - Prairie Rose Area Flood Risk Management - Phase 2	917,622.00	768,754.21
V02816	Landwehr Construction	WP-42C.1 In-Town Levees 2nd Street/Downtown Area Demo	807,483.57	143,118.00
V02809	AT & T	2nd Street Utility Relocation	728,934.90	404,202.58
V02818	Industrial Builders	WP-42I.1 Mickelson Levee Extension	724,910.00	-
V02802	Terracon Consulting	WP-42 (In Town Levees) Materials Testing	607,500.00	376,587.04
FM1412	H & S Contracting Inc	Coulee's Crossing / OakCreek Flood Risk Management- Phase 2	331,972.00	282,518.31
V02804	702 Communications	2nd Street Utility Relocation	326,243.91	266,892.07
HD15B1	Industrial Builders	Demolition, Site Restoration & Incidentals	273,300.00	-
V02810	Cable One	2nd Street Utility Relocation	148,511.37	-
V02808	City of Fargo	Relocation of fiber optic along 2nd Street North	38,002.05	38,002.05
V02814	Primoris Aevenia	2nd Street Utility Relocation	16,230.00	16,230.00
			\$ 130,957,911.83	\$ 85,392,086.36

# Downtown Fargo (2nd St.)



## 2<sup>nd</sup> St. Flood Wall



## 2<sup>nd</sup> St. Flood Wall



## Downtown Fargo (4<sup>th</sup> St.)



FLOOD  
DIVERSION  
AUTHORITY

## 4<sup>th</sup> St. Flood Wall



FLOOD  
DIVERSION  
AUTHORITY

# Status of Reimbursements

Time Period for This Request: May 1, 2016 - May 31, 2016

Drawdown Request No: 6	
<b>Requested Amount:</b>	<b>\$ 1,162,585</b>
Total Funds Expended This Period:	\$ 1,162,585
Total Funds Requested at 100%	1,162,585
<b>Total Funds Requested:</b>	<b>\$ 1,162,585</b>

## STATE AID SUMMARY:

Summary of State Funds Appropriated

Appropriations from 2015 Legislative Session		60,000,000
Appropriations to be funded in 2017 Legislative Session - Available 7/1/2017	15,000,000	
Appropriations to be funded in 2019 Legislative Session - Available 7/1/2019	15,000,000	
Appropriations to be funded in 2021 Legislative Session - Available 7/1/2021	15,000,000	
Appropriations to be funded in 2023 Legislative Session - Available 7/1/2023	15,000,000	
<b>Total State Funds Appropriated</b>	<b>60,000,000</b>	<b>60,000,000</b>
Less: Payment #1	Received on: 12/28/2015	(12,065,171)
Less: Payment #2	Received on: 2/1/2016	(1,207,497)
Less: Payment #3	Received on: 3/10/2016	(223,507)
Less: Payment #4	Received on: 3/31/2016	(423,052)
Less: Payment #5	Received on: 5/20/2016	(408,251)
Less: Payment #6		(1,162,585)
<b>Total Funds Reimbursed</b>		<b>(15,490,063)</b>
<b>Total State Fund Balances Remaining</b>		<b>\$ 44,509,937</b>



# Take Away Notes

- Funds allocated by State of North Dakota in SB2020 have been spent or allocated for in-town flood control projects
- Work will continue until 2020 on in-town projects
  - *All projects in-town are being completed in conjunction with FM Diversion Project to provide flood protection to the City of Fargo and surrounding area*



# FM Area Diversion Project Status Report

Presentation to:  
Water Topics Committee

June 15, 2016



## State Funding Authorization

- \$450 Million
  - *State of North Dakota Commitment*
- \$244 Million
  - *Appropriated to Date*
- \$69 Million to be Requested
  - *2017, 2019, 2021 Sessions*



## Summary of State Reimbursement

- \$109 Million Reimbursed from ND SWC to date
- \$135 Million of Appropriations Remain to date
- All State Appropriated Dollars Expected to be Utilized in 2017-2018 Biennium
- Future Annual Expected Construction Expenditures

Pre 2016	\$162M
2016	\$222M
2017-2018	\$340M
2019-2020	\$501M
2021-2022	\$660M
2023-2024	\$309M



## Diversion Financial Plan Summary

- Diversion Authority Financial Plan was released in May, 2016
  - *No tax increases*
  - *No special assessments*
  - *Requires extension of existing sales taxes*
- The Financial Plan does not rely on any additional State of ND funding requests beyond existing commitments
- Financial Plan utilizes updated Diversion cost estimate and up to date commitments from Federal Government

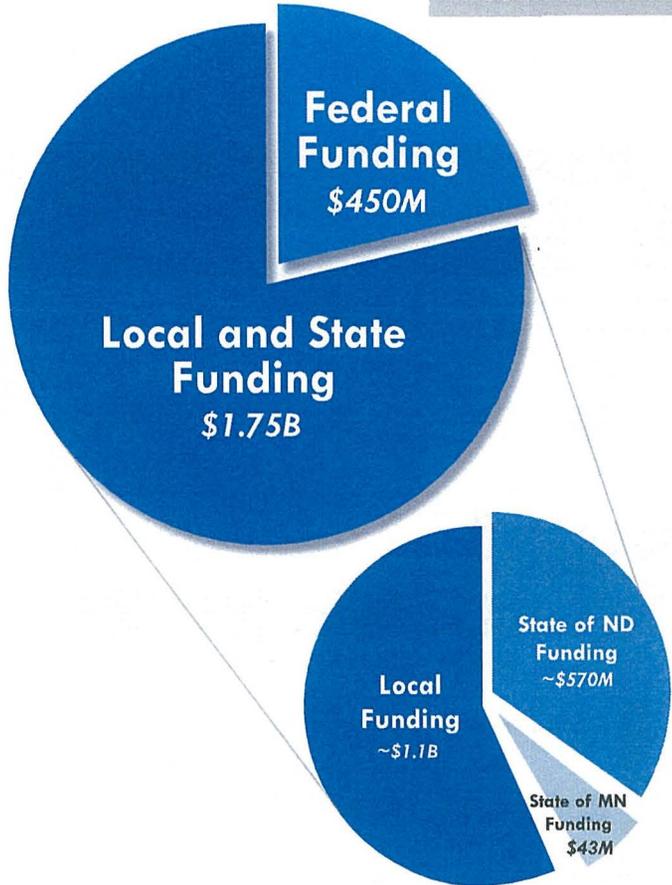


# Questions?



# Funding Breakdown

Cost Estimate: \$2.2 Billion



## Local Funding Sources

- Cass County and City of Fargo Sales Taxes
- Sales Tax used to secure short- and long-term financing for construction
- No special assessment funds needed for construction
- Assessment District utilized to improve credit ratings and access sales tax growth



## FM Metro Flood Protection Financial Plan

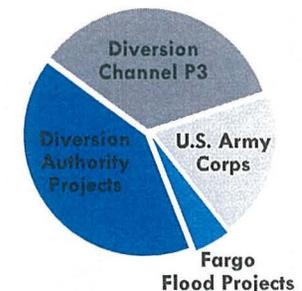
May 2016

### Main points of financial plan

- Multi-generational funding approach
- Includes Diversion Authority and Fargo Flood Projects
- Based on extension of current sales tax
- No increases in taxes needed
- No special assessments needed

### Total capital cost for project estimated at \$2.2 Billion

- \$905M Diversion Authority Projects (Land, mitigation, legal, financial, technical, construction)
- \$763M Diversion Channel P3
- \$433M U.S. Army Corps Southern Embankment
- \$104M Fargo Flood Projects



# Paying for the Project

## Existing Sales Taxes

## Financial Plan

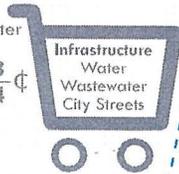
## Extending Current Sales Taxes = No Direct Special Assessments

### City of Fargo Sales Taxes

$\frac{1}{2}$ ¢ Passed in 2009  
Dedicated to the Diversion  
Currently expires in 2029

$\frac{1}{2}$ ¢ Passed in 2012  
Dedicated to Flood Control  
Currently expires in 2032

1¢ Passed in 2006 as Fargo Infrastructure Tax  
 $\frac{1}{4}$  for flood protection  
 $\frac{1}{4}$  for streets  
 $\frac{1}{4}$  for wastewater  
 $\frac{1}{4}$  for water  
Currently expires in 2028



### Cass County Sales Tax

$\frac{1}{2}$ ¢ Passed in 2010  
Dedicated to the Diversion (and other county projects)  
Currently expires in 2031

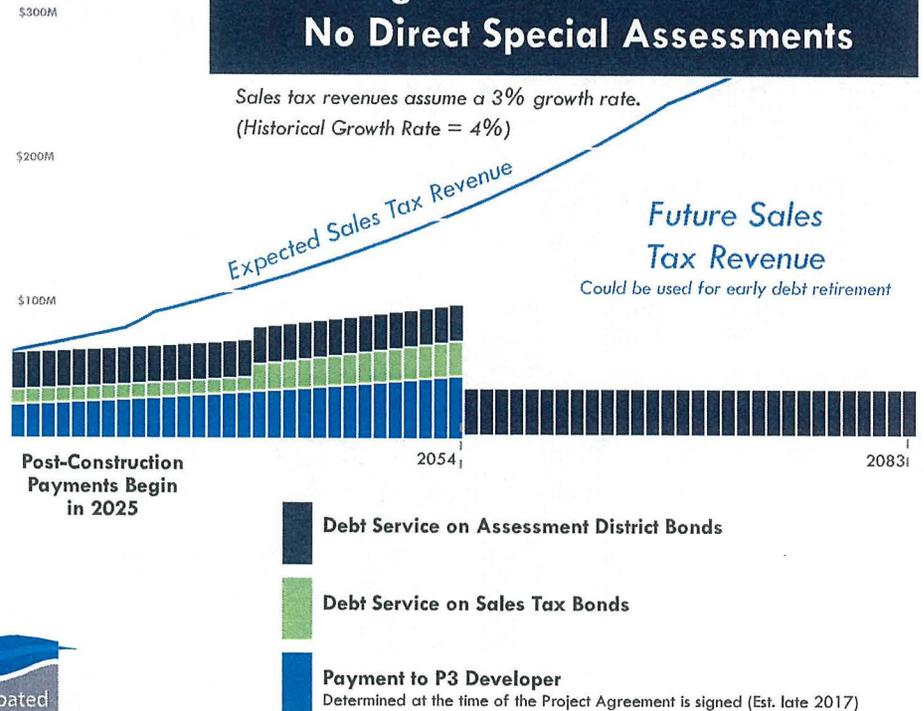
$1\frac{3}{4}$ ¢



**Construction**  
Fargo Flood Projects  
Diversion Project



**Anticipated Completion**  
Project in Operation  
Expected in 2024

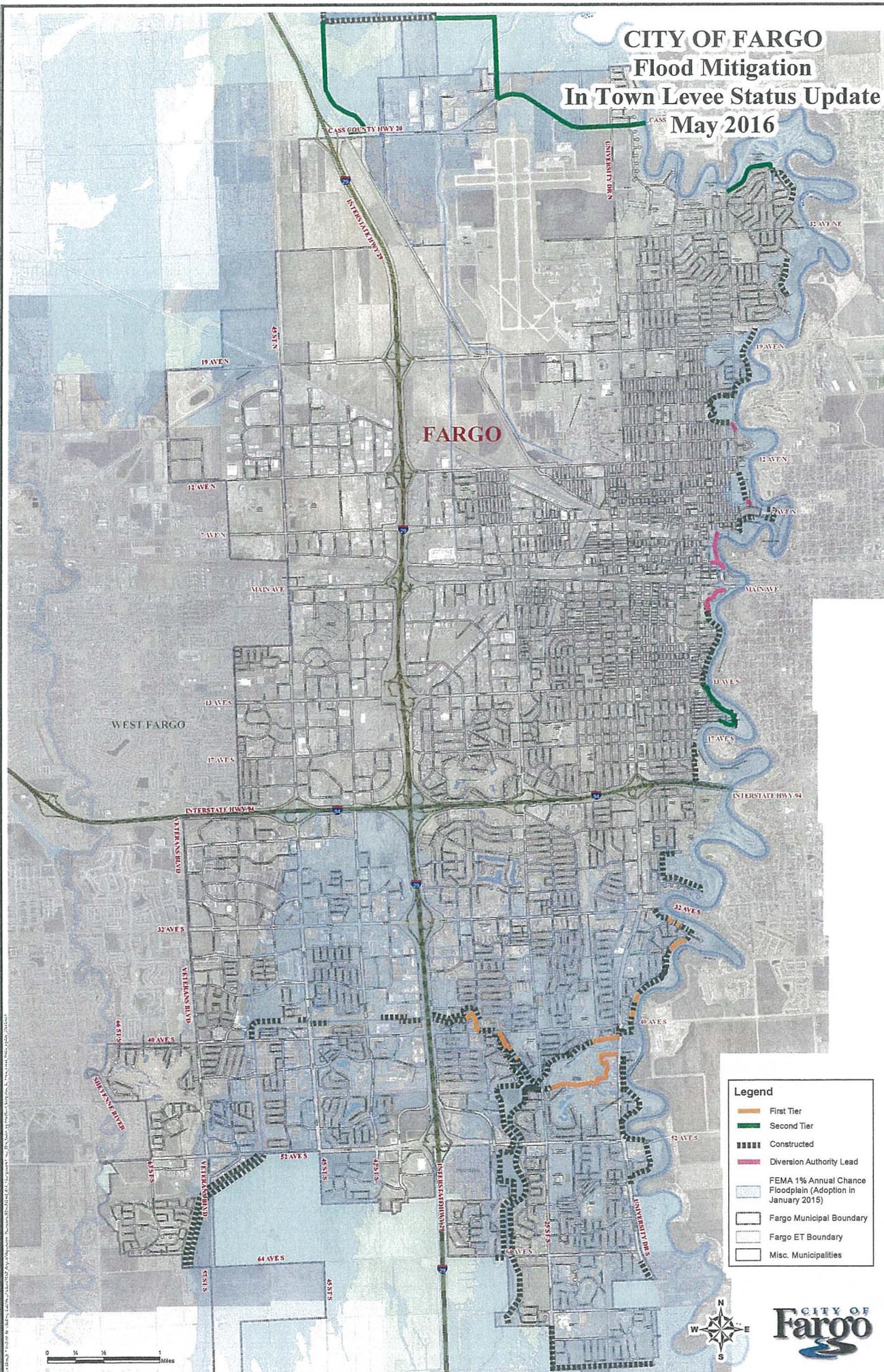


**“There is no solution other than the Diversion.”**

- Mark Bittner, Fargo City Engineer



# CITY OF FARGO Flood Mitigation In Town Levee Status Update May 2016



- Legend**
- First Tier
  - Second Tier
  - — — — — Constructed
  - Diversion Authority Lead
  - FEMA 1% Annual Chance Floodplain (Adoption in January 2015)
  - Fargo Municipal Boundary
  - Fargo ET Boundary
  - Misc. Municipalities



City of Fargo, ND, 2016. All rights reserved. This map is for informational purposes only. It is not intended to be used for legal or engineering purposes. The City of Fargo is not responsible for any errors or omissions on this map.



# Property Acquisition Schedule<sup>1</sup>



Major Project Element	Work Package <sup>2</sup>	State	65 Percent Design & Work Limits Defined	Initial Notification Sent to Property Owners <sup>3</sup>	Start Property Acquisition <sup>4</sup>	Complete Property Acquisition	Number of Parcels Impacted	Land Firm
Features Constructed by Diversion Authority using Public-Private-Partnership (P3)								
Diversion Channel Phase 1 <sup>5</sup>	LAP1A	ND	June 2016	July 2016	June 2016	Nov 2017	41	HMG
	LAP1B	ND	June 2016	July 2016	June 2016	Nov 2017	49	Ulteig
Diversion Channel Phase 2	LAP2	ND	June 2017	July 2017	June 2017	Nov 2018	80	TBD
Diversion Channel Phase 3	LAP3	ND	June 2017	August 2017	August 2017	Nov 2019	210	TBD
Features Constructed by Diversion Authority								
CR16/17 Bridge & Road	WP28	ND	Feb 2016	-	Feb 2016	Sept 2016	13	HMG
Features Constructed by USACE								
Diversion Inlet Control Structure	WP26	ND	Feb 2016	-	Feb 2016	June 2016	3	HMG
Wild Rice Control Structure	WP30	ND	Feb 2017	May 2017	Feb 2017	June 2018	9	
I-29 Road Raise	WP31	ND	Feb 2017	May 2017	Feb 2017	June 2018	- <sup>6</sup>	
Red River Control Structure	WP35	MN	Feb 2018	May 2018	Feb 2018	June 2019	8	
CR 81 Road Raise	WP33	ND	Feb 2018	May 2018	Feb 2018	June 2019	4	
BNSF Moorhead Line Raise	WP29	MN	Feb 2019	June 2019	Feb 2018	June 2019	-	
HWY 75 Bridge/Raise	WP29	MN	Feb 2019	June 2019	Feb 2018	June 2019	-	
Southern Embankment (MN) <sup>7</sup>	WP29	MN	Feb 2018	June 2019	Feb 2019	June 2020	29 <sup>8</sup>	
Southern Embankment (ND) <sup>9</sup>	WP27	ND	Feb 2018	May 2018	Feb 2020	June 2021	20	
Limited Service Spillway	WP39	ND	Feb 2020	June 2020	Feb 2020	June 2021	17	
Comstock Ring Levee	WP52	MN	Feb 2020	March 2020	Feb 2020	June 2021	18	
Staging Area	WP38	ND/MN	Feb 2018	TBD	Feb 2018	June 2022	950 <sup>10</sup>	

<sup>1</sup> Based on proposed P3 and USACE schedules from February 2016.

<sup>2</sup> See associated maps for location of work packages and impacted parcels.

<sup>3</sup> Initial notification shall be a letter from the acquiring entity, introducing the Land Agent, who will follow-up with separate correspondence indicating an intent to acquire, the process for acquisition, and an offer to meet.

<sup>4</sup> The work limits defining property acquisition needs are generally expected at the 65 percent design level.

<sup>5</sup> Diversion Channel Phase 1 includes Maple River & Sheyenne River Aqueduct Structures.

<sup>6</sup> Parcels for the I-29 Road Raise are the same as those for the Wild Rice Control Structure.

<sup>7</sup> The southern embankment in MN will likely be designed and constructed in two (2) phases.

<sup>8</sup> Parcels for the southern embankment in MN include the properties needed for the BNSF and HWY 75 projects.

<sup>9</sup> The southern embankment in ND will likely be designed and constructed in three (3) phases.

<sup>10</sup> Upstream retention area property rights for a 925 foot pool elevation will affect approximately 950 parcels in ND and MN.

# Typical Property Acquisition Process



June 2016

The Fargo-Moorhead Metro Flood Diversion Authority (DA) and Cass County Joint Water Resources District (CCJWRD) are responsible for the acquisition of real property. The parties will utilize the following steps for acquiring properties in North Dakota:

## 1. Design Team (USACE, HMG, or P3 Developer)

- a. Advises Program Management Consultant (PMC) of Right of Way (ROW) needs at 65 percent design.
- b. PMC establishes a budget for the acquisition needs by Phase or Work Package.

## 2. PMC-LAND

- a. Presents Land Acquisition Directive (with budget) to Diversion Authority's Finance Committee for approval.
- b. Submits the executed Land Acquisition Directive to CCJWRD.
- c. PMC assigns acquisition to a land acquisition firm.
- d. Land acquisition firm accepts assignment, prepares proposed fee for review by PMC.
- e. PMC initiates task order amendment for Land Agent, obtains CCJWRD approval, executes documents with Land Agent, and provides fully executed documents to parties.

## 3. Right of Entry

- a. PMC identifies parcels which require Right of Entry (ROE) for boundary surveying.
- b. Legal prepares ROE request for access to conduct boundary survey.
- c. CCJWRD manages ROE request and receipt forms, conducts initial follow-up calls, and notifies PMC and Land Agent when additional follow-up is required.
- d. Land Agent conducts any necessary additional follow-ups to establish singular point of contact.

## 4. Survey Parcel

- a. PMC conducts boundary survey and supplies initial certificate of survey exhibits to Land Agent (and appraiser).

## 5. Notice of Intent to Acquire (NOI)

- a. Land Agent sends property owner certified letter of NOI.
- b. Land Agent contacts property owner by phone to describe acquisition process, offers to meet.

## 6. Parcel Appraisal

- a. Appraiser, using certificate of survey exhibit, conducts appraisal following federal standards.
- b. Appraiser submits draft appraisal report for review (see Appraisal Review Plan for additional details).
- c. Upon appraisal review, Just Compensation value approved by CCJWRD (in accordance with NDCC § 32-15-06.1).

## 7. Parcel Purchase Negotiation

- a. Land Agent presents appraisal to property owner and makes initial offer of just compensation based on appraisal amount.
- b. Land Agent has 45 days (goal) to negotiate fair market value for acquisition. Land Agent has 90 days (goal) to negotiate relocation benefits, where applicable.
- c. Legal team develops Purchase Agreement based on Land Agent recommendation.
- d. Land Agent meets with property owner to present Purchase Agreement; execute Purchase Agreement.
- e. If outstanding terms, negotiate additional terms and seek CCJWRD approval regarding any additional negotiations.
- f. PMC prepares final acquisition exhibits (Certificate of Survey) and supplies to legal team for inclusion in the closing documents.

# Typical Property Acquisition Process



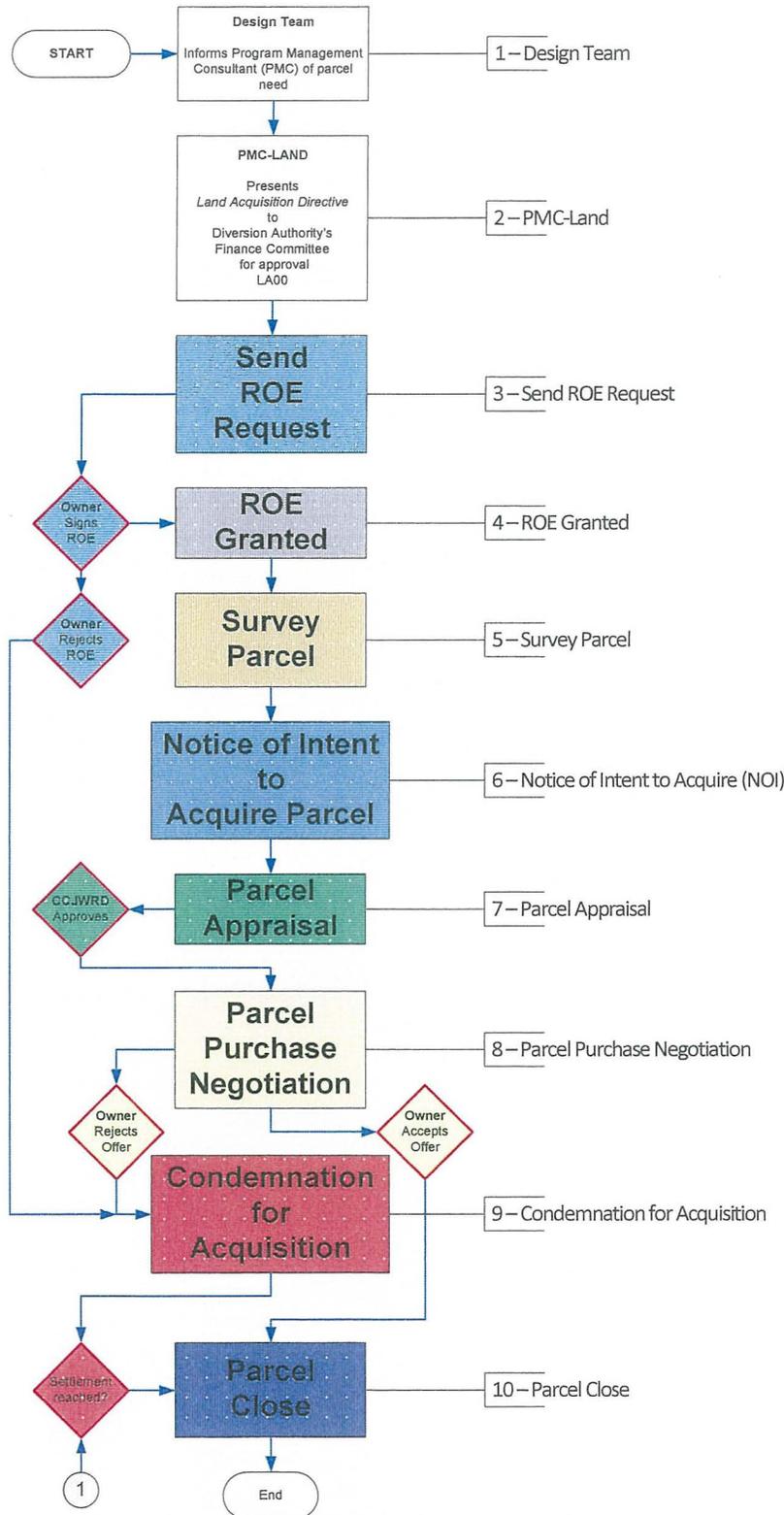
June 2016

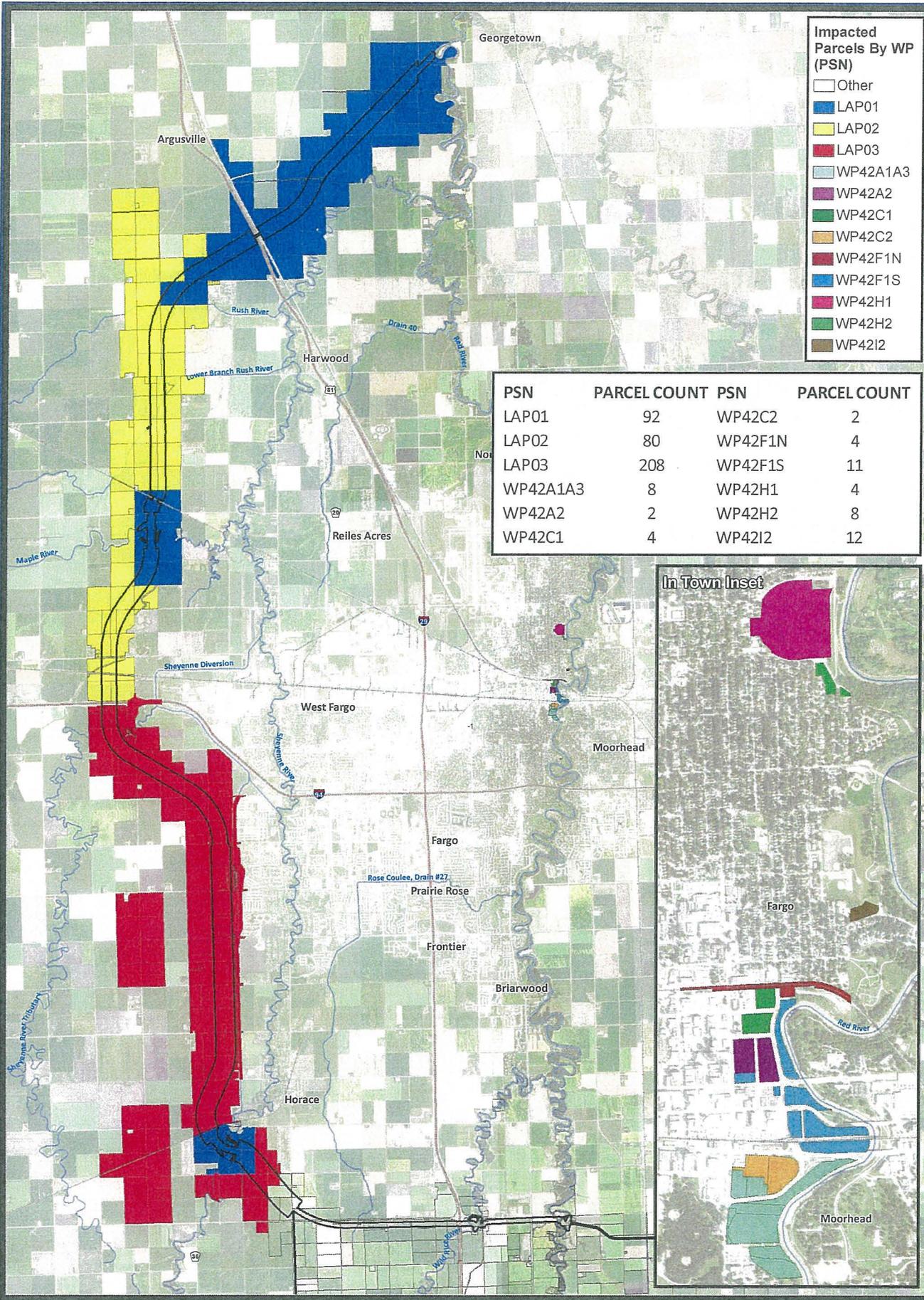
- g. Upon final approval of Purchase Agreement by landowner and CCJWRD, legal team prepares deed and additional documents required for closing.
  - h. Exhaust all reasonable negotiation opportunities via personal meetings and phone contacts.
- 8. Parcel Close**
- a. The Title Company prepares partial mortgage releases, closing statement, 1099, and conducts the closing with owner.
- 9. Eminent Domain for Acquisition**
- a. If negotiation opportunities are exhausted and a negotiated acquisition is unlikely, designer, Land Agent, and PMC present negotiation details to CCJWRD.
  - b. If CCJWRD concludes negotiated acquisition unlikely and judicial action will be necessary to acquire the property, legal team, in coordination with designer, Land Agent, and PMC, presents RESOLUTION OF NECESSITY and RESOLUTION OF OFFER TO PURCHASE for CCJWRD's consideration and approval. CCJWRD makes a decision based on timing and type of property being acquired as to which eminent domain process will be used to acquire the necessary property.
  - c. Upon approval of RESOLUTIONS by CCJWRD, Land Agent presents RESOLUTIONS, along with final offer to property owner and notifies owner of one-week deadline for acceptance.
  - d. If no acceptance, legal team starts an eminent domain action to acquire the necessary property.
  - e. Legal team continues negotiations with landowner or landowner's counsel throughout judicial process. Legal team engages landowner's counsel in discovery and pre-trial motions and otherwise prepares for trial.
  - f. Following acquisition of the property through the judicial process, Diversion Authority, USACE, etc., may proceed with construction on parcel.

# Typical Property Acquisition Process

June 2016

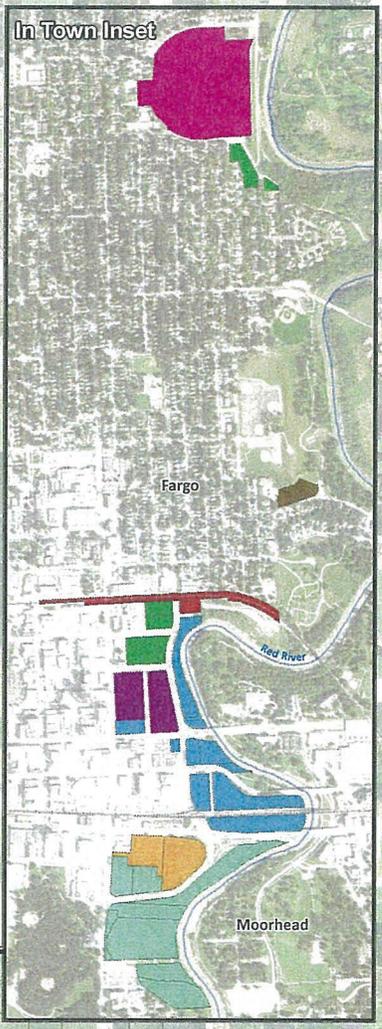
Workflow diagram summary presented below. Detailed workflow diagram attached.



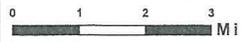


- Impacted  
Parcels By WP  
(PSN)**
- Other
  - LAP01
  - LAP02
  - LAP03
  - WP42A1A3
  - WP42A2
  - WP42C1
  - WP42C2
  - WP42F1N
  - WP42F1S
  - WP42H1
  - WP42H2
  - WP42I2

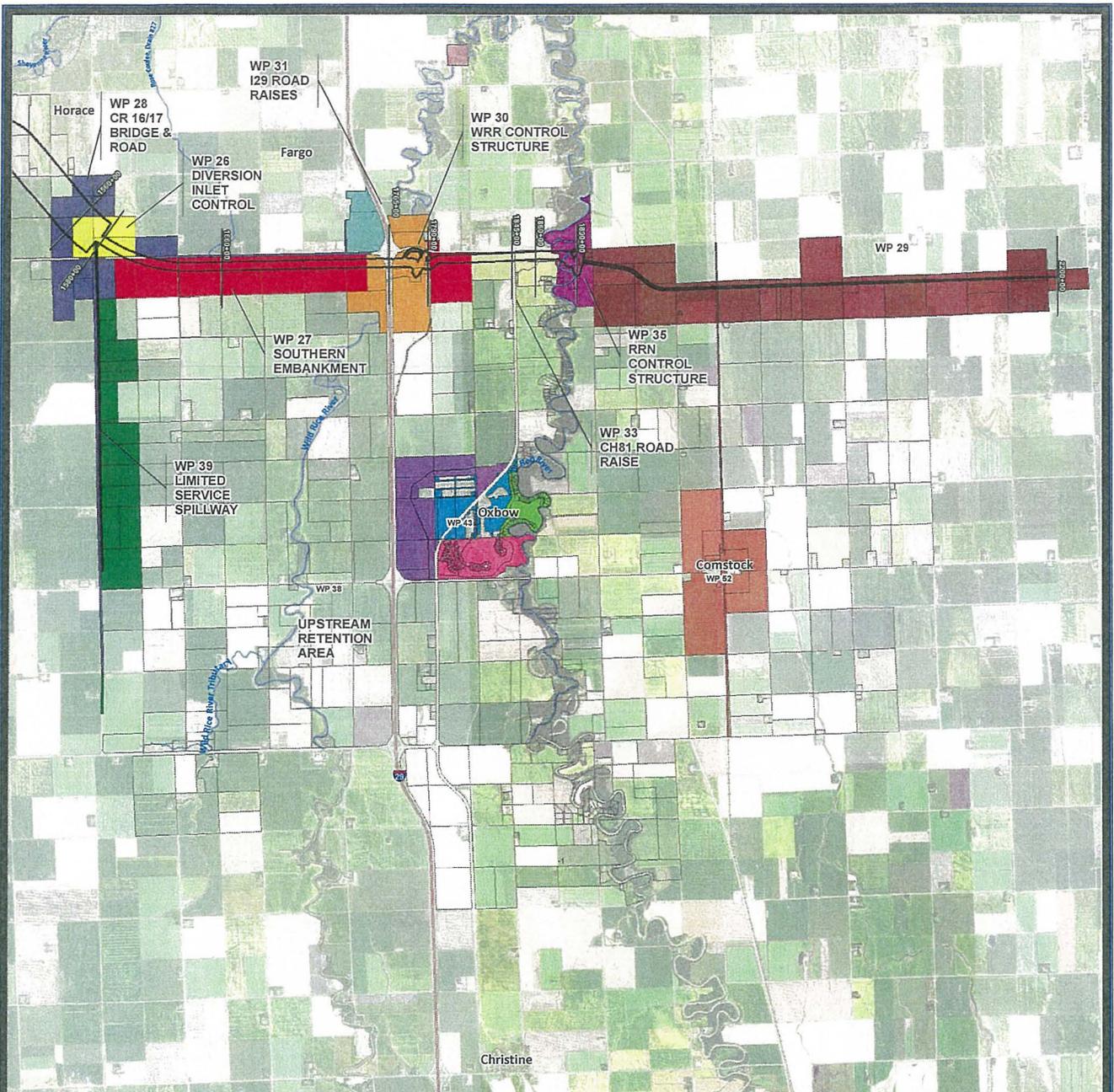
PSN	PARCEL COUNT	PSN	PARCEL COUNT
LAP01	92	WP42C2	2
LAP02	80	WP42F1N	4
LAP03	208	WP42F1S	11
WP42A1A3	8	WP42H1	4
WP42A2	2	WP42H2	8
WP42C1	4	WP42I2	12



METRO DIVERSION PROPERTY ACQUISITION  
**PARCELS ASSIGNED TO  
 WORK PACKAGES  
 CHANNEL AND  
 IN TOWN AREA**



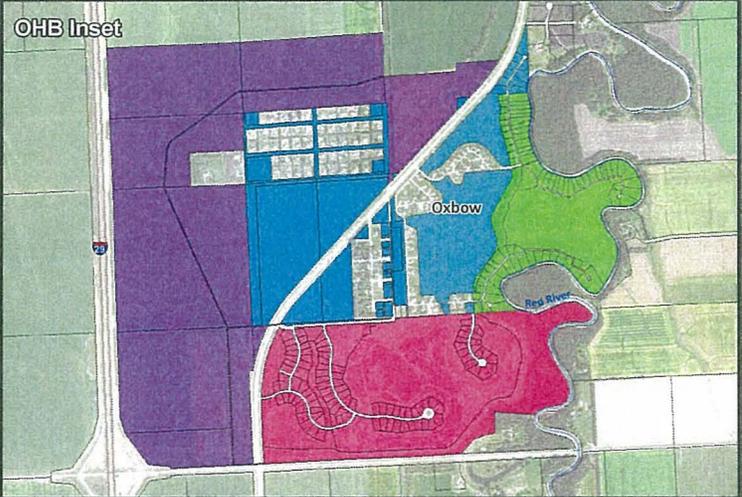
5/19/2016



**Impacted Parcels By WP (PSN)**

WP27	WP33	WP43A
WP28	WP35	WP43B
WP29	WP36	WP43C
Other	WP30	WP39
WP26	WP31	WP43D
	WP43	WP52

PSN	PARCEL COUNT	PSN	PARCEL COUNT
WP26	3	WP38	538
WP27	20	WP39	17
WP28	13	WP43	1
WP29	29	WP43A	107
WP30	7	WP43B	18
WP31	2	WP43C	82
WP33	4	WP43D	52
WP35	8	WP52	18
WP36	1		



METRO DIVERSION PROPERTY ACQUISITION  
**PARCELS ASSIGNED TO  
 WORK PACKAGES**  
 SOUTHERN STAGING AREA  
 AND EMBANKMENTS



5/19/2016

Document Path: C:\GIS\515 Projects\Flood Diversion\Parcels Land Acquisition\Level Acquisition - By WP - Parcels\FAGS\1322534.mxd

# DIVERSION AUTHORITY MOVES FORWARD

## AFTER RELEASE OF MINNESOTA'S FINAL ENVIRONMENTAL IMPACT STATEMENT

The Fargo-Moorhead Area Diversion Project continues to move forward toward construction this fall after the recent release of the Final Environmental Impact Statement (FEIS) by the Minnesota Department of Natural Resources.

No additional reasonable alternatives to the diversion project were identified by the Department of Natural Resources in its FEIS. The FEIS, released on May 16, offers further confirmation that there is no alternative to the diversion project that has the same level of protection with less impact. Corps-led construction is scheduled to begin this fall on the Diversion Inlet Control Structure south of Horace.

The release of the FEIS brings the project another step closer to getting the approval of all permitting federal and state agencies. Applying and receiving permits for the project has been underway since 2011 and will continue to be a key part of the effort.

“We are gratified to know that after many independent studies, our current plan remains the only project that will provide 100-year flood protection for Fargo and Moorhead, with a chance at 500-year protection,” says Diversion Authority Chairman Darrel Vanyo. “Commenters to the Minnesota Department of Natural Resources’ alternative screening of the project attempted to provide solutions other than the diversion, but it is important to note that after studying each of these proposed alternatives, it determined none of them were reasonable.”

“We are grateful for the independent analysis of the diversion project, and happy to receive confirmation that we are on the right path,” says Fargo Mayor Tim Mahoney. “That being said, we have worked closely with the Department of Natural Resources to identify in its EIS [Environmental Impact Statement] some outstanding issues that we know need to be addressed, and we are working on that.”

The Diversion Authority worked closely with the Department of Natural Resources to identify outstanding concerns and unresolved questions, that can now be addressed as the project moves forward. Some of the questions were raised through the public commenting process and included the impact to the area upstream and ensuring there is enough mitigation for areas impacted by the project.

### STUDYING THE PROJECT AND EVALUATING ALTERNATIVES

Plans for the project officially began in 2008. In July 2011, the U.S. Army Corps of Engineers issued a Final Feasibility Report and EIS followed by a Record of Decision in April 2012. The following year, the Department of Natural Resources issued a scoping document that started the EIS process for the agency. A draft EIS was issued by the Department of Natural Resources last fall. Public meetings were held to gather comments about each document issued in the process.

The EIS process focuses on reviewing the project and any possible alternatives. That includes reviewing the potential environmental, social, and economic effects; mitigation and monitoring efforts proposed; and if any additions need to be incorporated to minimize potential impacts.

The EIS also evaluated numerous alternatives, but found that most didn’t meet the project goals. Alternatives that met the project goals did not have significant environmental benefits, and some transferred impacts of the project downstream. Other alternatives had excessive capital costs.

The Department of Natural Resources evaluated several potential alternatives, one of which was included for additional analysis in the FEIS. This Northern Alignment Alternative would move the dam and embankment 1.5 miles north from its current proposed location. Moving the embankment would impact 274 additional structures and have an additional construction cost of \$81 million, according to the FEIS.

Another alternative studied was using smaller, more distributed storage areas instead of one upstream staging area. This alternative wasn’t studied completely because the smaller distribution areas couldn’t guarantee protection from catastrophic flooding events, the Department of Natural Resources wrote, and “is not a feasible or practical alternative to the proposed project.”

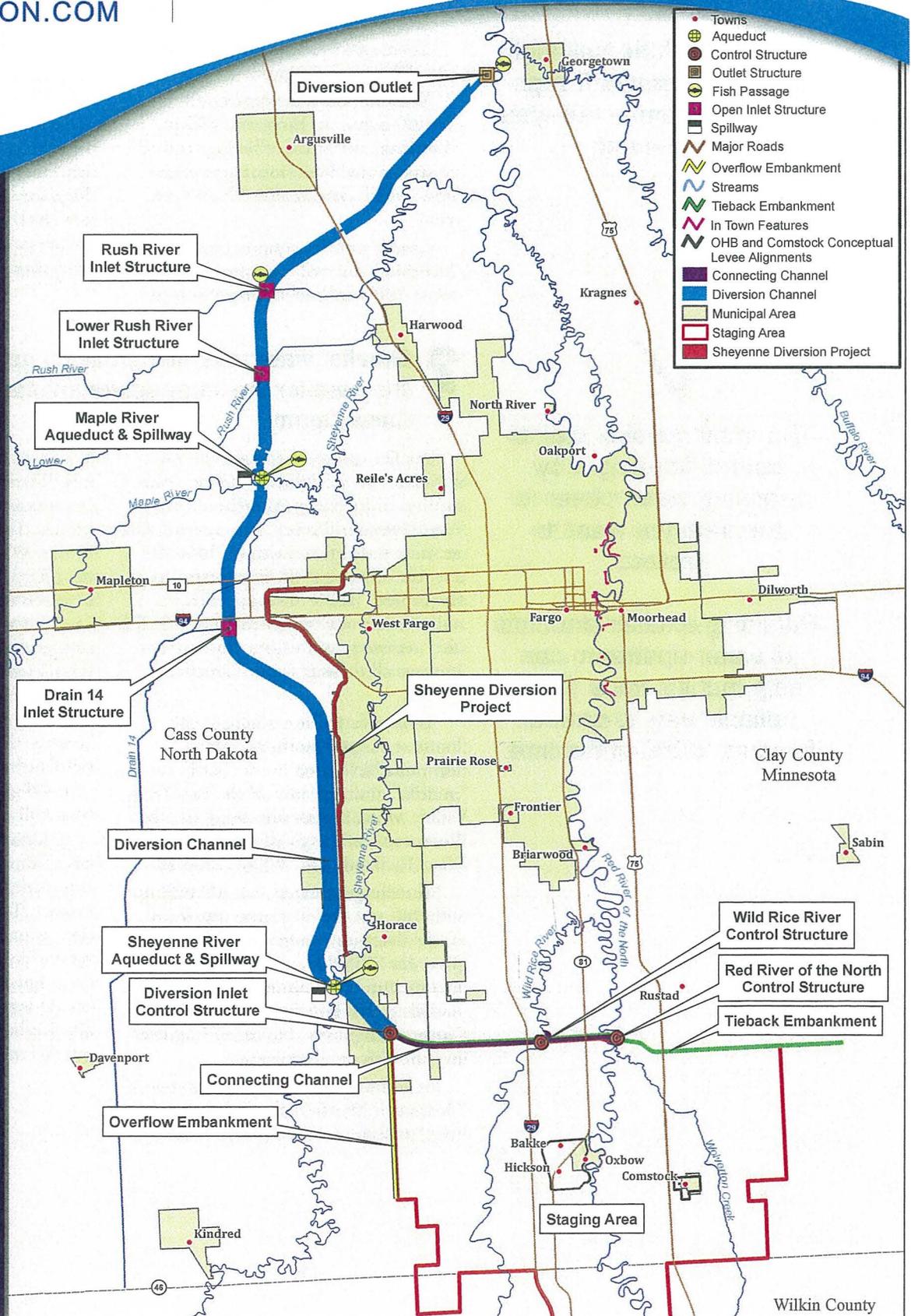
Once the FEIS is reviewed by the public and agencies, it must be determined if it is adequate. The Department of Natural Resources will issue a Record of Decision regarding the adequacy of the FEIS. After the Record of Decision, the Minnesota review of the project will transition into its permitting phase.

To read the full FEIS visit [www.dnr.state.mn.us/input/environmentalreview/fm\\_flood\\_risk/index.html](http://www.dnr.state.mn.us/input/environmentalreview/fm_flood_risk/index.html).



# Common Questions ON PROJECT DETAILS

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- DRAINAGE**  
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- CONSTRUCTION**  
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## ALTERNATIVES CONSIDERED



Levees can't be built high enough to protect Fargo-Moorhead from a 100-year flood event.



The most reliable way to control flooding is by retaining water closer to the area you want to protect.

Retaining smaller amounts of water upstream can help, but it's not a 100% reliable way to control flooding 100% of the time.



I thought levees alone are good enough flood protection?

Levees alone cannot achieve certifiable 100-year protection.

Without 100-year protection, 19,400 homes in Fargo and 800 in Moorhead are at risk of being required to pay annual flood insurance premiums; which costs \$2,000-\$4,000 per year.

Levees work in conjunction with the Diversion, and will increase the Diversion's 100-year level of protection to

almost 500-year protection.

Moorhead has spent \$135 million and Fargo has spent more than \$185 million on levee construction through the city center. Levee construction continues in Fargo and new levees in Fargo are being constructed to the 42.5 foot level. This is equivalent to approximately a 50-year protection without a Diversion in place.



Smaller water retention projects upstream will eliminate the need for the large upstream staging area in southern Cass County.

Smaller upstream storage will not eliminate the need for the storage plan outlined in the Fargo-Moorhead (FM) Area Diversion Project. The current and recommended plan includes 150,000 acre feet of storage directly upstream of the project. This is the most effective and efficient way to control flooding. It's also necessary to mitigate downstream impacts all the way to the Canadian border.

To be effective at reducing peak floods at Fargo-Moorhead, retention must be located in the "early" or "middle" drainage area of the Red River Valley, which is basically along the Red River south of Fargo-Moorhead in Cass, Clay, Richland, and Wilkin counties.

Modeling estimates that 400,000 to 600,000 acre feet of storage upstream of the diversion would be needed to replace the 150,000 acre feet of retention included in the recommendation. The modeling was done by the U.S. Army Corps of Engineers, Houston Engineering, and Moore Engineering.

In addition, Local Water Resource Districts in North Dakota did a sensitivity analysis for the 2009 flood on the

Wild Rice River. The results showed how distributed storage can't replace the storage component of the Diversion project. If this option were pursued for the Wild Rice River, nearly all of the distributed storage would need to be placed in eastern Richland County. Even if that happened, the distributed storage would not be enough to replace the storage required for the Diversion project. These results could also be applied to other tributaries and Wilkin County. Therefore, the direct impacts to Richland and Wilkin Counties would be much greater with distributed storage than with the current recommendation.

Additional upstream retention could help reduce the frequency of use of the Fargo-Moorhead (FM) Area Diversion Project. The Red River Basin Commission recommends construction of a diversion to endure a successful 500-year flood fight, supplemented by retention. The Diversion Authority has pledged \$25 Million to upstream retention projects that demonstrate this benefit.



Over \$30 Million has been spent on studies, to date.

Dozens of flood protection options were studied by the U.S. Army Corps of Engineers, local engineering departments, and the Minnesota DNR; only a Diversion Project with upstream staging provides the level of protection needed to protect the metro area.

**?** There is a better plan out there. This project hasn't looked at all options.

A three-year study led by the Corps of Engineers found that a diversion was the only option that could significantly reduce flood risk in the Fargo-Moorhead area from flood events larger than the flood of 2009. Numerous alternatives were studied and dismissed as inadequate or infeasible.

The Minnesota DNR's Draft Environmental Impact Statement, another three year study, also has found that only a diversion could provide the flood protection needed. The EIS also studied alternatives to a diversion that were dismissed as impractical or infeasible, including a Diversion with retention further upstream.

All viable options have been considered and no evidence has been presented that demonstrates otherwise. A diversion channel is the safest and most robust flood risk reduction option available because no matter the size of the flood, a diversion channel will provide some benefits.

The Fargo area lacks high ground to begin and end levees, and that limits the potential levee height. As such, the

largest cost-effective levee plan could only be certified up to the two-percent chance (50-year) event. This alternative was estimated to cost \$900 Million (for 50-year protection) left an intolerable level of remaining risk, so the levee alternative was dropped from consideration as a stand-alone alternative.

Flood storage was also considered. Water resource managers in the Red River Basin estimated in the Fargo-Moorhead and Upstream Feasibility Study that up to a total of 400,000 acre-feet of flood storage (or 40,000 acres covered with 10 feet of water) could be constructed at various locations upstream of Fargo-Moorhead at a cost of approximately \$600 Million. (For comparison, the Diversion Project's staging area holds 150,000 acre-feet) Such a system of storage sites would reduce the 100-year flood crest at Fargo by less than two feet. The proposed diversion would reduce the 100-year flood stage in Fargo by 7.4 feet. As such, the risk reduction provided by retention does not even come close to matching that offered by a diversion channel.



The Corps recommended a North Dakota Diversion after looking at numerous alternatives in both MN and ND.

**?** Fargo picked the Diversion route. I thought the Army Corps preferred the Minnesota Diversion?

The Corps is required to determine a National Economic Development (NED) plan. The NED outlines the greatest net national economic benefit consistent with protecting the Nation's environment. The NED plan was a 40,000 cubic feet per second (cfs) diversion channel on the Minnesota side. The Corps has the ability to recommend a different plan for construction, which was done. The Corps recommended the Locally Preferred Plan, which was a 35,000 cfs diversion channel on the North Dakota side.

There was considerable opposition to a diversion on the Minnesota side from state leaders, including Dilworth Mayor Chad Olson and Rep. Collin Peterson,

who said the plan had a "minus 5 percent" chance of being approved.

The North Dakota diversion has the added benefit of also protecting flooding along six rivers (Red, Wild Rice, Sheyenne, Maple, Rush, Lower Rush). This plan also benefits more people and infrastructure than the Minnesota diversion (the benefits to Fargo were similar with both plans).

At the time of development, the Minnesota Diversion would have had downstream impacts all the way to the Canadian border. This plan likely would have developed similarly to the North Dakota Diversion, requiring an upstream staging area.

# PROJECT BENEFITS



800 homes in Moorhead are at risk of flooding during a 100-year event, plus many Minnesotans work in Cass County.



The design intent was to benefit as much existing development as possible, while minimizing overall impacts to people and the environment, while at the same time, minimizing costs.

Also, the Minnesota DNR recognized Fargo and Moorhead as sharing economic vitality.



The project protects from 5 tributaries of the Red River along with 92% of Cass County residents.



Minnesota doesn't need this project. They are already protected.

While there has been significant efforts made to provide flood protection in Moorhead and the surrounding Minnesota communities, there still remains a flood risk to much of the area. As many as 800 homes in Moorhead are at risk of being without 100-year flood protection and are at risk of being required to pay annual flood insurance

premiums.

In addition to the direct threat from flooding, it has been estimated that as much as 60% of the workforce in Moorhead works across the river in Cass County. Without adequate flood protection for the entire metro area, the economy of Moorhead is also at risk.



This project is only to protect Fargo's growth in the floodplain. It's a Fargo land grab.

The project was designed to provide benefits to the existing infrastructure and not for future development.

The Diversion Project's southern alignment was selected after much study and discussion for technical and policy reasons. The design intent was to benefit as much existing development as possible, while minimizing overall impacts to people and the environment, while at the same time, minimizing costs.

The southern diversion alignment was located to keep flood water out of the Rose Creek watershed by capturing overland flows south of Fargo, to stay south and west of the existing federal projects on the Sheyenne River, which caused the channel to wrap around the west and south side of Horace, ND. The alignment continues due east to the Red River to minimize the length and cost of the southern embankment and to reduce the long term risk to the benefit-

ed communities.

Since the decision was made to have a ND Diversion route, the southern alignment has actually been moved approximately a mile north of its original location to reduce impacts to the environment, people, and Richland and Wilkin counties. In addition, several versions of the southern alignment were considered, including an option to move it further north to the confluence of the Wild Rice and Red River, as well as an option that would move it south of the City of Oxbow. Ultimately, the decision was made to impact the least number of people possible and to reduce costs.

The Minnesota DNR says, "The two cities do share an economic vitality. If Moorhead were to be protected from a large-scale flood event such as a 100-year flood, and Fargo was not protected, it is likely that Minnesota would still be affected both socially and economically.



This project only protects Fargo.

One of the reasons for the decision to run the Diversion channel through rural Cass County is to provide flood protection for Cass residents who otherwise have no feasible option for protection. With the Diversion, 92 percent of Cass County residents (more than 138,000 people) will benefit from this Project.

This project benefits the vast majority of Cass County. Once the Diversion is

built, the Cass County cities of Oxbow, Briarwood, Prairie Rose, Frontier, Wild Rice, Horace, Reile's Acres, Harwood, West Fargo, and Fargo will no longer be threatened with flooding. The Clay County cities; including the cities of Moorhead and Oakport will also receive benefits from the Project. In addition, it has been estimated that 60 percent of Clay County works within Cass County.



The final Environmental Impact Statement was released in May 2016. The project will continue to file for all required permits.



All federal claims have been dismissed. The remaining two state claims will be resolved after the MnDNR releases its Determination of Adequacy in Summer 2016.



This claim was dismissed by a federal judge in March 2016.

### ? Minnesota DNR will never permit the project.

Construction in Minnesota related to a permit is not expected until 2019. That said, the Minnesota Dam Safety Permit was applied for on February 18, 2016. Permit discussions are ongoing and are not expected to fully commence

until after the release of the Final Environmental Impact Statement and the Determination of Adequacy later this summer.

Similarly, permitting in North Dakota is also underway.

### ? The Diversion will be stopped by Federal Court.

The Court was evaluating three main arguments by the Plaintiff Richland/Wilkin Joint Powers Authority (“JPA”):

- Claim 1: the Army Corps of Engineers violated Executive Order 11988 (“EO 11988”);
- Claim 2: The Army Corps should have chosen a Minnesota diversion route
- Claim 3: The Army Corps misled Congress by not highlighting MNDNR’s comments as an “opposing view” to the project.

In its March 31, 2016 ruling, the Court rejected all three arguments. The Court stated:

- The JPA had not properly alleged an EO 11988 theory, and even if it had, EO 11988 is not enforceable in court;
- The Corps complied with all legal requirements in considering diversion routes, and it is not the Court’s role to determine what is the “best” route;

- The Corps properly described and responded to the MDNR’s comments on the Project.

As a result of these holdings, the Court dismissed all claims against the Corps. The Court also dismissed all federal claims against the Diversion Authority (National Environmental Policy Act and EO 11988).

Two procedural claims remain in court against the Diversion Authority. The claims allege the Diversion Authority violated the Minnesota Environmental Policy Act (“MEPA”) and Minnesota Environmental Rights Act (“MERA”) by starting work on the Oxbow, Hickson, Bakke Ring Levee too early, before Minnesota had completed environmental review.

### ? The Diversion violates an executive order that requires federal agencies to consider the impact their projects will have on floodplains.

Executive Order 11988 has not been violated. The claim related to EO11988 has been dismissed in federal court.

EO11988 requires federal agencies to consider the impacts their activities may have on floodplains.

The objectives of the E.O. 11988 are “to avoid to the extent possible the long- and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development where ever there is a practicable alternative...”

To accomplish this, each federal agency is required “to take action to reduce the risk of flood loss, to minimize the impact of floods on human safety,

health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains...”

Each federal agency is responsible for developing their own regulations for implementation of E.O. 11988. Through their developed regulations and procedures, the federal agencies are required to take a leadership role in the following: avoiding the base floodplain (100-year flood) if at all possible; minimizing impacts to the floodplain; and keeping the public informed of proposed actions in the base floodplain and facilitating public comments.

The Corps has complied with all aspects of its criteria for evaluating floodplain impacts.

# PROJECT DEVELOPMENT



51 public meetings were held from 2008 to 2011 to gather input for the Federal Feasibility Study.

## ? The Diversion Authority and Army Corps of Engineers haven't allowed for public input.

During the feasibility phase, 51 public meetings were held to inform and gather input from November 2008 to June 2011. Nine public meetings were also held to specifically address upstream concerns from December 2010 to January 2013.

In addition, hundreds of public meetings have been held since on a regular basis to provide up to date information to all interested parties.

During the Feasibility Study, the Corps responded to over 1,600 pages of comments made by approximately 430 agencies and members of the public. In addition, there have been numerous

neighborhood meetings where property owners within the staging area were invited to attend, listen, and ask questions.

The Diversion Authority and Corps of Engineers have also conducted small group meetings with individuals impacted by the construction and operation of the Diversion and will continue to do so in order to mitigate impacts and ease other concerns. The project website [www.FMDiversion.com](http://www.FMDiversion.com) also offers a transparent look at all the documentation used by elected officials to make their decisions and allows the ability for the public to ask questions and receive answers.



The Diversion is not feasible without staging upstream. Previous alternatives showed impacts all the way to Canada without a staging area.

## ? Upstream residents are not against the Project, just the dam part.

The diversion channel and upstream staging are one in the same and the overall project would not be feasible without the diversion channel and the upstream staging. Upstream staging is required to prevent impacts all the way

to the Canadian border.

In order to provide 100-year flood protection to the metro area, a dam and staging area are required.



The 100-year flood level has changed roughly every decade in Fargo and Moorhead. The Diversion is designed to accommodate these changes.

## ? The Corps made up data used to create new 100-year flood levels to make the economics work.

No data was made up for this study, and all information and data has been reviewed by independent experts.

The Corps and FEMA are not in disagreement over the proposed project flood levels, and in the future, FEMA and the Corps will base their information on the modeling completed by the Corps as part of the FM Area Diversion Project.

The primary difference between the current Corps and FEMA numbers is that the FEMA hydrology data does not account for recent severe flooding seen the last two decades, while the Corps hydrology is up to date.

In addition, the Corps worked with national experts (EOE) to include the analysis of wet and dry periods into the analysis; although this work was in-

cluded the results were not significantly different than if the traditional method of utilizing the entire period of record (POR) was used. The information for both is reflected in the table below. FEMA has determined that either the USACE EOE or POR would be reasonable to use in future floodplain mapping.

	Discharge (cfs) at USGS Gage at Fargo
100-year FEMA	29,300
100-year USACE EOE	34,700
100-year USACE POR	33,000
500-year FEMA	50,500
500-year USACE EOE	61,700
500-year USACE POR	66,000
Event	
1997 Historic	28,000
2009 Historic	29,500

## STAGING AREA



The staging area would only temporarily be used and only during times of extreme flooding.



Farming will continue in the staging area because it will only be used in a flooding situation. There is a 1 in 10 chance in any year it will be needed.



The staging area reduces downstream impacts. Moving the staging area north impacts 60 more homes and would cost more.



The Project includes a 50,000 acre pool or reservoir.

The staging area will only be utilized in floods that exceed the 35-foot level on the Fargo gage. Farming during non-flood years will continue as normal. The staging area would drain as the flood receded. During extreme flood events, the staging area could see additional water from 1-3 weeks depending on location

before normal farming activities could continue.

During a 100-year flood with the Diversion Project in place, approx. 50,750 acres are needed to temporarily store water. 32,602 acres of which would already be flooded under existing conditions (without a Project in place).



The staging area will be a dead zone with farm land out of commission and no growth allowed.

The Staging Area will not be a dead zone.

Farming will continue in the staging area. The staging area will only operate under flood events larger than a 10-year event, which means there is a 1 in 10 chance in any year that the staging area would be used.

This means that, on average, 9 in 10 years, the staging area would not be used. In addition, in the 10 percent chance that the staging area is used, the additional duration of flooding would be roughly 1-3 weeks depending on location within the staging area.



The staging area is not needed. The land immediately south of Fargo is better used as staging area.

The staging area is required to mitigate the downstream impacts that were associated with previous diversion options. The downstream impacts associated with the previous plan extended into Canada and would have impacted more structures and more land than upstream staging. The current upstream staging location minimizes the number of residential properties that are impacted by the project, and is the best technical solution. If the staging area was moved north to other areas it would impact more residential properties, than are being impacted by the current proposal.

The Post-Feasibility study examined moving the staging area north of the confluence of the Wild Rice and Red

River. It was concluded that moving the staging area north would impact approximately 170 more residential properties than the current proposed location as more rural developments exist closer to the metro area. It was determined that the staging area will impact the same area regardless of its location.

The Minnesota DNR also studied an option that shifted the staging area to the north. The Draft EIS showed that shifting the staging area a mile and a half north would result in a difference of 60 additional homes needing to be acquired and an additional cost of \$81 Million.

# COST & FINANCIALS



**No. Under the current plan, property owners would not have to pay special assessments.**

**? Will I be assessed to pay for the Diversion?**

No. The financial plan developed by the Diversion Authority calls for no requirement for property owners to pay special assessments and no increase in the rate of sales tax. The Financial Plan instead relies on a multi-generational approach that would extend the sales taxes previously approved by voters. The

assessment district, passed by a vote of benefiting property owners and public jurisdictions in 2014, would remain as a financing tool that would allow the Diversion Authority to finance the Diversion Project at a more favorable interest rate and remove the unfavorable coverage requirements of sales tax financing.



**Yes. Federal appropriations for construction of the Diversion Project were received in February, 2016. Construction is anticipated to begin this fall**

**? Will the federal government pay its share?**

The U.S. Army Corps of Engineers (Corps) FY2016 Work Plan included federal appropriations for construction for the Diversion Project. The Diversion Project was 1 of 6 new starts selected and 1 of only 11 new starts in the last six years.

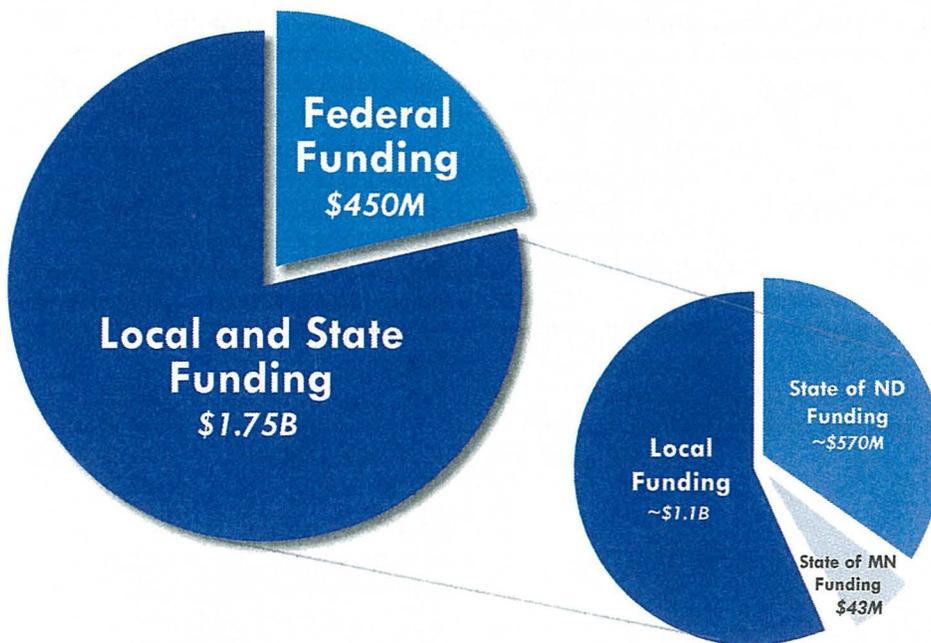
allotment of the \$450 Million federal commitment to the Diversion Project. This is money in addition to the \$40 Million in federal funding already spent on planning, engineering, and design.

The FY2016 Work Plan included \$5 Million for the fiscal year, which ends in October. The appropriation is the first

Construction is anticipated to begin this fall on the Diversion Inlet Control Structure south of Horace, ND. Construction this will be led by the Corps.

## UPDATED FUNDING BREAKDOWN FOR FLOOD PROTECTION PROJECTS

**Cost Estimate: \$2.2 Billion**



### Local Funding Sources

- Cass County and City of Fargo Sales Taxes
- Sales Tax used to secure short- and long-term financing for construction
- No special assessment funds needed for construction
- Assessment District utilized to improve credit ratings and access sales tax growth



The Diversion Project is affordable with existing tax revenues and funding commitments.

? The \$2.1 Billion project cost will double by the time it is constructed.

The updated cost estimate for the project is \$2.1 Billion in Dec. 2015 dollars.

The increase from the estimate of \$1.8 Billion issued in 2011 is based on rising construction costs due to inflation, scope increases related to in-town levees, and acquisition costs.

Assuming a three percent inflation rate, the cost for the Diversion could increase approximately \$60 Million per year if construction does not begin as scheduled.

Regarding cost escalation, to date, approximately \$100 Million in cost savings have been identified. We anticipate being able to drive additional cost savings through detailed design of

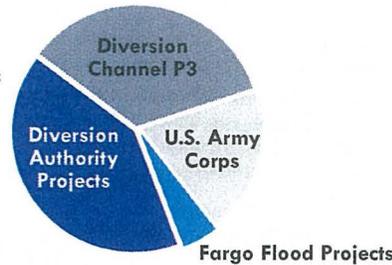
additional project elements. As noted, however, time is the enemy for large infrastructure projects, such as the FM Area Diversion Project.

It is important to note that for the Grand Forks/EGF project, the 1998 cost estimate was \$350.5 Million and the cost at completion in 2012 was \$380 Million, an 8.4 percent increase that is below the rate of inflation for that timeframe. The Grand Forks/EGF project has prevented more than \$1 Billion in damages. In addition, the Wahpeton/Breckenridge projects cost approximately \$66 Million and have prevented more than \$164 Million in damages, resulting in a 200 percent rate of return on investment.

## UPDATED FINANCIAL PLAN

### Main points of financial plan

- Multi-generational funding approach
- Includes Diversion Authority & Fargo Flood Projects
- Based on extension of current sales tax
- No increases in taxes needed
- No special assessments needed



### Total capital cost for project estimated at \$2.2 Billion

- \$905M Diversion Authority Projects (Land, mitigation, legal, financial, technical, construction)
- \$763M Diversion Channel P3
- \$433M U.S. Army Corps
- \$104M Southern Embankment Fargo Flood Projects

### Existing Sales Taxes

### Financial Plan

### Extending Current Sales Taxes = No Direct Special Assessments

#### City of Fargo Sales Taxes

$\frac{1}{2}$ ¢ Passed in 2009 Dedicated to the Diversion Currently expires in 2029

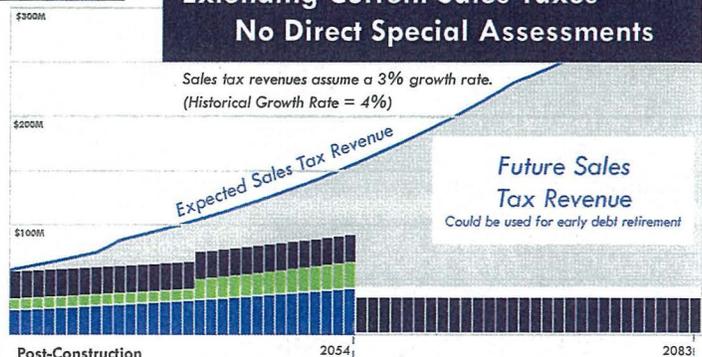
$\frac{1}{2}$ ¢ Passed in 2012 Dedicated to Flood Control Currently expires in 2032

1¢ Passed in 2006 as Fargo Infrastructure Tax  
 $\frac{1}{4}$ ¢ for flood protection  
 $\frac{1}{4}$ ¢ for streets  
 $\frac{1}{4}$ ¢ for wastewater  
 $\frac{1}{4}$ ¢ for water  
 Currently expires in 2028

#### Cass County Sales Tax

$\frac{1}{2}$ ¢ Passed in 2010 Dedicated to the Diversion (and other county projects) Currently expires in 2031

$1\frac{3}{4}$ ¢



- Debt Service on Assessment District Bonds
- Debt Service on Sales Tax Bonds
- Payment to P3 Developer  
 Determined at the time of the Project Agreement is signed (Est. late 2017)

Construction  
 Fargo Flood Projects  
 Diversion Project

Anticipated Completion  
 Project in Operation  
 Expected in 2024

# LAND ACQUISITION PROCESS OVERVIEW & DETAILS



The process to acquire land includes a federal appraisal and working directly with property owners.

## NEED FOR A PARCEL

Design team identifies and determines the need for a parcel.

## NEED PRESENTED TO DIVERSION AUTHORITY

Program Management Consultant presents the need to the Diversion Authority's Finance Committee for approval.

## RIGHT OF ENTRY REQUEST SENT

## PARCEL SURVEYED

## NOTICE OF INTENT TO ACQUIRE PARCEL SENT

## PARCEL APPRAISED

Cass County Joint Water Resources District reviews for approval

## PURCHASE NEGOTIATION BEGINS



How will land for the project be acquired?

The Fargo-Moorhead Metro Flood Diversion Authority (DA) and Cass County Joint Water Resources District (CCJWRD) are responsible for the acquisition of real property.

The parties will utilize the following steps for acquiring properties in North Dakota:

### Design Team (Corps/HMG/P3)

- Advises Program Management Consultant (PMC) of Right of Way (ROW) needs at 65 percent design.
- PMC establishes a budget for the acquisition needs by Phase or Work Package.

### Program Management Consultant

- Presents Land Acquisition Directive (with budget) to Diversion Authority's Finance Committee for approval.
- Submits the executed Land Acquisition Directive to CCJWRD.
- PMC assigns acquisition to a land acquisition firm.
- Land acquisition firm accepts assignment, prepares proposed fee for review by PMC.
- PMC initiates task order amendment for Land Agent, obtains CCJWRD approval, executes documents with Land Agent, and provides fully executed documents to parties.

### Right of Entry

- PMC identifies parcels which require Right of Entry (ROE) for boundary surveying.
- Legal prepares ROE request for access to conduct boundary survey.
- CCJWRD manages ROE request and receipt forms, conducts initial follow-up calls, and notifies PMC and Land Agent when additional follow-up is required.
- Land Agent conducts any necessary additional follow-ups to establish singular point of contact.

### Survey Parcel

- PMC conducts boundary survey and supplies initial certificate of survey exhibits to Land Agent (and appraiser).

### Notice of Intent to Acquire (NOI)

- Land Agent sends property owner certified letter of NOI.
- Land Agent contacts property owner by phone to describe acquisition process, offers to meet.

### Parcel Appraisal

- Appraiser, using certificate of survey exhibit, conducts appraisal following federal standards.
- Appraiser submits draft appraisal report for review (see Appraisal Review Plan for additional details).
- Upon appraisal review, Just Compensation value approved by CCJWRD (in accordance with NDCC § 32-15-06.1).

### Parcel Purchase Negotiation

- Land Agent presents appraisal to property owner and makes initial offer of just compensation based on appraisal amount.
- Land Agent has 45 days (goal) to negotiate fair market value for acquisition. Land Agent has 90 days (goal) to negotiate relocation benefits, where applicable.
- Legal team develops Purchase Agreement based on Land Agent recommendation.
- Land Agent meets with property owner to present Purchase Agreement; execute Purchase Agreement.
- If outstanding terms, negotiate additional terms and seek CCJWRD approval regarding any additional negotiations.
- PMC prepares final acquisition exhibits (Certificate of Survey) and supplies to legal team for inclusion in the closing documents.
- Upon final approval of Purchase Agreement by landowner and CCJWRD, legal team prepares deed and additional documents required for closing.
- Exhaust all reasonable negotiation opportunities via personal meetings and phone contacts.

### Parcel Close

- The Title Company prepares partial mortgage releases, closing statement, 1099, and conducts the closing with owner.

## PARCEL CLOSES

Closing proceeds after the purchase agreement has been signed by all parties.



The Diversion Project is designed to not negatively impact areas outside of the channel.

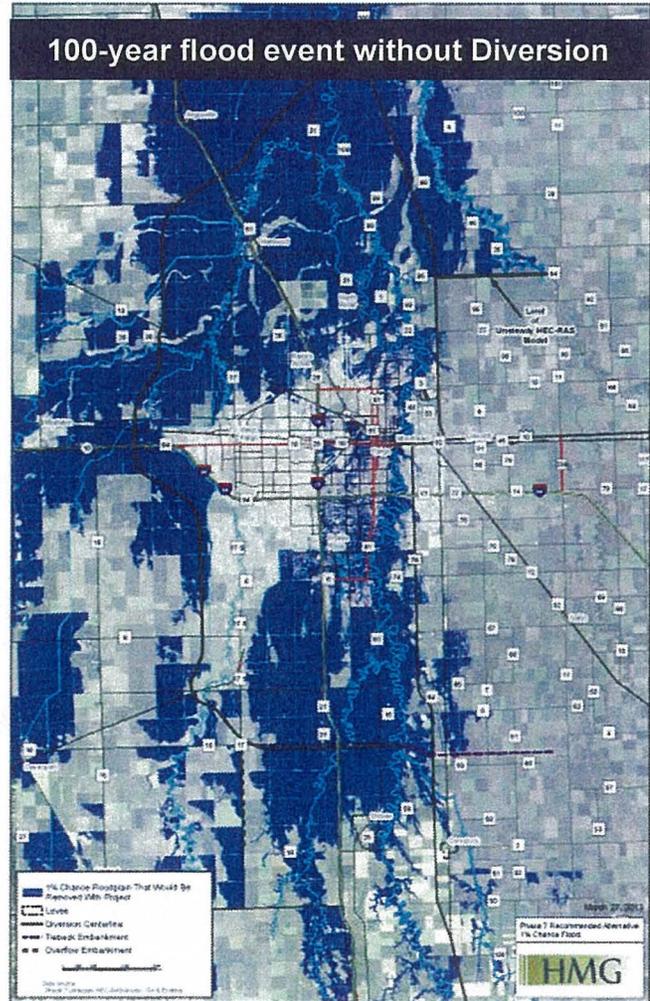
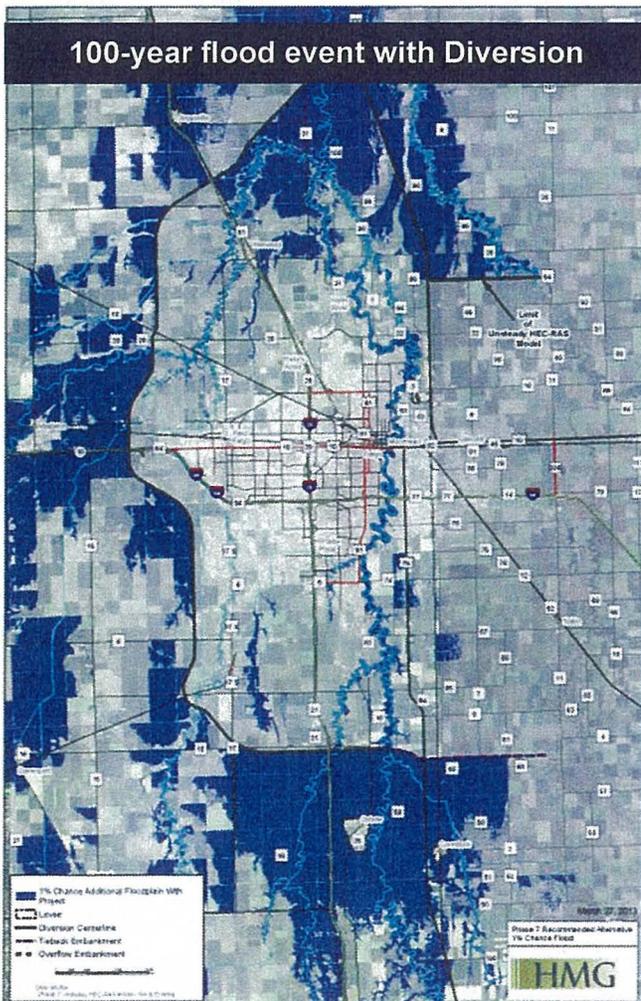
? Drainage west of the alignment will back up on farm land.

The Diversion Project is designed with no negative impacts on areas outside the designated staging area. This includes areas to the west of the channel. The design prevents the back up of water by allowing positive drainage into the channel at measured intervals. Drainage will be similar to what occurs now in most areas and will likely be improved for events smaller than a one-percent chance (100-year) event.

Detailed local drainage plans have been developed for channel reaches currently under design and will be developed for future reach designs. Drainage features of the Diversion Project will

include drainage channels constructed parallel to and outside of the Excavated Material Berms (EMBs) for the entire length of the project. The purpose of the drains is to pick up drainage off of the EMBs as well as local drainage approaching the project from either side.

The project will be designed to minimize impacts to tributaries, especially for smaller, more frequent flood events. The design goal is to not change the one-percent chance (100-year) floodplain outside of the diversion. The project will include measures to capture and direct flows along the tieback levees to the diversion channel.



# CONSTRUCTION



Construction is starting this fall.



Eight years. The entire project is planned to be operational in 2024.



Will the Diversion ever get built?

Yes. Construction is planned to begin in Fall 2016 on the Diversion Inlet Control Structure south of Horace, ND. This Corps-led construction will be the first piece of the Southern Embankment structure that the Corps will be responsible for constructing. In addition, the Channel portion of the Diversion Project will be led through a public-private

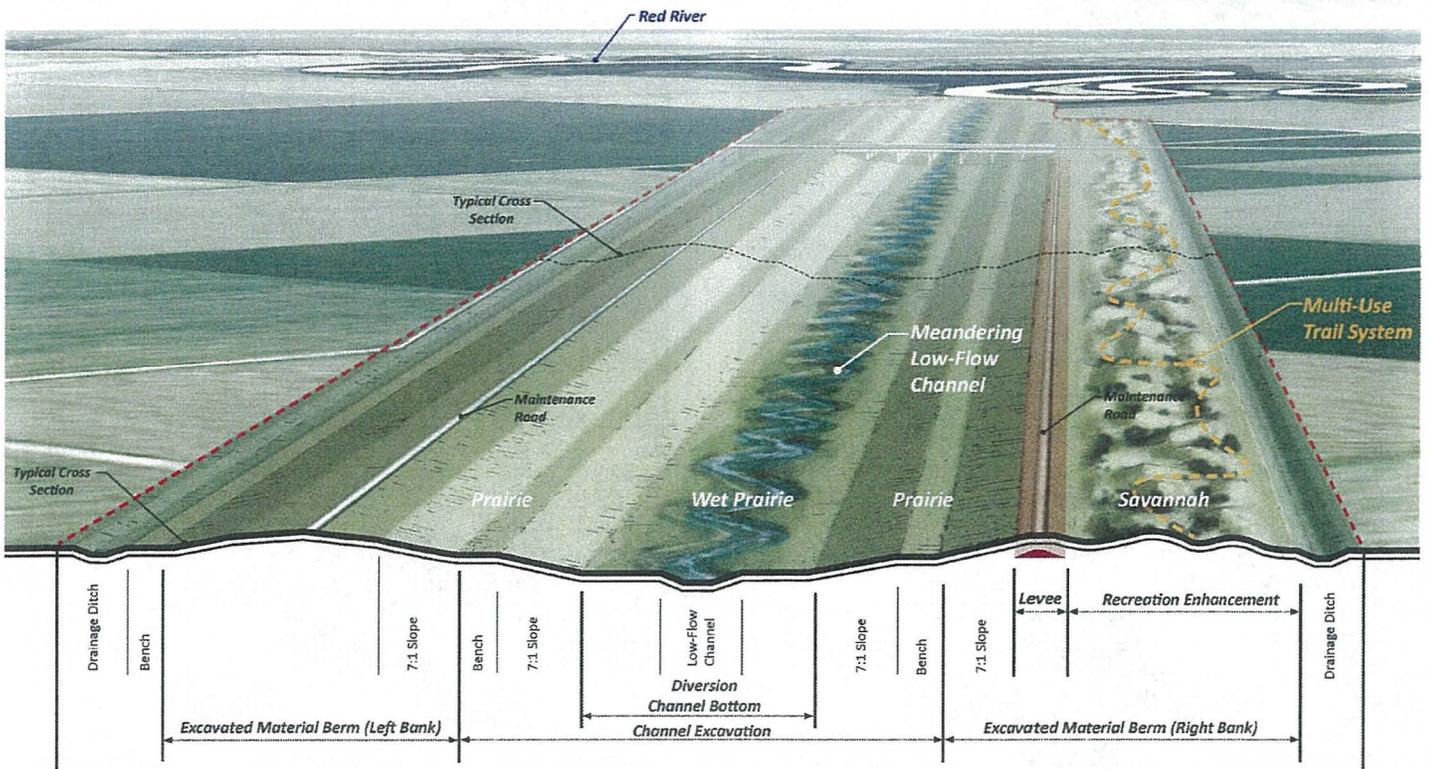
partnership or P3. The procurement process to retain a P3 developer will begin in 2016 with financial close possible before the end of 2017, with construction to begin in 2018. Construction on the P3 channel portion of the Project is likely to begin at the north end of the Project, but the exact schedule is yet to be determined.



How long will it take to construct?

With construction beginning this Fall, the Diversion Project is anticipated to be operational in 2024. There will be greater cost and schedule certainty once a P3 developer is onboard and a contract for construction of the P3 is in place. The Corps-led construction efforts along the Southern Embankment will be dependent on the amount of an-

annual federal appropriations through the Corps' Work Plan and other funding sources.



Drawing of the Diversion Channel

Above: Drawing of an aqueduct structure.