

TESTIMONY BY DIVERSION AUTHORITY
CHAIRMAN DARRELL VANYO TO THE WATER
TOPICS OVERVIEW COMMITTEE ON FUNDING
FOR THE FM AREA DIVERSION PROJECT

JUNE 24TH, 2014

TESTIMONY TO THE WATER TOPICS OVERVIEW COMMITTEE
By: DARRELL VANYO
FM DIVERSION AUTHORITY CHAIRMAN
JUNE 24, 2014

Good morning Chairman Grindberg and committee members. Thank you for the opportunity this morning to provide you with an update on the Fargo Moorhead Area Diversion project. Much has been accomplished since the 2013 legislative session.

This morning, I'll discuss the recent Federal authorization of the Project, the work to implement distributed storage, the mitigation efforts underway upstream, and I'll discuss the Diversion Authority's priorities for the next few years.

Water Resource Reform and Development Act (WRRDA)

On June 10, President Obama solidified authorization of the diversion project with the signing into law of Water Resource Reform and Development Act (WRRDA). This is the first time in the past 7 years that a federal water project has been authorized. The project authorized construction of the Diversion Project and authorized \$846 Million as the federal share of the cost. The Diversion was 1 of only 26 water projects authorized nationwide. The significance of authorization cannot be overstated.

Distributed Storage

You may have a read recent letter in local newspapers by Senator Hoeven and a response by Trana Rogne representing the Richland-Wilkin JPA. I'd like to emphasize the FM Diversion Authority's support of more distributed storage throughout the Red River Valley. The Diversion Authority provided \$500,000 to the Red River Basin Commission to evaluate distributed storage potential. The study identified 96 locations with potential to provide storage benefits. The Diversion Authority has

committed \$25 Million for construction of distributed storage projects. The Cass Joint Water Resource Board is aggressively moving forward with a number of projects. Of special note is a recent assessment vote with 80% of voters in favor of construction of an upper Maple River dam in SE Steele County. A joint group from Cass and Richland County Water Resource Districts has met occasionally since 2008 to discuss storage projects. On the Minnesota side, the Buffalo-Red River Watershed is also working on a number of potential projects. We understand efforts are also underway by local officials in the Bois De Sioux Watershed. Your packet contains lists of these projects. I believe there is a real opportunity for cooperation in this area and we welcome a dialog with our upstream neighbors about distributed storage projects. In addition to the local benefits of these retention sites, retention in the right location upstream of the Diversion Project have potential to reduce the frequency in which the staging area of the Project would be used.

Ongoing Mitigation Efforts:

Cemeteries - The Corps of Engineers has taken the lead on a study to determine the appropriate measures to take to preserve cemeteries in the project area. The first step of the process was to identify the impacts to each of the cemeteries. This has been completed. The study identified 7 cemeteries in the staging area that would be impacted by the project during a 100 year flood. The study also identified 19 cemeteries that flood now that would be protected by the project. This study will be publically released by the Corps on June 30. The next step will be to meet with the managers from each of the impacted cemeteries to discuss appropriate mitigation measures. Mitigation options under consideration include clean-up, anchoring gravestones, riverbank armoring, and protective berms. Relocation of graves is not anticipated and would be considered only as a last resort.

Agricultural Mitigation - The Diversion Authority commissioned Watts & Associates, one of the leading national firms in developing federal crop insurance programs, to outline mitigation options, including crop insurance options, to mitigate the impacts on ag land from the FM Area Diversion Project. The details of a supplemental crop insurance program still need significant consideration and development, but there is plenty of time to develop the program fully before the need for the product would be realized.

Hardship Acquisitions – Six homes in the impacted area have been purchased at the request of their owners due to hardships that made staying in their homes impractical. The Diversion Authority will continue to work with the residents impacted by the project to accommodate unique housing and health situations.

Early Acquisitions – Several farmland owners in the footprint of the project have approached the Diversion Authority with an interest in selling their land. As a result the Diversion Authority has purchased or has purchase agreements in place on about 2,000 acres of land to date. These voluntary acquisitions initiated by the landowners are a great example of a win-win scenario. A map of these properties is included in your packet.

Other mitigation efforts – Your packet includes a list with several other refinements that were made to the project previously to limit upstream impacts. In the interest of time, I won't go into each of these.

2015/2017 Priorities:

In-town levees - Efforts within Fargo are moving swiftly on constructing of levees to function in conjunction with the Diversion channel. A set of slides describing projects underway and planned throughout the City is included in your packet. In

addition design is proceeding on the downtown floodwall. The first construction contracts for the downtown work are expected to be awarded later this summer.

I would note that with ongoing home acquisitions, Fargo and Cass County will have purchased more than 500 flood prone homes that not only allow the construction of levees but also allow a widened river corridor.

Oxbow/Hickson/Bakke levee construction – As you recall, early on in the project discussion a plan was put forward to acquire these communities in full. In response to public objections, the plan was modified several years ago to include a ring levee that would allow these communities to remain intact. In addition, the Diversion Authority committed to accelerating this work to remove the uncertainty that had impacted the real estate market and threatened the tax base of the Kindred School District. We are pleased to report that once the decision was made to protect these communities, we have witnessed a very positive turn around in the real estate market and houses are again being purchased in these communities at market prices. The required federal, state, and local permits have been issued. The first two construction contracts have been awarded and on site work is imminent. It has been erroneously suggested in several recent articles that Oxbow already has protection. It is important to note that the City of Oxbow faces a flood threat with or without the diversion. Oxbow suffered severe flooding in 2009. While some levee construction work has been completed by the City since 2009, it is not suitable to provide reliable long term protection or be accredited by FEMA to remove the city from the 100 year floodplain. The construction of an accredited levee with no diversion would have a similar footprint, require the same pumping stations, and removal of the same 40 homes as the levee necessary with the diversion.

Land Acquisition – The Diversion Authority plans to proceed in upcoming months with land appraisals and acquisition of land necessary for construction of the northern reaches of the diversion.

Northern Reach Channel Construction – The design documents for the northern reaches of the channel are nearly complete. It is our goal to start construction on the outlet and channel during the 2015 construction season.

Appropriations and potential Private Public Partnership – With federal authorization now secured, the Corps and the Diversion Authority will work toward signing a project partnership agreement which spells out the cost sharing and construction responsibilities of the Corps of Engineers and the local sponsors. WRRDA authorizes \$846 million in federal funding for the Diversion Project. The Diversion Authority will now focus efforts on securing funding to begin construction. Federal funding is expected to be appropriated over time. Funding from the State of North Dakota can only be used for the Diversion once federal funding for construction is received. There have been a number of discussions recently surrounding the passage of WRRDA about completing water projects in a faster and more cost effective manner through alternative project delivery methods. The Diversion Authority is exploring these possibilities, but we emphasize that these are only in the early discussion stage. We plan to continue those discussions on a parallel track with our continued pursuit of traditional design, construction, and funding methods.

2015 Funding Request:

The Diversion Authority has been meeting regularly with the State Water Commission regarding the funding needed for the Diversion Project. The funding plan used for the Project has the State of North Dakota's share at \$450 million. To

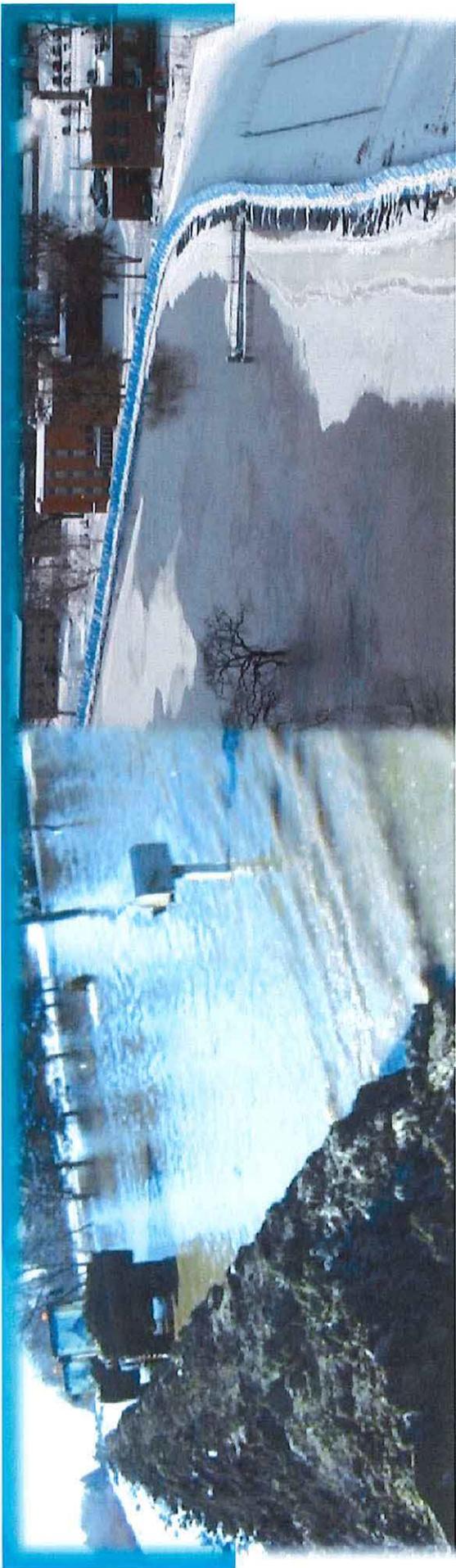
date, the North Dakota legislature has appropriated \$175 million towards flood protections efforts for the Fargo metro area.

In the 2013 legislative session, HB1020 included legislative intent for the remaining \$275 million to be appropriated in even amounts over the next four bienniums. Our request to the State Water Commission and to this legislative body is to follow the intent of the law and request \$68.75 million for the 2015 legislative session and each of the next four sessions. There is breakdown of the funding plan along with the estimated annual expenses of the Diversion Project in your packet.

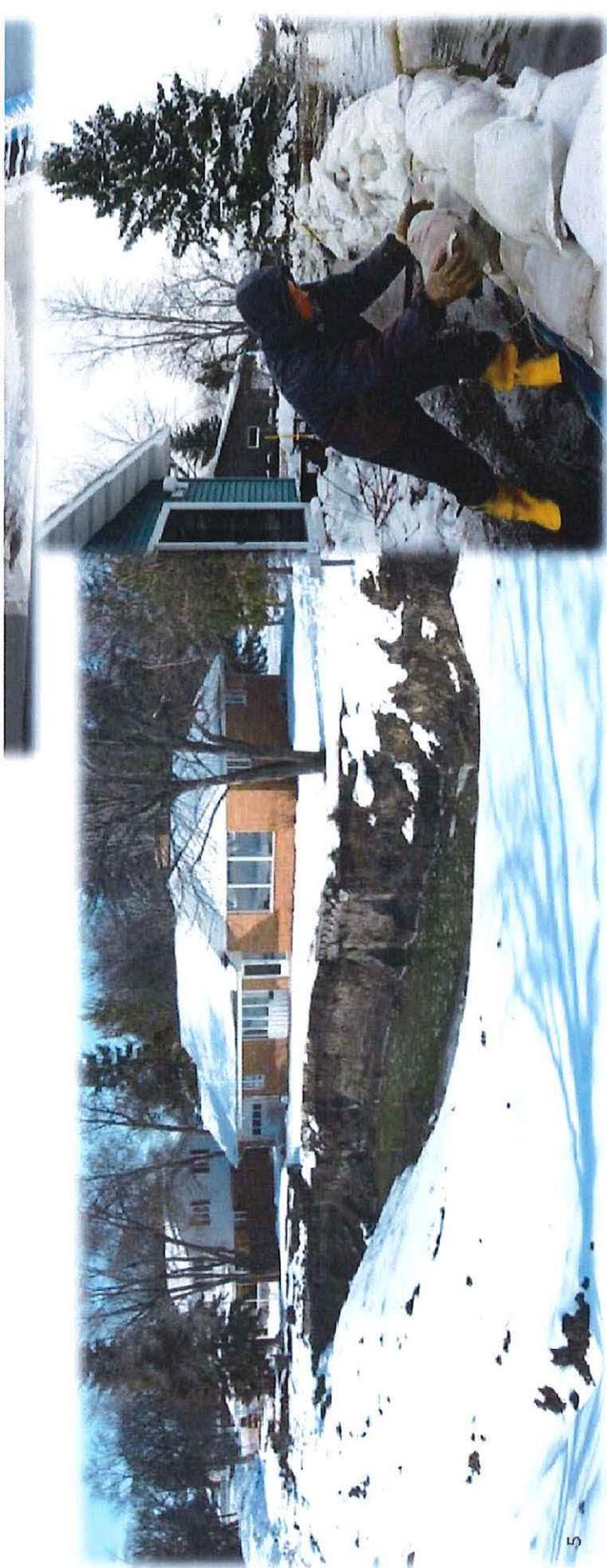
Thank you again Chairman Grindberg and members of the committee for the opportunity to address you today. The people of Cass County, and the entire area protected by the Diversion, also thank you for your ongoing support of permanent flood protection for the metro area.

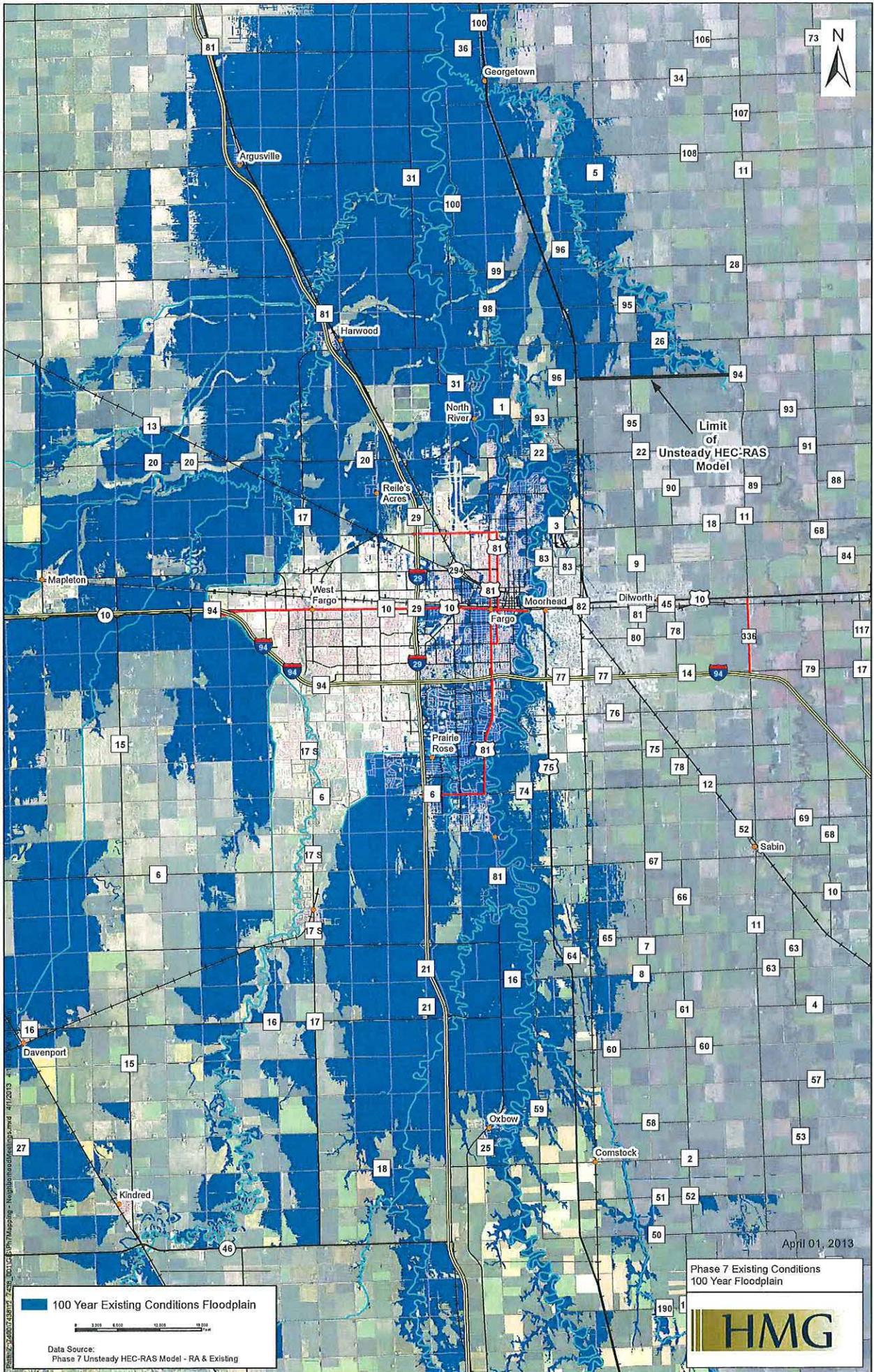
Sincerely,

Darrell Vanyo
Cass County Commissioner &
Chairman, FM Diversion Authority



Flooding is the problem





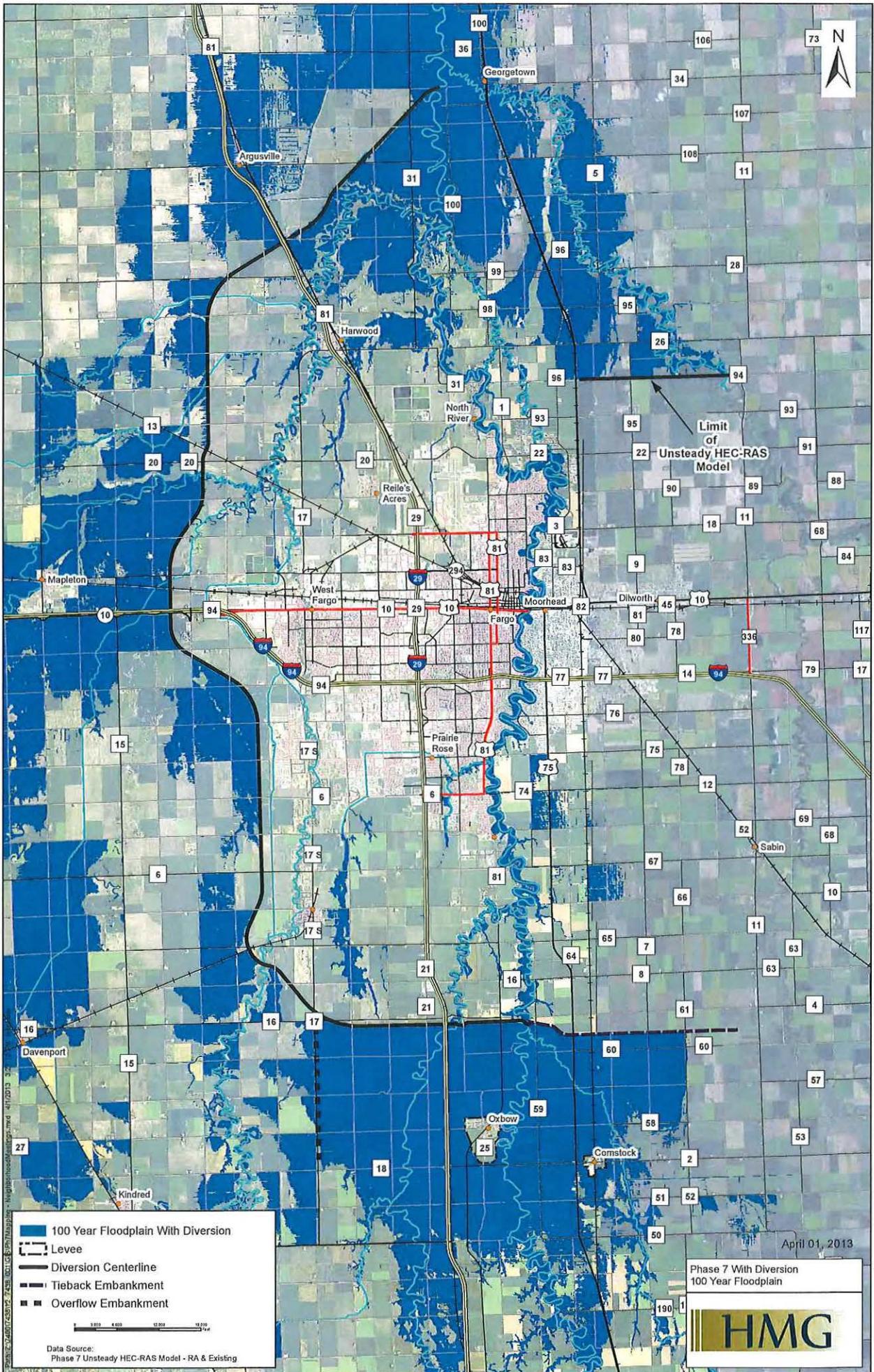
100 Year Existing Conditions Floodplain

0 3,000 6,000 12,000 18,000
 Feet

Data Source:
 Phase 7 Unsteady HEC-RAS Model - RA & Existing

April 01, 2013
 Phase 7 Existing Conditions
 100 Year Floodplain





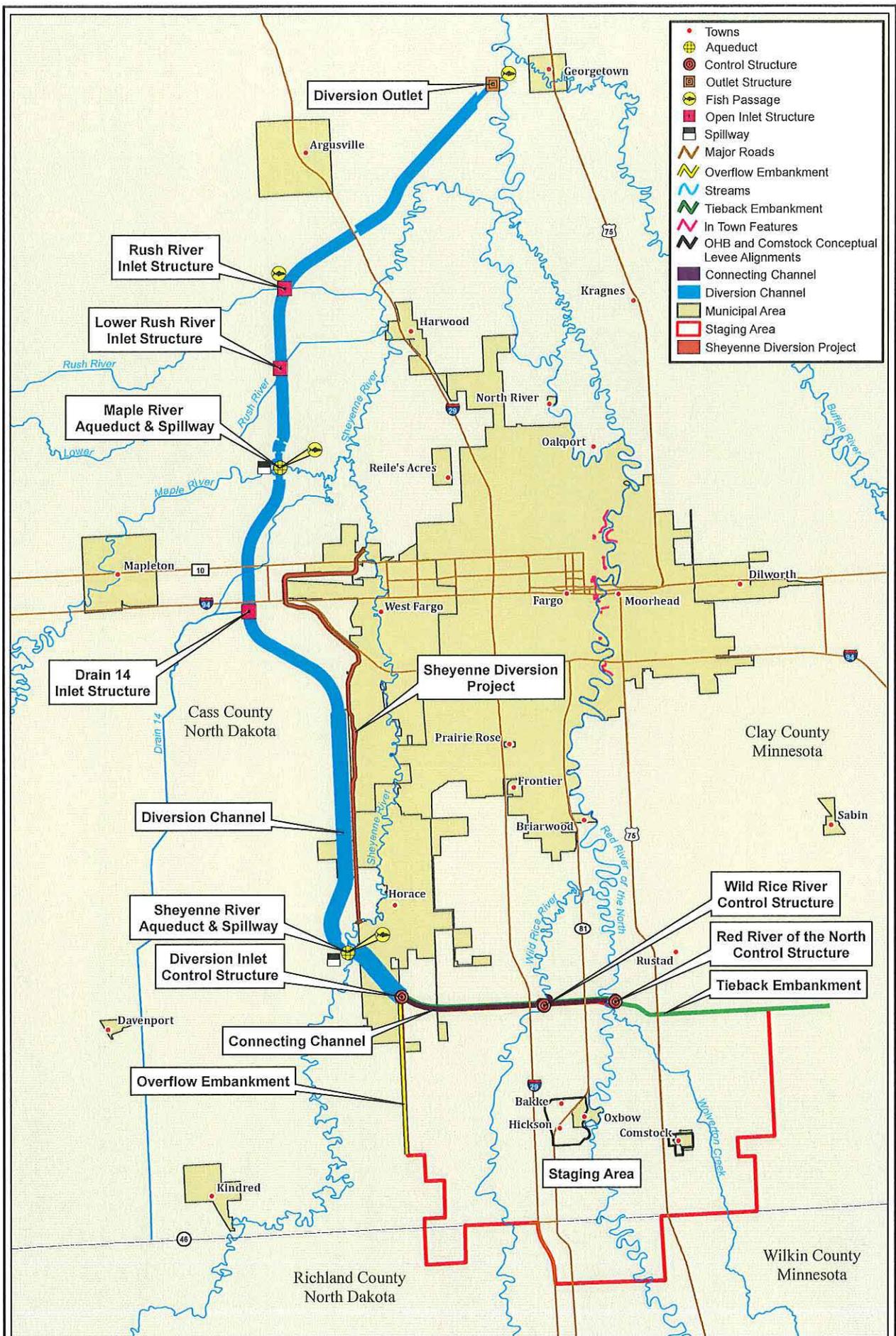
Limit
Of
Unsteady HEC-RAS
Model

100 Year Floodplain With Diversion
 Levee
 Diversion Centerline
 Tieback Embankment
 Overflow Embankment

0 3000 6000 12000 18000
 Feet

Data Source:
 Phase 7 Unsteady HEC-RAS Model - RA & Existing

April 01, 2013
 Phase 7 With Diversion
 100 Year Floodplain



- Towns
- ⊕ Aqueduct
- ⊙ Control Structure
- ⊠ Outlet Structure
- ⊕ Fish Passage
- ⊠ Open Inlet Structure
- ⊠ Spillway
- ⊠ Major Roads
- ⊠ Overflow Embankment
- ⊠ Streams
- ⊠ Tieback Embankment
- ⊠ In Town Features
- ⊠ OHB and Comstock Conceptual Levee Alignments
- ⊠ Connecting Channel
- ⊠ Diversion Channel
- ⊠ Municipal Area
- ⊠ Staging Area
- ⊠ Sheyenne Diversion Project



F-M Area Diversion

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News

Presidential Signature Authorizes F-M Area Diversion Project Construction

June 10, 2014

President Obama has signed a bill into law which authorizes construction to move forward on the Fargo-Moorhead Area Diversion Project. The signing of the Water Resources Reform and Development Act (WRRDA) marks a critical step to acquiring federal funding for the Project, which will build permanent flood protection for approximately 200,000 people in North Dakota and Minnesota.

Dennis Walaker, Mayor of the City of Fargo, ND, was in attendance in Washington, D.C. as President Obama signed the bill. "The final plan we have today is going to provide the robust flood relief that the F-M area needs and deserves," said Walaker. "Now that Congress and the President have approved the plan for the Diversion Project, we look forward to working with all interested parties to implement it in such a way as to limit the impacts where possible"

With authorization now secured, the Corps and the local sponsors, represented by Fargo, Moorhead and the Diversion Authority, will work toward signing a project partnership agreement which spells out the cost sharing and construction responsibilities of the Corps of Engineers and the local sponsors.

The significance of federal authorization for the Diversion Project cannot be understated, according to Col. Dan Koprowski, Commander of the Corps of Engineers St. Paul District. "Receiving authorization for construction is the most important event in a project's history," said Koprowski. "Congress is saying it's within the public interest to build and makes it eligible for construction funding. This project is one of the top priorities of the Corps' Mississippi Valley Division, and we will continue to work hand-in-hand with our local partners to ensure flood risk reduction is provided in a timely manner."

WRRDA authorizes \$846 million in federal funding for the Diversion Project. The Diversion Authority will now focus efforts on securing funding to begin construction. Federal funding is expected to be appropriated over time. Funding from the State of North Dakota can only be used for the Diversion once federal funding for construction is received. The State of North Dakota has already committed \$175 million to the Diversion Project, in addition to legislative intent for an additional \$275 million over the next four bienniums. Voters in the City of Fargo and Cass County have overwhelmingly approved two dedicated local sales taxes to help fund the Project. With modest growth, the sales taxes are expected to jointly raise \$700 million over the life of the tax.



Dennis Walaker, Mayor of the City of Fargo, ND, was in attendance in Washington, D.C. as President Obama signed the bill.



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Water Resources Reform & Development Act

“Receiving authorization for construction is the most important event in a project's history. Congress is saying it's within the public interest to build and makes it eligible for construction funding. This project is one of the top priorities of the Corps' Mississippi Valley Division, and we will continue to work hand-in-hand with our local partners to ensure flood risk reduction is provided in a timely manner.”

- **Colonel Koprowski, Commander St. Paul District**



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News

Retention Projects Have Potential to Reduce Impacts in Staging Area

June 19, 2014

The F-M Area Diversion Project's Staging Area immediately upstream of Fargo-Moorhead is an essential part of the Project. Without it, the amount of water which would pass through the Fargo-Moorhead area during times of severe flooding, and the corresponding impacts downstream, could not be managed adequately. However, the placement of additional water retention projects upstream could lessen the frequency in which the Diversion's Staging Area would need to be used.



The placement of additional water retention projects upstream could lessen the frequency in which the Diversion's Staging Area would need to be used.

In addition to funding the Halstad, MN Upstream Retention (HUR) study by the Red River Basin Commission, the Diversion Authority has pledged \$25 million to upstream retention projects, and is committed to retention as a means to reduce the impacts from the Project.

"Retention located in the right places will strengthen the Diversion Project and take water away from the Staging Area during times of severe flooding," said Rodger Olson, Diversion Authority member. "If I didn't believe in retention, I wouldn't be on the Cass County Joint Water Resource District board. The benefits of retention are huge. We'll continue to promote those in my water district. We have excellent support on a county and state level, and from the Red River joint board."

Clearly, the benefits of retention are understood by many. "We took upper Maple River Dam to an assessment vote," Olson continued. "It passed 80% to 20%. There was tremendous support for that, and the 80% that supported it include people who have land in retained area that's going to hold water. That's just about unheard of."

Another agency that's been active in developing retention sites is Cass County. "Cass County just distributed \$1.7 million for flood retention projects, and a large share of that is going to projects that are not in this immediate area, but are in Steele, Barnes, northwestern Cass and southern Cass counties," said Ken Pawluk, Diversion Authority member. "This is on top of the roughly two dozen or more retention projects that Cass County has in place, and we are actively pursuing others."

"One benefit of retention is to reduce the impacts in the staging area, and when you look at it with that perspective, it really helps to clarify the things we can do," said Pawluk. "I think most of us feel you cannot retain-away a major flood, but by putting retention in place, we're going to continue to minimize impacts, just like we've done by increasing the water flow through Fargo-Moorhead in the Diversion Project."



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Buffalo-Red River Watershed District FDR Storage Sites



Identified Potential Flood Water Detention Location Statistics				
Site Name	Drainage Area	Gated Volume	Ungated Volume	Total Volume
Sabin Coulee	33.6 Mi ²	7,265 Ac-ft (4.1")	12,364 Ac-ft (6.9")	19,629 Ac-ft (11.0")
Meadows Twp. Site 1	31.5 Mi ²	6,865 Ac-ft (4.1")	6,364 Ac-ft (3.8")	13,229 Ac-ft (7.9")
Meadows Twp. Site 2	32.1 Mi ²	7,813 Ac-ft (4.6")	6,578 Ac-ft (3.8")	14,391 Ac-ft (8.4")
Nilsen Twp.	62.2 Mi ²	14,422 Ac-ft (4.4")	9,807 Ac-ft (3.0")	24,229 Ac-ft (7.3")
Foxhome Twp.	44.1 Mi ²	9,440 Ac-ft (4.0")	6,346 Ac-ft (2.7")	15,786 Ac-ft (6.7")
Spring Prairie Twp.	60.4 Mi ²	14,837 Ac-ft (4.6")	5,425 Ac-ft (1.7")	20,262 Ac-ft (6.3")
Pierce Lake	14.3 Mi ²	3,330 Ac-ft (4.4")	1,710 Ac-ft (2.2")	5,040 Ac-ft (6.6")
Reep Lake	22.6 Mi ²	4,488 Ac-ft (3.7")	1,523 Ac-ft (1.3")	6,011 Ac-ft (5.0")
Elkton Twp.	57.1 Mi ²	14,276 Ac-ft (4.7")	2,271 Ac-ft (0.7")	16,547 Ac-ft (5.4")
Stony Creek Off-Channel	36.0 Mi ²	8,676 Ac-ft (4.5")	1,049 Ac-ft (0.5")	9,725 Ac-ft (5.1")
Barnesville Twp.	35.5 Mi ²	8,481 Ac-ft (4.5")	7,569 Ac-ft (4.0")	16,050 Ac-ft (8.5")
Deerhorn Creek Site 2A	12.4 Mi ²	3,198 Ac-ft (4.8")	1,917 Ac-ft (2.9")	5,115 Ac-ft (7.7")
Deerhorn Twp. Off-Channel	93.0 Mi ²	4,283 Ac-ft (0.9")	2,309 Ac-ft (0.5")	6,592 Ac-ft (1.3")
Manston Twp.	24.0 Mi ²	5,443 Ac-ft (4.2")	4,740 Ac-ft (3.7")	10,183 Ac-ft (7.9")
Subtotal (Potential Sites Identified)	534.6 Mi ²	112,817 Ac-ft (4.0")	69,971 Ac-ft (2.5")	182,788 Ac-ft (6.4")
		(3.6")	(2.4")	(6.0")
Total (Identified & All Existing**)	597.6 Mi²	119,618 Ac-ft (3.8")	86,619 Ac-ft (2.7")	206,237 Ac-ft (6.5")

*Note: 5 highlighted sites would provide 29,128 A-F of Gated +16,985 A-F of Ungated = 46,113 A-F Total storage

Potential Storage sites under consideration by the Cass County Joint Water Resource Board in partnership with surrounding Counties

Goose River Watershed	3 sites	12,000 Ac-ft
Elm River Watershed	1 site	4,000 Ac-ft
Rush River Watershed	3 sites	12,000 Ac-ft
Maple River Watershed	9 sites	36,000 Ac-ft
Sheyenne Watershed	2 sites	13,000 Ac-ft
Wild River Watershed	Unknown	

Potential Storage sites under consideration in the Bois De Sioux Watershed (5 sites)

- Redpath
- Brandrup 9
- Western 32/Copeland
- Big Lake
- Eldorado 7

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News

Impacts to Cemeteries to be Mitigated Fairly and Cooperatively

June 19, 2014

A report will be posted on fmdiversion.com on June 30 which will detail a Corps of Engineers study of cemeteries in the Fargo-Moorhead region. The report will outline the current impacts to area cemeteries prone to flooding and the efforts that have been successful during previous floods to mitigate the impacts. In addition, the report will list several potential mitigation options for cemeteries impacted by the F-M Area Diversion Project.

The study, which involved site visits and interviews with cemetery owners and operators, inventoried all cemeteries in the greater Fargo-Moorhead area, established points of contact, gathered information on the effects of flooding, developed a list of mitigation options, and formed the basis for development of a mitigation plan.



The Corps of Engineers study includes information from 52 cemetery sites.

The study includes information from 52 cemetery sites focusing on three geographic areas:

- Diversion Project Staging Area (7 sites)
- Area Upstream of Staging Area (15 sites)
- Benefited Area (Protected by the Diversion Project) (30 sites)

Cemeteries Impacted in Staging Area

Within the Staging Area, there are seven identified cemeteries which would be impacted by the operation of the Diversion:

1. Clara (Clay County)
2. Cornstock (Clay County)
3. Hemnes (Richland County)
4. Hoff (Clay County)
5. Lower Wild Rice and Red River (LWRRR) (Cass Co.)
6. North Pleasant (Cass Co.)
7. Roen Family (Clay Co.)

Without the Diversion Project in place, three of the seven currently have a flood risk ranging from 0 feet to 6.2 feet during a 100-year flood event.

With the Diversion Project in place, during a 100-year flood, flood depths would range from 0.3 feet to 14.2 feet.

Cemeteries Benefiting from the Diversion

The Corps of Engineers study found 30 cemeteries within or adjacent to the Diversion alignment, including 19 which would flood during a 100 year event at depths between 0.9 feet and 4.6 feet. All 19 of these cemeteries would receive protection by the Diversion Project.

Report on June 30

"The study we're releasing at the end of June is going to present the impacts to each cemetery, potential mitigation options, and individual maps of each cemetery," said Terry Williams, U.S. Army Corps of Engineers Project Manager. "We are still in the information-gathering stage. There are a number of mitigation options for the Corps, the Sponsors and the cemeteries to consider. We expect to have a mitigation plan drafted for this project within a year."

"We like to look at all sites independently," said Aaron Snyder, U.S. Army Corps of Engineers Project Manager. "We don't anticipate that cemeteries in the impacted area will experience anything being dislodged from underground. The types of impacts that will likely be seen include the possibility that some gravestones may be displaced. There is also the potential of some sedimentation, and some grass dying. We will look for ways to mitigate all of these."

The mitigation options under consideration include clean up, anchoring gravestones, bank armoring, protective berms, flowage easements, and the most unlikely option: relocation.

After the Cemetery Study is posted in the [Library](#) section of fmdiversion.com on June 30, the Corps and the Diversion Authority will meet individually with the impacted sites to develop a mitigation plan, which is expected later this year.



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PROJECT REFINEMENTS LIMITING IMPACTS



THE DIVERSION PROJECT CONTINUES TO BE REFINED TO LIMIT IMPACTS AND IN CONSIDERATION OF UPSTREAM AND DOWNSTREAM COMMUNITIES AND THEIR FLOOD PROTECTION

1. Supported State and Federal funding for flood protection efforts in Grand Forks / East Grand Forks and Wahpeton / Breckenridge before funding local efforts in Cass County and Fargo.
2. Challenged Corps of Engineers on Project location in Minnesota. Took a position that Project and impacts should be located where the majority of benefits were realized, in North Dakota.
3. Virtually eliminated downstream impacts through the addition of a staging area to the Project Challenged Corps of Engineers to allow a ring levee for Oxbow-Hickson-Bakke.
 - Prevented community-wide buyout of 196 homes
 - Provided 500-year flood protection for Oxbow/Hickson/Bakke
4. Preserved the tax base of the Kindred School District through accelerated construction of the Oxbow-Hickson-Bakke ring levee.
5. Moved southern alignment of the Diversion north by one mile.
 - Lessened residential structure impacts
 - Shifted the majority of impacts into Cass and Clay Counties, which receive the majority of benefit, and out of Richland and Wilkin counties
6. Added gates to the Diversion Inlet to allow more flow through town and to better control and minimize upstream impacts.
 - Diminished potential for summer flooding upstream and damaging standing crops
7. Increased levee heights within Fargo-Moorhead
 - Lowered the frequency of Diversion use to only operate in flood events greater than a 10-year flood (35 feet at Fargo gage)
 - Also Diminished potential for summer flooding upstream and damaging standing crops
 - Reduced size and duration of the Staging Area
8. Included a ring levee for the City of Comstock, which provides the community with increased flood protection.
9. Initiated an early hardship acquisition program to alleviate real estate concerns during the development of the Project.
10. Implemented a comprehensive agricultural mitigation program.
 - Created an Agricultural Subcommittee, whose membership includes upstream farmers impacted by the Project
 - Provided flowage easements to compensate landowners for retaining water during large flood events
 - In the process of establishing a supplemental crop insurance program that provides equivalent insurance coverage to what growers have today
11. Designated \$25 million for retention projects, which will also provide local flood protection benefits to the region.
 - Funded a \$500k Red River Basin Commission study to assist in prioritizing and allocating retention projects

DRAFT – Cemeteries Located Within Project Staging Area

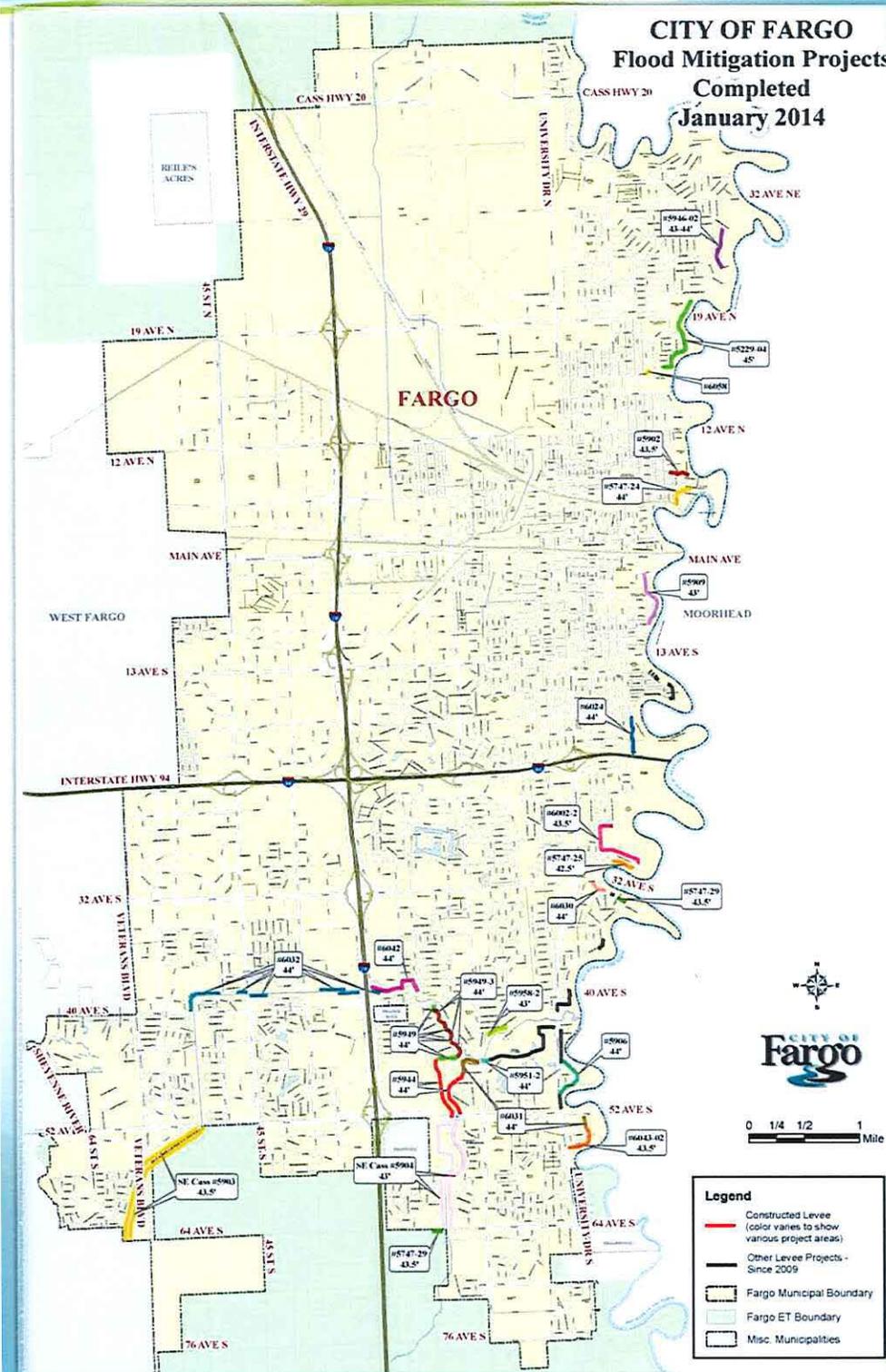
CEMETERY NAME	Average Natural Ground Elevation	100 – Year Elevation Existing Condition	100 – Year Elevation With Project	Inundation Depths Without Project (feet)	Inundation Depths With Project (feet)	Duration Without Project (Days)	Duration With Project (Days)	Susceptible to Riverbank Erosion (Y/N)
<u>North Dakota – Cass County</u>								
Lower Wild Rice and Red River Cemetery	908	914.2	922.2	6.2	14.2	10	12	No
North Pleasant Cemetery	921	920.7	922.4	0	1.4	0	5	No
<u>North Dakota – Richland County</u>								
Hernes Cemetery	922	919.7	922.7	0	0.7	0	3.5	Yes, by Red River
<u>Minnesota – Clay County</u>								
Hoff Cemetery	908	914.2	922.2	6.2	14.2	10	12	No
Clara Cemetery	915	915.4	922.3	0.4	7.3	2	9.5	No
Comstock Cemetery	922	No cemetery flooding	922.3	0	0.3	0	2	No
Roen Family Cemetery	917.5	917.5	922.3	0	4.8	1.5	8.5	No

Summary – Crop Insurance Study

June 19, 2014

1. The Diversion Authority commissioned Watts & Associates, one of the leading national firms in developing federal crop insurance programs, to outline mitigation options, including crop insurance options, to mitigate the impacts on ag land from the FM Area Diversion Project.
 2. The report confirms that impacts to the ag community can be mitigated, and that the Diversion Authority is committed to mitigation of those impacts.
 3. The Diversion Project is a federal project. Federal law only requires flowage easements for lands in the staging area. The development of a supplemental crop insurance product would exceed federal requirements and the costs would be the sole responsible of the non-federal entities.
 4. The Diversion Authority is committed to going beyond the federal standard to provide additional mitigation for agricultural producers because we recognize the importance of agriculture to the Red River Valley and the states of ND and MN.
 5. The details of a supplemental crop insurance program still need significant consideration and development, but there is plenty of time to develop the program fully before the need for the product would be realized. The impacts from the staging area would not be realized until the Project is constructed and the Diversion is operational.
 6. We intend to work with our Agricultural Policy Sub-Committee, which includes area producers, to further develop ag risk mitigation options.
-

**CITY OF FARGO
Flood Mitigation Projects
Completed
January 2014**

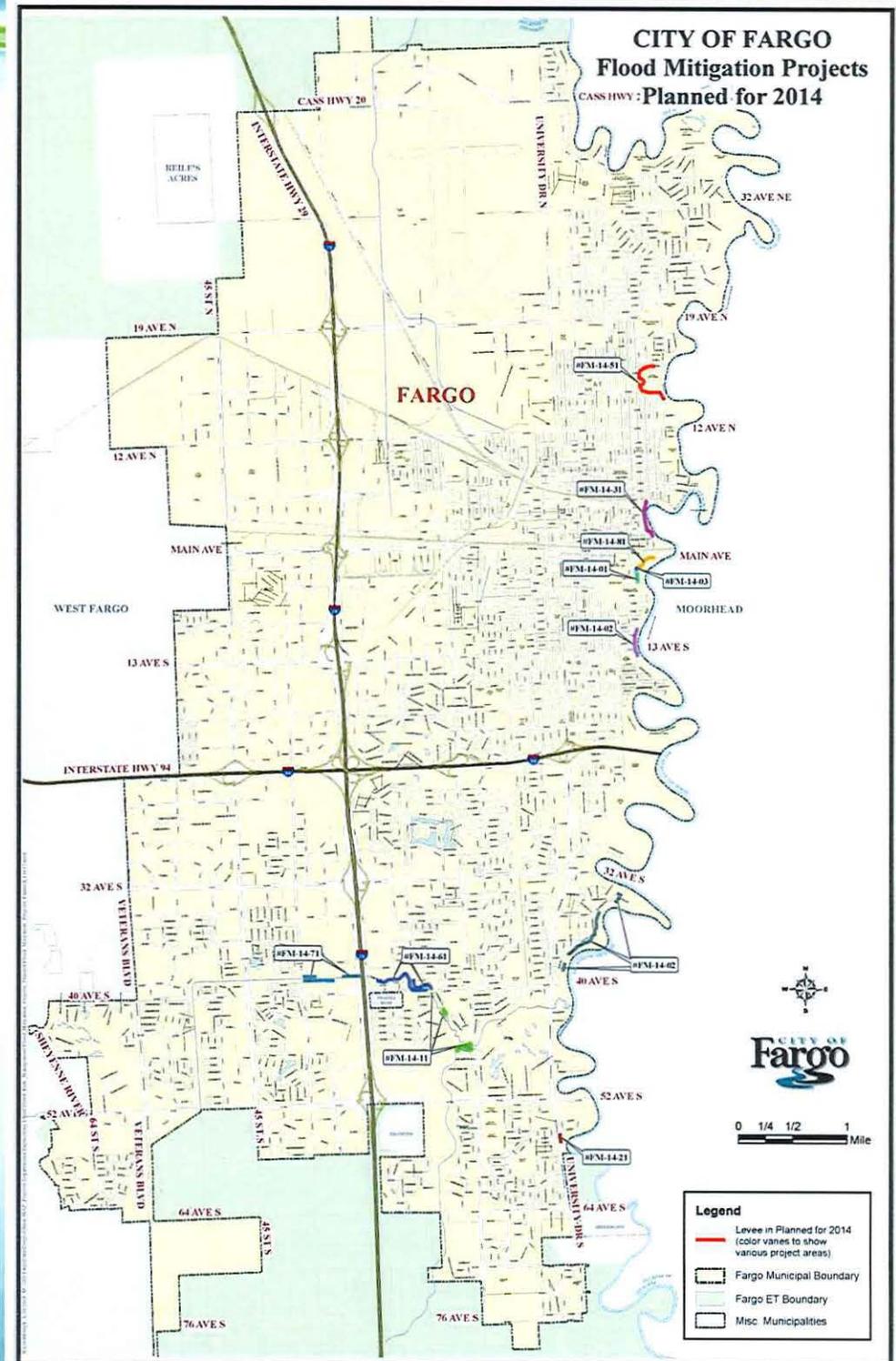


Progress To Date

- Approximately 14 Miles of Improvements Totaling Over \$57M Since 2009
- Over 300 Buyouts Completed
- Reduce required sandbags by approximately 3.4 million

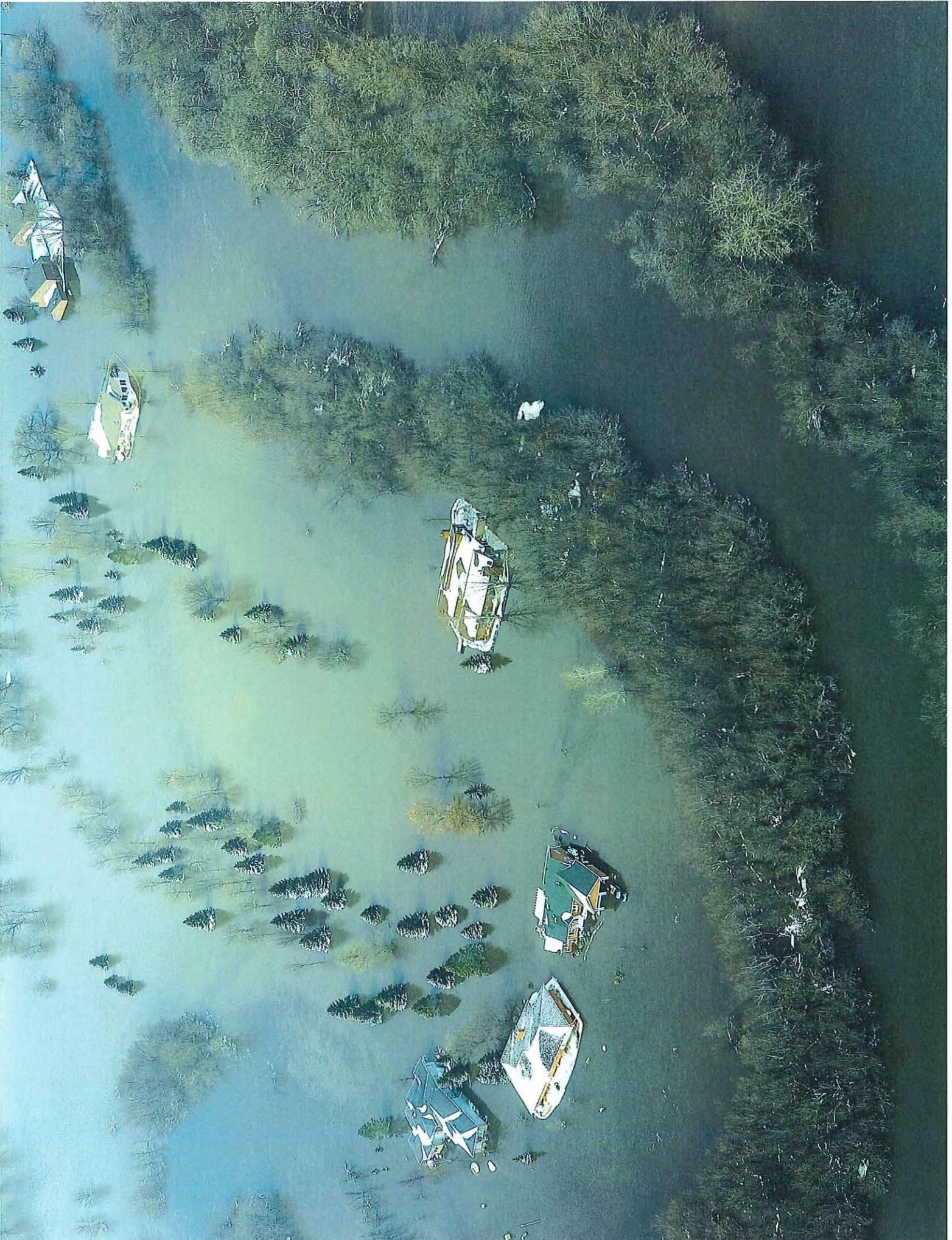
In Progress

- 2014
 - 11 Projects
 - Construction Cost of \$67 million
 - Plus ROW Cost of approx. \$45 million
 - Approximately 3 miles of levee
 - Reduce sandbag needs by approximately 1.3 million
 - Projects expected to be carried over into 2015

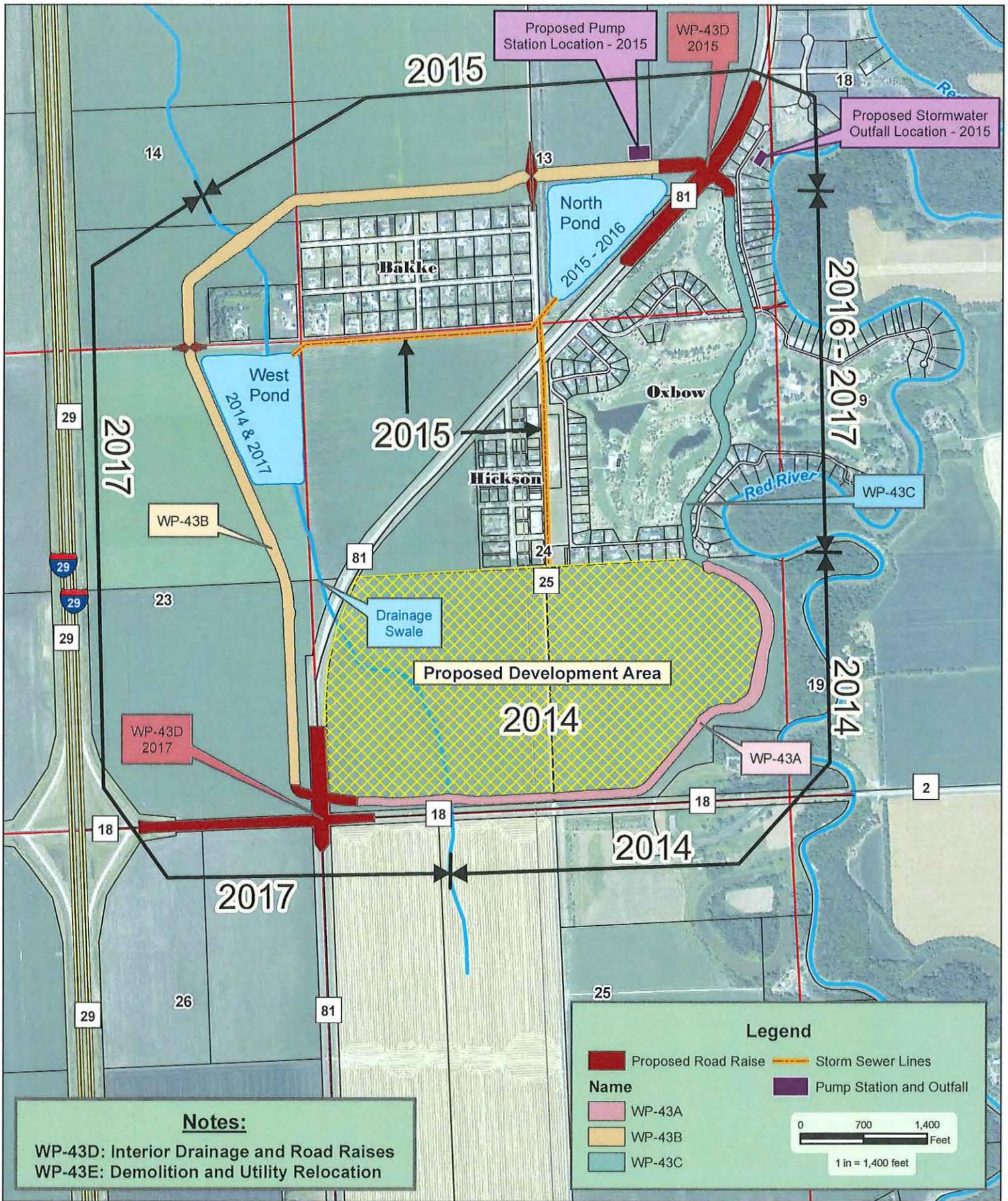


OXBOW
↑

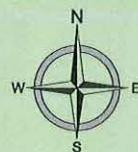




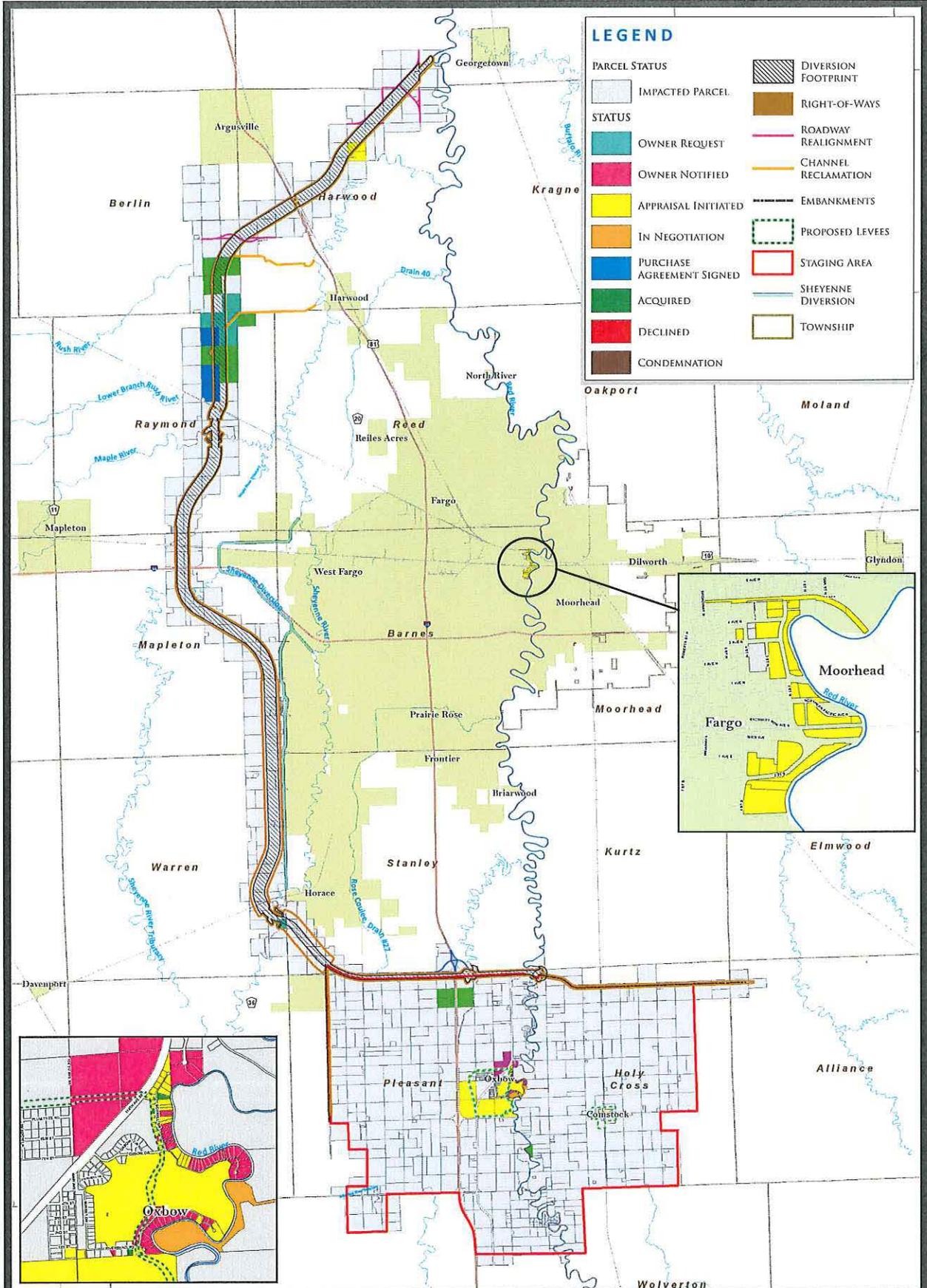




OHB Ring Levee - Construction Staging Oxbow, Hickson and Bakke, North Dakota



Created By: GG Date Created: 07/31/13 Date Saved: 02/20/14 Date Plotted: 10/11/13 Date Exported: 02/20/14
 Plotted By: gretchen.gotsacker Parcel Date: 03/01/13 Aerial Image: 2012 County NAIP SIDS Elevation Data: IWI Lidar
 Horizontal Datum: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet Vertical Datum: NAVD1988
 T:\Numbered Projects\151444\011\Map_OHB_RingLevee_ProjectYrs1.mxd

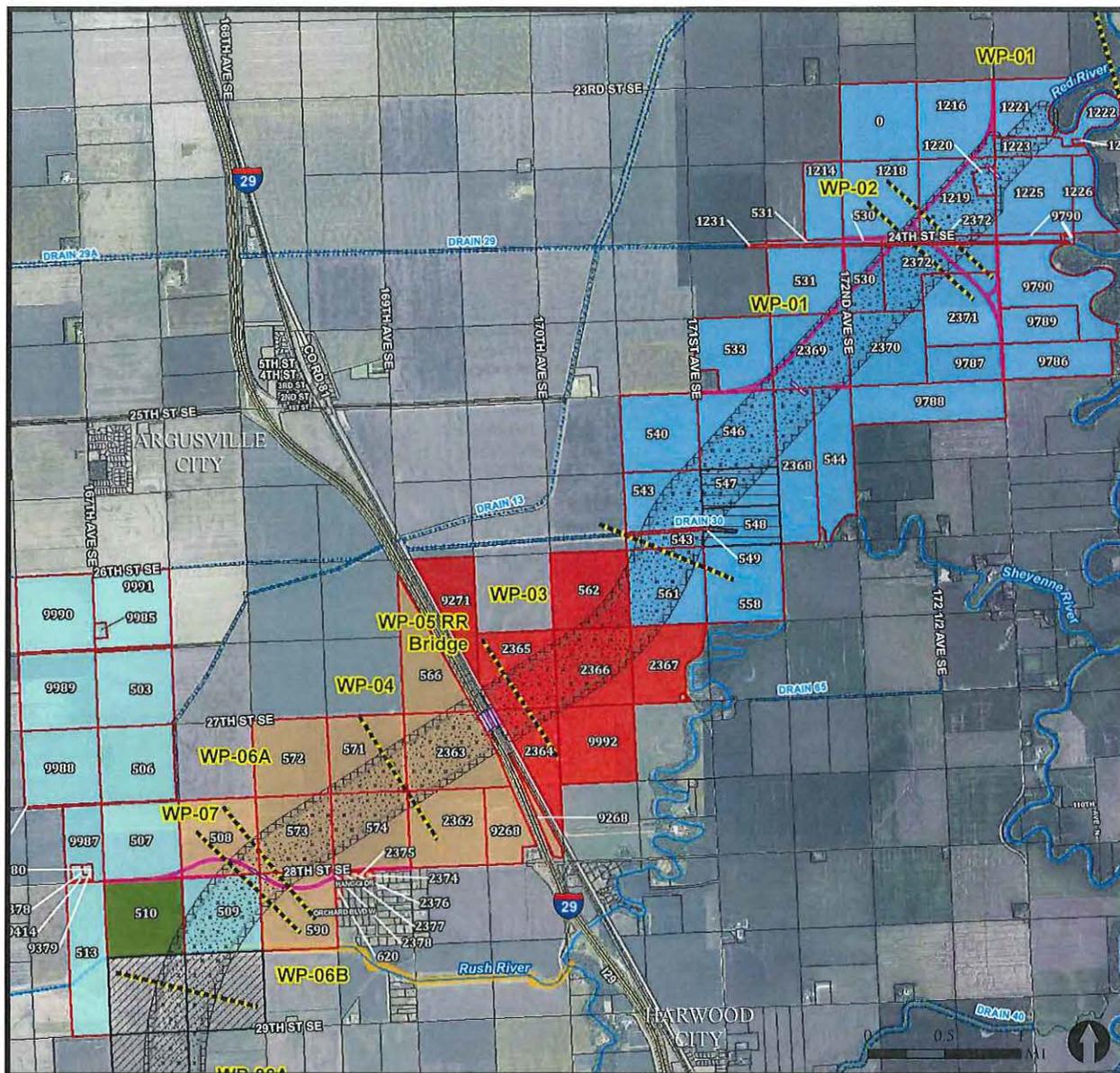


DISCLAIMER
 Maps are for graphical purposes only. They do not represent a legal survey. While every effort has been made to ensure that these data are accurate and reliable, the Division Authority does not guarantee the accuracy of the information, and waives any warranty or guarantee of any kind, express or implied. The data involved in the project is continuously refined and revised; you should not rely on this information for technical purposes or accuracy.

LAND ACQUISITION STATUS

6/10/2014



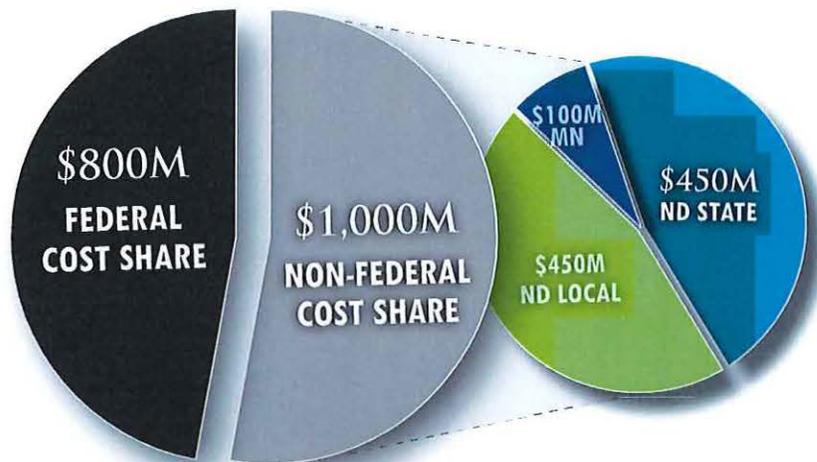


WORK PACKAGE ASSIGNMENT

WP 01, 02					WP 03					WP 04, 05, 06A					WP 06B					WP 07					
WP	PIN	OWNER	PROP ADD	ACRES	WP	PIN	OWNER	PROP ADD	ACRES	WP	PIN	OWNER	PROP ADD	ACRES	WP	PIN	OWNER	PROP ADD	ACRES	WP	PIN	OWNER	PROP ADD	ACRES	
1	0 70-0000-13642-000	GAHAGEN, CHRISTOPHER C ETAL	N/A	162.13	3	562 44-0000-00064-000	RED RIVER TRUST, ETAL	N/A	161.15	4	566 44-0000-00038-000	ROTH, LARRY R & LEONE M	N/A	134.75	7	9989 27-0000-01551-000	N/A	N/A	159.83	7	9987 27-0000-01593-000	N/A	N/A	66.69	
1	530 44-0000-00100-000	HEIDEN, KEVIN L & PAMELA S	N/A	74.70	3	2364 44-0000-00069-000	RABANUS, HERMAN	N/A	106.56	4	571 44-0000-00070-000	SCHOENBERG, NELLIE M	N/A	161.60	7	9987 27-0000-01593-000	N/A	N/A	159.83	7	9987 27-0000-01593-000	N/A	N/A	66.69	
1	531 44-0000-00120-000	LARSON, EDGAR WILLIAM	N/A	150.58	3	2365 44-0000-00069-000	HEIDEN FAMILY LLLP,	N/A	155.02	4	2362 44-0000-00029-000	HEIDEN TRUST, MARWEE E	N/A	161.00	7	500 27-0000-01598-000	WILLIAMS FARMS,	N/A	163.00	7	9988 27-0000-01590-000	SCHLOSSER, EDWARD J & KAREN E LE	N/A	N/A	157.11
1	533 44-0000-00128-010	DIEKRAGER, WAYNE & MARION	N/A	141.37	3	2367 44-0000-00069-000	FARGO CITY,	N/A	128.80	4	2363 44-0000-00029-000	AMUNDSON, LLOYD ETAL	N/A	161.00	7	9988 27-0000-01590-000	RUSH RIVER WATER RESOURCE DISTRICT,	N/A	2.28	7	9991 27-0000-01545-000	PETERSON, CARL R & LILUE K	N/A	N/A	153.55
1	540 44-0000-00250-000	RED RIVER TRUST, ETAL	N/A	160.81	3	9271 44-0000-00063-000	SCHWABER, DALE E & KRSTIK	N/A	108.83	4	2364 44-0000-00029-000	AMUNDSON, LLOYD ETAL	N/A	97.85	7	513 27-0000-01602-000	OLSON, EDWARD & JEANNE W	N/A	159.85	7	9380 27-0300-00020-000	N/A	N/A	3.40	
1	543 44-0000-00270-000	RED RIVER TRUST, ETAL	N/A	154.70	3	9272 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2365 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9379 27-0300-00010-000	N/A	N/A	3.40	7	9379 27-0300-00010-000	N/A	N/A	3.40	
1	544 44-0000-00280-000	CHOSE, IOAH	N/A	144.03	3	9273 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2366 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9378 27-0300-00010-000	N/A	N/A	5.72	7	9378 27-0300-00010-000	N/A	N/A	5.72	
1	545 44-0000-00288-000	LARSON, WILLIAM HENRY J	N/A	160.43	3	9274 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2367 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9377 27-0300-00010-000	N/A	N/A	4.87	7	9377 27-0300-00010-000	N/A	N/A	4.87	
1	547 44-0000-00290-000	LARSON TRUST, CHARLES ETAL	N/A	80.32	3	9275 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2368 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9376 27-0300-00010-000	N/A	N/A	5.72	7	9376 27-0300-00010-000	N/A	N/A	5.72	
1	548 44-0000-00300-010	LARSON TRUST, CHARLES ETAL	2595 171 AVE SE	76.79	3	9276 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2369 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9375 27-0300-00010-000	N/A	N/A	4.87	7	9375 27-0300-00010-000	N/A	N/A	4.87	
1	549 44-0000-00300-020	RUSH RIVER WATER RESOURCE DISTRICT,	N/A	0.35	3	9277 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2370 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9374 27-0300-00010-000	N/A	N/A	5.72	7	9374 27-0300-00010-000	N/A	N/A	5.72	
1	558 44-0000-00570-010	LARSON TRUST, CHARLES ETAL	17150 27 ST SE	161.37	3	9278 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2371 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9373 27-0300-00010-000	N/A	N/A	4.87	7	9373 27-0300-00010-000	N/A	N/A	4.87	
1	561 44-0000-00600-000	RED RIVER TRUST, ETAL	N/A	161.00	3	9279 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2372 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9372 27-0300-00010-000	N/A	N/A	5.72	7	9372 27-0300-00010-000	N/A	N/A	5.72	
1	1214 70-0000-13640-000	OHNSTAD, WAYNE & GARY	N/A	80.93	3	9280 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2373 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9371 27-0300-00010-000	N/A	N/A	4.87	7	9371 27-0300-00010-000	N/A	N/A	4.87	
1	1216 70-0000-13641-000	HEIDEN FAMILY LLLP,	N/A	162.36	3	9281 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2374 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9370 27-0300-00010-000	N/A	N/A	5.72	7	9370 27-0300-00010-000	N/A	N/A	5.72	
1	1218 70-0000-13643-000	BAKER, DONNA	N/A	161.87	3	9282 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2375 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9369 27-0300-00010-000	N/A	N/A	4.87	7	9369 27-0300-00010-000	N/A	N/A	4.87	
1	1219 70-0000-13644-010	HEIDEN FAMILY TRUST, ORIS L ETAL	N/A	146.89	3	9283 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2376 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9368 27-0300-00010-000	N/A	N/A	5.72	7	9368 27-0300-00010-000	N/A	N/A	5.72	
1	1220 70-0000-13644-020	HEIDEN, KEVIN L & PAMELA S	2368 173 AVE SE	15.23	3	9284 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2377 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9367 27-0300-00010-000	N/A	N/A	4.87	7	9367 27-0300-00010-000	N/A	N/A	4.87	
1	1221 70-0000-13645-000	RICHARD, CHARLES J	N/A	102.84	3	9285 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2378 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9366 27-0300-00010-000	N/A	N/A	5.72	7	9366 27-0300-00010-000	N/A	N/A	5.72	
1	1222 70-0000-13646-005	JOHNSON, VALKHH & SHIRLEY	2351 173 AVE SE	40.80	3	9286 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2379 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9365 27-0300-00010-000	N/A	N/A	4.87	7	9365 27-0300-00010-000	N/A	N/A	4.87	
1	1223 70-0000-13646-010	OHNSTAD, WAYNE & GARY	N/A	41.43	3	9287 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2380 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9364 27-0300-00010-000	N/A	N/A	5.72	7	9364 27-0300-00010-000	N/A	N/A	5.72	
1	1224 70-0000-13646-020	CASS COUNTY FLOOD PROPERTY,	N/A	1.49	3	9288 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2381 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9363 27-0300-00010-000	N/A	N/A	4.87	7	9363 27-0300-00010-000	N/A	N/A	4.87	
1	1225 70-0000-13647-000	RADEBAUGH, DAVID W & EMILY	N/A	162.15	3	9289 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2382 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9362 27-0300-00010-000	N/A	N/A	5.72	7	9362 27-0300-00010-000	N/A	N/A	5.72	
1	1226 70-0000-13648-000	RADEBAUGH, EMILY	N/A	54.46	3	9290 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2383 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9361 27-0300-00010-000	N/A	N/A	4.87	7	9361 27-0300-00010-000	N/A	N/A	4.87	
1	1231 CO DRAIN 29	CO DRAIN 29	N/A	7.98	3	9291 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2384 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9360 27-0300-00010-000	N/A	N/A	5.72	7	9360 27-0300-00010-000	N/A	N/A	5.72	
1	2368 44-0000-00284-000	LARSON, WILLIAM HENRY J	N/A	160.72	3	9292 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2385 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9359 27-0300-00010-000	N/A	N/A	4.87	7	9359 27-0300-00010-000	N/A	N/A	4.87	
1	2369 44-0000-00130-000	LARSON, EDGAR WILLIAM	N/A	153.51	3	9293 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2386 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9358 27-0300-00010-000	N/A	N/A	5.72	7	9358 27-0300-00010-000	N/A	N/A	5.72	
1	2370 44-0000-00131-000	MARVEL, BART & LORI	N/A	152.03	3	9294 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2387 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9357 27-0300-00010-000	N/A	N/A	4.87	7	9357 27-0300-00010-000	N/A	N/A	4.87	
1	2371 44-0000-00090-000	MARKS, TIMOTHY	N/A	150.42	3	9295 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2388 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9356 27-0300-00010-000	N/A	N/A	5.72	7	9356 27-0300-00010-000	N/A	N/A	5.72	
1	2372 44-0000-00080-000	OLSON, GERALD E	N/A	146.99	3	9296 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2389 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9355 27-0300-00010-000	N/A	N/A	4.87	7	9355 27-0300-00010-000	N/A	N/A	4.87	
1	9786 44-0000-00050-000	DOHL, MARK L & ROCKNES	N/A	105.08	3	9297 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2390 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9354 27-0300-00010-000	N/A	N/A	5.72	7	9354 27-0300-00010-000	N/A	N/A	5.72	
1	9787 44-0000-00114-000	MARVEL, BART & LORI	N/A	75.25	3	9298 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2391 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9353 27-0300-00010-000	N/A	N/A	4.87	7	9353 27-0300-00010-000	N/A	N/A	4.87	
1	9788 44-0000-00310-000	HEIDEN, KEVIN L & PAMELA S	N/A	160.74	3	9299 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2392 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9352 27-0300-00010-000	N/A	N/A	5.72	7	9352 27-0300-00010-000	N/A	N/A	5.72	
1	9789 44-0000-00046-000	IDEAL AG CORP,	N/A	74.37	3	9300 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2393 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	161.51	7	9351 27-0300-00010-000	N/A	N/A	4.87	7	9351 27-0300-00010-000	N/A	N/A	4.87	
1	9790 44-0000-00044-000	IDEAL AG CORP,	N/A	181.15	3	9301 44-0000-00072-000	SCHOENBERG, HERMAN	N/A	161.10	4	2394 44-0000-00029-000	SCHOENBERG, NELLIE M	N/A	155.58	7	9350 27-0300-00010-000	N/A	N/A	5.72	7	9350 27-0300-00010-000	N/A	N/A	5.72	

BASEMAP

- Work Package
- Diversion Alignment
- Permanent ROW
- Temporary ROW
- Bridges
- Roadway Realignment
- Channel Reclamation
- Drain
- Water
- Interstate



ND LEGISLATIVE APPROPRIATIONS (\$450 MILLION)

- **2009: \$45 Million (approved)**
- **2011: \$30 Million (approved)**
- **2013: \$100 Million (approved)**
 - HB1020 included legislative intent for the remaining \$275 over four biennium
 - **2015:** Request \$68.75 (tentative)
 - **2017:** Request \$68.75 (tentative)
 - **2019:** Request \$68.75 (tentative)
 - **2021:** Request \$68.75 (tentative)

ND LOCAL FUNDING

- Two voter-approved, 20-year, ½¢ sales taxes dedicated to flood protection
- Fargo sales tax in 2009 (90% approval) and County sales tax in 2010 (64% approval)
- Taxes jointly raised approximately \$27M in 2013
- Over the life of the taxes, projections estimate collections totaling \$700M (4% growth rate)

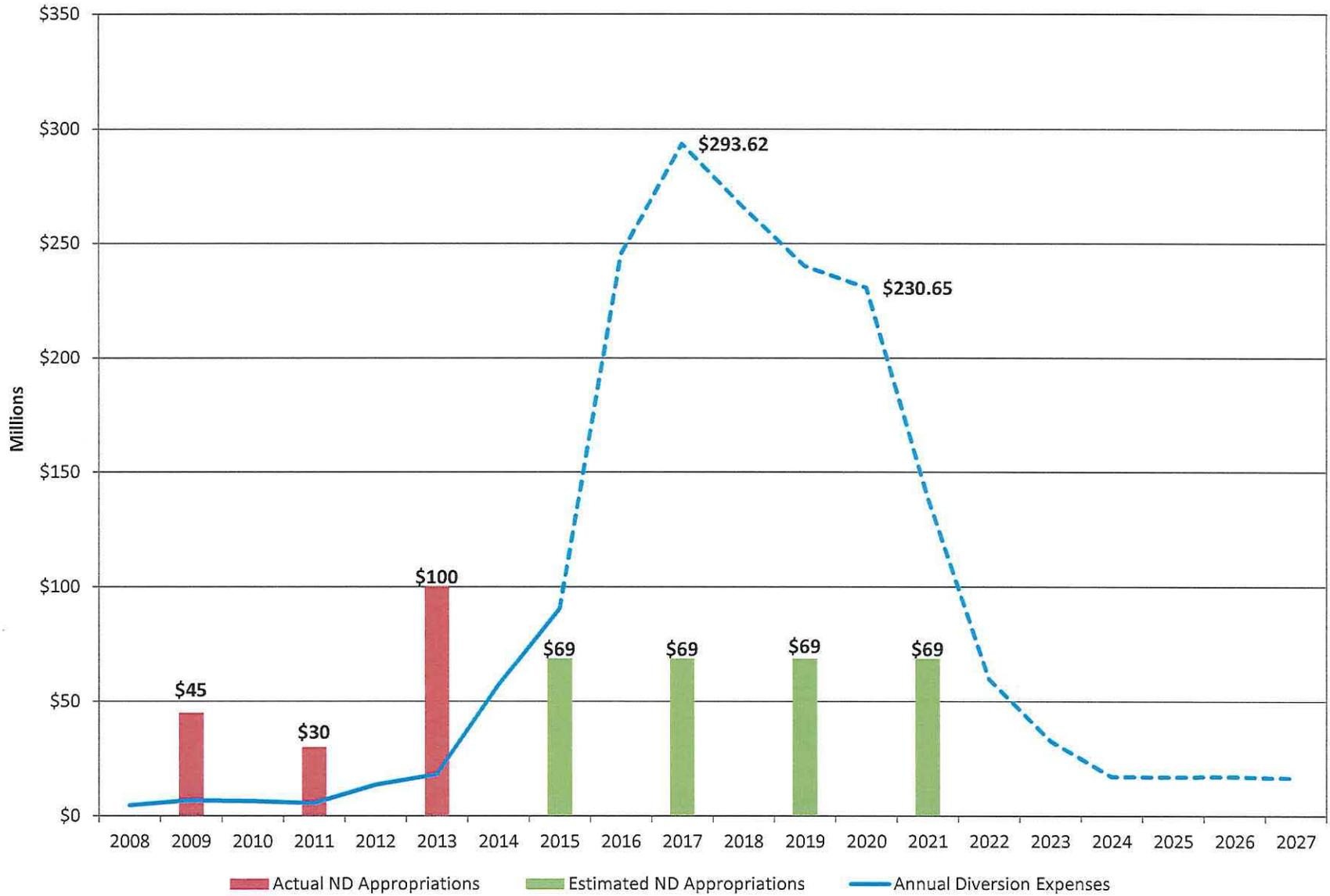
FEDERAL FUNDING

- Federally authorized for \$846 Million
- Approximately \$40 Million to date for Planning, Engineering, and Design (PED)

DIVERSION AUTHORITY FUNDING PRIORITIES 2015/17

- Intown Levees
- Oxbow/Bakke/Hickson Ring Levee
- Diversion preconstruction engineering, land acquisition, and construction once conditions are met

Annual Expenses vs. ND Appropriations FM Area Diversion Project



Diversion Financial Summary

State Aid Summary	
Summary of State Funds Appropriated	
Appropriations from 2009 Legislative Session	\$ 45,000,000
Appropriations from 2011 Legislative Session	30,000,000
Appropriations from 2013 Legislative Session	100,000,000
Total State Funds Appropriated	\$ 175,000,000
Total State Funds Reimbursed	\$ (45,731,969)
Total State Fund Balances Remaining	\$ 129,268,031

Local Funds Summary:	
State Matching Funds Expended to Date	\$ 44,233,485
Diversion Authority Expenditures to Date	\$ 52,000,000
City of Fargo Flood Sales Tax Revenue to Date (as of 4/30/14)	\$ 45,484,000
Cass County Flood Sales Tax Revenue to Date (as of 6/13/14)	\$ 44,606,080