

FISCAL NOTE
Requested by Legislative Council
02/02/2015

Amendment to: SB 2076

- 1 A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2013-2015 Biennium		2015-2017 Biennium		2017-2019 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues						
Expenditures				\$900,000		
Appropriations						

- 1 B. **County, city, school district and township fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

	2013-2015 Biennium	2015-2017 Biennium	2017-2019 Biennium
Counties			
Cities			
School Districts			
Townships			

- 2 A. **Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

This Bill requires the Water Commission to contract with NDSU for a study on the impact of the Fargo Diversion project.

- B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

This bill requires the Water Commission to contract for a study but does not provide any additional appropriation authority. This would require us to reassign funding that was planned for other project to this one.

3. **State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

- A. **Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

- B. **Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

The cost estimate was provided by North Dakota State University.

- C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation or a part of the appropriation is included in the executive budget or relates to a continuing appropriation.*

Name: David Laschkewitsch

Agency: ND State Water Commission

Telephone: (701) 328-2750

Date Prepared: 02/04/2015

FISCAL NOTE
Requested by Legislative Council
12/19/2014

Revised
 Bill/Resolution No.: SB 2076

- 1 A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2013-2015 Biennium		2015-2017 Biennium		2017-2019 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues						
Expenditures						
Appropriations						

- 1 B. **County, city, school district and township fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

	2013-2015 Biennium	2015-2017 Biennium	2017-2019 Biennium
Counties			
Cities			
School Districts			
Townships			

- 2 A. **Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

This Bill requires the Water Commission to conduct studies of the Fargo Diversion project. We are unable to determine the fiscal impact of this bill at this time.

- B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

The Fargo Diversion project is a federal project, the Corps of Engineers looked at retention as an alternative when completing the Environmental Impact Statement. We would need to discuss with Legislators how much of that analysis could be used for this subsequent study before setting out the parameters and seeking bids from engineering firms. As for the study of the impact of the project on the areas outside the area the Corps of Engineers determined mitigation was required, we do not have a history of contracting for this type of study and are unable to estimate its cost.

3. **State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

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- B. **Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

- C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation or a part of the appropriation is included in the executive budget or relates to a continuing appropriation.*

Name: David Laschkewitsch

Agency: ND State Water Commission

Telephone: (701) 328-2750

Date Prepared: 12/26/2014

FISCAL NOTE
Requested by Legislative Council
12/19/2014

Bill/Resolution No.: SB 2076

- 1 A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2013-2015 Biennium		2015-2017 Biennium		2017-2019 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues						
Expenditures						
Appropriations						

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	2013-2015 Biennium	2015-2017 Biennium	2017-2019 Biennium
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We are unable to determine the fiscal impact of this bill.

- B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

The Fargo Diversion project is a federal project, the Corps of Engineers looked at retention as an alternative in the Environmental Impact Statement. We would need to discuss with Legislators how much of that analysis could be used for this subsequent study before setting out the parameters and seeking bids from engineering firms. As for the study of the impact of the project on the areas outside the area the Corps of Engineers determined mitigation was required, we do not have a history of this type of study and are unable to estimate its cost.

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- C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation or a part of the appropriation is included in the executive budget or relates to a continuing appropriation.*

Name: David Laschkewitsch

Agency: ND State Water Commission

Telephone: (701) 328-2750

Date Prepared: 12/26/2014

2015 SENATE ENERGY AND NATURAL RESOURCES

SB 2076

2015 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources
Fort Lincoln Room, State Capitol

SB 2076
1/16/2015
22067

- Subcommittee
 Conference Committee

Committee Clerk Signature

Katie Oliver

Explanation or reason for introduction of bill/resolution:

To provide for a study on the impact of the Fargo diversion project.

Minutes:

7 attachments

Chairman Schaible called the committee to order, roll was taken, and all members aside from Senator Armstrong: were present.

Senator Larry Luick: See attachment #1.

Chairman Schaible: Has this been studied to death?

Senator Larry Luick: If I am a contractor and I am the one who is going to be harming your property do you feel that it is fair for me to be telling you what your impacts are going to be? The impact studies that have been done are from the Corps of Engineers, City of Fargo, Diversion Authority and not that it is a bad thing but more intricate problems need to be addressed and identified. That is where I think a companion study needs to be addressed to look at these things.

Chairman Schaible: The Fiscal Note says it is undetermined of the cost. What might this study cost?

Senator Larry Luick: At this time we do not know. There are something's that we can take out of the study that will lessen the cost but as of now it is up in the air due to the broad scope.

Senator Murphy: Are you suggesting that the objectivity of the Corps is tainted or that they have a bias?

Senator Larry Luick: I do not want to go on record as saying the Corps has a problem in that manner but there are things that are not identified.

Vice Chair Unruh: Who would use this study and how could they use it?

Senator Larry Luick: Right now the efforts to build this project are on hold due to unknowns. If the project goes through or does not go through I believe that by getting all the info we can we will have a better idea to compensate the people who are not being compensated. I do not think that one side should be conducting a study that is going to be affecting the people on the lower end of things to suffer the consequence.

Senator Dotzenrod: Senator Dotzenrod. See attachment #2

Mark Askegaard: See attachment #3. 21:21

Senator Triplett: In 1997 the city of Grand Forks was the owner of the project but the county worked on some of the things. I thought the Corps rule was that if there was up/down stream impact there would need to be compensated.

Mark Askegaard: As far as I am aware the Army Corps of Engineers drew that line and that the local sponsors only have to provide compensation for impacts greater than 12 inches. .

Senator Triplett: Is the notion that the Corps has made some kind of determination that 11.9 inches of water on a parcel of land will soak in in an adequate amount of time.

Mark Askegaard: I am not sure why they had that ruling; I am not sure why it is 12 inches.

Chairman Schaible: Being a farmer 12 inches of water sitting, how long does it take for it to disappear and farm again?

Mark Askegaard: We don't know. Under normal conditions it would be a few days. After the water goes off the ground there needs to be time for debris cleanup.

Matt Ness: See Attached #4

Senator Triplett: Has your group approached the Corps of Engineers or the city of Fargo to have the red box lines changed?

Matt Ness: They have told us that they are thinking about it but nothing has happened yet.

Senator Triplett: When will it be finished? If it is done to everyone's satisfaction that it would answer what you are asking for in this bill.

Matt Ness: I think that the North Dakota State University has done a lot of the leg work.

Senator Triplett: Can your group do some research and ask for the expected date?

Representative Alisa Mitskog: District 25. I would encourage support of this bill for a few reasons. I have been watching this project for a few years and the concern over impacts, so many questions that have not been answered. This is some of the most vibrant, productive farmland in the United States and with agriculture being the backbone of North Dakota there are impacts and when they reference the amount of acreage that could be impacted and the non-compensated acreages outside those areas, it has ramifications.

Wayne Ulven: See attachment #5

Chairman Schaible: What about the property of crop land?

Wayne Ulven: We were looking at a 19% decrease.

Scott Rising: Soybean Growers Association, in support. The bottom line is that we expect in the Ag community to have and be good neighbors. Right now we need a big brother to have our back.

Pete Hanibutt: North Dakota Farm Bureau. We support this bill, we feel that supporting our members and studying this is not necessary a bad thing. We want the full story before we proceed.

Kevin Fischer: Real Estate agent from Fargo. In opposition. How many studies do we need on this topic?

Chairman Schaible: Do you feel the concerns that we heard today have been answered by previous studies?

Kevin Fischer: I feel like they have been, yes.

Greg Larson: See attachment #6.

Vice Chair Unruh: Since the Flood Insurance Rate Maps have been updated has the red box area been updated?

Greg Larson: I do not know.

Keith Burndt: Cass County. See attachment #7.

Chairman Schaible: The blue areas already flood without help, correct?

Keith Burndt: Yes.

Chairman Schaible: Would it be deeper and would it be wet longer.

Senator Murphy: In terms of it not being compensated I thought it as said previous he finished it with about being locally compensated, is that correct.

Keith Burndt: No matter where it is coming from it doesn't matter.

Senator Triplett: The line that represents the red box sys that this is where the box would be? Can you just clarify that?

Keith Burndt: People should be compensated but litigation would be the next step.

There was no further testimony, the hearing was closed and the committee adjourned.

2015 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources
Fort Lincoln Room, State Capitol

SB 2076
1/29/2015
22846

- Subcommittee
 Conference Committee

Committee Clerk Signature

Kate Olives

Explanation or reason for introduction of bill/resolution:

To provide for a study on the impact of the Fargo diversion project.

Minutes:

1 Attachment

Dean Bangstund: Department of Agribusiness and Applied Economics with NDSU. We are working on a study that is an agriculture risk evaluation; what this study is designed to do is look at the effects of water storage in terms of what effect it might have on planting and crops. We are focusing on the income affects to producers in the staging area; we are not looking at a development rate or anything that might go into an easement.

Senator Laffen: The staging area is inside the red box, correct?

Dean Bangstund: With floods of a certain size, within the staging area, the diversion is designed to withhold and store water temporarily in the region. We are evaluating the income affects with and without the diversion. We are also looking at production losses if it is built and used in the way it is right now. We are looking at it with and without federal crop insurance. We are looking at a supplemental income program that is based off of federal crop insurance. We will know what will occur in this region and we will be able to say what will happen if insurance could play in mitigating any crop losses that would occur. We are going to be working with hydrology modeling that breaks this staging area into 97 individual tracks, each of those tracks has information on the elevation, acreage, what county it is in. We will look at 1997 and 2009 flood that had a high crest but a short duration of flows. We do not know when the flood will occur, when farmers can get into their fields is also an unknown. We are running a simulation that the data is giving us. That will allow us to give a distribution of the affects. We know that they are likely to be large but those floods don't occur very often. Key variables in the model: flood/planting start dates. Planting rates, the hydrology, prevent plant dates based on crop insurance, crop prices, optimal planting dates based on agronomic principals, 10 day dry down, calendar dates in the spring that will trigger farmers switch from one crop to the other. It is not the same date for every producer but you can't model every producer in the data so we are using fixed dates.

Senator Laffen: It sounds like what you are doing is similar to this bill but in a different area. You are working within the red box and you are working in the whole area. How much money would that cost?

Dean Bangstund: If we are going to incorporate the same kind of data we have now and the same type of analysis we would be looking at \$60,000-\$70,000, there is a lot of detail in this model. Getting accurate hydrology modeling would be a benefit. If we wanted to have a good assessment we need to rely on the engineers.

Senator Laffen: Approximately what cost?

Dean Bangstund: I would ask someone who has more experience with hydrology than I do.

Vice Chair Unruh: The release date of the study has been delayed. Can you explain why?

Dean Bangstund: There have been several versions of the modeling. When we started the process of culverts was not included in the modeling. Our study is delayed until we get the updated hydro modeling.

Vice Chair Unruh: The release date for this study has been delayed, could you explain to the committee why and what changed?

Dean Bangstund: There have been several versions of the hydrology modeling and the details of which I do not know. It is our perception that this next round will provide an accurate portfolio on the water.

Chairman Schaible: Completion date?

Dean Bangstund: I think the analysis will be quick once we get the hydrology modeling.

Senator Triplett: If we were to approve the bill and engage your group can we get the study in a timely way in an interim?

Dean Bangstund: That timeframe is feasible.

Terry Williams: US Army Corps of Engineers. (Attachment #1) (15:10-21:50)

Chairman Schaible: Outside the red box if a farmer has more damage than expected you said that their recourse is the flowage easement?

Terry Williams: Yes.

Vice Chair Unruh: Do you mean 1" or more?

Terry Williams: That is the land inside the area. Outside the taking analysis and they look at the depth frequency. They are not as much as what is inside the staging area.

Senator Hogue: The bill says they want another study. Does that in any way impact the project?

Terry Williams: An additional study wouldn't impair the process, any findings from studies will be taken into consideration but we know that this is the most efficient problem to solve.

Senator Laffen: You say you are studying the area outside the box, can you tell us a little about that.

Terry Williams: We have been working with FEMA for years on this and we have different regulations to go by. What is likely to happen is that there would be mitigation to a certain tie in point. That mapping ends somewhere. The current concept is wherever the tie in is, somewhere around Wolverton, MN.

Senator Laffen: You are exactly studying the areas for which mitigation is required other than what you are telling us what they are.

Terry Williams: We are studying it on a piece by piece basis. If there is mitigation required we will work with FEMA, North Dakota and Minnesota on it.

Vice Chair Unruh: Potential for the red box to change?

Terry Williams: We are currently updating our models but they will not change very much.

Senator Laffen: Did the Corps look at retention at all?

Terry Williams: Yes. There are a number of concerns but it would impact more people, land and farming. You are taking the water upstream and disperse it to counties who do not benefit from the project. The Minnesota DNR just distributed their study and came to the same conclusion. Upstream staging is the only alternative and will provide 100 year protection for the Fargo area.

Chairman Schaible: What is a taking analysis?

Terry Williams: Legal analysis where they look at the impacts by our actions on a piece of land.

Senator Laffen: The 1" that is the line, what is the logic behind that?

Terry Williams: It basically offsets downstream impacts.

Senator Laffen: The line is really the definition of how much water you need.

Terry Williams: There is impact, 1" or less, infrequent and short duration.

Senator Triplett: Do you have any insight when congress might put more money into this?

Terry Williams: We are a high priority project; the Corps has a work plan. They divide up the money and we have yet to find out what they get this year.

Senator Laffen: And idea what the cost of the study is?

Terry Williams: the study costs 22mil and it was half federal cost and half local sponsors - Fargo, Moorhead and the study- the federal government has pledged a lot of money to the project.

Senator Laffen: Is the state participating in the local share?

Keith Burndt: Cass County Administrator, there is state funding limited to 10% of our costs with state funds.

Senator Hogue: Why do you not want another study?

Keith Burndt: From the div authority we are neither for nor against, just questioning what has not been study. I am not sure what we can gain from another study.

Senator Triplett: Is that to say that the hydrologic modeling has already been done and you could share it with him?

Keith Burndt: Refining the model, the ones he is waiting for is going to make inches of change.

Senator Triplett: Does your model include all the area?

Keith Burndt: Yes

Senator Triplett: Can you speak for the diversion authority?

Keith Burndt: Yes, absolutely.

Todd Sando: Chief Engineer North Dakota State Water Commission.

Vice Chair Unruh: Can you give us a brief overview of NDSWC involvement with the study?

Todd Sando: We are providing cost share in the form of grants to the local entities. Over the last 6 years the NDSWC has put \$175,000,000 towards the project. Only 10% can go towards engineering and design that has been an issue for a local sponsor too.

Vice Chair Unruh: There would have to be a construction permit if the diversion were to be built. How would that affect those out of the red box?

Todd Sando: One issue is if you are building you need a permit. The roll of state engineers you need to submit the permits. There are usually conditions and they have to have a property interest for land owners.

Senate Energy and Natural Resources

SB 2076

01/29/2015

Page 5

There were no further questions and the committee was adjourned.

2015 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources
Fort Lincoln Room, State Capitol

SB 2076
1/30/2015
22931

- Subcommittee
 Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

To provide for a study on the impact of the Fargo diversion project.

Minutes:

1 attachment

Chairman Schaible called the committee back to order Senator Hogue handed out an amendment that he had prepared. See attachment 1.

Senator Hogue: Key changes to the bill are that it does not direct the state water commission to study retention as an alternative to diversion and it clarifies that the water commission will contract with NDSU to expand the scope of the existing study, the rest of the picks up the language that the folks who are proponents of the bill thought were being adequately studied outside of that area. I thought that there should be an appropriation on this but I am sure there will be a fiscal impact and we are going to have to send it to appropriations because with the testimony that we heard it was between \$60,000-\$80,000 so I am sure that there will be an impact. (1:06-2:43)

A motion was made by Senator Armstrong to adopt the amendment with a second by Senator Murphy, roll was taken and the motion passed 6-0-1. The committee then had the bill and amendment in front of them.

Senator Laffen: I believe that there are always people who as they are going through this process feel like they are getting the short end but in the end everyone is satisfied with this. The Corps is studying this area and the state engineer needs to work with them eventually. I am not sure on spending more money on more study this when we have already studied this before.

Senator Laffen then made a motion for a do not pass as amended with a second by Senator Murphy.

Senator Hogue: This is a \$1,800,000,000 project and I know we have spent a lot of time and money studying the project. I do not have the same confidence as Senator Laffen in the Corps. They do not always get it right and I think that the way they manage the

reservoir in 2009 doesn't instill confidence. I do not think that \$60,000-\$70,000 is too much. NDSU is already doing the study and can accommodate what is happening.

Senator Triplett: I will join Senator Hogue in resisting the reason for the do not pass. 1997 flood, I was on the county commission. Issues on both ends, upstream and downstream. It wasn't until the county got involved that they made people happy. We thought that people in the city were being looked after in the cities. I think of this as very analogous to this and we have an obligation as larger units have to think about the people who are right outside.

Chairman Schaible: I would resist the confidence in the Corps. If this doesn't pass some of the mitigation questions will be lost. My concern is that the small number and if this is the only way to address this then it is worth pursuing this.

Senator Hogue: I am not coming down on the Corps, they are highly competent but one of the fair criticisms is that they get caught up in their doctrine. During the 2011 flood all of the home owners along the river wanted to block off the inlets along the cul-de-sacs along the residential areas of the river and the Corps refused. The contractors came forward and said that the soils are not as porous as you think, the Corps blocked off the inlets. When it comes to managing river and surface water runoff they use computer models and they tend to discount any local suggestions or local knowledge. That is where I think that it wouldn't hurt to let NDSU supplement their study.

There was no other discussion, roll was taken, the motion failed 2-5-0.

Senator Murphy then moved a do pass as amended with a second by Senator Triplett, roll was taken, the motion passed on a 6-1-0 count with Senator Hogue carrying the bill to the floor.

Chairman Schaible then closed the committee work on SB 2076.

January 30, 2015

1/30/15
Jue

PROPOSED AMENDMENTS TO SENATE BILL NO. 2076

Page 1, line 5, replace "for a" with "with North Dakota state university to expand the scope of the university's existing"

Page 1, line 6, remove "and review retention as an alternative to diversion"

Page 1, line 6, after "The" insert "expanded"

Page 1, line 8, after "The" insert "expanded"

Page 1, line 9, replace the first underscored comma with an underscored semicolon

Page 1, line 9, replace the second underscored comma with an underscored semicolon

Page 1, line 9, replace the third underscored comma with an underscored semicolon

Page 1, line 10, remove "from changes in taxable valuation"

Page 1, line 10, after "The" insert "expanded"

Page 1, line 11, remove "The"

Page 1, remove lines 12 through 14

Page 1, line 15, remove "of the access."

Page 1, line 15, after "The" insert "expanded"

Page 1, line 16, after "completed" insert "expanded"

Renumber accordingly

**2015 SENATE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2076**

Senate Energy and Natural Resources Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Not Pass as Amended

Motion Made By Senator Laffen Seconded By Senator Murphy

Senators	Yes	No	Senators	Yes	No
Chairman Schaible		X	Senator Murphy	X	
Vice Chair Unruh		X	Senator Triplett		X
Senator Armstrong		X			
Senator Hogue		X			
Senator Laffen	X				

Total (Yes) 2 No 5

Absent 0

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2076: Energy and Natural Resources Committee (Sen. Schaible, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (6 YEAS, 1 NAYS, 0 ABSENT AND NOT VOTING). SB 2076 was placed on the Sixth order on the calendar.

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2015 SENATE APPROPRIATIONS

SB 2076

2015 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2076
2/10/2015
Job # 23558

- Subcommittee
 Conference Committee

Committee Clerk Signature

Kate Oliver for Alice Deltzer

Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide a study on the impact of the Fargo diversion project

Minutes:

Testimony 1- 4

Chairman Holmberg called the committee to order on Tuesday, February 10, 2015, at 9:30 am in regards to SB 2076. All committee members were present. Chris Kadrmas, Legislative Council, and Lori Laschkewitsch, OMB, were also present.

Senator Luick, District 25: Testified in favor of SB 2076 and presented testimony. Attached # 1.

Chairman Holmberg: You are recommending the amendment that you presented to us as the bill?

Senator Luick: Yes. Amendment # 15.0098.02001 Testimony Attached # 2.

Senator Carlisle: The new fiscal note should iron it down from \$50,000-\$80,000 to a more finite amount?

Senator Luick: Right now there is an advanced hydrology study going on in the area of the map in the red box. As of last week that study was not completed, after that study is complete then the study for the outside of the box is supposed to start.

Senator Dotzenrod, District 26 testified in favor of SB 2076 and presented Testimony Attached # 3. (13.03)

RaeAnn Kelsch: Lobbyist for MNDak Upstream Coalition. The testimony that I handed out is what was presented at the policy committee. The policy committee amended the original bill to remove areas of the study that they felt were going to be more costly based on the discussion they had had in their committee. When they amended the bill they believed that in doing so they thought it would cost \$50,000-\$80,000 to study outside of the red box. Testimony Attached # 4 - letters of support for SB 2076. They are as follows:

1. Wayne Ulven, Retired resident and land owner.

2. Mark Askegaard, member of the MNDak Upstream Coalition and farmer; Vice-chair of the Ag Subcommittee for the Diversion Authority.
3. Matt Ness, Fargo resident and farm land owner; serves on the Diversion Authority Ag Subcommittee.

Senator Sorvaag: You not defining, in the amendment, any area that they are going to study. Is that not fairly broad?

Senator Luick: The areas that are impacted outside the red box by the consequences of this project.

Senator Sorvaag: Isn't that what's defined in the red line? I am looking for parameters.

Senator Luick: Yes, I agree. The 500 year impact would be a boarder outside the box. The 100 year for sure, if we could go somewhere in between it would be nice.

Senator Sorvaag: If this amendment was going forward wouldn't you want that in there?

Senator Luick: Did that dollar amount include the Minnesota side or just the North Dakota side? Nothing would make it worse than the dollar amount we are looking at.

Scott Rising, Soybean Growers Association: Testified in favor of SB 2076. We have several ag producers that feel they will be negatively affected. They simply want to know the impact on them outside of going to court afterwards and argue about what should have happened upfront.

Larry Syverson: North Dakota Township Association. We have a resolution to oppose the diversion on the basis that we don't feel that the rural values have been properly recognized and we would see this study as a move in correcting that.

Dave Laschkewitsch: State Water Commission.

Senator Gary Lee: You did the \$900,000 fiscal note and I was wondering if you have seen the amendment and if so do you think that \$50,000-\$80,000 is a more appropriate number.

Dave Laschkewitsch: I was just given the note, as far as the fiscal note, we sent the last draft to NDSU, and it was their estimate that we reported on the fiscal note. My thought is to scan this send to NDSU and get an updated note.

Senator Mathern: The scope of the study of the original bill and the fiscal note appears somewhat elusive; the new amendment suggestion appears to have similar difficulties. Would you study this all the way to the head waters of the tributaries, how do you see this as a hydrologist?

Dave Laschkewitsch: I don't see a definition here of what area they are looking at. I fear the fiscal note will come back very large again.

Senator Mathern: Would you have a suggested territory, water line, or flood level to help in that regard?

Dave Laschkewitsch: I do not. I suspect the Senator may have something to add.

Senator Luick: Yes, I just got a phone call from the person at NDSU, what he told me the study would include the North Dakota and Minnesota side of the river and that the study would include 5 different flood events-the 10 year, 25 year, 50 year, 100 year and 500 year events- so if you work of this you can detect where that water line will be. That would be the parameter of the outside impacts.

Chairman Holmberg: We will be taking the bill to the subcommittee working on water issues and will get the updated information before we make any decisions. They are Senator Gary Lee, Senator Holmberg and Senator Robinson.

Senator Wanzek: It appears like what we are studying, impacts on agriculture and I do see a reference to crop insurance. If someone's lands floods because of a manmade structure it voids out a farmer's federal crop insurance.

Senator Luick: You are correct. If it is a manmade structure or event the federal crop insurance does not cover anything with the crop loss. If that water sits on the land in the spring for extended time, you may have to consider different crops or no crops depending on the event itself. We have been told that it is the Corps philosophy that if there is 12 inches of less of water, no impact or no impact. You could have 50,000 acres outside that red box that has 5 inches of water on it, now you have an area that could it can be horrific to the people outside the red box.

Senator Wanzek: Those are the kind of impacts that come out of the study. If I would be farming in that area it would be quite an impact on me.

Senator Luick: Yes.

Chairman Holmberg closed the hearing on SB 2076.

2015 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2076
2/17/2015
Job # 23946

- Subcommittee
 Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL for a study on the impact of the Fargo Diversion Project

Minutes:

Chairman Holmberg called the committee to order on Tuesday, February 17, 2015 in reference to SB 2076. He commented this bill will be in 2020.

V. Chairman Krebsbach: I don't know if we want to address the amendment that was presented by Senator Luick to the committee.

Senator Mathern: I talked with Mr. Laschkewitsch and he had talked with NDSU and he said the amendment is going to cost many hundreds or thousands of dollars. The only way the cost of this would come down to \$50,000 or \$60,000 if you amended the place of consideration to just a few sections of land.

Senator Gary Lee: to response to Senator Mathern, Senator Luick has told me that he has talked to NDSU again, the fiscal note has gone back and forth, the amendment that will go on the bill has been refined. It is the lower number. The policy committee did agree with that with NDSU. I think we can take it up and dispose of this bill. I think it's the amendment we're dealing with. Is that the one that came down or the one he offered?

Chairman Holmberg He offered the amendment.

Senator Gary Lee: I don't know if we need to take it up. We can just dispose of the original bill. I would move a do not pass on 2076.

Chairman Holmberg: We have a motion for a Do Not Pass on 2076. We would hold the bill until after 2020 has gone through the process. 2nd by V. Chairman Krebsbach.

Senator Gary Lee: The bill is just to study the area outside the red box, usually talked about in terms of the retention area to get an estimate of the impacts outside of that box in terms of some of the effects that will be there with water stored on that land. That is what

Senate Appropriations Committee
SB 2076
02-17-2015
Page 2

Senator Luick's intent is. I don't think there will be a fiscal note along with it. It will be the lower number. We will roll it into SB 2020 so I think we can dispose of this bill.

Chairman Holmberg: Call the roll on a Do Not Pass on SB 2076.

A Roll Call vote was taken. Yea: 13; Nay: 0; Absent: 0.

Chairman Holmberg: Senator Gary Lee will carry the bill. The hearing is closed on SB 2076.

Date: 2-17-15
 Roll Call Vote #: 1

**2015 SENATE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2076**

Senate Appropriations Committee

Subcommittee

Amendment LC# or Description: _____

- Recommendation:
- Adopt Amendment
 - Do Pass Do Not Pass
 - As Amended
 - Place on Consent Calendar
 - Without Committee Recommendation
 - Rerefer to Appropriations
- Other Actions: Reconsider _____

Motion Made By Lee Seconded By Krebsbach

Senators	Yes	No	Senators	Yes	No
Chairman Holmberg	✓		Senator Heckaman	✓	
Senator Bowman	✓		Senator Mathern	✓	
Senator Krebsbach	✓		Senator O'Connell	✓	
Senator Carlisle	✓		Senator Robinson	✓	
Senator Sorvaag	✓				
Senator G. Lee	✓				
Senator Kilzer	✓				
Senator Erbele	✓				
Senator Wanzek	✓				

Total (Yes) 13 No 0

Absent 0

Floor Assignment Lee

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2076, as engrossed: Appropriations Committee (Sen. Holmberg, Chairman)
recommends **DO NOT PASS** (13 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING).
Engrossed SB 2076 was placed on the Eleventh order on the calendar.

2015 TESTIMONY

SB 2076

Chairman Schaible and committee members;

My name is Senator Larry Luick and I am introducing SB2076 to you for your consideration. This bill is asking that an impact study of the affected areas of the proposed Fargo Diversion project be performed. The diversion project itself is a very large and affects many property owners, roads, farm and business sites, farmland, cemeteries and churches, property valuations, and much more. I will let others behind me address more of the reasons of why this study is needed.

Thank you

15.0098.01001
Title.

Prepared by the Legislative Council staff for 1-16-15
Senator Luick
January 13, 2015

Attachment 1
Page 2
SB 2076

PROPOSED AMENDMENTS TO SENATE BILL NO. 2076

Page 1, line 13, after the underscored period insert "The study must determine the detrimental effects on township roads, county roads, and state highways."

Renumber accordingly

Testimony in support of SB 2076

Jim Dotzenrod, District 26, ND State Senate

January 16, 2015

SB 2076 asks the State Water Commission to contract for a study of the impacts of the Fargo diversion project and to look at alternatives to the project plan that is currently in place.

I call your attention in particular to the impacts listed on lines 9 and 10.

Like many big water projects, this one creates winners and losers. There will be a flood protection benefit to Fargo, West Fargo, other cities and their residents. This is a needed benefit and enjoys a high level of support in the state and in the legislature. This flood protection benefit comes a high cost and sacrifice to the people and property South of the diversion. There is a long held legal and moral principle that those who are making the sacrifice (such as those listed in SB 2076) will be made whole again by those who are enjoying the benefit. One of the reasons that I thought SB 2076 was a good idea is because those impacts listed in the bill have been brushed aside and not confronted by any of the work that I have seen so far on this project. They have been referred to generally (and that is what I expect you will hear today), but not specifically as they should be at this stage of the project.

I expect that this morning you will hear over and over again an argument or line of reasoning from the opponents of SB 2076 that we have all that information, we don't need another study, we have been working on this for years and this is just some kind of delaying tactic from those who are continually opposed to anything that supports the project.

It is my hope that the members of this committee will upon hearing these attempts to brush aside the question of dealing with these upstream impacts will ask the opponents of this bill to explain to your committee, as a matter of record, with the tape running and in writing just how they plan to make the interests of those who are sacrificing greatly whole again. The answers they provide to this committee should be listed individually and specifically on each of the impact items listed in the bill.

Based on everything I have seen and read on this matter they will again resort to dismissing these concerns as something not to worry about, they have got this covered, it is in the plans. I expect the committee to pursue this matter beyond generalities and make it clear that the expectation of your committee and the legislature is that those giving up home, farmland, community, businesses, burial sites of their parents and family members need specifics in writing, not verbal assurances which all they have gotten to this point.

In so many ways it seems almost inconceivable that a project of this size could be this far along with large scale upstream impacts and an expectation that some people will be expected to give up most of what they have labored for over a lifetime without the proponents providing the kind of impact information called for in SB 2076.

I urge a DO PASS on SB 2076

City of Oxbow

January 26, 2011

Jim Nyhof, Mayor
Greg Anderson, City Council
Ardin Breimeier, City Council
Bill Kuzas, City Council
Frank Pearson, City Council
Pam Twedt, Auditor

Mr. Terry J. Birkenstock
Chief, Environmental and GIS Branch
U.S. Army Corps of Engineers – St. Paul District
180 Fifth Street East, Suite 700
St. Paul, MN 55101-1678

VIA FED EX

Attachment 2
Page 2
SB 2076
1-16-15

Re: Comments on Notice of Intent to Prepare a Supplemental Draft EIS for the
Proposed Fargo-Moorhead Flood Risk Management Project

Dear Mr. Birkenstock:

The City of Oxbow ("City") respectfully submits the following comments on the Notice of Intent to Prepare a Supplemental Draft Environmental Impact Statement for a Proposed Flood Risk Management Project on the Red River of the North in Fargo, ND and Moorhead, MN 75 Fed. Reg. 81249 (Dec. 27, 2010) ("Notice of Intent").

The City appreciates this opportunity to comment on the proposed scope of the planned Supplemental Draft Environmental Impact Statement for a Proposed Flood Risk Management Project on the Red River of the North in Fargo, ND and Moorhead, MN 75 Fed. Reg. 81249 (Dec. 27, 2010) ("Notice of Intent"). The City appreciates this opportunity to comment on the proposed scope of the planned Supplemental Draft Environmental Impact Statement ("SDEIS"); including the U.S. Army Corps of Engineers' plan to limit the scope of the SDEIS to analyzing downstream impacts of the Proposed Fargo-Moorhead Flood Risk Management Project ("Proposed FM Project" or "the Project"), possible measures to mitigate those impacts, and potential alternatives for the Project.

As a preliminary matter, the City states that it fully supports a proposed FM project.

The initial plan as prepared by the Corps was a preferred project. At the time the initial plan was prepared and supported by the City and other governmental agencies, there were no upstream impacts. The plan, as presently proposed, drastically impacts the City.

The City is a residential community south of Fargo. It is very similar to many of the residential areas within the Cities of Fargo and Moorhead. The biggest differences are in its openness and its proximity to one of North Dakota's finest recreational assets, Oxbow Golf & Country Club.

Just as in Fargo-Moorhead, the most flood-prone homes in the City either have been or are in the process of being removed. Additionally, the City has substantially completed flood protection to near the 500-year flood stage without substantial government participation. The City also supported a countywide sales tax, which was passed to assist in paying for flood improvements. The City continues to support that tax but at the same time questions why they are paying for a project which may ultimately inundate the City in event of a major flood.

Mr. Birkenstock
Page 2
January 26, 2011

The project, as presently proposed, now plans to stage water on the south side of the diversion. That staging project (or dam) will create a massive holding pond that will extend well to the south and west of the City. The precise numbers will not be known until mid-March 2011; however, the City has been advised that they can easily anticipate an increased impact of 3 to 7 feet. This is additional water on top of the pre-diversion press level. No location in the Red River Valley can handle that additional water without extended protection.

The result may mean the removal of another 30+ homes from the City and the destruction of the golf course. The City was a community of approximately 120 homes prior to the recent flood years. That number has now been reduced to approximately 110 homes. With this project the potential additional erosion of residents from the City will result in a substantial loss to the City's tax base. In all likelihood, the City will experience sufficient erosion of its economic base to threaten its ability to maintain its roads and/or operate its sewer and water systems. Additionally, the value of property and/or residences in the Kindred Public School District will be substantially harmed by the plan as presently proposed.

At a recent meeting, the City Council unanimously passed a resolution opposing the presently proposed project. Additionally, many of the property owners in the City have signed a petition joining in the resolution opposing the project as presently proposed. A copy of this resolution is enclosed for your review and consideration.

If the inlet structure is moved south about two miles, it will provide needed flood protection for an additional 300 structures (approximate), with a tax valuation of \$53 million or greater and a market value approaching or exceeding \$300 million.

The City respectfully requests that the Corp consider these matters when making its conclusions on the SDEIS. Thank you for your consideration of this matter.

Respectfully Submitted,



James E. Nyhof, Mayor

- cc: Cass County Commissioners
- Cass County Joint Water Resource District Members
- Governor Jack Dalrymple
- Senator Kent Conrad
- Senator John Hoeven
- Representative Rick Berg
- Fargo Mayor Dennis Walaker
- West Fargo Mayor Rich Mattern
- Attorney Sean Fredricks

enc

Resolution #2011-01

RESOLUTION OPPOSING THE FARGO/MOORHEAD (FM) DIVERSION

Council member Breimeier introduced the following resolution and moved for its adoption:

WHEREAS, the United States Army Corps of Engineers (USACE) has proposed constructing a flood water diversion channel around the cities of Fargo, ND and Moorhead, MN

WHEREAS, the proposed diversion channel restricts the flow of the Red River in southern Cass County, causing water to stage on the south side of the diversion channel

WHEREAS, the City of Oxbow is situated directly south and upstream from the point where the diversion channel intersects the Red River

WHEREAS, the proposed flood diversion channel will change the flow regime of the Red River during flood events and is estimated to cause adverse impacts measured in feet of additional crest elevations at the City of Oxbow, necessitating drastic and severe mitigation measures

WHEREAS, actions by the USACE or other outside interests to impose mitigation measures in order to offset the adverse impacts of the diversion channel will irreversibly change the character of the City of Oxbow and impact the quality of life of its residents

WHEREAS, operation of the flood diversion channel will increase not only the severity but frequency and duration of events at the City of Oxbow

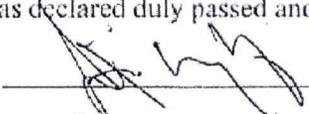
WHEREAS, increased flood crests of the magnitude envisioned by the USACE will also adversely impact roads, utilities, public safety, personal property, commerce, and personal well being to those upstream of the proposed diversion

WHEREAS, said change in flow regime results in multiple adverse impacts to the City of Oxbow, its residents and others situated upstream from the proposed FM diversion project as it is now proposed

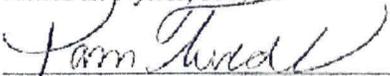
NOW THEREFORE, to preserve the interests of the City of Oxbow and its people, the City of Oxbow Council does hereby go on record as opposing the FM diversion project as it is now proposed. The City of Oxbow Council does also hereby resolve that any offer to purchase property for purposes of mitigation related to the FM diversion project must extend to all property owners within the City of Oxbow.

The motion for adoption of the foregoing resolution was duly seconded by council member Zink and upon vote being taken thereon, Greg Anderson, Frank Pearson, Dan Zink and Arden Breimeier voted in favor thereof and NONE voted against the same, whereupon the resolution was declared duly passed and adopted.

Adopted this 19th day of January, 2011



James E. Nyhof, Mayor



Pam Twedt, Auditor

The following signatories, all residents of the City of Oxbow, affix their name in support of Oxbow Resolution #2011-01:

Name: Charl Mila Address: 550 Sunset Drive

Name: [Signature] Address: 566 SUNSET Dr

Name: [Signature] Address: 708 Riverbend Rd

Name: _____ Address: _____

The following signatories, all residents of the City of Oxbow, affix their name in support of Oxbow Resolution #2011-01:

- Name: Lang W. Baker Address: 217 Oxbow Circle
- Name: Paul Benson Address: 840 Riverbend Rd
- Name: C. J. Carlson Address: 119 Oxbow Drive
- Name: Mike Steig Address: 808 Riverbend Rd
- Name: Robert Smith Address: 100 Oxbow Dr
- Name: Brigitte Smith Address: 100 Oxbow Dr
- Name: Bob Smith Address: 713 Riverbend
- Name: Mark D. Anderson Address: 622 Evergreen Circle
- Name: Jeff Kruger Address: 544 Sunset Dr.
- Name: W. Hall Address: 522 Sunset Dr.
- Name: Rick Smith Address: 729 Oxbow Circle
- Name: Gonda Davis Address: 229 Oxbow Circle
- Name: Sandi C. Papp Address: 710 Oxbow Circle
- Name: Henry D. Leah Address: 210 Oxbow Circle
- Name: Jim Tallent Address: 736 River Bend Road
- Name: Robert Smith Address: 645 EVERGREEN CIRCLE
- Name: Tom Wood Address: 610 Evergreen Circle
- Name: Cynthia Tucker Address: 610 Evergreen Circle
- Name: Gina Brubaker Address: 701 Oxbow Circle
- Name: Robert Brubaker Address: 701 Oxbow Circle
- Name: Daniel H. [unclear] Address: 852 Riverbend Road
- Name: [REDACTED] Address: [REDACTED]
- Name: _____ Address: _____

The following signatories, all residents of the City of Oxbow, affix their name in support of Oxbow Resolution #2011201:

Name: Wesley Podolak Address: 843 Riverbend Rd

Name: Bernita Podolak Address: OXBOW, N.D.

Name: _____ Address: _____

Name: Jolene Samways Address: 320 Schwell Dr

Name: Don Williams Address: 1001 Evergreen Circle

Name: Dana / Krista Address: 201 Oxbow Circle

Name: [Signature] Address: 346 SCHWELL DR.

Name: [Signature] Address: [Signature]

Name: [Signature] Address: 576 Sunset Dr

Name: Shelby Cooper Address: 650 Evergreen Circle

Name: Brenda Carlson Address: 119 Oxbow Drive

Name: Deb/Kathy Schmidt Address: 747 Rimband Road

Name: [Signature] Address: 237 Oxbow Circle

Name: [Signature] Address: 618 Evergreen Circle

Name: [Signature] Address: 274 Oxbow Circle

Name: [Signature] Address: 530 Sunset Dr.

Name: [Signature] Address: Sunset Dr

Name: _____ Address: _____

Name: _____ Address: _____

Name: _____ Address: _____

Name: _____ Address: _____

The following signatories, all residents of the City of Oxbow, affix their name in support of H16-15
Oxbow Resolution #2011-01:

Name: Dwayne A. Zimmerman Address: 832 Riverbank Road, Oxbow

Name: [Signature] Address: 713 River Bend Rd Oxbow

Name: _____ Address: _____

Good morning. Thank you for your attendance today and for your willingness to take a critical look at some of the impacts outside of the "red box" area that correspond with the F-M Metro Flood Control Project that are not being addressed.

My name is Mark Askegaard. With me this morning, and providing testimony after myself, are Matt Ness and Wayne Ulven. We are members of the MNDak Upstream Coalition and are being negatively impacted from the staging area associated with the dam portion of the proposed flood control project.

I am a fourth generation farmer and graduate of NDSU. I live in Fargo and the majority of the land that I farm is located within the "red box" staging area. I serve as vice-chair of the Ag Subcommittee for the Diversion Authority and have served in that capacity since the inception of the group. Our committee's job is to address and work through the many issues that affect the agricultural community from the dam and staging area associated with the project, as well as the agricultural impacts stemming from the diversion channel itself.

This morning, I will show how the area impacted from the proposed project is significantly greater than what the Diversion Authority (DA) is willing to provide compensation for within the "red box". I will also touch briefly on a study conducted by Watts and Associates, a firm from Montana, specializing in crop insurance products, that was hired by the Diversion Authority to analyze the options to provide risk management to both landowners and farmers within the staging area. Following my testimony, Matt will discuss the initial modeling results presented to our Ag Subcommittee of the potential "losses" to the Ag community from the staging of water with the project. This study is being conducted by NDSU. Wayne will then elaborate on the impacts he has witnessed from flooding in his area over time, how they affect our communities and how those impacts have been altered through man-made changes to the landscape.

In your packets, there are 2 maps. The first map shows the land that stored water just up stream (South) from the Fargo-Moorhead area during the 1997 and 2009 flood events. These 2 flooding events were both very similar to the area where water will pool in regards to the newly adopted 100year FEMA flood plain level in Fargo, which is now 39.5'. (The 1997 flood crest was below 40' and the 2009 crest was 40.80). This map shows where water naturally stores during large flood events, as indicated by the blue shade. As you can see, most of the impacted land is north of and within the "red box" area on the ND side of the river. There is little property south (upstream) of the "red box" which currently is impacted in a 100year flood.

The second map in your packet depicts the area impacted with the diversion/dam project in place. The area shaded in blue is land that would be inundated with the ACOE proposed definition of a 100year flood (42.4'). Some of the area shaded in blue within the "red box" is already impacted today without the project, but as you can see, there are newly impacted areas outside of the "red box" area with the project in place. The area shaded in red is newly impacted land from the project that

will receive compensation if it is within the "red box". With the project in place and the raised 100year flood elevations, it is clearly seen that there is more area shaded in blue that is now located within the 100year flood plain. This newly introduced area to the flood plain will receive no compensation for being outside of the "red box". (The DA has said that they will provide compensation to landowners who have 12" or more of water impact to their property---any place within the "red box" or approximately 32,500 acres). Under this scenario, the total impacted acres with the project implemented are 54,472. Existing area impacted without the project under this scenario is 32,802, for a difference of 21,870 acres. (54,472-32,802). There is a tremendous difference between the figures that the DA is willing to provide compensation for and the true/estimated number of acres that will be impacted during a 100year flood event with the project in place. If the DA and ACOE are successful in raising the 100year FEMA number to 42.4' and implementing the project, the landowners, farmers and residents in that newly impacted area outside of the "red box" will not receive compensation.

There is no difference to a farmer or homeowner if there is 6" of water on their property or 10', they will still not be able to get into their fields or will need to take measures to protect their property. It is also important to note that with the project in place, the staging area will be utilized whenever there is a 10 year or greater event (river gauge of 35' in Fargo). This 2nd map is an accurate depiction of what the staging area will look like up to a 100 year event with the project in operation.

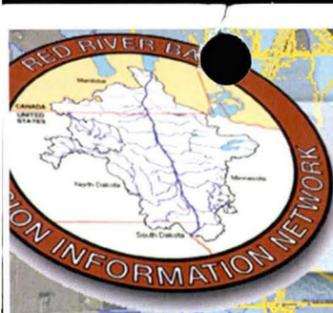
Watts and Associates, a firm specializing in the area of federal crop insurance and risk management, was hired by the DA to do an analysis on all possible methods to mitigate risk to landowners and farmers within the staging area. The study was presented to our Ag Subcommittee by Alex Offerdahl and was entitled "Evaluation of Agricultural Risk management Options for The FM Area Diversion Project". It provided the Diversion Authority with 7 different options they could explore to provide compensation to landowners and farmers for the uninsured risks and losses that they will potentially face within the staging area. (There is no Federal Crop Insurance provided to cover potential losses for man-made events, such as the flooding that would occur in the staging area in a year that the project is implemented). These options ranged from providing a private insurance product to securing a federal insurance policy to buying flowage easements, tiling of the land in the staging area and outright purchase of the land in the staging area, the DA self-insuring or a combination of all of the above.

The final thoughts by Mr. Offerdahl to the DA and our Ag Committee were that a combination of methods of risk reduction would most likely have to be pursued to accomplish this project, that all were doable, but at great expense and needed community "buy-in". All options had pros and cons. However, the most important message that Mr. Offerdahl delivered to our group was that compensation would have to be provided to anyone who suffered economic hardship or loss from the project, regardless of where the "red box" was drawn. He has not been invited back to do further analysis.

Who is going to pay for the impacts to landowners, farmers and residents who are outside of the "red box" and are completely outside of the current FEMA 100 year flood plain?

These costs need to be thoroughly examined in Senate Bill 2076 and I would appreciate your support of this bill.

Thank you.



1997 & 2009 Flood Extent

Army Corps "Red Box" Impact Area

Attachment 3
Page 4
1-16-15
SB 2016

Effective FEMA
100 year
Floodplain

Diversion, Dam and Tie-Back Levee

Red Box
Mitigation
Area

Bakke →
Hickson →

← Oxbow

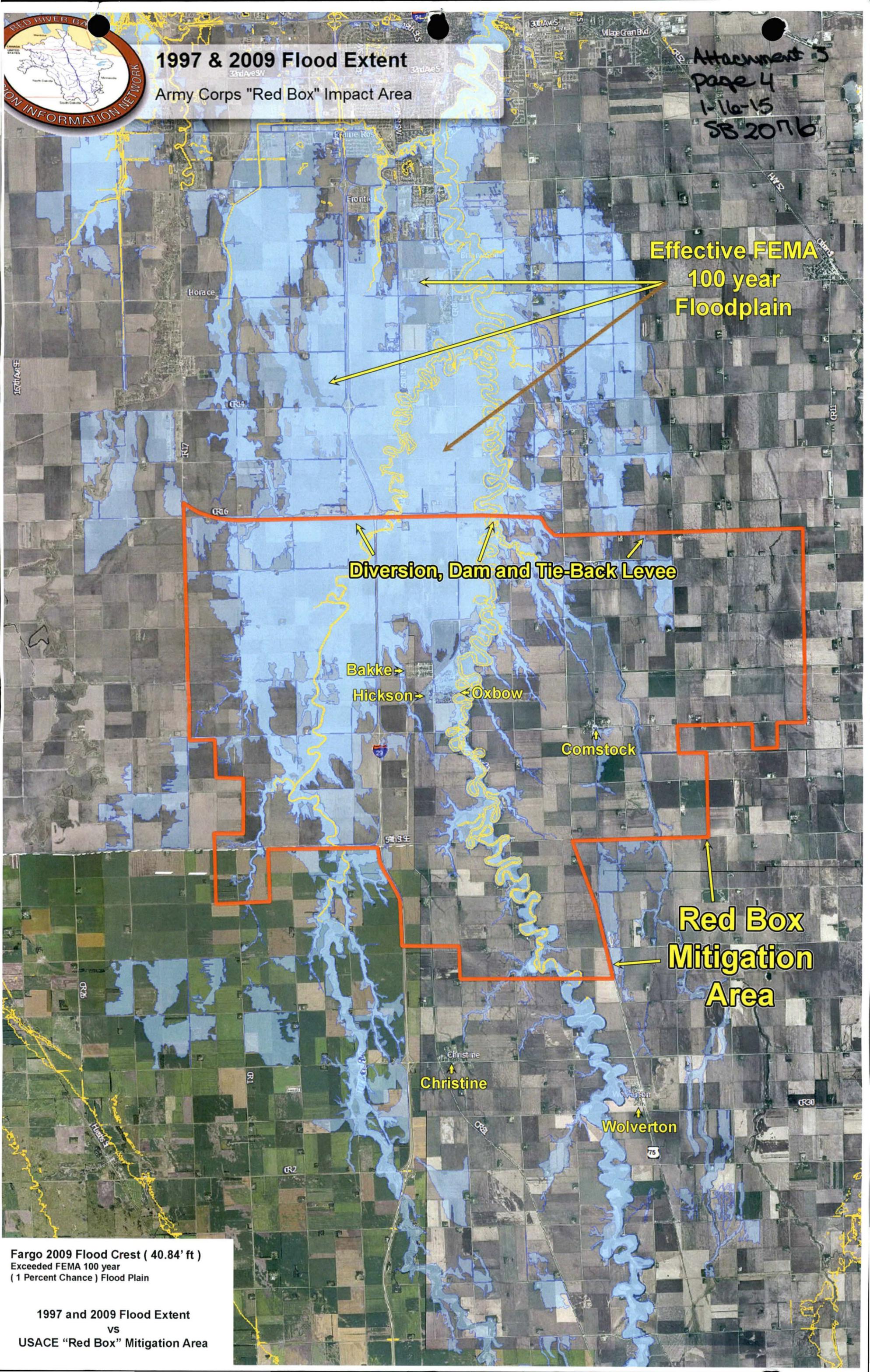
Comstock

Christine

Wolverton

Fargo 2009 Flood Crest (40.84' ft)
Exceeded FEMA 100 year
(1 Percent Chance) Flood Plain

1997 and 2009 Flood Extent
vs
USACE "Red Box" Mitigation Area



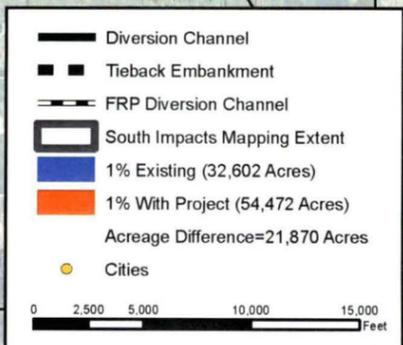
100 year Impacts Induced By Diversion

Diversion, Dam and Tie-Back Levee

Red Box Mitigation Area

Red Box Mitigation Area

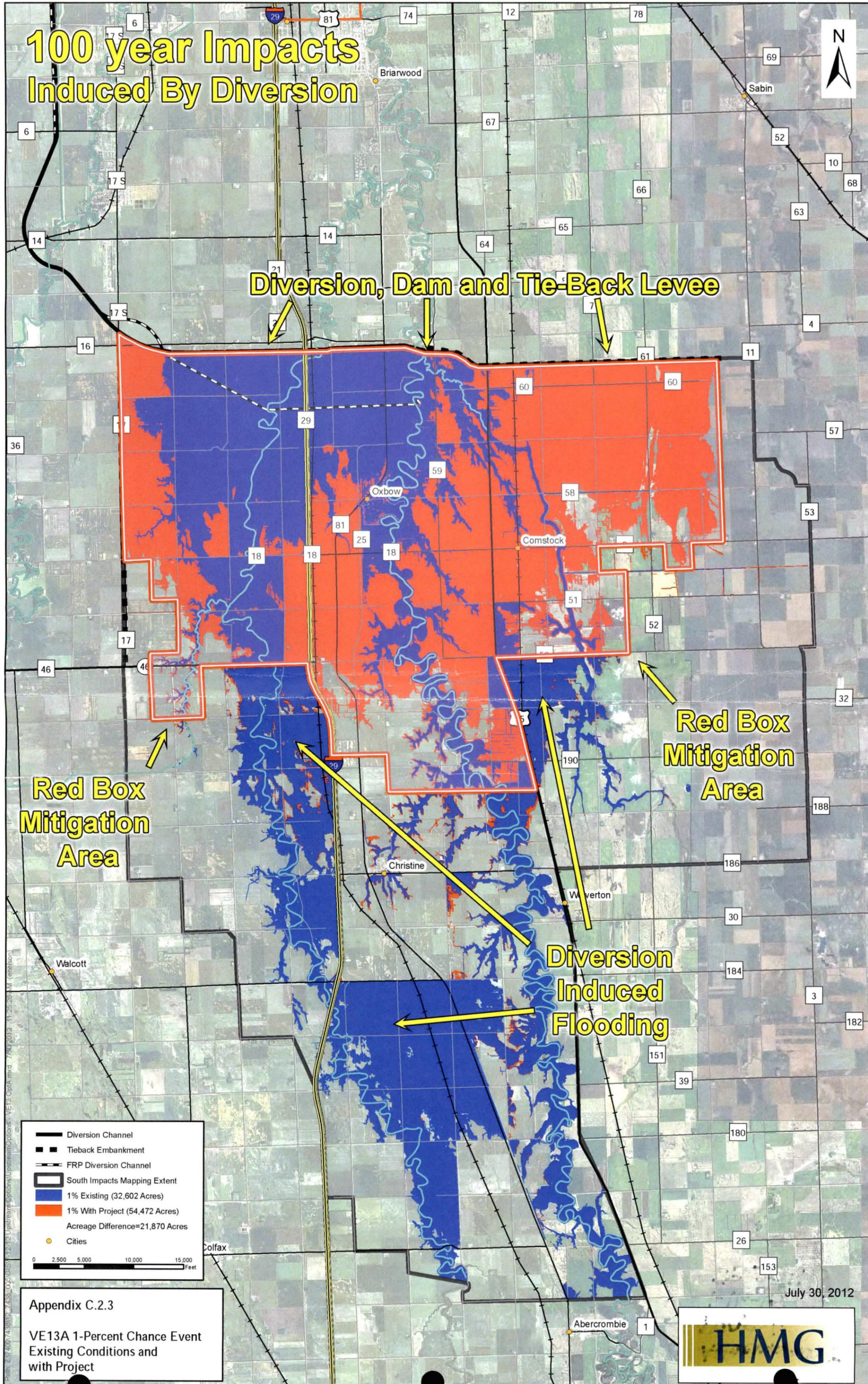
Diversion Induced Flooding



Appendix C.2.3
 VE13A 1-Percent Chance Event
 Existing Conditions and
 with Project



July 30, 2012



City of Oxbow
708 Riverbend Road
Oxbow, ND 58047

SB 2076

James E. Nyhof, Mayor
Chris Champ, City Council
Paul Nelson, City Council
D.J. Reiger, City Council
Tami Heinke, City Council
Beth Leake, City Auditor

January 13th, 2014

RE: Senate Bill No. 2076

Dear Chairman Schaible and members of the Energy and Natural Resources Committee

As the recently reelected Mayor of Oxbow, North Dakota, I would like to address SB 2076, the bill under consideration to study the Fargo Diversion Project (Project) impacted areas; in which the impact to Oxbow residents has to be a primary focus. The City Oxbow is the only City in North Dakota impacted by the Diversion Project and its residents have been active participates in similar studies for the last five years. We are just now starting to see the light at the end of the tunnel and an end to the perpetual limbo state that they have been in. SB2076 again puts my citizens back into limbo and creates a lot of anxiety as to what it means for the future of our community.

Comprehensive and costly studies have been completed or are currently underway by other government entities for the majority of what SB2076 seeks to study. Instead of reinventing the wheel on multiple issues, such as reviewing retention as an alternative, that have already been studied in incredible detail and which will only further slow down the efforts to provide flood protection and mitigation to Oxbow and others, the State should put its efforts towards working with the local entities to enhance the work that is currently underway.

For the City of Oxbow, which makes up between 20-25% of the Kindred School District's property value and student population, the impact on the valuation of property in the mitigation area is of great importance. I hope this letter helps give a better perspective of factors impacting the value in the mitigated area from the Diversion Project.

Under current conditions, flooding within the Kindred School District has been a primary impact to valuation changes. The taxable valuation of land within the Kindred School District has increased annually every year since the big flood of 2009 devastated the City I represent. This increase in valuation exists even in 2012 when the State Tax Equalization Board granted the City of Oxbow a 20% reduction due to the uncertainty the Project's impact on Oxbow. In 2014, the taxable valuation for the school district totaled \$19,900,491. The City of Oxbow was the fifth largest taxing entity at \$1,208,943, only \$374,121 behind the City of Kindred. Because of the Project, the City of Oxbow has developed infrastructure to support 100 new residential lots. Half of these lots will service as replacement property for residents losing their home due to the Project or for the relocation of the removed homes to protect them from demolition. The remaining new lots will bring incredible new taxable value to the school district. Assuming structures averaging \$400,000 in value are built on these lots, an estimated \$30,000,000 in true value or \$1,350,000 of new taxable value will be added to the school districts taxable valuation. Based on the current mill levy at 133.05 this will generate an additional \$179,617 annually. Upon completion this construction would double Oxbow's taxes to the Kindred School District and make it the biggest taxing city in the District. With another 80 acres of land already annexed into the city limit, the next phase of residential development is only inevitable.

03 11

With completion of this Project, Oxbow will finally have certifiable 100-year flood protection and the valuation of the homes within the City will more closely reflect the true and accurate value and will no longer need the temporary 20% discount granted by the State Tax Equalization Board due to knowing the future of our community. Thankfully, the economic future of the Kindred School District does not appear to be at risk, perhaps quite the opposite.

In addition, a vast majority of the residents of Oxbow work within the protective area created by the Diversion Project. Without the financial stability created by permanent flood protection, the economic viability of much of the Kindred School District is at risk due to flooding of our larger metro neighbors of Fargo, West Fargo, and Moorhead.

Thank you for allowing me to comment on this issue of great important to me and the City I represent.



Mayor Jim Nyhof

Good morning. My name is Matt Ness. I am a Fargo resident and I am a fourth generation farmer in the staging area. I am also on the Ag Subcommittee. 2/3 of the farmland I farm is in the southern edge of the staging area, and the other 1/3 is located right outside of the "red box". This land outside of the "red box" is literally right across a gravel road. This farmland on both sides of this gravel road, have the same elevation.

The DA has hired NDSU to complete a study of the potential losses to the agricultural community regarding the staging of water on agricultural land entitled "Ag Risk Economic Evaluation". The initial presentation to our Ag Subcommittee was presented this past December with the final results of this study due early this year.

The format used in the modeling for the evaluation was given during this meeting. The NDSU team then presented the key variables and assumptions to be used during the economic and physical modeling for the study. These included stochastic variables such as the flood start date, planting start date, and planting progress rates. Other variables incorporated into the model included water storage/inundation with and w/o diversion, prevent plant dates, future crop yields, crop shares and yields, optimal planting dates, a 10 day dry down and clean-up period, insurance coverage provisions, and crop switching dates.

Impacts to a theoretical 400 acres farm in the staging area consisting of a rotation of 100 acres each of corn, soybeans, wheat, and sugar beets, that were used in the evaluation.

Data provided by the ACOE was provided to enter into the model. (The initial modeling done by the ACOE for the FEIS states that the water duration in the staging area will be an additional 5-7 days over existing conditions in a 100 year flood event).

4 random sites were chosen in the staging area to determine initial economic impacts to each site. For the initial presentation, data was presented for a random site in Holy Cross Township in Clay County Minnesota. This data represents a 25 year flood event.

The initial modeling for this location using ACOE data showed that water would be on the landscape for 13 days. (This location currently does not flood without the project). NDSU projects (and is using for modeling

purposes) that an additional 10 days will be required after water leaves the field before field work can begin to allow time for field drying and clean up of debris. For this location, an additional 23 days over existing conditions will be needed for planting to begin.

This delay of planting was entered into the model and the model showed that depending on the timing of a spring flood, there could be little impact to the modeled farm, or there could be a complete loss of crop at that location depending on the time of the flood. The planting of wheat, sugar beets, and corn, becomes highly problematic due to loss of yield in late planting such as this.

Immediate responses from the ACOE and the DA when the data was presented were that there had to be a mistake in the numbers entered into the model and that this material should not be released to the public.

We have not been able to gain access to the initial presentation. The DA and the ACOE have informed us that they are entering into the model and that this material should not be released to the public.

We have not been able to gain access to the initial presentation. The DA and the ACOE have informed us that they are entering new updated modeling information into the NDSU model and will release the entire initial presentation only after the new modeling information has been completed.

One of the arguments given to us for not releasing all of the information from the initial report was that there was incorrect sizing of one culvert in the modeled area and that when the correct culvert sizing was entered into the model, the duration of inundation dropped 4 days. Culvert sizing is very important, especially during a summertime flood event. However, during most spring floods, culverts are plugged with snow, ice, logs, cornstalks, etc., so there is very limited flow through them, until they open. It is almost a certainty that water in the staging area will stay on the landscape for a longer period of time than what the ACOE is admitting to. The potential for longer periods of time that the water is on the landscape presents a huge potential loss of revenue for the farmer, the community, and also the state if crops do not get planted on time—if they get planted at all. The possibility of infrastructure and roads being topped/washed out from this project also poses to be a huge economic concern to the area.

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Although there has been a significant amount of work done to mitigate impacts within the staging area, there has not been much attention paid to the area outside of the "red box". What are those potential impacts? Who is going to provide compensation to those outside of the "red box" area? What is going to happen to property valuations in this impacted area? Who will be willing to farm in an area without the protection of crop insurance? How will this potential loss of revenue affect the communities and townships within this area where there is no guarantee of mitigation for potential losses? We need to know these amounts and who is going to bear the economic pain for these impacts.

As stated before, I farm land that is located on the southern edge of the "red box", as well as some land directly outside of the "red box". The elevation is the same on many of these tracts of land. Water does not stop at a red line or a gravel road. I have three young sons who someday may wish to farm this land. If this project gets built, it will be devastating for many generations to come, if the impacts are not studied and mitigated.

We need to have the state water commission study these potential impacts before any further work is done on the diversion project outside of Fargo. I appreciate your support of Senate Bill 2076.
Thank you.

Senate Bill 2076

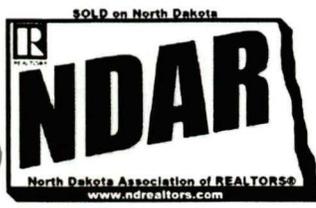
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My name is Wayne Ulven. Our farmstead has been in our name for five generations. My son is the fifth generation to live in the same house. We have had three major floods that I would like to compare. 1969 flood, 1997 flood, and 2009 flood. All three had about the same amount of concern for me before the spring thaw. The difference between 69 and 97 floods was the construction of 1-29 in 1972, which became a dam that slowed down the water and backed up the river stream. We lost the basement of our home, barn with small pigs, and many family items. If 1-29 had not been in place we would have had about the same damage as 69 which was none, except for inconveniences. In 2009 the water level of the flood was 2 feet higher than the 97 flood at the Galchutt Bridge, which is about eight miles upstream on the Wild Rice River. When the crest reached our farmstead the water level was only five inches higher, not two feet higher. We had diked our homestead by this time and all was saved. The Wild Rice River had gone across to the Red River in three areas between Galchutt and our farmstead. This overland flooding saved us from at least an additional 1.5 feet of flood water. If the Diversion data is correct, they estimate the diversion levy, will raise the level of the Red River at Abercrombie by two feet. If that happens we will not have any overland flooding from the Wild Rice to the Red River, due to the fact both Rivers will be at the same level. All land between the Red and Wild Rice River will be subject to a greater level of flooding. Our dikes at home, which we built after the 97 flood, will not be sufficient to protect our farmstead. This is one instance that shows why we need an independent study on the areas upstream, which are not in the red zone. Arkansas courts have stated, that areas such as where we live outside the red zone, can only receive compensation after a major flood occurrence through litigation. The litigation chain would be; Core of Engineers first, City of Fargo next, and the last option is the State of North Dakota. Litigation is expensive; this bill will produce facts that will enable the average person to make a decision, based on facts.

The taxable evaluation of the Richland School District is another concern. The area ^{North}~~south~~ of the Walcott Road has had zero growth since the news of the diversion. This was our growth area 5 years ago. Each home built had an average of \$1,000 of taxable evaluation and an average of 1.5 children. This amount is substantial to a small school district. The diversion studies have not estimated the taxable valuation, or population impacts of the diversion for either Richland or Kindred School Districts. This bill will produce facts that the Richland School District can use when making decisions for the district.

Facts from an independent agency are needed for all. Thank you for your consideration.

Wayne N. Ulven, Retired resident



North Dakota Association of REALTORS®

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2015

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TESTIMONY IN OPPOSITION TO SB 2076

Senator Shaible and members of the Senate Energy and Natural Resources Committee. My name is Greg Larson and I am President of the North Dakota Association of REALTORS® (NDAR). NDAR is a trade association that represents 1640 REALTOR® members and 250 affiliate members, organized under 8 regional boards statewide.

In September 2014, NDAR's Board of Directors voted to support the Fargo Diversion Project. This support was given after viewing presentations from those supporting the project and those opposed to the project and reviewing information from all parties.

NDAR believes that Senate Bill 2076 is unnecessary. Numerous studies at great cost have been completed for five years related to the diversion project, including the option of retention. The Minnesota Department of Natural Resources supports the diversion project and the ND Congressional Delegation has worked hard on the federal level to obtain congressional authorization and funding commitments for the project.

NDAR objects to any activity that may further delay the diversion project. Recently the Federal Emergency Management Agency released new flood maps in Fargo. Two-thousand properties not considered to be at risk for flooding in earlier maps, now have been added as being at risk in these recent maps. The result is that homeowners who had not previously been required to obtain flood insurance now must, and many who had flood insurance, but were paying a reasonable premium, are seeing their premiums skyrocket.



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REALTORS'® business is being affected as well, as prospective buyers are leery of purchasing property in areas that have been identified as at risk.

More importantly, it will most likely affect those home owners in that area who may need to sell their homes.

Upon substantial completion of the Diversion Project, the city of Fargo intends to contact FEMA and request a review of at risk properties in light of reduction of risk due to the diversion project.

Our concern is that this bill may serve to delay the project or portions of the project, which is critical to alleviating the issues caused by the new mapping by FEMA. Homeowners and REALTORS® cannot afford any additional delays.

For these reasons, NDAR requests a DO NOT PASS on SB 2076. I would be happy to answer any questions.

Keith Berndt
Cass County Administrator
January 15, 2015

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Studies Related to the FM Diversion Completed or Underway:

1. Federal Feasibility Report and Environmental Impact Statement – 20 plus bound volumes and \$22M to complete.
2. Minnesota Environmental Impact Statement – Underway over \$2M to date
3. The Corps of Engineers has been working on a Red River Basin Feasibility Study for many years. To date the COE has spent \$6.8 million and local partners an equal amount including work in kind on flood damage reduction studies in the US portion of the Red River Basin.
4. The Red River Basin Commission completed Long Term Flood Solutions Report in 2011 funded by the states of Minnesota and North Dakota. Two major conclusions were a recommendation of 500 year protection for Fargo-Moorhead and a 20% flow reduction through distributed storage should be a goal.
5. The Red River Basin Commission in 2014 completed the Halstad Upstream Retention Study that evaluated the impact on the Red River with distributed storage built to meet the 20% goal. RRBC concluded that the distributed storage included to meet the 20% goal was not sufficient to meet Fargo-Moorhead's need for adequate flood protection. The Diversion Authority funded \$500,000 toward the study and committed \$25M for retention projects that can benefit FM area.
6. Corps of Engineers Cemetery Study – Ongoing mitigation plan being developed for each affected cemeteries.
7. Watts and Associates Flood Insurance Study \$20,000.
8. NDSU Agribusiness and Applied Economics Department ongoing study \$65,000.
9. Much work has been done to date in the upstream area. The results of the previous efforts continue to be expanded and refined. Work upstream of the FM area is being looked at on a property by property basis. (Evaluation includes over 650 square miles. Survey crews have recently shot elevations on over 1,000 culverts)

Forum editorial: DNR finds retention can't do it

Posted on Jan 13, 2015 at 11:33 p.m.

A preliminary report from the Minnesota Department of Natural Resources all but endorses the findings of several agencies and private engineers that water retention impoundment alone cannot provide the level of permanent flood protection the F-M diversion will guarantee. The DNR has not issued a final report, but the water retention finding concludes that the retention option, while possibly an element of an overall flood protection strategy, is not the silver bullet that opponents of the diversion say it is.

No kidding. Study after study by highly qualified analysts has concluded the same thing. The DNR's welcome agreement with other studies adds another important layer of credibility to the common-sense side of the retention argument. The DNR's work is especially important because opponents of the project were assuming the Minnesota agency would be in their camp on the retention question. But as if to polish its credentials as a serious agency, the DNR shunned emotional hearsay and political pander, and instead did good fact-based analyses.

The reality in the Red River Basin, especially upstream of Fargo-Moorhead, is that there is little appetite among landowners to offer up land for retention basins. Don't believe it? Despite there being money available to compensate farmers, only three retention projects have been completed since 1997, and one of them is downstream from Fargo. Despite the noise from upstream landowners who have been objecting strenuously to the diversion – and insisting retention is a better option – none have stepped forward with significant offers of land for water retention.

The DNR's report takes the land-availability factor into consideration, and suggests that the more than 90 individual impoundments that would be necessary to achieve meaningful retention would never be acquired. Given the history of a watershed where ditching and draining – not retention – has been modus operandi for generations, that's an accurate and pragmatic assessment.

The sane retention conclusion does not mean the DNR will support every aspect of the diversion. The agency likely will object to or urge modifications in project features the agency believes will negatively affect Minnesota.

Meanwhile, diversion opponents can be counted on to spin the DNR's preliminary report to fit their fact-starved narrative. But the latest science-based assessment further exposes the myth of retention's efficacy as the flood protection solution. And the diversion remains on budget and on track.

Forum editorials represent the opinion of Forum management and the newspaper's Editorial Board.

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DNR dismisses water storage concept

Thursday, January 01, 2015 1:42 p.m. CST



Water storage analysis report

ST. PAUL (KFGO-AM) -- The Minnesota DNR, in a draft analysis, has rejected further study of upstream storage areas such as wetlands and reservoirs to lessen the impact of the Red River Diversion project.

The review, part of Minnesota's environmental impact study of the \$2 billion dollar project, says the "distributive storage alternative" does not meet the project's purpose and is not a feasible or practical alternative to the diversion.

The preliminary report, forwarded to the diversion project managers, technical staff and city leaders, says approximately 96 water impoundment sites would be needed to reach the desired goal of reducing flood water flow. The DNR says it would be "challenging" for the diversion authority or the Army Corps of Engineers to work with property owners across the Red River Basin to find this number of storage sites within a reasonable amount of time.

The report notes that since the 1997 spring flood, only three such water impoundment projects have been completed north of Halstad, Minn.

Minnesota DNR on Red River retention: No protection from catastrophic events

By Patrick Springer

Forum News Service

POSTED: 01/06/2015 12:01:00 AM CST | UPDATED: 7 DAYS AGO

The Minnesota Department of Natural Resources has concluded that widespread retention projects in the Red River basin would not offer a viable alternative to the proposed flood protection diversion.

Fargo-Moorhead would not be protected by "catastrophic events or from peak tributary flows" on the Red River from water retention projects alone, but impoundments still could provide significant benefits, a new Minnesota DNR draft report concluded.

The analysis of retention projects as a possible alternative to the diversion was part of a broader environmental review expected to be finished in late spring, with a goal of completing the full draft report in May.

Members of the Diversion Authority board on Monday welcomed the report's conclusions but cautioned that the DNR's review of the diversion project isn't complete.

"I think they really lay it on the line that it's something we should continue to look at but really is not feasible to help with the catastrophic flood events," Nancy Otto, a Moorhead City Council member and diversion board member said, referring to distributed water storage.

"It reaffirms everything that we've been told about how much retention can help us and that it's not the sole option that will protect our citizens," she said.

"This is a very important step," Otto added, saying the report should help answer some "false assumptions" about the potential of retention to protect against catastrophic floods.

As a benchmark, the DNR analysis used the diversion sponsors' flood prevention goals, including protecting Fargo-Moorhead against a 100-year flood, at minimum.

The DNR's conclusions largely agreed with earlier studies of the potential of using widespread retention projects -- so-called "distributed storage" -- as a component of flood control for Fargo-Moorhead and other Red River cities.

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A study by the Red River Basin Commission, often cited in the Minnesota DNR analysis, identified 96 sites throughout the basin that together could reduce peak flows on the river by 20 percent.

But the DNR noted that since 1997, only three retention projects have been built upstream of Halstad, Minn., in the Red River Valley, including construction of the Maple River Dam and enhancement of the Baldhill Dam in North Dakota.

Obstacles to building retention projects include "funding, regulatory issues and land owner consent," the DNR report said.

"We did want to acknowledge that there is some real challenges to completing that full array of distributed storage projects," said Randall Doneen, the Minnesota DNR's environmental review unit supervisor.

That's significant, he added, because the Federal Emergency Management Agency, better known as FEMA, would require all of the 96 retention projects to be completed and certified, otherwise Fargo-Moorhead properties in the 100-year flood plain must purchase flood insurance.

Nathan Berseth, a Richland County Commissioner, said upstream opponents of the diversion's temporary retention feature, have never argued that retention alone could protect Fargo-Moorhead.

Nonetheless, he said he believed the DNR analysis left room for a possible combination solution, incorporating retention as well as a diversion.

Because it concluded that widespread retention is not a viable alternative, it will not be fully considered in the complete draft environmental impact study, Doneen said.

Also, he added, the review must examine the diversion as proposed, which does not include widespread retention as part of the project.

Darrell Vanyo, chairman of the Diversion Authority, agreed with Otto that the report bolsters the diversion's case for the project.

The Diversion Authority is willing to support retention projects, and has set aside \$25 million for impoundments that would mitigate flooding in Fargo-Moorhead, Vanyo said.

As yet, no project sponsors have stepped forward to seek funding, he said. That doesn't mean there won't be any such projects, but does reflect the long time it takes to identify and plan them, Vanyo said.

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"The report was not a total surprise but if anything I was pleased that they came out stronger than I ever thought they would," Vanyo said of the DNR draft analysis rejecting retention as an alternative to the diversion.

"Of course," he added, "this isn't the end of the DNR study."

Fargo-Moorhead Metropolitan Area Flood Risk Management

Fargo-Moorhead Diversion Project

JB 20716

1.1

Brett Coleman and Terry Williams, MVP

North Dakota State Legislature

Bismarck, ND

January 29, 2015



U.S. ARMY



US Army Corps of Engineers
BUILDING STRONG



Flooding is the problem.

1.2



2

Estimated Flood Damages

Flood Damages:

- 100-year flood event - ~\$6 Billion
- 500-year flood event - ~\$10 Billion

Loss of Life:

- ~200 for 100-year flood event
- ~600 for 500-year flood event



Corps Studies – FM Metro

- Reconnaissance study 2007-2008
- Feasibility Study 2008-2012



US Army Corps
of Engineers
St Paul District

FARGO-MOORHEAD METROPOLITAN AREA RECONNAISSANCE STUDY

Section 905(b) Analysis
(Water Resources Development Act (WRDA) of 1986)

North Dakota and Minnesota

March 2008

Final Feasibility Report and Environmental Impact Statement

Fargo-Moorhead Metropolitan Area
Flood Risk Management

July 2011



US Army Corps
of Engineers

Prepared by
U.S. Army Corps of Engineers
St. Paul District
1300 Fifth Street East, Suite 700
St. Paul, Minnesota 55101-1878



Reconnaissance Study 2007 - 2008

Partners:

- Fargo, Moorhead, West Fargo, Oakport Township, Cass County, Buffalo-Red River Watershed District, Southeast Cass Water Resource District, North Dakota State Water Commission
- Fargo – Requested analysis of a levee/floodwall near 2nd street
- Moorhead – Requested analysis of a levee/floodwall plan near Horn Park
- Study resulted in a determination that there was a Federal interest in conducting a feasibility study to reduce risk in the Fargo-Moorhead area.
- Fargo and Moorhead indicated they would be the non-Federal sponsors for a feasibility study.



Feasibility Study 2008 - 2012

- Cost - \$22,550,000 (\$11,448,500 Federal, \$11,101,500 non-Federal)

- Timeline

- | | |
|--|-------------|
| • Feasibility Study Began | Sep 2008 |
| • Flood of Record | Spring 2009 |
| • Public Review of Draft Feasibility Report & EIS | June 2010 |
| • Public Review of Supplemental Feasibility Report & EIS | May 2011 |
| • Final Report | July 2011 |
| • Chief's Report Signed | Dec 2011 |
| • Record of Decision Signed | Apr 2012 |
| • Supplemental Environmental Assessment completed | Sep 2013 |
| • Water Resource Reform Development Act (WRRDA) | June 2014 |

- Local Sponsors: Cities of Fargo and Moorhead

- Local Partners:

- Cass County ND and Clay County, MN
- Buffalo-Red River Watershed District
- Cass County Jt. Water Resource Board



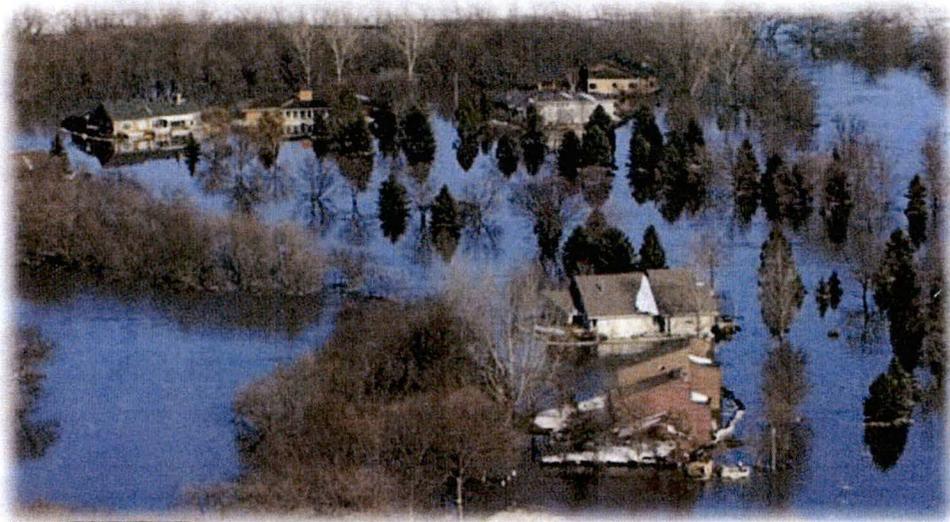
President Barack Obama grants a pen before signing House Resolution 3060, the Water Resources Reform and Development Act, on Tuesday at the White House. The legislation will authorize the distribution of federal flood-fighting funds.



FMM Project Purpose & Objectives

Purpose:

To identify measures to reduce flood risk in the entire Fargo-Moorhead Metropolitan Area.



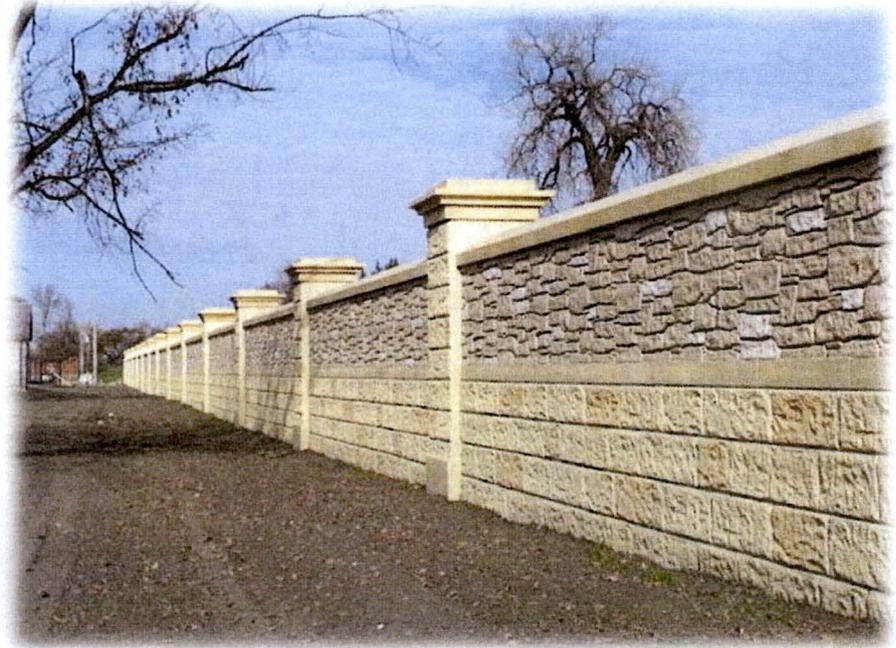
Objectives:

- Reduce flood risk and flood damages in the Metro area
- Restore or improve degraded riverine and riparian habitat
- Provide additional wetland habitat
- Provide recreational opportunities



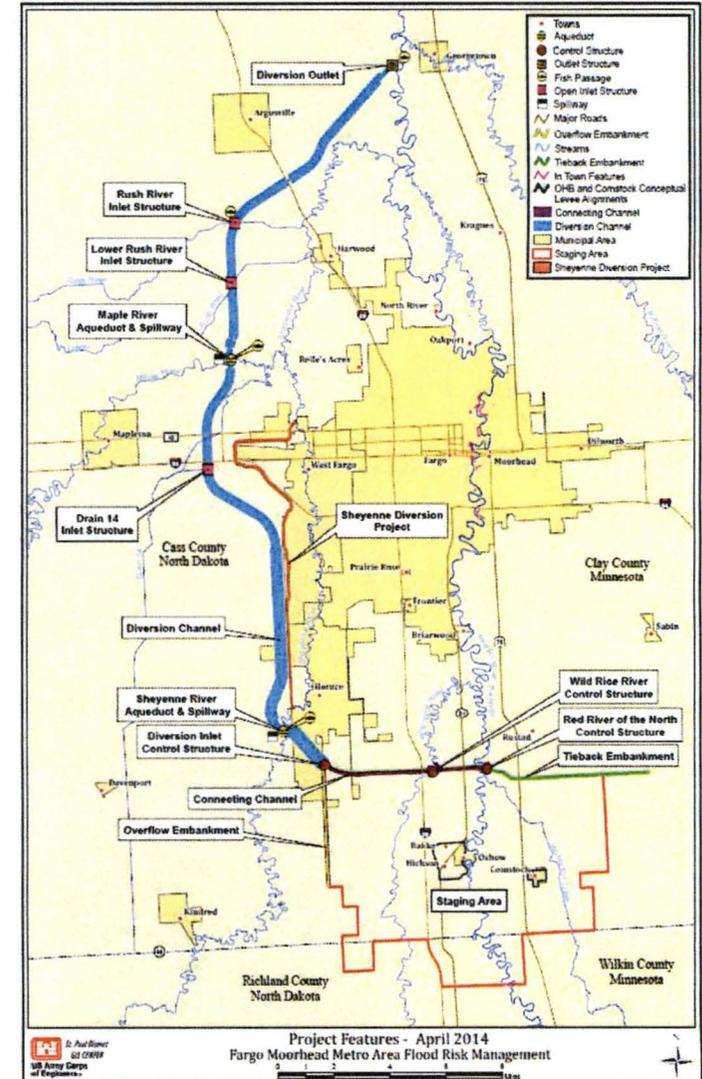
Alternatives Considered

- Non-structural
- Levees/floodwalls
- Upper basin storage
- Retention/controlled field runoff
- Diversion channels
- Combinations
 - Diversions and Levees
- Various levels considered
 - 10,000 to 45,000 cfs capacity diversions
 - Up to 1-percent chance levees
 - Levees unable to achieve 1-percent level of risk reduction



Why the Diversion?

- What does the diversion do?
 - Benefits ~200,000 people
 - Provides benefits to more than 70 square miles of existing infrastructure
 - Provides safe and reliable flood risk reductions
 - Minimized loss of life
 - Significantly minimizes economic damages
 - The best possible engineering solution
 - The diversion plan is the **safest and most reliable plan** for existing infrastructure and population centers



Public Involvement

During feasibility study - 51 Public meetings held to inform and gather input from Nov 2008 to Jun 2011

Additional Public Meetings

- Feb 2011 - North Dakota Farm Bureau
- Sept 2012 – Post-Feasibility Analysis
- June 2013 – Environmental Assessment
- Aug 2013 – MN Upstream



Upstream Meetings

- Dec 2010 - Bennett Elementary
- Mar 2011 – Kindred High School
- May 2011 – Kindred High School
- May 2011 - Richland and Wilkin Counties
- May 2011 - Comstock, MN
- Feb 2012 – Walcott Township ND and Comstock, MN
- Mar 2012 - Richland and Wilkin Counties
- Jan 2013 – Bennett Elementary (Oxbow, Hickson, Bakke – individual landowner meetings)
- Apr 2013 – ND Upstream Individual Meetings



Resource Agency Coordination

30+ meetings held with Resource Agency Team over the life of the project:

- Federal
 - USFWS
 - FEMA
 - EPA
 - FAA
 - NRCS
- State
 - MNDNR
 - MPCA
 - MNBWSR
 - MNDOT
 - ND G&F
 - NDSWC
 - NDDOH
 - NDDOT
- Local
 - Fargo
 - Moorhead
 - Cass Co., ND
 - Clay Co., MN
 - SE Cass WRD
 - BRRWD



Feasibility Summary

- Study was detailed, methodical and complete – it meets or exceeds all Federal standards and identifies the best plan for the Fargo-Moorhead region.
- Cost - \$22,550,000 (\$11,448,500 Federal, \$11,101,500 non-Federal)
- The **Corps recommended only one plan** – a diversion built in North Dakota with upstream staging
 - The recommended plan was supported by: The City of Moorhead, Clay County, Buffalo-Red River Watershed District , City of Fargo, Cass County, and Cass County Jt. Water Resource Board and transmitted to the Corps via letter dated April 2, 2011.
- All projects have impacts – the goal is to minimize those impacts.



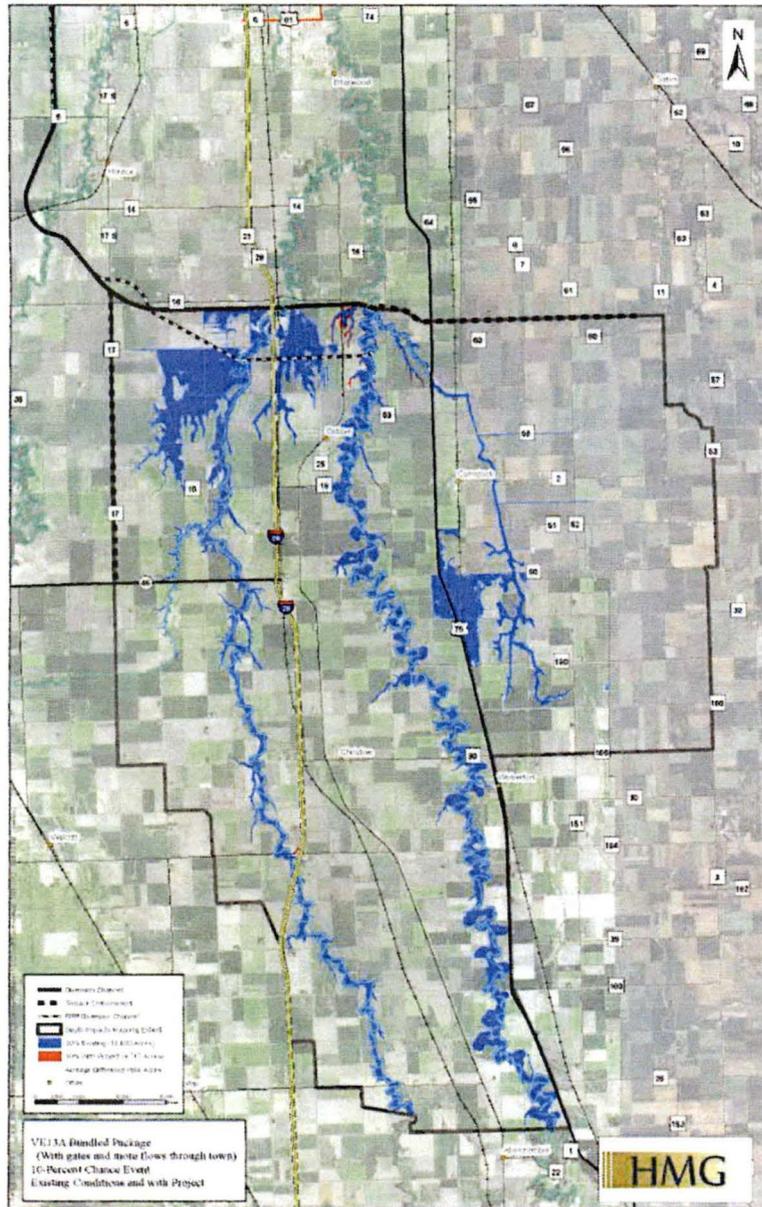
Reduction of Impacts

- Included a ring levee for Oxbow-Hickson-Bakke, preventing a community-wide buyout of 196 homes
- Moved southern alignment of the Diversion north by one mile.
 - Reduced impacts to Richland and Wilkin counties
- Added gates to the Diversion Inlet.
 - Reduced staging elevation and provide better control of flow
- Increased levee heights within Fargo-Moorhead
 - Reduced frequency of Diversion use to only operate in flood events greater than a 10-year flood (35 feet at Fargo gage)
 - Diminished potential for summer flooding upstream and damaging standing crops
 - Reduced duration of staging water



10-Year Flood Operation

- No Project Operation Under 10-Year Flood Event
- 10-Year Flood Event = 35' at Fargo Gage
- Project would not have operated during a historic summer events (1975, 2005, 2007, 2009)



Impacts and Mitigation

Cover:

- Determination and definition of Staging Area (red box)
- Mitigation for Staging Area
- Impacts outside the Staging Area (red box)
- Richland County Inundation - October 2012

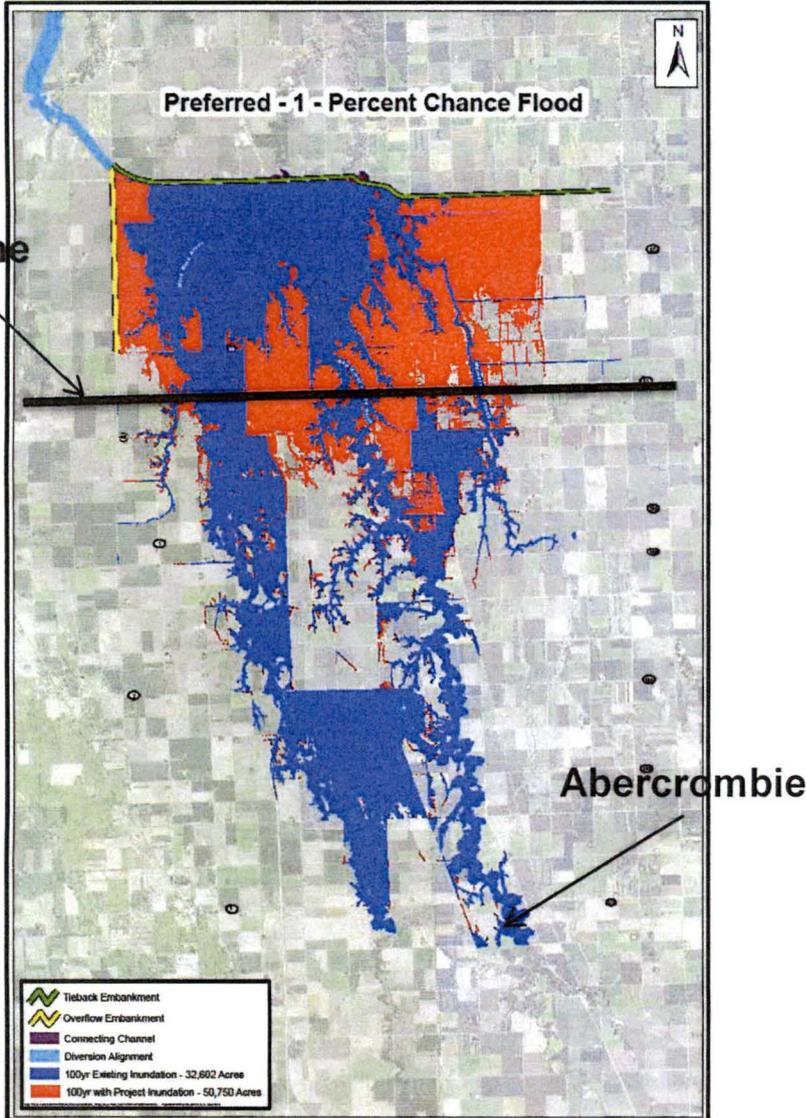
Notes:

- Information based on Supplemental Environmental Assessment dated Sept 2013.
- Hydraulic model undergoing refinements
- Structure counts being updated
- No major changes to Project are anticipated



Upstream Impacts - 1% (100-year) Event

100-yr Existing Conditions and with Project



- Defined area
- Ability to mitigate for impacts
- Impacts on an estimated 800 structures upstream (~ 387 residential)
- Virtually eliminated all downstream impacts
- Blue: flooded without-Project
- Red: Flooded with Project in place



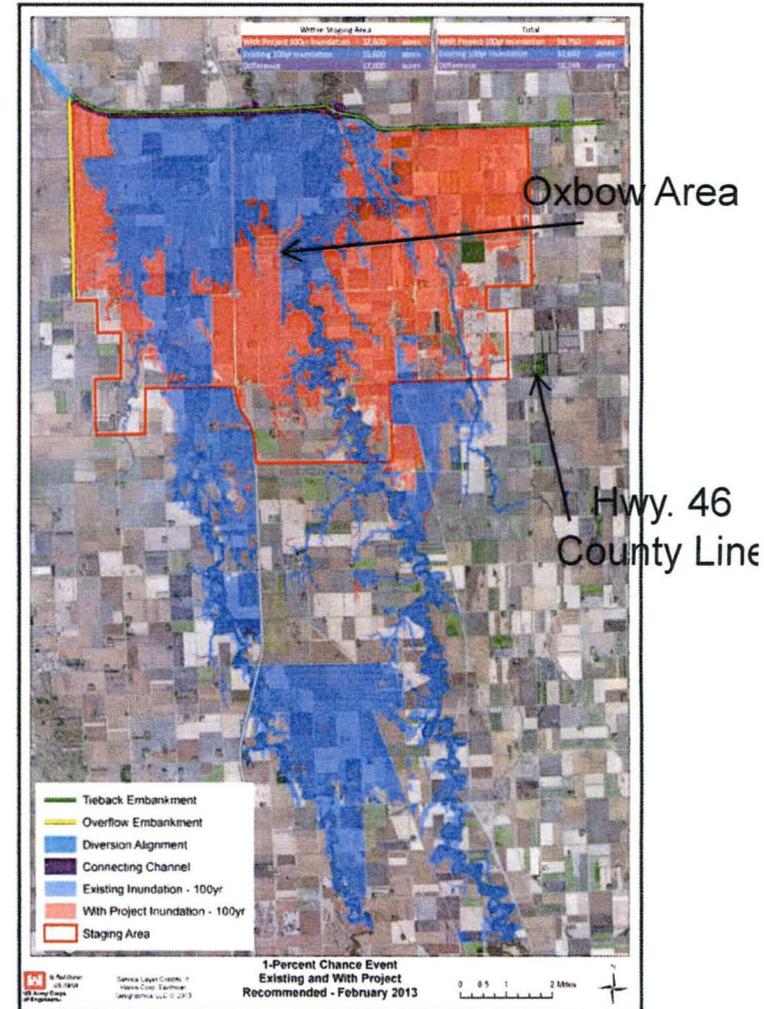
Upstream Impacts - 1% (100-year) Event

- Majority of land outside Staging Area flooded without a project in place
- Vast majority of impacts are located within Staging Area and will be mitigated

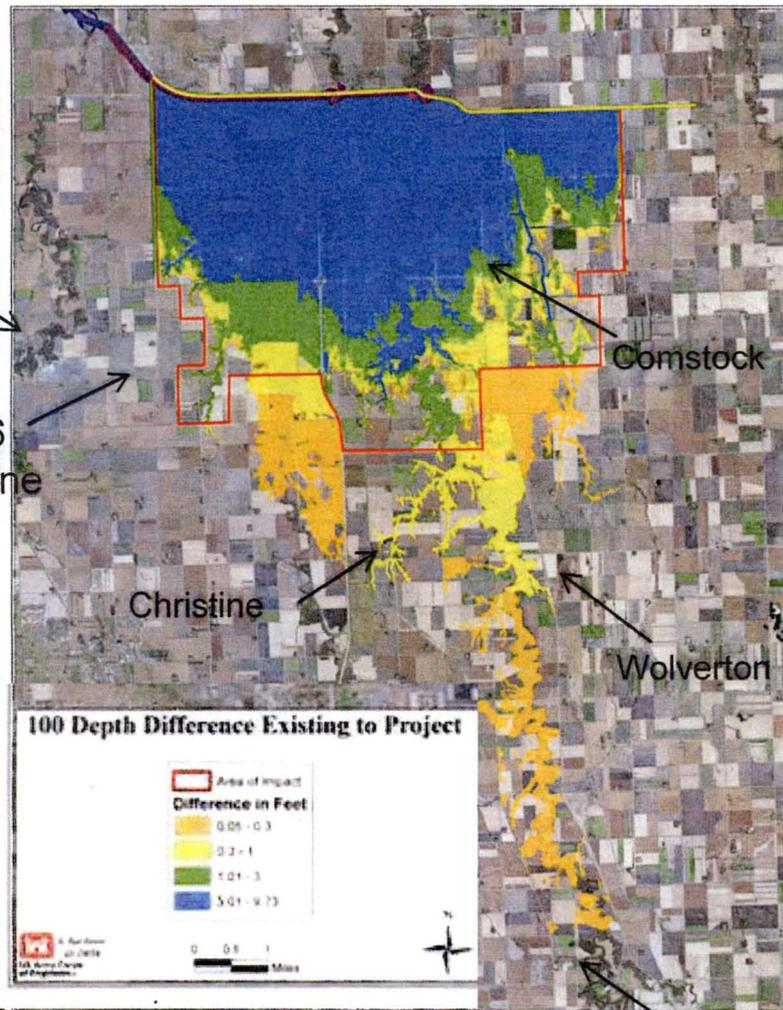
	Within Staging Area (ac.)	Outside Staging Area (ac.)	Total (ac.)
With Project	32,600	18,150	50,750
Existing (blue)	15,600	17,000	32,600
Difference (red)	17,000	1,150	18,150
% inundated under existing conditions	48%	94%	64%

Location	Stage Increase (Inches)
Upstream Diversion	89.6
Oxbow	70.1
Hickson Gage	58.1
Cass/Richland County Line	35.9
Abercrombie	0.5

100-yr Existing Conditions and with Project



Staging Area Definition -100-year Event



- Staging area (red box) captures impacts caused by the project that are **greater than 1 foot** (green color). Impacts outside the red box are 1 foot or less (yellow).

- “Staging Area encompasses the area where the 1%-chance with-project pool elevation is increased by 1 foot or more and needs to be protected from encroachment to preserve operability of the Project”

- Areas outside the staging area could be filled and raised without affecting the storage volume needed for project operation



100-yr Project Impact Map

Abercrombie

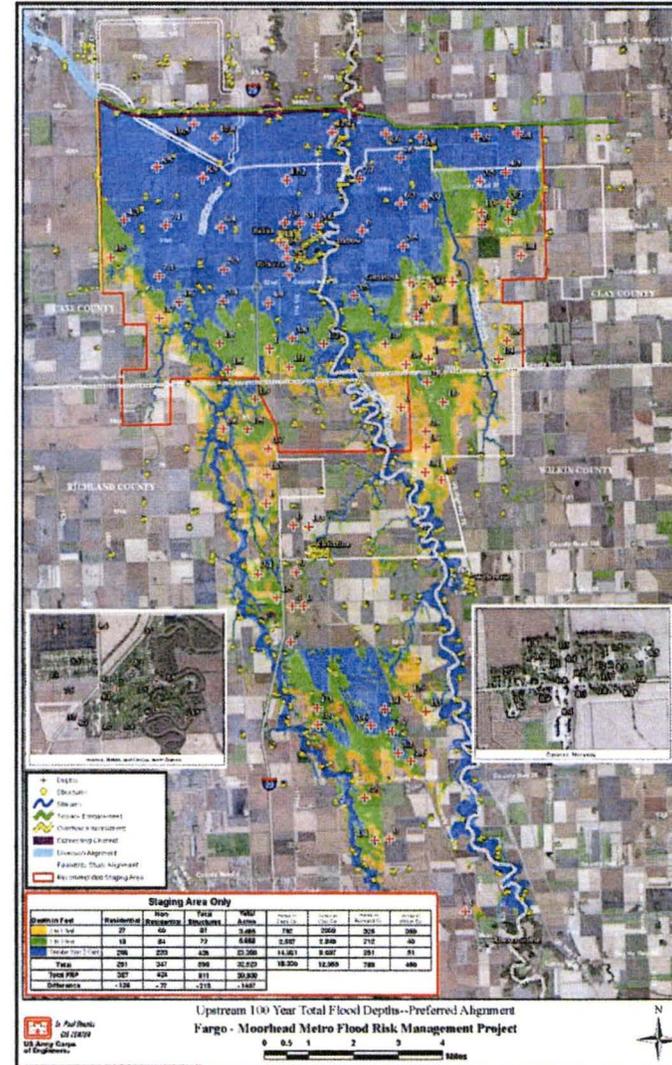


Staging Area Mitigation -100-year Event

Federal Plan:

Based on total depth of water, with Project:

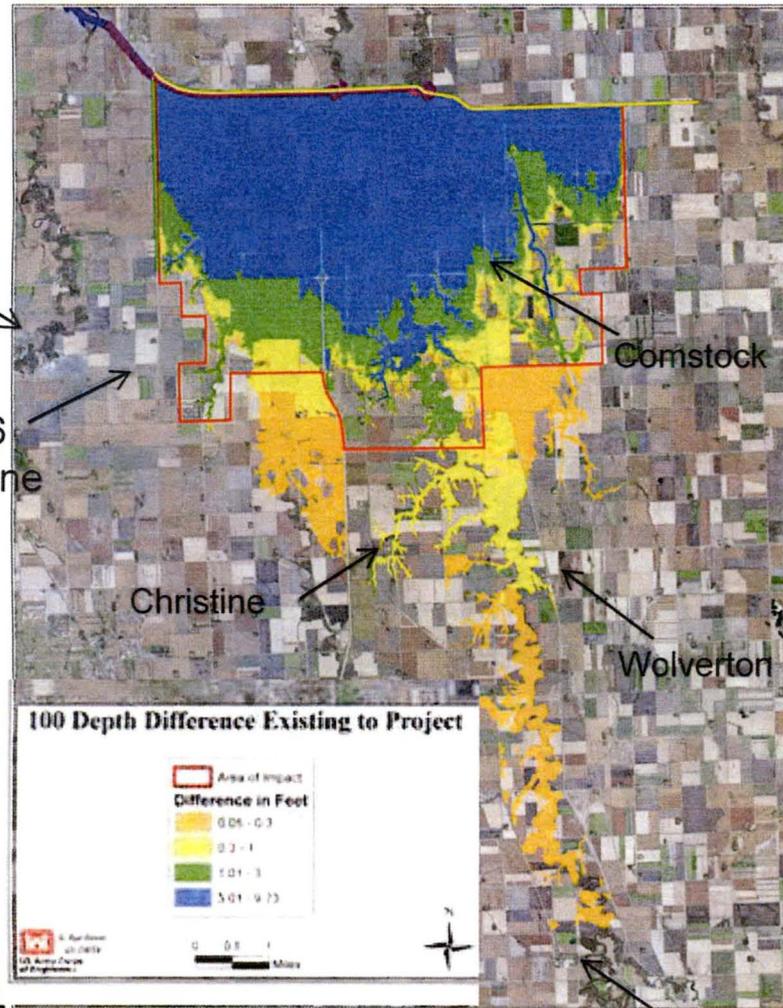
- **Farmland:** Flowage Easements
- **Structures:**
 - 0 to 1 foot – Flowage Easement only
 - 1 to 3 feet – Ring levee or Buyout
 - Greater than 3 feet – Buyout
- **Communities – Ring Levees**
 - Oxbow/Hickson/Bakke
 - Comstock



100-yr Total Depth w/Project Map



Mitigation Outside Staging Area?



- Takings analysis performed on a property-by-property basis
 - Consider depth, duration, frequency
- Impacts are 1-foot or less and infrequent. Occur in the Spring.
- Additional duration of flooding=2-3 days on most farmland.
- Most impacted area inundated under existing conditions
- Can still farm
- Area is not required for project storage
- If mitigation required, would consist of a Flowage Easement. Would restrict land use unnecessarily.

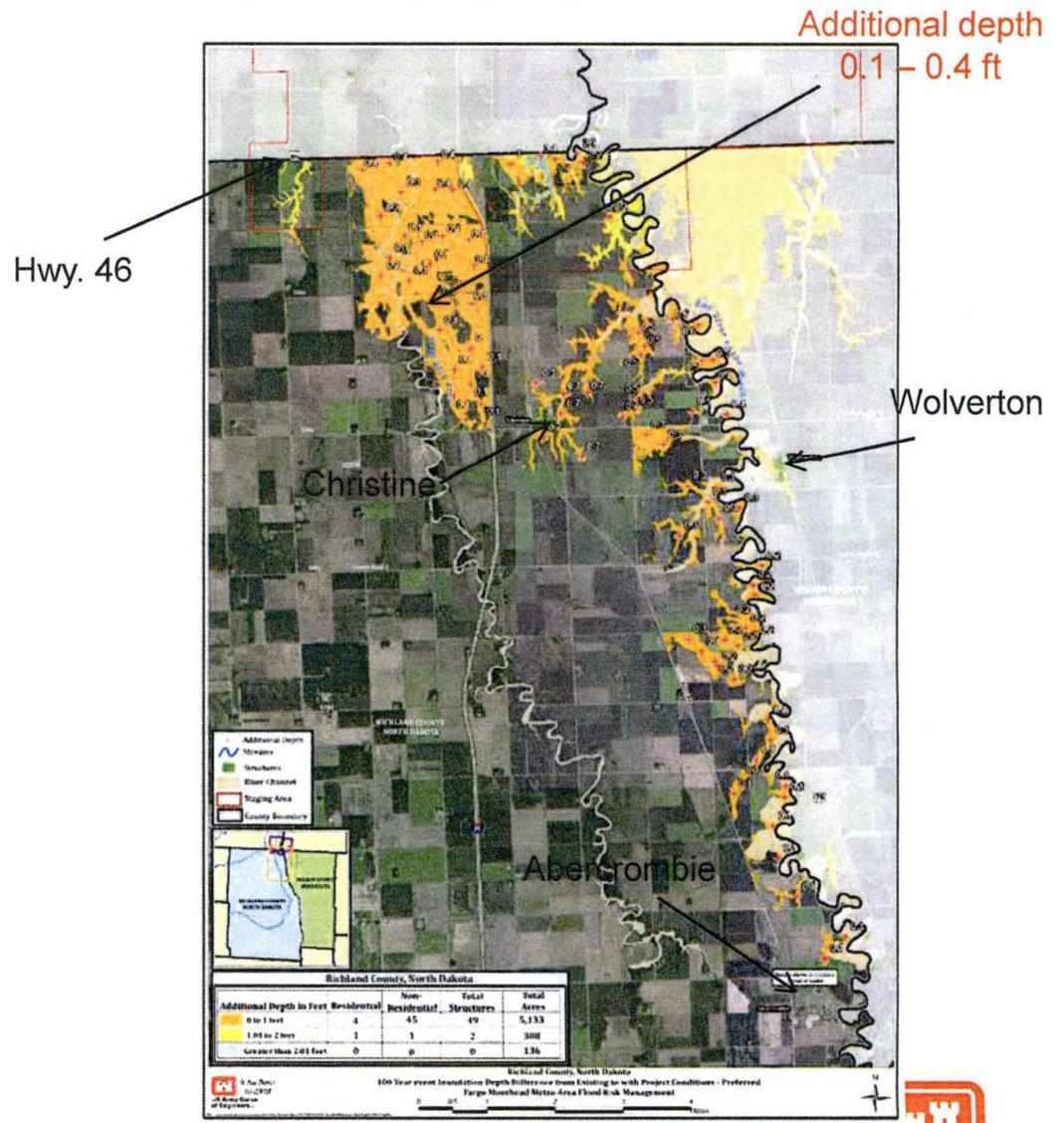
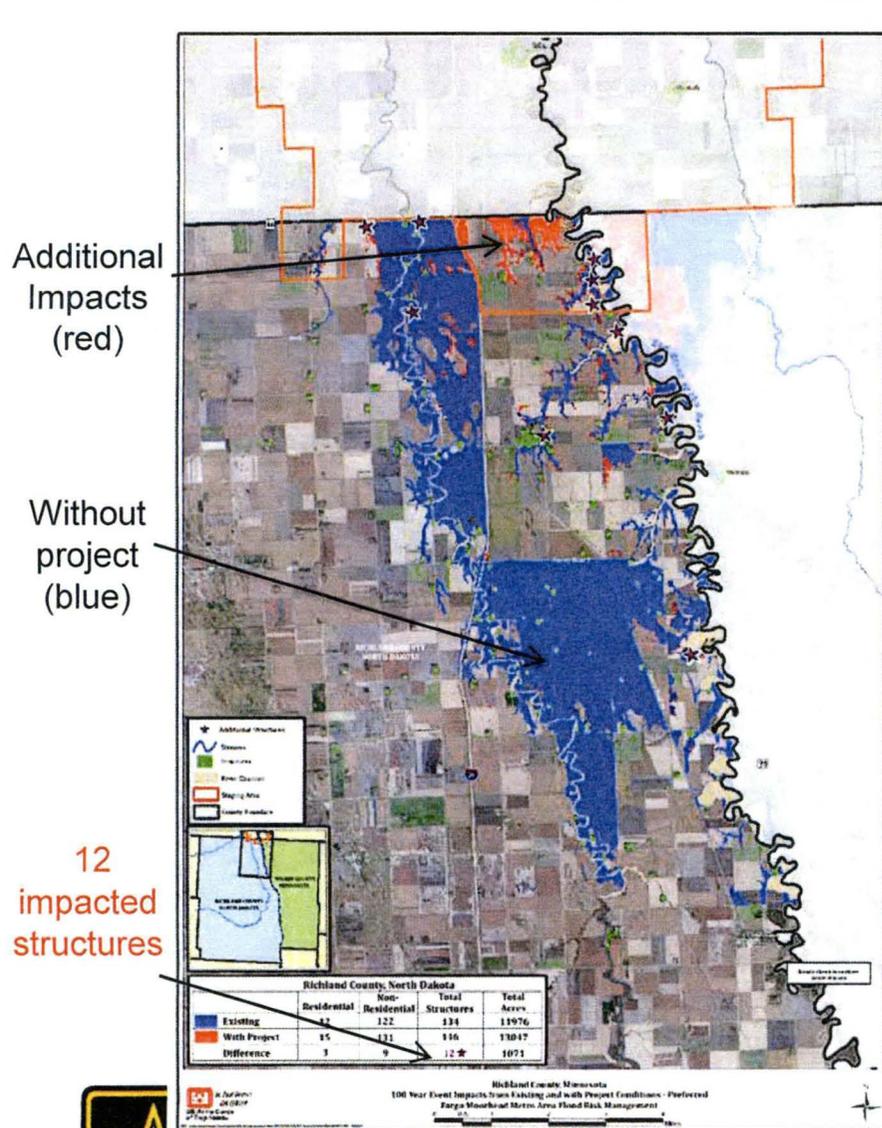


100-yr Project Impact Map

Abercrombie



Richland County 100-year Event



Existing Conditions and with Project

Project Depth Impacts



Richland County – 100-Year Event

	Residential	Non-Residential	Total Structures	Total Acres
Without Project	12	122	134	11,976
With Project	15	131	146	13,047
Additional Impacts w/Project	3	9	12	1,071

- 3 Residential Structures and 1071 acres impacted at 100-yr event that wouldn't be under existing conditions
- Vast majority of additional-depth impacts to structures and acres are between 0 and 1 foot
- Maximum depth increase of 3 ft applies to low ground at very downstream extent of the county
- This is for a large, infrequent events.
- No project impacts during 10-year event
- Additional duration of flooding on most farmland approximately 2-3 days



Drainage, Stage and Duration

- Runoff from local drains will typically occur prior to peak flows on the Red and Wild Rice rivers, which will reduce impacts caused by the Project
- Peak stage increase caused by the Project for the Wild Rice and Red rivers in Richland County would occur at the Cass/Richland County line and diminish proceeding upstream
- Same statements apply to Clay and Wilkin Counties
- Stages on the Sheyenne River in Richland County will not be impacted by the Project
- In Wilkin County and Richland County the duration of additional flood inundation on higher ground will typically be 3 to 5 days with the Project; lower ground near the river could see water for an additional 5 to 10 days
- In Cass County and Clay County the duration of additional flood inundation on higher ground will typically be 5 to 9 days with the Project; lower ground near the river could see water for an additional 10 to 12 days



Impacts and Mitigation Summary

- All Projects have impacts - the goal is to minimize impacts and mitigate them fairly in accordance with Federal requirements.
- A vast majority of impacts caused by the Project are located within the Staging Area and will be mitigated
- Impacts outside the Staging Area are:
 - 1 foot or less
 - Infrequent
 - At a relatively short duration
 - Likely to occur during the Spring months
 - On land flooded under existing conditions.
- Sponsors exploring mitigation in excess of Federal plan



Sponsors Considering Additional Mitigation

- Replacement Income (Crop Insurance)
 - NDSU's Agribusiness Department has been contracted to develop a plan to mitigate the impact on farmland
- The Diversion Authority has committed \$25 million to develop upstream retention projects
- Exploring mitigating insurable structures within the limits of remapping per FEMA

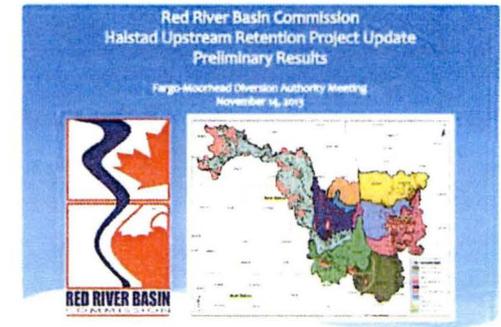


Other/Ongoing Studies



Retention Has Been Evaluated

- Upstream Retention was evaluated in the Federal National Environmental Policy Act (NEPA) documents
 - Stand Alone and in Combination
 - Compared to the upstream staging area
 - Numerous Concerns:
 - Less cost effective than a diversion
 - Less reliable
 - Difficult to implement
 - Would impact more people, land and farming operations
 - **Not certifiable as stand alone or in combination with a levee plan**
 - Increased safety concerns in combination with levee plan
 - Distributed storage would increase the risk of catastrophic flooding from extreme events.
 - Cannot effectively replace the Project's Staging Area



Retention Studies

- FM Upstream Phase 1 Report, Sept 9, 2005
- RRBC HUR Study, March 2014
- MnDNR Dec 2014: Draft EIS Distributed Storage Alternative (DSA) report:
 - “DSA is not a feasible or practical alternative”
 - Only remaining alternatives include a diversion w/upstream staging

- Consistent Conclusions:
 - The diversion is needed to meet flood risk reduction goals for Fargo-Moorhead
 - Addition of upstream retention would not substantially improve the performance of the Project



Waffle Plan was Considered

- Would not substantially reduce flood risk to FM area
- Costly and difficult to implement
- Not an effective/efficient/feasible alternative
- Issues were identified with the Study



Mn DNR EIS

- The DNR must produce an Environmental Impact Statement (EIS) for the Project as required by Minnesota law
 - EIS started: February 20, 2014
 - Draft EIS for public review: early July 2015
- EIS examining five (5) Alternatives, including the Federal Project and Two No Action Alternatives
- Examining entire upstream area
- Learn more about process/scope at:
http://www.dnr.state.mn.us/input/environmentalreview/fm_flood_risk/index.html



Cemetery Study

■ Impacted Sites - Staging Area

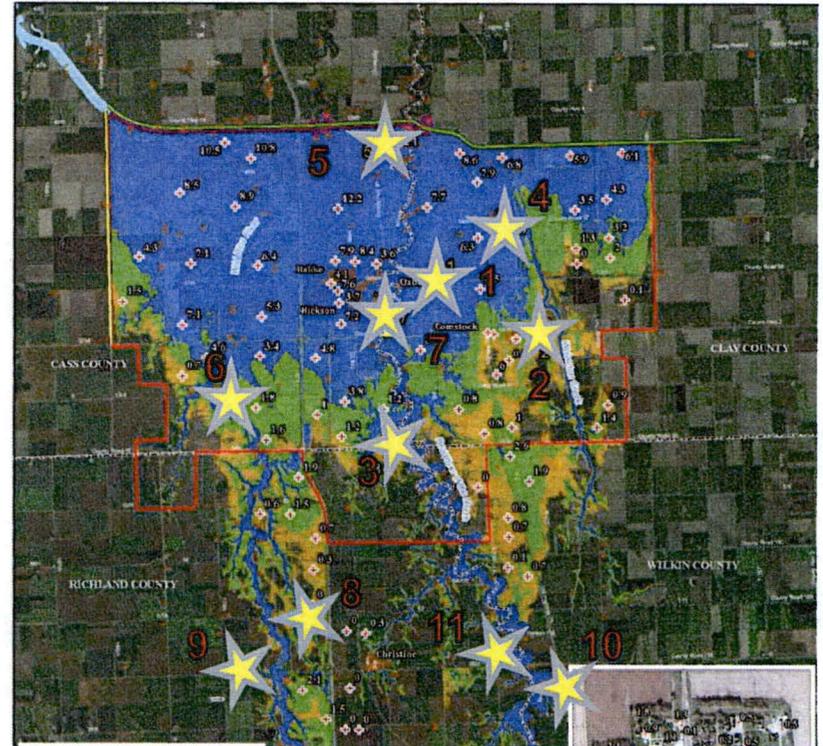
- 1 - Clara (Clay County)
- 2 - Comstock (Clay County)
- 3 - Hemnes (Richland County)
- 4 - Hoff (Clay County)
- 5 - Lower Wild Rice and Red River (LWRRR) (Cass Co.)
- 6 - North Pleasant (Cass Co.)
- 7 - Roen Family (Clay Co.)

Additional-depth impacts range between 0.3 ft. and 8.3 ft.

■ Impacted Sites – Upstream

- 8 - South Pleasant (Lium)
- 9 - South Pleasant Church
- 10 - Wolverton-Salem Lutheran
- 11 - Eagle Valley

Additional-depth impacts range between 0.1 ft. and 0.5 ft.



Cemetery Study

- 185-page Study is available to the public on www.fmdiversion.com
 - Presents impacts to sites
 - Potential mitigation options
- Next Steps
 - Develop a Mitigation Plan by June 2015. Alternatives considered:
 - Protective berms
 - Debris fencing, anchoring headstones
- 8 of the 11 cemeteries impacted flood under existing conditions
- 19 cemeteries currently prone to flooding will be protected by the Project



Cemetery Study

Fargo Moorhead Metropolitan Area Flood Risk Management Project



U.S. Army Corps of Engineers
St. Paul District
June 2014



DEPART
ST. PAUL, MN
SERIES
NO.

Regional Planning and Environment Divi

Dear Mr. [REDACTED], Lower Wild Rice a

After the Supplemental Environmental As
Risk Management Project (Project) was fi
Army Corps of Engineers (Corps) and the
gathered information on cemeteries on bot
in the north to Abercrombie, North Dakot
purpose of the cemetery study was to get
benefits to cemeteries in the region, to ide
to offset Project impacts, and to form a ge
associated with regional cemeteries. Sour
North Dakota Department of Health's Cer
Geological Survey 7.5' topographic maps
ground surveys. Despite the thoroughness
cemeteries that were not identified, but th
identified.

Fifty-three cemeteries were identified duri
area, and 15 upstream of the staging area,
along the Maple River upstream of the Pn
channel alignment near Horace, North Da
photograph, and analyze each cemetery. 3
has been identified in the staging area, bringi
total there to 7 cemeteries and the grand total
to 54 cemeteries. Eleven of the 54 cemeteries (the 7 in the staging area and 4 upstream of the
staging area) will potentially be flooded or flooded deeper with the Project in place than they
would be under existing without Project conditions.

The enclosed Cemetery Study report lists (1) current and potential impacts to the cemeteries
from flooding, (2) current and anticipated clean-up efforts after flooding, and (3) mitigation
options to remedy or prevent potential Project-related impacts. This information was acquired
during telephone and on-site interviews with funeral directors and cemetery representatives from
15 of the 54 cemeteries. The report provides tables with information on each of the 54
cemeteries, with separate tables for cemeteries in the staging area, for those upstream of the
staging area, and for those in the benefitted area. There are also maps and photographs showing



Summary

- The Corps Feasibility Study was detailed, methodical and complete - it meets or exceeds all Federal standards and identifies the best plan for the Fargo-Moorhead region.
- The diversion plan is the safest and most reliable plan.
- The diversion plan is the only feasible way to provide 100-year certifiable flood risk management to the Fargo-Moorhead metro area.
- The Project was authorized for construction by Congress in June 2014.
- All Projects have impacts - the goal is to minimize impacts and mitigate them fairly in accordance with Federal requirements.



Diversion Authority Website

Fargo Moorhead Diversion

Search for: Search

SITE MAP | CONTACT US | HOME

PROJECT STATUS ABOUT THE PROJECT ABOUT THE AUTHORITY NEWS VIEWPOINTS CALENDAR LIBRARY LINKS COMMENTS

About the Project

This description of the diversion plan focuses on the recommended Federal plan (also known as the Locally Preferred Plan). For full details, read the [Final Feasibility Report and Environmental Impact Statement, July 2011](#).

THE DIVERSION IN DEPTH

Flooding in the Red River Valley has become increasingly severe and frequent. It threatens our viability and quality of life for the entire region. In fact, during times of severe flooding, the potential damages alone to the Fargo-Moorhead area are estimated at more than \$194 million a year without a flood diversion that includes upstream staging and storage.

A three-year study led by the Corps of Engineers, and also involving local engineering firms, looked at many options; including levees, floodwalls, retention, etc.; and found the current diversion plan is the only concept that would significantly reduce flood risk in the Fargo-Moorhead area from flood events larger than the flood of 2009.

The alignment of the 20,000 cfs diversion channel with upstream staging and storage would start approximately four miles south of the confluence of the Red and Wild Rice Rivers and extend west and north around the cities of Horace, Fargo, West Fargo and Harwood. It ultimately would re-enter the Red River north of the confluence of the Red and Sheyenne Rivers near the city of Georgetown, MN. Along the 36 mile path it would cross the Wild Rice, Sheyenne, Maple, Lower Rush and Rush rivers and incorporate the existing Horace to West Fargo Sheyenne River diversion channel.

The basic North Dakota alignment remained the same as in the earlier screening phase, except where it was adjusted northwest of Harwood, ND to avoid Drain 13. Some significant design changes were made for the recommended Federal plan, including the addition of staging and storage, along with optimization of the channel cross section. The plan includes 19 highway bridges and 4 railroad bridges that cross the diversion channel.

The channel capacity was modified from previous phases to account for the storage and staging areas that were included. The inclusion of these areas allowed for the capacity of the diversion channel to be reduced to approximately 20,000 cfs. The diversion channel was designed to keep the 1-percent chance event flood flows below existing ground in the diversion channel as much as possible to limit impacts to drainage outside the channel.



The Need for the Project

Learn why the Fargo Moorhead Diversion is critically needed. [Click Here](#)

Project History

Learn about how this project came about. [Click Here](#)

Project Timeline

View a timeline for the project. [Click Here](#)

Mitigation

Learn about Project Mitigation. [Click Here](#)



Frequently Asked Questions

Find answers to commonly asked questions and learn about common misconceptions about the project. [Click Here](#)



<http://www.FMDiversion.com>



Energy and Natural Resources Committee Members:

SB 2076
lol
1-30-15

Thank you for taking time to review information from North Dakota State University and the Army Corps for S.B. 2076. North Dakota residents of the areas impacted by the project have sat through countless hours of reviews and studies. After all this time, we have no indication of estimated project impacts on our farms, schools, homes and communities. The Corps has quantified the hydrologic impacts of the project, but relies on the local sponsor for economic mitigation. Of critical concern for us are impacts outside the "red box" that the Army Corps exempts from their study. NDSU is currently involved in studying agricultural impacts within the "red box", and provides a reasonable and low cost means to address areas outside it as well. The State of North Dakota has said they will financially support the project if it receives a federal construction grant. As part of that process the Diversion Authority promised the last legislative session that a plan would be in place by now to compensate our communities, but so far it hasn't happened. This bill does not ask the Corps to change the project or delay it, it only asks that a study be sponsored to tell local residents what its impact will be to them.

Thank You.

PROPOSED SB 2076

1.1
1/30/15

1 A BILL for an Act to provide for a study on the impact of the Fargo diversion project.

2 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

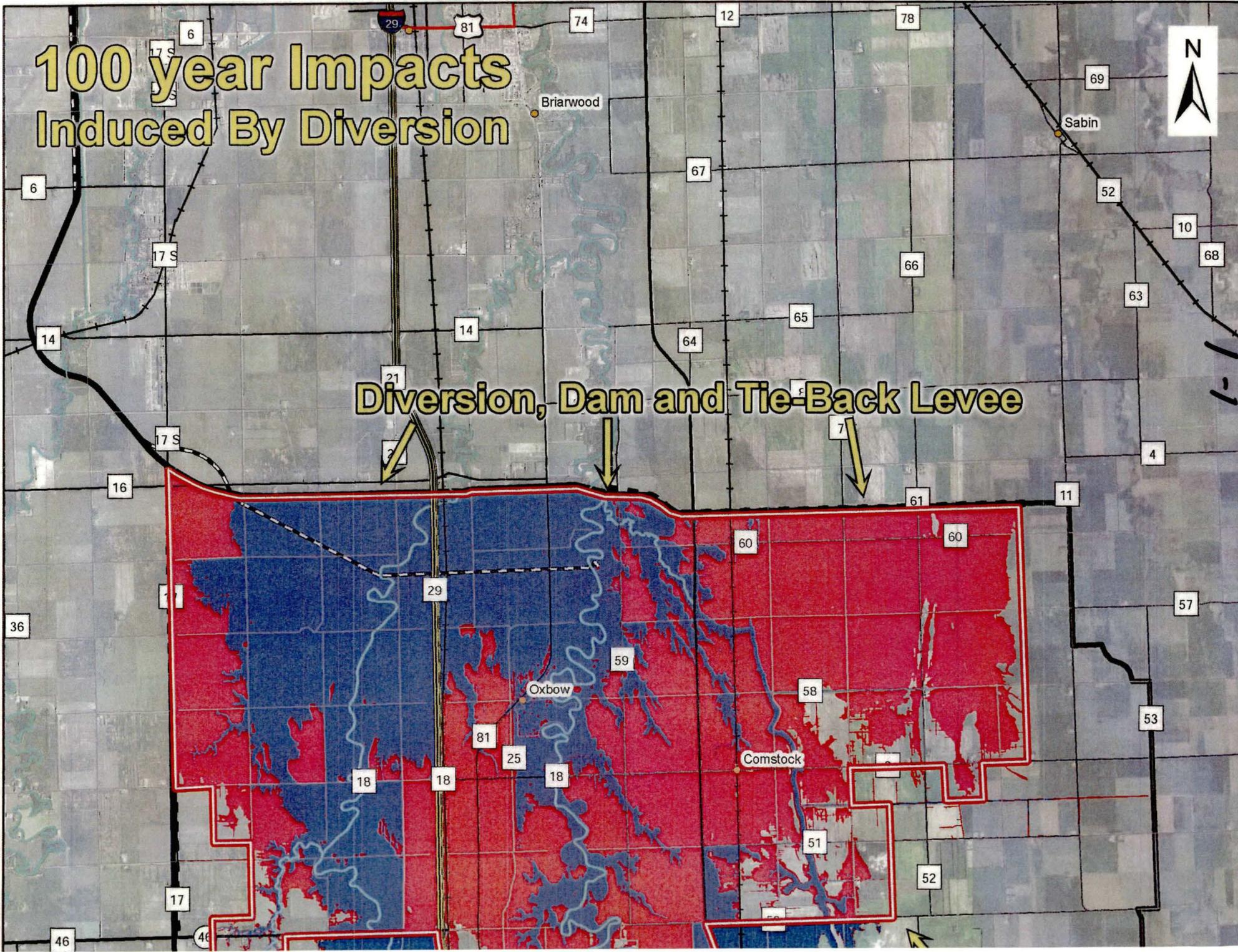
3 **SECTION 1. State water commission study of Fargo diversion project.**

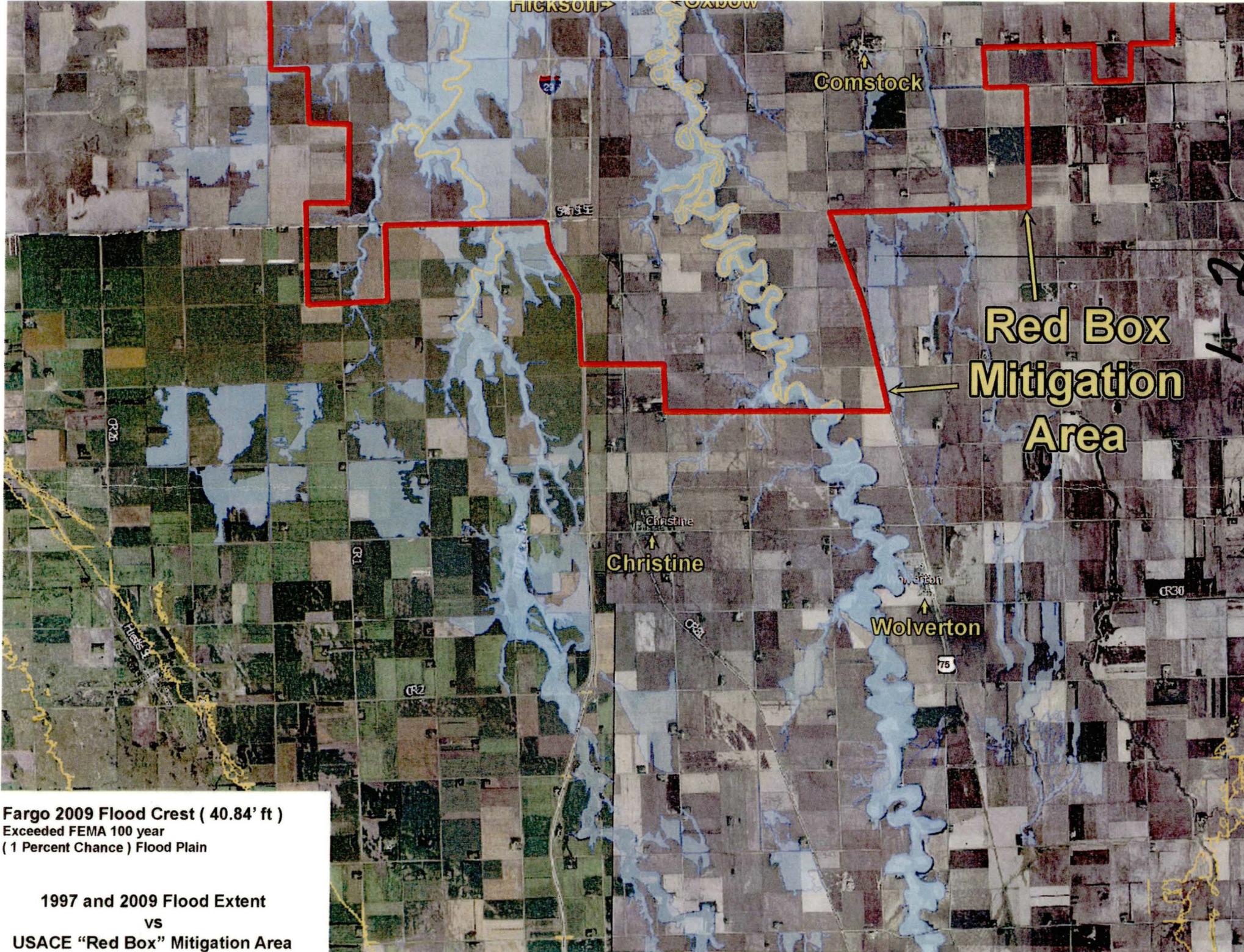
4 During the 2015-16 interim, the state water commission shall contract with
5 North Dakota State University to expand the scope of its existing ~~for a~~ study
6 of the impact of the Fargo diversion project ~~and review retention as an~~
7 ~~alternative to diversion.~~ The expanded study must focus on the impacts in the
8 area outside the area recognized by the army corps of engineers for which
9 mitigation is required. The expanded study must include the effect of
10 diversion on the price of crop insurance, the sale and rental price of land, the
11 taxable valuation of property, and schools, fire protection, townships, and
12 counties from changes in taxable valuation. The expanded study must
13 determine the impact on business, communications, historical areas, and
14 schools. ~~The study also must determine the buildings and structures that will~~
15 ~~need to be ring-diked and estimate the cost of ring dikes, including ring dikes~~
16 ~~for churches and cemeteries. The study must include a plan to provide~~
17 ~~access to emergency responders in case of a flood and the cost of the~~
18 ~~access.~~ The expanded study must be completed during the 2015 - 16 interim
19 and the state water commission shall present a report of the
20 ~~completed~~ expanded study to the legislative management's water topics
21 overview committee.

2-10-13 SB2076 #1

100 year Impacts Induced By Diversion

Diversion, Dam and Tie-Back Levee





Fargo 2009 Flood Crest (40.84' ft)
Exceeded FEMA 100 year
(1 Percent Chance) Flood Plain

1997 and 2009 Flood Extent
vs
USACE "Red Box" Mitigation Area

Red Box Mitigation Area

Red Box Mitigation Area

Diversion Induced Flooding

1-3

Path: Z:\17400\4238\12_7439_005\GIS\12_12_12 Upstream_options\Upstream_options - VE13 OptA.mxd 7/30/2012 11:25:26 AM (enelson)

- Diversion Channel
- - - Tieback Embankment
- FRP Diversion Channel
- ▭ South Impacts Mapping Extent
- 1% Existing (32,602 Acres)
- 1% With Project (54,472 Acres)
- Acreeage Difference=21,870 Acres
- Cities

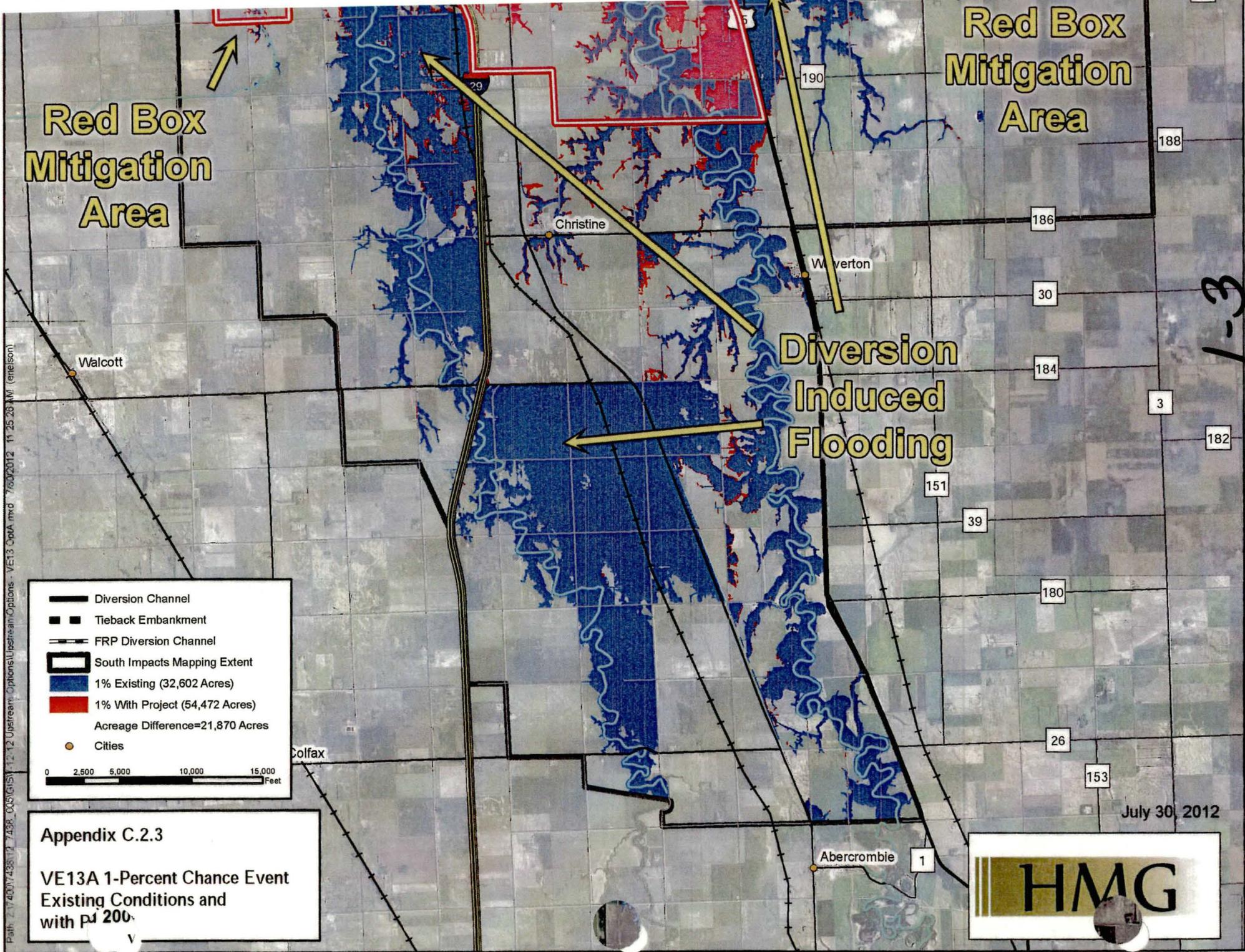
0 2,500 5,000 10,000 15,000 Feet

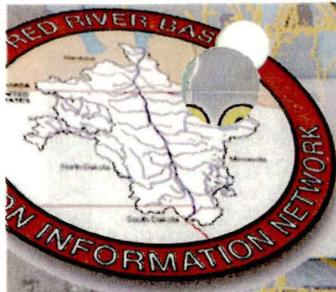
Appendix C.2.3

VE13A 1-Percent Chance Event Existing Conditions and with p1 200



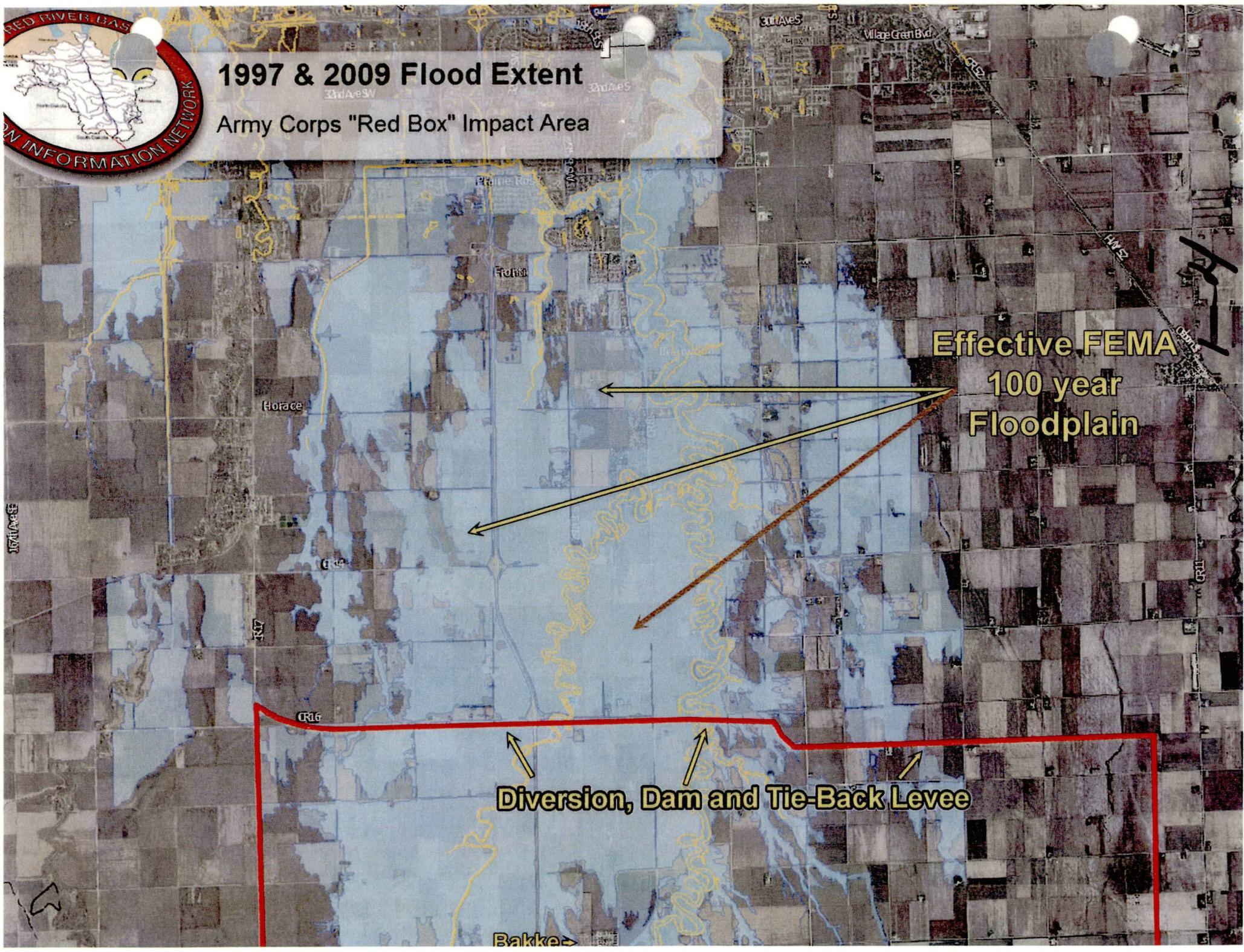
July 30, 2012





1997 & 2009 Flood Extent

Army Corps "Red Box" Impact Area



**Effective FEMA
100 year
Floodplain**

Diversion, Dam and Tie-Back Levee

February 6, 2015

#2
5-10-15

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2076

Page 1, line 1, after "A BILL" replace the remainder of the bill with "for an Act to provide for a study on the impact of the Fargo diversion project; and to provide a report to the legislative management.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. STATE WATER COMMISSION STUDY OF FARGO DIVERSION PROJECT. The state water commission shall contract with North Dakota state university to expand the scope of the university's existing study of the impact of the Fargo diversion project. Upon receipt of detailed hydrology modeling data from the F-M area diversion authority, the university shall begin the expanded study. The expanded study must focus on the impacts in the area outside the area recognized by the army corps of engineers for which mitigation is required. The expanded study must include the effect of diversion on the price of crop insurance; the sale and rental price of land; the taxable valuation of property; and schools, fire protection, townships, and counties. The expanded study must determine the impact on business, communications, historical areas, and schools. The state water commission shall provide to the legislative management's water topics overview committee periodic reports on the status of the study, the status of the final report, and the report of the completed expanded study."

Renumber accordingly

1

#3

Testimony in support of SB 2076

Jim Dotzenrod, District 26, ND State Senate

February 10, 2014

SB 2076 asks the State Water Commission to contract for a study of the impacts of the Fargo diversion project and to look at alternatives to the project plan that is currently in place.

I call your attention in particular to the impacts listed on lines 9 and 10.

Like many big water projects, this one creates winners and losers. There will be a flood protection benefit to Fargo, West Fargo, other cities and their residents. This is a needed benefit and enjoys a high level of support in the state and in the legislature. This flood protection benefit comes a high cost and sacrifice to the people and property South of the diversion. There is a long held legal and moral principle that those who are making the sacrifice (such as those listed in SB 2076) will be made whole again by those who are enjoying the benefit. One of the reasons that I thought SB 2076 was a good idea is because those impacts listed in the bill have been brushed aside and not confronted by any of the work that I have seen so far on this project. They have been referred to generally (and that is what I expect you will hear today), but not specifically as they should be at this stage of the project.

I expect that this morning you will hear over and over again an argument or line of reasoning from the opponents of SB 2076 that we have all that information, we don't need another study, we have been working on this for years and this is just some kind of delaying tactic from those who are continually opposed to anything that supports the project.

It is my hope that the members of this committee will upon hearing these attempts to brush aside the question of dealing with these upstream impacts will ask the opponents of this bill to explain to your committee, as a matter of record, with the tape running and in writing just how they plan to make the interests of those who are sacrificing greatly whole again. The answers they provide to this committee should be listed individually and specifically on each of the impact items listed in the bill.

Based on everything I have seen and read on this matter they will again resort to dismissing these concerns as something not to worry about, they have got this covered, it is in the plans. I expect the committee to pursue this matter beyond generalities and make it clear that the expectation of your committee and the legislature is that those giving up home, farmland, community, businesses, burial sites of their parents and family members need specifics in writing, not verbal assurances which all they have gotten to this point.

In so many ways it seems almost inconceivable that a project of this size could be this far along with large scale upstream impacts and an expectation that some people will be expected to give up most of what they have labored for over a lifetime without the proponents providing the kind of impact information called for in SB 2076.

I urge a DO PASS on SB 2076

3.1

Senate Bill 2076

2/

My name is Wayne Ulven. Our farmstead has been in our name for five generations. My son is the fifth generation to live in the same house. We have had three major floods that I would like to compare. 1969 flood, 1997 flood, and 2009 flood. All three had about the same amount of concern for me before the spring thaw. The difference between 69 and 97 flood was the construction of 1-29 in 1972, which became a dam that slowed down the water and backed up the river stream. We lost the basement of our home, barn with small pigs, and many family items. If 1-29 had not been in place we would have had about the same damage as 69 which was none, except for inconveniences. In 2009 the water level of the flood was 2 feet higher than the 97 flood at the Galchutt bridge, which is about eight miles upstream on the Wild Rice River. When the crest reached our farmstead the water level was only five inches higher, not two feet higher. We had diked our homestead by this time and all was saved. The Wild Rice River had gone across to the Red River in three areas between Galchutt and our farmstead. This overland flooding saved us from at least an additional 1.5 feet of flood water. If the Diversion data is correct, they estimate the diversion levy, will raise the level of the Red River at Abercrombie by two feet. If that happens we will not have any overland flooding from the Wild Rice to the Red River, due to the fact both Rivers will be at the same level. All land between the Red and Wild Rice River will be subject to a greater level of flooding. Our dikes at home, which we built after the 97 flood, will not be sufficient to protect our farmstead. This is one instance that shows why we need an independent study on the areas upstream, which are not in the red zone. Arkansas courts have stated, that areas such as where we live outside the red zone, can only receive compensation after a major flood occurrence through litigation. The litigation chain would be; Core of Engineers first, City of Fargo next, and the last option is the State of North Dakota. Litigation is expensive, this bill will produce facts that will enable the average person to make a decision, based on facts.

The taxable evaluation of the Richland School District is another concern. The area south of the Walcott Road has had zero growth since the news of the diversion. This was our growth area 5 years ago. Each home built had an average of \$1,000 of taxable evaluation and an average of 1.5 children. This amount is substantial to a small school district. The diversion studies has not estimated the taxable valuation, or population impacts of the diversion for either Richland or Kindred School Districts. This bill will produce facts that the Richland School District can use when making decisions for the district.

Facts from an independent agency is needed for all. Thank you for your consideration.

Wayne N. Ulven, Retired resident

4-1

#4

Thank you for your willingness to take a critical look at some of the impacts outside of the "red box" area that corresponds with the F-M Metro Flood Control Project that are not being addressed.

My name is Mark Askegaard. I am a member of the MNDak Upstream Coalition and am being negatively impacted by the staging area associated with the dam portion of the proposed flood control project.

I am a fourth generation farmer and graduate of NDSU. I live in Fargo and the majority of the land that I farm is located within the "red box" staging area. I serve as vice-chair of the Ag Subcommittee for the Diversion Authority and have served in that capacity since the inception of the group. Our committee's job is to address and work through the many issues that affect the agricultural community from the dam and staging area associated with the project, as well as the agricultural impacts stemming from the diversion channel itself.

This morning, I will show how the area impacted from the proposed project is significantly greater than what the Diversion Authority (DA) is willing to provide compensation for within the "red box". I will also touch briefly on a study conducted by Watts and Associates, a firm from Montana, specializing in crop insurance products, that was hired by the Diversion Authority to analyze the options to provide risk management to both landowners and farmers within the staging area. Following my testimony, Matt will discuss the initial modeling results presented to our Ag Subcommittee of the potential "losses" to the Ag community from the staging of water with the project. This study is being conducted by NDSU.

In your packets, there are 2 maps. The first map shows the land that stored water just up stream (South) from the Fargo-Moorhead area during the 1997 and 2009 flood events. These 2 flooding events were both very similar to the area where water will pool in regards to the newly adopted 100year FEMA flood plain level in Fargo, which is now 39.5'. (The 1997 flood crest was below 40' and the 2009 crest was 40'). This map shows where water naturally stores during large flood events, as indicated by the blue shading. As you can see, most of the impacted land is north of and within the "red box" area on the ND side of the river. There is little property south (upstream) of the "red box" which currently is impacted in a 100year flood.

The second map in your packet depicts the area impacted with the diversion/dam project in place. The area shaded in blue is land that would be inundated with the ACOE proposed definition of a 100year flood (42.4'). Some of the area shaded in blue within the "red box" is already impacted today without the project, but as you can see, there are newly impacted areas outside of the "red box" area with the project in place. The area shaded in red is newly impacted land from the project that will receive compensation if it is within the "red box". With the project in place and the raised 100year flood elevations, it is clearly seen that there is more area shaded in blue that is now located within the 100year flood plain. This newly introduced area to the flood plain will receive no compensation for being outside of the "red box". (The DA has said that they will provide compensation to landowners who have 12" or more of water impact to their property---any place within the "red box" or approximately 32,500 acres). Under this scenario, the total impacted acres with the project implemented are 54,472. Existing area impacted without the project under this scenario is 32,802, for a difference of 21,670 acres. (54,472-32,802). There is a tremendous difference between the figures that the DA is willing to provide compensation for and the true/estimated number of acres that will be impacted during a 100year flood event with the project in place. If the DA and ACOE are successful in raising the 100year FEMA number to 42.4' and implementing the project, the landowners, farmers and residents in that newly impacted area outside of the "red box" will not receive compensation.

There is no difference to a farmer or homeowner if there is 6" of water on their property or 10', they will still not be able to get into their fields or will need to take measures to protect their property. It is also important to note that with the project in place, the staging area will be utilized whenever there is a 10

4- 2

#4

year or greater event (river gauge of 35' in Fargo). This 2nd map is an accurate depiction of what the staging area will look like up to a 100 year event with the project in operation.

[Redacted] and Associates, a firm specializing in the area of federal crop insurance and risk management, was hired by the DA to do an analysis on all possible methods to mitigate risk to landowners and farmers within the staging area. The study was presented to our Ag Subcommittee by Alex Offerdahl and was entitled "Evaluation of Agricultural Risk management Options for The FM Area Diversion Project". It provided the Diversion Authority with 7 different options they could explore to provide compensation to landowners and farmers for the uninsured risks and losses that they will potentially face within the staging area. (There is no Federal Crop Insurance provided to cover potential losses for man-made events, such as the flooding that would occur in the staging area in a year that the project is implemented). These options ranged from providing a private insurance product to securing a federal insurance policy to buying flowage easements, tiling of the land in the staging area and outright purchase of the land in the staging area, the DA self-insuring or a combination of all of the above.

The final thoughts by Mr. Offerdahl to the DA and our Ag Committee were that a combination of methods of risk reduction would most likely have to be pursued to accomplish this project, that all were doable, but at great expense and needed community "buy-in". All options had pros and cons. However, the most important message that Mr. Offerdahl delivered to our group was that compensation would have to be provided to anyone who suffered economic hardship or loss from the project, regardless of where the "red box" was drawn. He has not been invited back to do further analysis.

Who is going to pay for the impacts to landowners, farmers and residents who are outside of the "red box" and are completely outside of the current FEMA 100 year flood plain?

[Redacted] these costs need to be thoroughly examined in Senate Bill 2076 and I would appreciate your support of [Redacted] bill.

Thank you.

#4

My name is Matt Ness. I am a Fargo resident and I am a fourth generation farmer located in the staging area. I am also on the Diversion Authority Ag Subcommittee. 2/3 of the farmland I farm is in the southern edge of the staging area, and the other 1/3 is located right outside of the "red box". This land outside of the "red box", that I farm, is literally right across a gravel road from one another. This farmland on both sides of this gravel road, have the same elevation.

The DA has hired NDSU to complete a study of the potential losses to the agricultural community regarding the staging of water on agricultural land entitled "Ag Risk Economic Evaluation". The initial presentation to our Ag Subcommittee was presented this past December with the final results of this study due early this year.

The format used in the modeling for the evaluation was given during this meeting. The NDSU team then presented the key variables and assumptions to be used during the economic and physical modeling for the study. These included variables such as the flood start date, planting start date, and planting progress rates. Other variables incorporated into the model included water storage/inundation with and w/o diversion, prevent plant dates, future crop yields, crop shares and yields, optimal planting dates, a 10 day dry down and clean-up period, insurance coverage provisions, and crop switching dates.

Impacts to a theoretical 400 acres farm in the staging area consisting of a rotation of 100 acres each of corn, soybeans, wheat, and sugar beets, that were used in the evaluation.

Data provided by the Army Corps of Engineers was provided to enter into the model. (The initial modeling done by the ACOE for the FEIS states that the water duration in the staging area will be an additional 5-7 days over existing conditions in a 100 year flood event).

4 random sites were chosen in the staging area to determine initial economic impacts to each site. For the initial presentation, data was presented for a random site in Holy Cross Township in Clay County Minnesota. This data represents a 25 year flood event.

The initial modeling for this location using ACOE data showed that water would be on the landscape for 13 days. (This location currently does not

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flood without the project). NDSU projects (and is using for modeling purposes) that an additional 10 days will be required after water leaves the field before field work can begin to allow time for field drying and clean up of debris. For this location, an additional 23 days over existing conditions will be needed for planting to begin.

This delay of planting was entered into the model and the model showed that depending on the timing of a spring flood, there could be little impact to the modeled farm, or there could be a complete loss of crop at that location depending on the time of the flood. The planting of wheat, sugar beets, and corn, becomes highly problematic due to loss of yield in late planting such as this.

Immediate responses from the ACOE and the DA when the data was presented were that there had to be a mistake in the numbers entered into the model and that this material should not be released to the public.

We have not been able to gain access to the initial presentation. The DA and the ACOE have informed us that they are entering new updated modeling information into the NDSU model and will release the entire initial presentation only after the new modeling information has been completed. This is where we felt the process lacked transparency!

One of the arguments given to us for not releasing all of the information from the initial report was that there was incorrect sizing of one culvert in the modeled area and that when the correct culvert sizing was entered into the model, the duration of inundation dropped 4 days. Culvert sizing is very important, especially during a summertime flood event. However, during most spring floods, culverts are plugged with snow, ice, logs, cornstalks, and other debris, so there is very limited flow through them, until they open. It is almost a certainty that water in the staging area will stay on the landscape for a longer period of time than what the ACOE is admitting to. The potential for longer periods of time that the water is on the landscape presents a huge potential loss of revenue for the farmer, the community, and also the state if crops do not get planted on time—if they get planted at all. The possibility of infrastructure and roads being topped/washed out from this project also poses to be a huge economic concern to the area.

Although there has been a significant amount of work done to mitigate impacts within the staging area, there has not been much attention paid to

the area outside of the "red box". What are those potential impacts? Who is going to provide compensation to those outside of the "red box" area? What is going to happen to property valuations in this impacted area? Who will be willing to farm in an area without the protection of crop insurance? How will this potential loss of revenue affect the communities and townships within this area where there is no guarantee of mitigation for potential losses? We need to know these amounts and who is going to bear the economic pain for these impacts.

As stated before, I farm land that is located on the southern edge of the "red box", as well as some land directly outside of the "red box". The elevation is the same on many of these tracts of land. Water does not stop at a red line or a gravel road. I have three young sons who someday may wish to farm this land. If this project gets built, it will be devastating for many generations to come, if the impacts are not studied and mitigated. As this is our livelihood!

We need to have these potential impacts studied before any further work is done on the diversion project outside of Fargo. I appreciate your support of Senate Bill 2076.

Thank you.