



**DIVERSION AUTHORITY  
Land Management Committee  
City Commission Chambers  
Fargo City Hall  
Wednesday, May 22, 2019  
3:00 p.m.**

1. Introductions
2. Agenda Review
3. Approve April 24, 2019 Minutes (item A)
4. Property Acquisition Status Report (item B)
5. USACE Bio/Geo Easement Request (item C)
6. Processing of Special Assessments (item D)
7. NDSU Ag Impacts Study Update (item E)
8. Lands Outreach Update - City of Christine
9. Cultural Mitigation
10. CCJWRD Update
11. MCCJPA Update
12. Other business
13. Next meeting June 26, 2019

*These minutes are subject to approval.*

**DIVERSION AUTHORITY  
Land Management Committee  
Commission Chambers  
Fargo City Hall  
Wednesday, April 24, 2019  
3:00 p.m.**

Present: Clay County Commission Representatives Kevin Campbell and Jenny Mongeau; Fargo City Administrator Bruce Grubb; Moorhead City Council Member Chuck Hendrickson; Cass County Joint Water Resource District Manager Rodger Olson (via telephone conference); Cass County Commission Representative Mary Scherling; Moorhead City Engineer Bob Zimmerman; Fargo Division Engineer Nathan Boerboom; Cass County Commissioner Duane Breitling; and City of Horace Mayor Kory Peterson.

Others present: Eric Dodds - AE2S.

Absent: Fargo City Commissioner John Strand; and City of Moorhead Mayor Johnathan Judd.

The meeting was called to order by Ms. Scherling.

Agenda Review:

Mr. Hendrickson moved to approve the agenda. Second by Mr. Campbell. All the members present voted aye and the motion was declared carried.

Item A: Minutes Approved:

Mr. Campbell moved the minutes from the March 27, 2019 meeting be approved. Second by Mr. Zimmerman. All the members present voted aye and the motion was declared carried.

Item B: Property Acquisition Status Report:

Mr. Dodds said there are quite a few more appraisals pending and in general, there is a lot more appraisal work occurring. He said the first batch of appraisal reports will be presented to the CCJWRD for approval, which is needed in order to make offers and he is happy that appraisals are moving forward. He said there are several parcels upstream of the embankment where property owners have reached out and asked to proceed with early acquisitions. He said there are also acquisitions ongoing in the Diversion Channel, which is the primary focus. There has not been much activity in Oxbow, he said; however, with the Hickson Main Avenue storm sewer project, there are some easements that need to be acquired and Matt Stamness with Cass County is helping negotiate and work with property owners. That project, he said, will allow a small gap in the levee at Oxbow to close and construction may start later this year; however, due to the late spring and the land acquisition process, it might be delayed to 2020. He said there are several cultural mitigation sites along the Diversion Channel that require investigations. He said the

property necessary for most of those sites has been acquired and there are a few additional sites that are in negotiations. He said the Corps intends to start some of the cultural mitigation work later this spring to delineate where the artifacts might be on the Sheyenne and Maple river sites as well as the Drain 14 site. He said rights of entry for the environmental monitoring areas in North Dakota have been acquired and the Corps hopes to get easements in those areas, which will allow the Corps and their contractors to conduct environmental monitoring that will include biotic conditions, soil erosion and other conditions. He said all of the rights of entries in Cass and Richland counties have been acquired and in Clay and Wilkin counties, rights of entry have been granted on the City- and/or County-owned parcels. Requests for private parcels are still needed, he said, and the Diversion Authority will be engaging with land agent teams and with property owners to try to secure the easements that will allow long-term monitoring.

In response to a question from Ms. Scherling asking if hard costs compared to the number of acquisitions is tracking the way it should, Mr. Dodds said he feels everything is within budget on the Diversion Channel. He said more than \$9 million worth of asset lands have been acquired and the Diversion Authority does not want to be in the land ownership business; however, land agents have advised it is too late this year for land sales and that the earliest sales could occur is in the fall. He said a final design from the P3 group for the Diversion Channel is needed, as well as a few more steps, in order to trigger the disposal of asset land.

In response to a question from Ms. Scherling asking if the asset land is being leased back to the property owner, Mr. Dodds said most of the asset acreage is being farmed and the previous owner/farmer is continuing to farm the acreage and pay rent to the CCJWRD.

Mr. Dodds said construction on the Diversion Inlet Control Structure will resume soon and two of the four needed parcels for the Wild Rice Control Structure have been acquired. He said the Corps has arranged its bid package for the Wild Rice structure to allow contractors to bid on the work on the land that is already purchased as a base bid, then on the additional two parcels as an alternative bid option, then award the second part of the bid once the land is acquired. He said for the Red River Control Structure, there are 10 appraisals pending, one in negotiation and 13 parcels have been acquired.

In the upstream mitigation area, he said, 737 flowage easements without structures are needed and to date, 124 flowage easements have been secured and several appraisals are pending. He said many of these parcels are government-owned and an easement can be negotiated outside of an appraisal process. Structure sites in the upstream mitigation area total 187, he said, with 10 easements secured and several appraisals pending.

In response to a question from Mr. Campbell asking if the upstream mitigation parcels are broken down by which side of the river they are located, Mr. Dodds said they are not in the information he provided for this meeting; however, he can provide that information if requested or if the committee members want to see other changes.

In response to a question from Ms. Mongeau asking about previously purchased properties, Mr. Dodds said, for example, Cass County owns a number of flood buyout lots and he has not accounted for the dollars spent on those lands. He said the status report assumes that the Diversion Authority has the easements; however, the dollars associated with it are not included.

#### Lands Outreach Update:

Mr. Dodds said it has been a long time since the Diversion Authority has had real conversations with upstream property owners due to uncertainty with the project. He said people are thirsty for information, they want to proceed, they want to know how the new project configuration will affect them and what their options are. He said there has been a consistent and steady number of phone calls and meetings and those are going well. In most situations, he said, a person who calls will be added to the appraisal list and they will be put in contact with a land agent. He said not everyone is excited about the project; however, they are appreciative of the information coming out.

Ms. Scherling said questions from residents of Richland County have been more about what the whole project means to them and in particular, hydrology questions and the Wild Rice River. She said rather than large group meetings, there needs to be more meetings with individual property owners. There have been people who have said they did not get a letter from the Diversion Authority and the landowner was originally going to be impacted; however, with the new design, they are no longer impacted.

In response to a question from Ms. Scherling, asking if the Diversion Authority website has an online map where people can see if they are impacted, Mr. Dodds said there is an interactive map on the website where people can put in a parcel number or an address and see where their property is located in reference to the project. He said there are also different layers on the map showing different flood plains and it is a very useful tool for property owners.

Ms. Mongeau said there is confusion in some communities and more outreach and presence in these communities is beneficial. While it seems that people are not asking questions the Diversion Authority might think are important, she said, it is important to them, therefore outreach is important and she encourages more, whatever it might be.

Mr. Dodds said what is most helpful is small group meetings or one-on-one meetings where the discussions can be about specifics of each situation. He said he is not sure group meetings still have purpose and value. He said group meetings in Eagle and Walcott townships are helpful and in those areas there definitely needs to be more outreach. He said as the Diversion Authority meets with property owners, more is learned about the specific circumstances, the complexities and the uniqueness of each property. He said each field is different, there are unique businesses and the Diversion Authority needs to understand what is out there.

Ms. Scherling said the Diversion Authority has had great reception most of the time and people are eager to learn about the project and want to know how it will impact them.

However, she said, the Diversion Authority has asked to meet with other groups and has not been received at all and it is frustrating that the Diversion Authority message is not getting out. She said those affected townships are doing a disservice to the residents when the Diversion Authority cannot hear their concerns.

In response to a question from Mr. Hendrickson regarding Plan B and now there are some residents no longer affected, Mr. Dodds said a mailing was sent to upstream townships that were impacted, which encouraged people to look at the Diversion Authority website to see the details. He said at that time there was not the modeling now available and there were no specific maps. The other challenging thing, he said, is the many people who are on the fringes of the impacted area. He said the hydrologic model was submitted to FEMA for final review and until FEMA gives its blessing, there is a chance that impacts will change. He said because the area is so flat, changing the model even a few inches makes a big difference. He said it is a good idea to keep in constant contact and an idea was mailing a quarterly postcard or newsletter to affected property owners with routine updates.

#### Item C: Appraisal Services:

Mr. Dodds said this month's appraisal services report is similar to what was shared with this committee two months ago, which contained appraisal packages 1 through 5. This Action Summary, he said, is for appraisal packages 6 through 10. He said a Request for Quotes was sent and each of the appraisal firms was asked to bid on the different parcel assignments. For a bit more context, he said, appraisal packages 1 through 5 were for new appraisals along the Diversion Channel and packages 6 and 7 include a few additional parcels along the Channel. He said with some of parcels in the first round of packages, an appraisal was conducted several years ago and the Diversion Authority was trying to use old appraisals to negotiate; however, things were not going well with those negotiations, so the land agent advised it would be best to get new appraisals. For those reasons, he said, an order for new appraisals is proposed for Package 6 on the north end of the Channel and Package 7 is a variety of parcels in the upstream area and in the southern embankment area. He said Packages 8, 9 and 10 indicate the number of people who are asking to move forward with an appraisal. He said quotes were received from the qualified list of appraisers and the Review Committee made the following recommendations: Package 6, Task Order No. 2, Compass Land Consultants, \$48,000.00; Package 7, Task Order No 1, Patchin Messner Valuation Counselors, \$39,500.00; Package 8, Task Order No 1., GEB Appraisals and Triebwasser Appraisal Service, \$49,000.00; Package 9, Task Order No. 3, Integra Realty Resources, \$12,500.00; and Package 10, Task Order No. 2, Patchin Messner Valuation Counselors, \$62,500.00. He said this information will be presented to the CCJWRD for approval and he is asking if this Committee wants to see these for awareness and visibility or is this something this Committee feels is covered adequately with a status report and is it agreeable to have the joint Board continue with this process.

Ms. Mongeau said there seems to be some objective factors in the terms of how each of the appraisal firms were awarded the contracts. She said she sees the dollar amounts for each package; however, she does not know where the other firms came in with bids.

She said it would be hard for her to recommend one or the other; however, it would be good to have a bit more detail about the recommendations. She said her concern is how the appraisal packages were awarded and the dollar amounts; however, if these firms are all qualified, she can understand why they were awarded.

Mr. Dodds said the Review Committee requested proposals from each of the firms; however, not all of the firms elected to submit bids. He said the Review Committee reviewed the bids on a variety of factors including cost and schedule, previous work with property owners and concerns or other information about what was happening with these parcels that might be helpful through the appraisal process. He said they also considered the firm's work level and what other assignments they currently have as well as other factors and all of that was weighed and the Review Committee came up with these recommendations. He said it was not simply a low bid.

In response to a question from Mr. Campbell regarding the different packages that were bid by multiple firms, Mr. Dodds said the Review Committee requested bids from qualified firms and not every firm bid on every package due to the fact that they would not have the capacity to take on all five packages. For example, he said, Patchin Messner bid on six or seven, and eight or 10, which they were comfortable taking on. He said the first thing the Review Committee looked at was the amount of the bid for the appraisal work and second was how soon could they do the work. He said the Committee looked at the firms that could get the work done when it was needed and at the most reasonable price.

Mr. Campbell said he knows what should jump a firm to the top of the list is not only the bid. He said just as important is when can a firm supply something when it is needed.

Ms. Scherling said costs need to be a factor; however, when discussions happen later on and the appraisal comes up on a particular property, if the appraisal is off, it can create more problems. She said she wants to be sure this Committee is getting a good appraisal that everyone is comfortable with due to the fact that it sets other things in motion such as what the landowner next door is going to be paid and if something ends up in court, she wants to make sure we can back up the numbers. She said the Diversion Authority has to be careful about saving money and she appreciates the report; however, next time she would like to see a more in-depth report.

In response to a question from Mr. Breitling about the correlation of the number of parcels and the amount of the bid, Mr. Dodds said the appraiser will look at parcels and if they are straightforward or just one parcel, it is a lower bid. If there are multiple parcels owned by the same family, he said, the appraiser will look at other things such as structures or other features that could create problems and the fee will increase. Each appraisal fee will vary with the specifics of each parcel, he said, and the Review Committee can bring this information to the Land Management Committee if they want it; however, if the CCJWRD is tasked with buying the land, does the Land Management Committee need to see this information or would the land status report suffice?

Ms. Mongeau said if there is going to be a Land Management Committee it seems that this information would fall under that umbrella and she thinks having more input in the process would be important. She said as a steward of the taxpayer's money, she would want to have all of the details to better understand the rationale on how an appraisal firm was chosen.

#### CCJWRD Update:

Mr. Olson said there will be several offers the CCJWRD board will vote on for just compensation. He said he has heard of no complaints, there are no issues and the process is smoothly moving along.

#### MCCJPA Update:

Mr. Campbell said they are waiting for the draft documents for the MCCJPA, which will go to the Minnesota members for review and then individually to the city and the county.

Mr. Dodds said several Minnesota properties have been purchased by the CCJWRD and as soon as the MCCJPA is up and running that group will take over the role of acquiring Minnesota property.

In response to a question from Mr. Campbell asking when the MCCJPA is formed, can those properties from Minnesota that have already been purchased be titled over to Minnesota, Mr. Boerboom and Mr. Olson said that can easily be done.

In response to a question from Ms. Mongeau about the ag study group, Mr. Dodds said there has not been much progress getting that group going. He said the CCJWRD talked about taking a group to Winnipeg to see that cities' flood control project in operation. He said with the flooding this spring, there are some good lessons that can be learned from areas north of Cass County and in the Harwood and Argusville areas about late planting dates, etc. He said he still thinks there is value in an ag study group due to the fact that there is a lot of uncertainty.

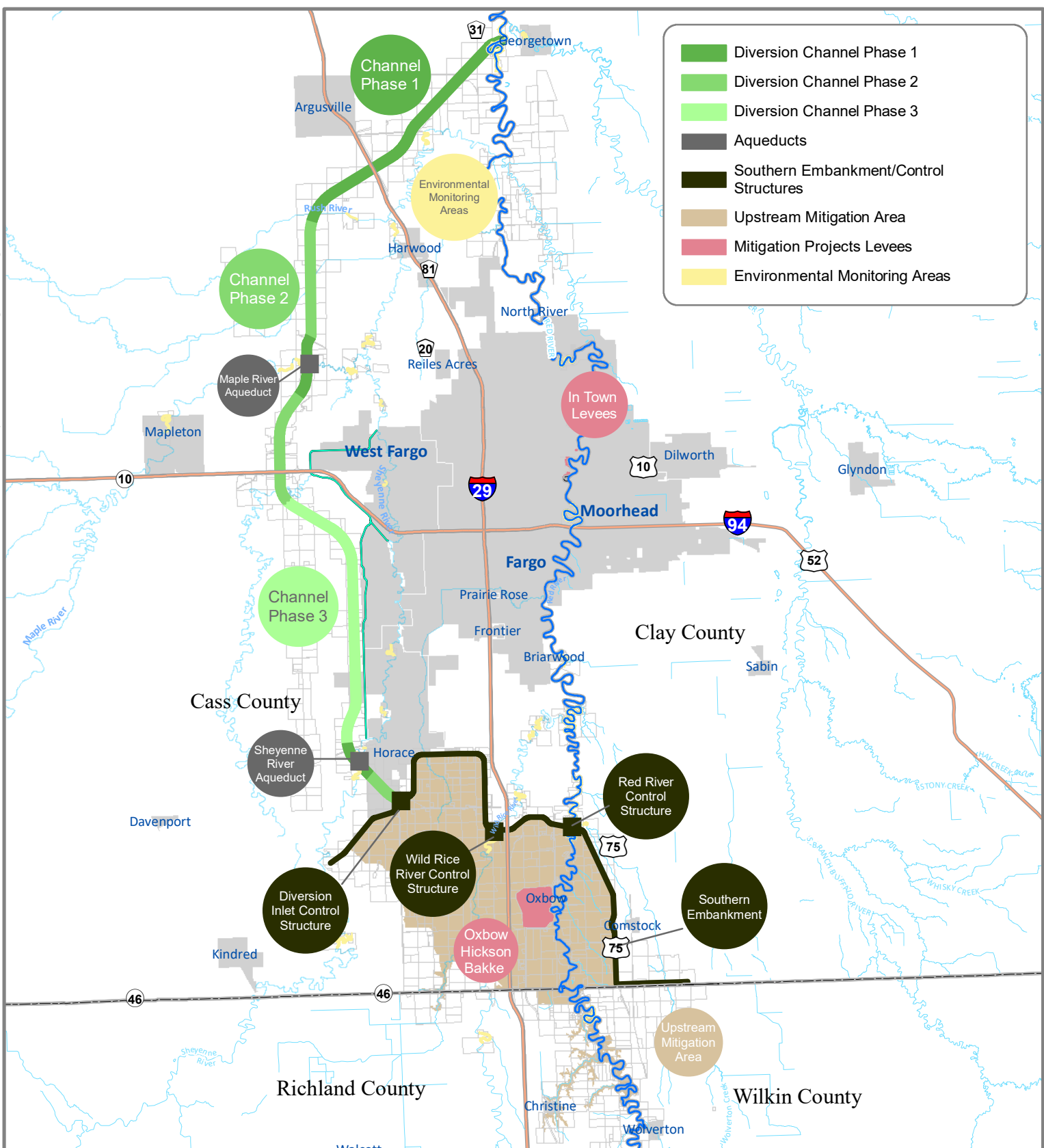
#### Other Business:

Ms. Scherling said the configuration in the City Commission Chambers is not the best way to have a roll-up-your-sleeves type of meeting. She said when sitting at the dais, she feels like she should be talking to the audience rather than other committee members. She said she is polling all of the Wednesday committees and asking if they would like to go back to sitting at an oval table or sit at the dais.

Mr. Campbell said it would be best if all of the groups could agree to one configuration and he likes the previous oval table set up.

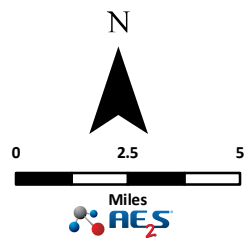
The meeting adjourned at 3:53 p.m.

The next meeting will be May 22, 2019.



- Diversion Channel Phase 1
- Diversion Channel Phase 2
- Diversion Channel Phase 3
- Aqueducts
- Southern Embankment/Control Structures
- Upstream Mitigation Area
- Mitigation Projects Levels
- Environmental Monitoring Areas

Any reliance upon this map is at user's own risk. AE2S does not warrant the map or its features are either spatially or temporally accurate or fit for a particular use. All parcel acreages and legal descriptions shown hereon are based on County GIS data. Final acreages and legal descriptions to be determined by boundary survey. Coordinate System: NAD 1983 UTM Zone 14N | Edited by: cwickenheiser  
 C:\Data\Projects\GIS\Projects\FM Area Diversion\Projects\Land Acquisition\Project Work Package\Project Wide\Overall LA Maps\PropertyAcquisitionSevenPhaseMap8x11.mxd

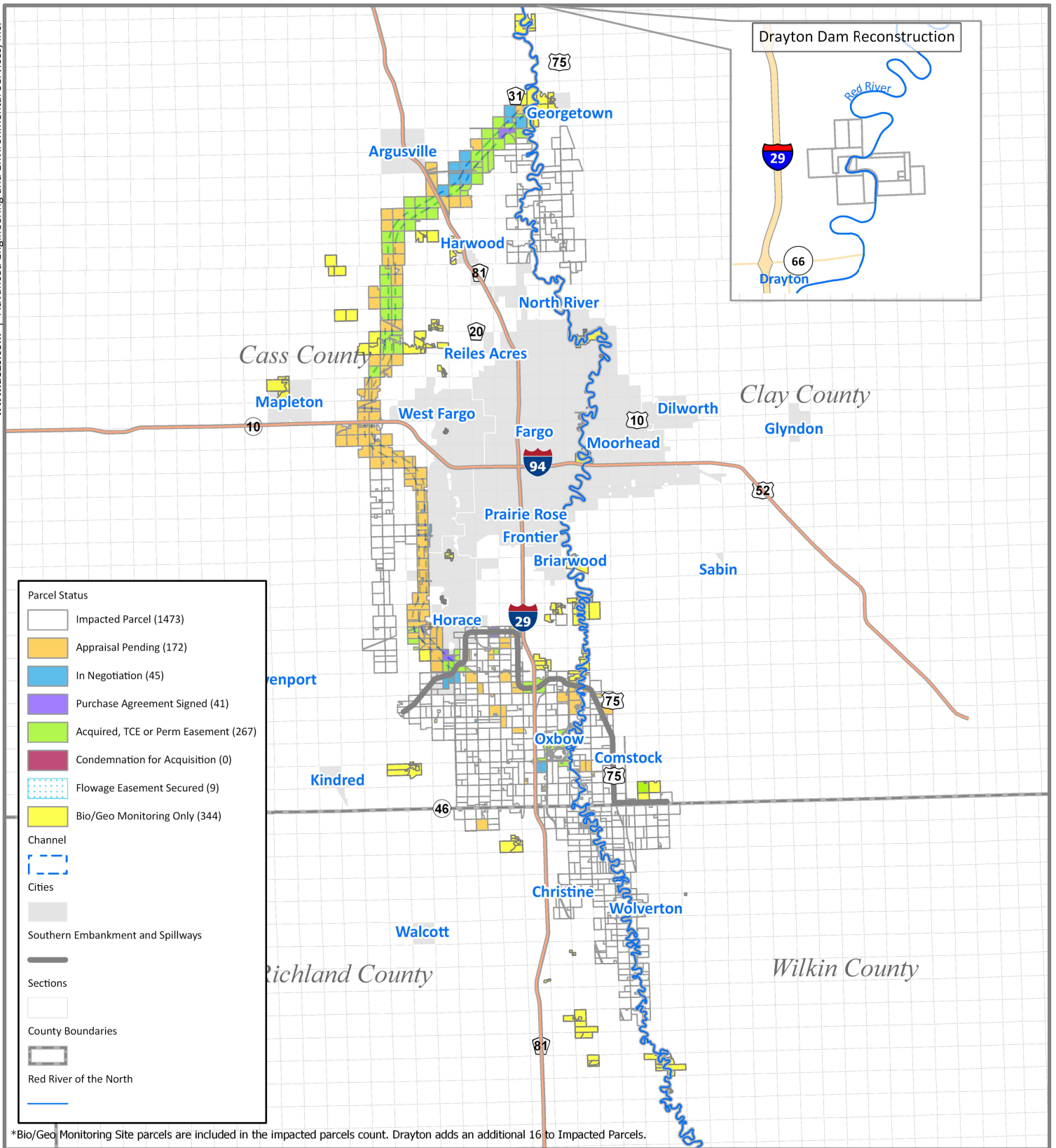


## FM AREA DIVERSION KEY ACQUISITION AREAS

Map Date: 5/13/2019

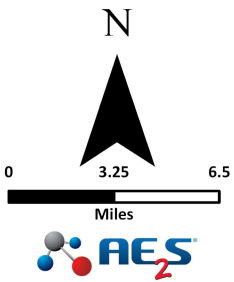






\*Bio/Geo Monitoring Site parcels are included in the impacted parcels count. Drayton adds an additional 16 to Impacted Parcels.

Information depicted may include data unverified by AE2S. Any reliance upon such data is at the user's own risk. AE2S does not warrant this map or its features are either spatially or temporally accurate.  
Edited by: cwickenheiser | C:\Data\Projects\GIS Projects\FM Area Diversion\FMDiversionParcelStatus.aprx



# PROPERTY ACQUISITION STATUS REPORT

Date: 5/13/2019



# Cultural Mitigation Areas



## Sheyenne River Site #1

(32-CS-201) Target Completion: Complete



**3 parcels total**

*(Part of Channel Phase 1)*

*Phase 3 Cultural Mitigation (Excavation) planned for Summer 2019*

## Sheyenne River Site #2

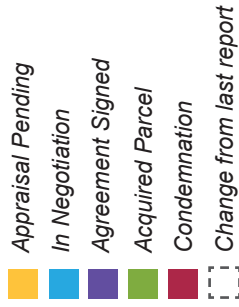
(32-CS-5126) Target Completion: TBD



**1 parcel total**

*(Part of Channel Phase 1)*

*Phase 2 Cultural Investigation ON HOLD pending results of Phase 3 work at Sheyenne River Site #1*



## North of Maple River Site

(32-CS-5139) Target Completion: TBD



**3 parcels total**

*(Part of Channel Phase 1)*

*Phase 2 Cultural Investigation complete - ND SHPO Reviewing Report, results of South of Maple River Site may impact next step at this site.*

## South of Maple River Site

(32-CS-5127) Target Completion: Complete



**3 parcels total**

*(Part of Channel Phase 1)*

*Phase 3 Cultural Mitigation (Excavation) planned for Summer 2019*

## Drain 14 Site

(32-CS-5135) Target Completion: Fall 2019



**1 parcel total**

*(Part of Channel Phase 2)*

*Phase 2 Cultural Investigation (Shovel Test) planned for Fall 2019*

**ON HOLD**

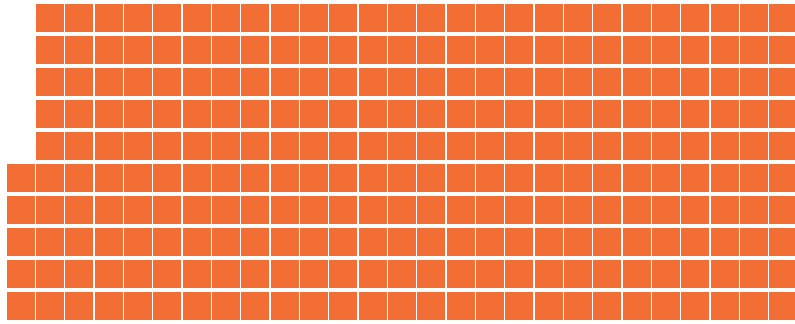
**ON HOLD**

# Environmental Monitoring Areas (BIOGEO)



As of May 13, 2019

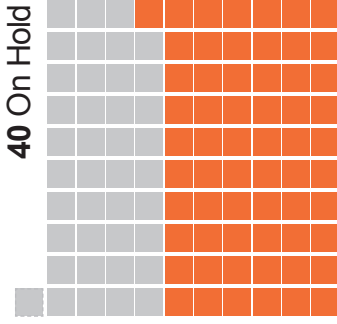
## Cass County



## Richland County



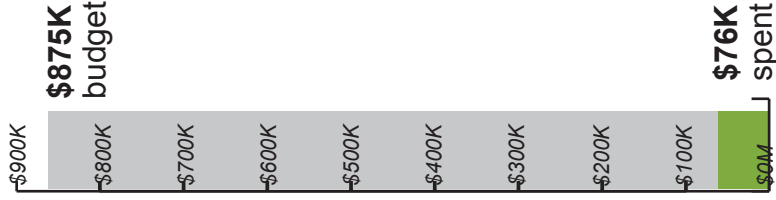
## Clay County



## Wilkin County



## Hard Costs paid to Property Owners



- Preliminary COS In Work
- ROE Sent
- ROE Granted
- USACE Easement Bounds In Work
- In Negotiations
- Bio/Geo Easement Secured
- Change from last report
- Budgeted
- Purchase Agreement
- Spent

# Diversions Channel

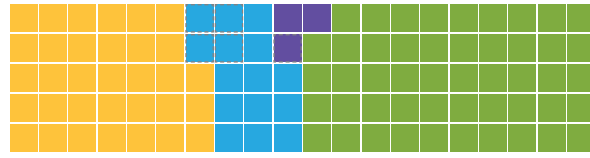


As of May 13, 2019

## Phase 1

(WP LAP01)

Target Completion:  
April 2020

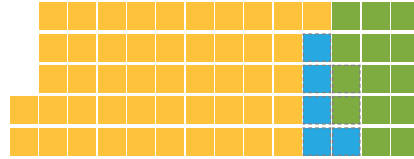


100 parcels total

## Phase 2

(WP LAP02)

Target Completion:  
April 2020

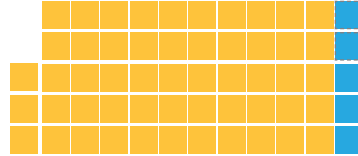


67 parcels total

## Phase 3

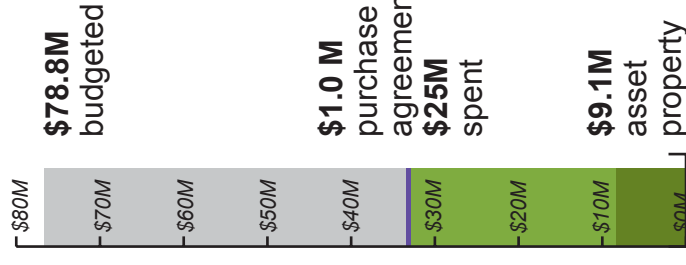
(WP LAP03)

Target Completion:  
April 2020



58 parcels total

## Hard Costs paid to Property Owners



- Budgeted
- Purchase Agreement
- Spent
- Asset Property

- 53 Appraisal/MOU Pending
- 5 In Negotiation
- 0 Agreement Signed
- 0 Acquired Parcel
- 0 Condemnation
- Change from last report

- 46 Appraisal/MOU Pending
- 5 In Negotiation
- 2 Agreement Signed
- 14 Acquired Parcel
- 0 Condemnation
- Change from last report

- 33 Appraisal/MOU Pending
- 15 In Negotiation
- 3 Agreement Signed
- 49 Acquired Parcel
- 0 Condemnation
- Change from last report

# Southern Embankment Control Structures

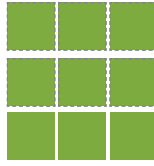


As of May 13, 2019

## Diversion Inlet Control Structure

(WP 26)

Targeted Completion: Complete



9 parcels total

- Appraisal Pending
- In Negotiation
- Agreement Signed
- 9 Acquired Parcel
- Condemnation
- Change from last report

## Wild Rice Control Structure

(WP 30)

Target Completion: TBD



"Option" Parcels  
"Base" Parcels

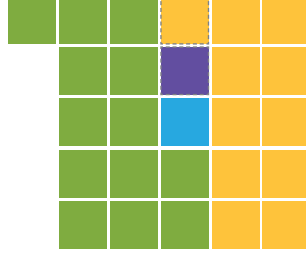
4 parcels total

- 2 Appraisal Pending
- 0 In Negotiation
- 0 Agreement Signed
- 2 Acquired Parcel
- Change from last report

## Red River Control Structure

(WP 35)

Target Completion: TBD



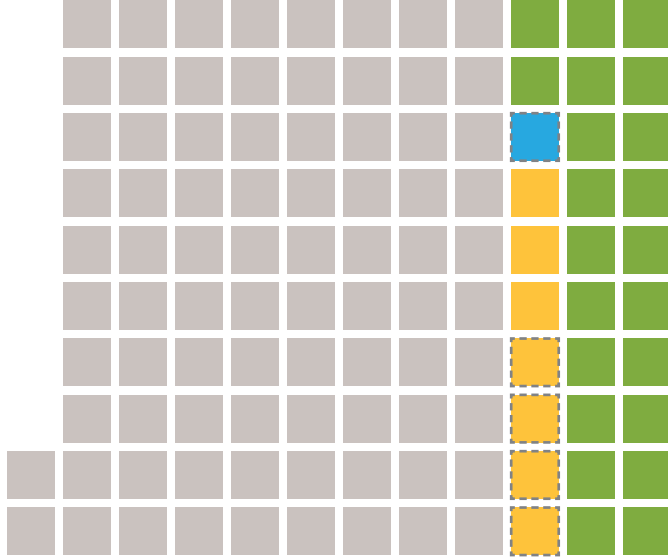
26 parcels total

- 11 Appraisal Pending
- 1 In Negotiation
- 1 Agreement Signed
- 13 Acquired Parcel
- Change from last report

# Southern Embankment

## Southern Embankment

(WP Reach A-D and I29)  
Targeted Completion: TBD

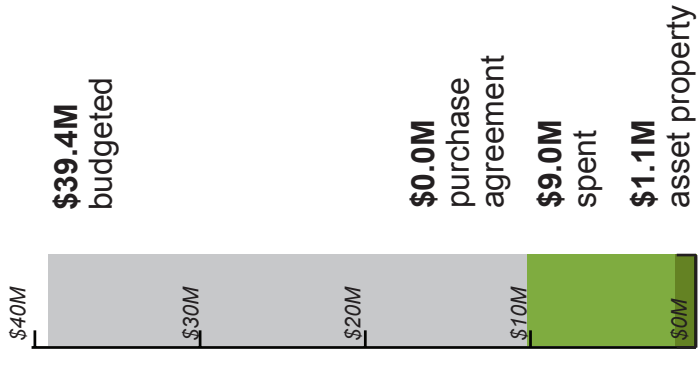


112 parcels total

- 7 Appraisal Pending
- 1 In Negotiation
- 0 Agreement Signed
- 22 Acquired Parcel
- Condemnation
- Change from last report

## Southern Embankment & Control Structures

Hard Costs paid to Property Owners



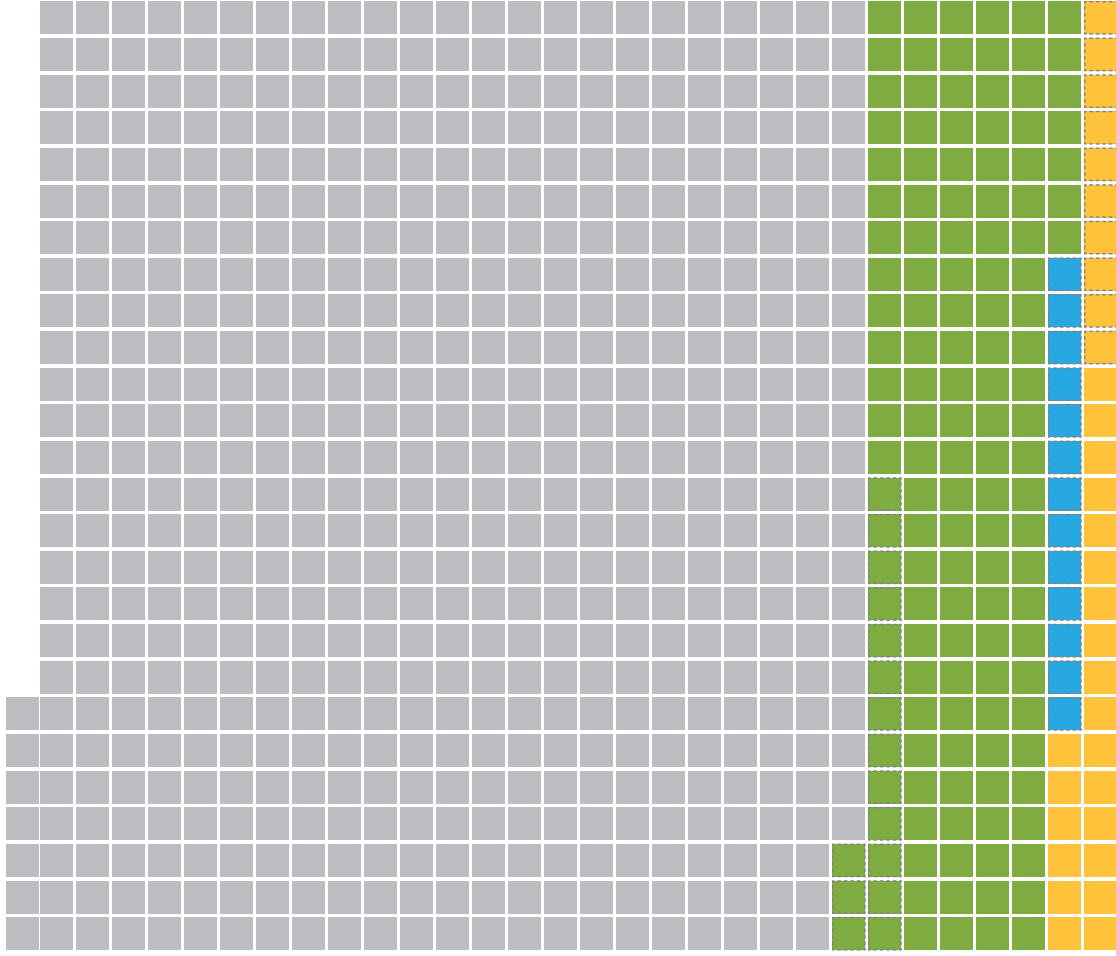
- Budgeted
- Purchase Agreement
- Spent
- Asset Property

# Upstream Mitigation Area (WP 38)

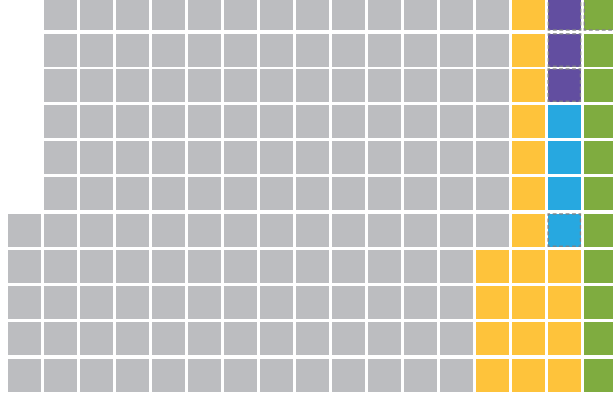


As of May 13, 2019

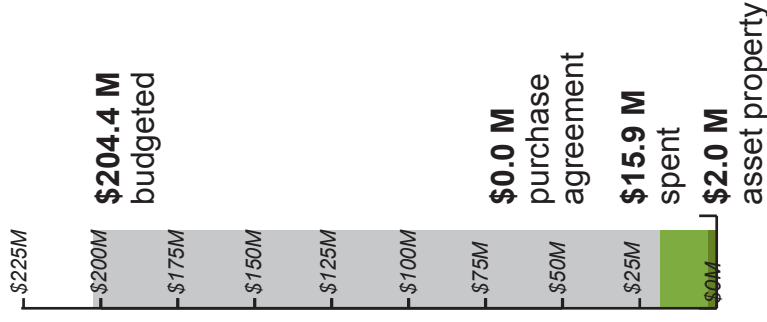
## Flowage Easements without structures



## Structure Sites



## Hard Costs paid to Property Owners



# OHB Projects



## OHB Ring Levee

WP 43

Hard Costs paid to Property Owners



24 parcels remaining

- 0 Appraisal Pending
- 11 In Negotiation
- 0 Agreement Signed
- 5 Acquired Parcel
- 0 Condemnation
- Changed from last report

\* Includes parcels purchased outside the OHB Ring Levee

- Budgeted
- Purchase Agreement
- Spent
- Asset Property

## Hickson Main Ave ROW

WP 43D5

Hard Costs paid to Property Owners



20 parcels total

- 20 Appraisal Pending
- 0 In Negotiation
- 0 Agreement Signed
- 0 Acquired Parcel
- 0 Condemnation
- Changed from last report

- Budgeted
- Purchase Agreement
- Spent
- Asset Property





**DEPARTMENT OF THE ARMY**  
ST. PAUL DISTRICT, CORPS OF ENGINEERS  
180 FIFTH STREET EAST, SUITE 700  
ST. PAUL, MN 55101-1678

Real Estate Division

SUBJECT: Fargo-Moorhead Metropolitan Area Flood Risk Management – Easement Request for Geomorphic and Biotic Surveys

Michael Redlinger  
Co-Executive Director  
City of Fargo  
200 3rd Street North  
Fargo, ND 58102

Robert Wilson  
Co-Executive Director  
Cass County  
211 9<sup>th</sup> Street South  
Fargo, ND 58103

Dear Mr. Redlinger and Mr. Wilson:

On September 28, 2016, the Corps requested access to conduct pre-construction biotic and geomorphological surveys in 2017 and for post-construction surveys (see Enclosure 1). The biotic and geomorphic surveys concluded successfully in 2017 and 2018, respectively.

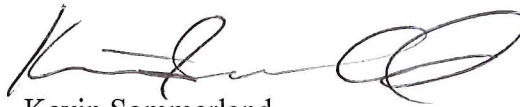
Due to the importance of gathering survey data at the same locations, the Corps and representatives of the Diversion Authority agreed to pursue easements for the continuation of biotic and geomorphic surveys which will resume in the spring of 2020 and will occur at regular intervals under the adaptive management plan. Please consider this the formal request for future access to perform biotic and geomorphic surveys. An updated description of the surveys is included in Enclosure 2 and individual maps detailing the easement limits are provided in Enclosure 3. Shapefiles can be provided upon request.

The Corps will keep the local sponsor team involved in the process and will inform the team if there are any changes to the request. In addition, our real estate office requires a copy of all ROEs granted. Please continue to provide copies of all easements. Copies should be sent to the St. Paul District at the same time as the weekly database update occurs. We also request that the database continue to be updated quarterly with the most current county data.

We request that the easements be obtained by February 28, 2020. Additional ROEs will be requested in 2019 in order to perform cultural, HTRW, geotechnical and land surveys.

We appreciate all of your efforts in gaining access to property for this project. Please call Terry Williams with any questions at 651-290-5517.

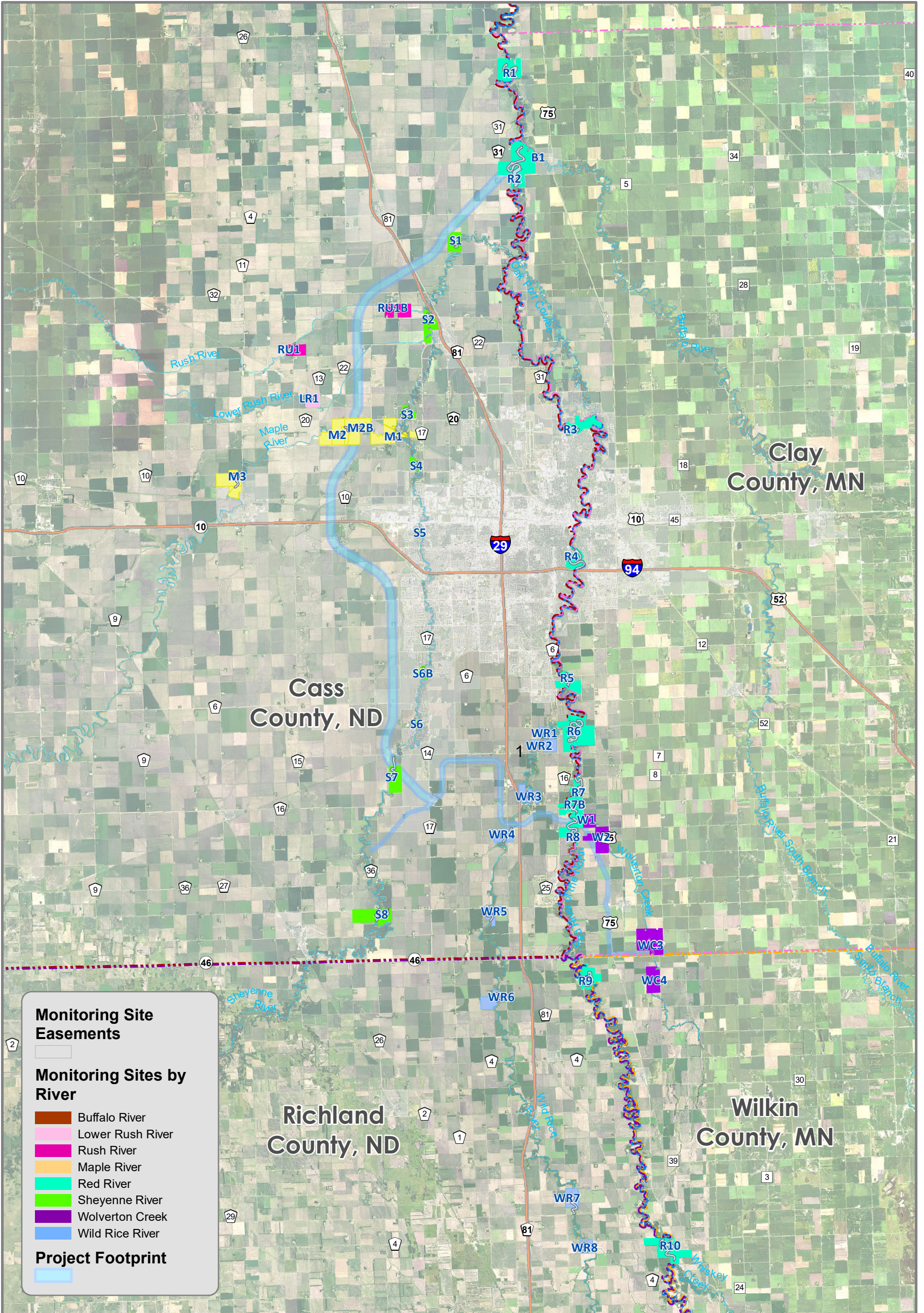
Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Sommerland". The signature is fluid and cursive, with a large loop at the end.

Kevin Sommerland  
Chief, Real Estate Division

Enclosures

CC:  
Mary Scherling  
Nathan Boerboom  
Jason Benson  
Bob Zimmerman  
Eric Dodds



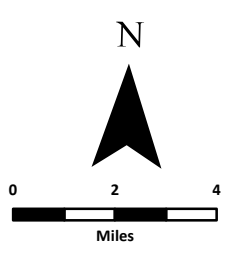
**Monitoring Site Easements**

**Monitoring Sites by River**

- Buffalo River
- Lower Rush River
- Rush River
- Maple River
- Red River
- Sheyenne River
- Wolverton Creek
- Wild Rice River

**Project Footprint**

Any reliance upon this map is at user's own risk. AE2S does not warrant the map or its features are either spatially or temporally accurate or fit for a particular use. All parcel acreages and legal descriptions shown hereon are based on County GIS data. Final acreages and legal descriptions to be determined by boundary survey. Coordinate System: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet Intl | Edited by: cwickenheiser  
 C:\Data\Projects\GIS Projects\FM Area Diversion\Projects\Land Acquisition\Project Work Package\!Project Wide\Environmental\Biotic & Geomorph Survey\USACE\_monitoring\_sites.mxd



**FM AREA DIVERSION  
USACE BIO-GEO MONITORING SITES**

Map Date: 5/15/2019





## Typical Processing of Special Assessments for Displaced Persons

May 9, 2019

### Issue:

The impacts of the FM Area Diversion Project require the acquisition and relocation of a number of rural residential properties. The displaced persons are eligible for relocation benefits, which include establishing an allowance for replacement housing, which is defined by finding comparable properties (Comparable) that are actively listed for sale. Many of the comparables that will be used to establish the relocation housing differential payment are located within the metro area, where special assessments (Specials) are routinely used for local infrastructure, but not directly reflected in the listed sale price. Since most rural properties do not have Specials, an issue arises when a rural resident decides to move into a replacement home with Specials, or when the comparable establishing the replacement housing allowance has an outstanding Specials balance. The Uniform Relocation Act does not contain regulations that are directly on point.

### Options:

There are several optional approaches to address this situation. Each option has pros and cons.

#### Option 1 (assume no Specials at the displacement site)

Do not consider the Specials as they are not detailed in the regulations specifically as an eligible expense.

#### Option 2 – Include Specials in the Replacement Housing Differential Payment (RHDP) (assume no Specials at the displacement site)

Include the amount of the Specials in the RHDP. Limited to the amount of the Specials at the Comparable.

#### Example:

- Appraised value of home: \$200,000
- List Price of Comparable: \$210,000
- Specials: \$10,000
- Maximum RHDP Calculation: \$220,000 (\$210k + \$10k) – \$200,000= \$20,000

If the displaced persons purchase a property where the Specials are less than \$10,000, the actual payment would be based on the actual Specials incurred. If the displaced persons purchase a property where the Specials are greater than the \$10,000, the payment would be based on the Specials at the Comparable.

This approach is consistent with how RHDP's are calculated. The costs are "capped" by the Comparable.

### Option 3 – Incidental Expenses Approach (assume no Specials at the displacement site)

The Specials would be reimbursed as an expense incidental to the purchase of a replacement property. The reimbursement would be capped, much like Option 2 above, based on the amount of the Specials at the Comparable.

#### Example RHDP Calculation:

- Appraised value of home: \$200,000
- List Price of Comparable: \$210,000
- Specials: \$10,000
- Maximum RHDP Calculation:  $\$210,000 - \$200,000 = \$10,000$

#### Incidental Expense Payment for Specials:

- Specials at the Comparable: \$10,000
- Actual Specials Incurred: \$10,000
- Payment \$10,000
  
- Specials at the Comparable: \$10,000
- Actual Specials Incurred: \$5,000
- Payment \$5,000
  
- Specials at the Comparable: \$10,000
- Actual Specials Incurred: \$50,000
- Payment \$10,000

The difference between Option 2 and Option 3 is that the displaced persons would specifically need to spend additional money on Specials under Option 3, rather than being able to apply the allowance to something other than Specials.

Under Option 2, if the displaced persons bought a property that was at least \$220,000 (with no Specials) they would still get the full RHDP of \$20,000.

#### Recommendation:

It is recommended to utilize Option 3 for typical processing of special assessments for displaced rural residential properties. This recommendation is supported by the land agents, relocation experts, and real estate legal team working on the Project.

**Assessment of the Agricultural Risk  
of Temporary Water Storage for FM Diversion:  
Re-alignment of FM Diversion Storage Area**

Discussion for:

Fargo-Moorhead Diversion Authority

Principal Investigators

Dean Bangsund

Saleem Shaik, PhD

David Saxowsky

Department of Agribusiness and Applied Economics

Nancy Hodur, PhD

Center for Social Research

North Dakota State University

Fargo, ND 58108

May 2, 2019

**Project Title:** Revised Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion: Re-alignment of FM Diversion Storage Area

**Introduction:** The Department of Agribusiness and Applied Economics at North Dakota State University previously examined the potential economic effects of temporary water storage on crop yields on land affected by operation of the FM Diversion in two separate studies. The first study had a geographic scope defined by the FM Diversion Authority (Bangsund et al. 2015). The second study had an expanded geographic scope based on input from the North Dakota Legislature and the North Dakota State Water Commission (Bangsund et al. 2016). A third study was in progress when work associated with the Diversion was halted in Federal court. The Federal injunction and the work that followed changed the characteristics of water retention associated with the FM Diversion and rendered any potential outcomes from that study irrelevant.

Previous studies used hydrology data indicating the onset of flooding, duration of flooding, and the length of time for flood waters to recede on land south of the FM Diversion embankment. The geographic scope of the hydrology data has varied based on thresholds of flood inundation. The 2015 study used data that largely coincided with tracts of land that may experience 1 foot or more of flood water inundation in a 100-year event and omitted acreage along the rivers and tributaries in the storage area.

Concerns that the potential economic losses to producers and landowners resulting from operating the FM Diversion could extend to lands that receive less than one foot of flooding, prompted the North Dakota State legislature to direct the North Dakota State Water Commission to expand the original study area. The North Dakota State Legislature subsequently directed the study area to include lands impacted by water storage of six inches or more. Therefore, the geographic scope in the 2016 study included additional land farther upstream of the embankment that may experience 6 inches or more of inundation and included land along rivers and tributaries, which was omitted in the first assessment.

A stochastic model was used in the 2015 and 2016 studies to determine the additional potential planting delays caused by the operation of the FM Diversion in flood events equal to or larger than a 10-year flood. A Monte Carlo simulation used historical data on when floods typically occur, when planting generally begins, and yield decline functions associated with delayed planting to predict

economic effects associated with diversion operations. The previous studies revealed considerable variability in the potential range of economic losses, while the mean or average losses were generally modest. Variation in the economic losses makes generalizations of the potential economic losses difficult.

The predicted timing, duration and receding of flood waters on lands south of the FM Diversion embankment have undergone nearly continual refinement since the 2015 study as knowledge of project details improved and as additional topography, flowage, and hydraulic data became incorporated into the engineering processes.

The realignment of the FM Diversion embankment and changes to the operational aspects of temporary retention of flood waters necessitates conducting another evaluation of potential economic effects and risk to producers of delayed or prevented planting within the staging area. Hydraulic modeling is currently or will be soon submitted for Conditional Letter of Map Revision (CLOMR) approval, allowing for the use of engineering data that meets with FEMA approval in the economic study.

As the FM Diversion Authority and the US Army Corps of Engineers move towards negotiating easements on lands in the staging area, the processes used to estimate appropriate compensation necessitate the use of Federal Emergency Management Agency approved flood plain designations and project flooding. An expectation that easement values be based on the best available data suggest that the economic effects associated with delayed planting need to be re-assessed.

In a related issue to planting delays, businesses that supply production inputs and services to agricultural producers in the general region that encompasses the FM Diversion staging area have expressed concern about the effects of wide-spread prevent planting due to operation of the FM Diversion. The concern stems from the geographic footprint of the staging area being sufficiently large that foregone purchases of inputs could potentially create financial hardship on the agriculture service and supply sector.

While the concept of foregone purchases of inputs from land not farmed is relatively straightforward, the issue of predicting producer's choices relating to shifting/substituting crops or electing to take prevent planting options of Federal crop insurance instead of raising a crop are subject to myriad of factors. Recognizing that in the absence of a prevent plant option (i.e., Federal crop insurance provisions for prevent plant may not be available when floods are considered man made), producers will be reluctant to idle land.



The current treatment of prevent planting in the economic model works on the premise that producers will choose to substitute crops, if possible, before electing to forgo raising a crop. Under the existing framework and over the flood events modeled, previous evaluations have shown little, if any, land would remain unplanted. The overall reason is that land too wet to plant to sugarbeets, wheat, or corn, does not remain too wet to plant soybeans—at least not due to the operation of the FM Diversion. Also, soybeans currently represent 50 percent of crop acreage limiting the acreage of crops that require early planting.

However, the economic model has not been used to estimate prevent plant acreage under producer decision alternatives that might result in less or no crop substitution. One alternative that would help frame the issue is to model the opposite producer decision with respect to prevent plant conditions—one that results in no crop substitution.

**Objectives:**

The work effort contains two primary objectives.

- 1) The first objective is to examine the potential economic losses associated with planting delays on lands that may experience flooding from operation of the FM Diversion. This overriding objective will:
  - a) Replicate the same economic processes as used in the previous studies
  - b) Update all key economic inputs as data availability allows
  - c) Evaluate a 10-, 20-, 25-, 50-, 100-, 500-year, 1997-like event, 2009-like event, and a probable maximum flood (PMF) event.
  - d) Consider dry down periods of 10 days and 14 days.
  
- 2) The second objective would evaluate the potential range of prevent plant acreage in the staging area using the Monte Carlo simulation model with economic parameters from Objective 1. Two conditions would be evaluated:
  - a) Use current producer decision hierarchy of substituting crops in all possible conditions up to the last date (i.e., Federal crop insurance guideline dates) to plant soybeans.
  - b) Use an alternative producer decision hierarchy of not substituting any crops to forego a prevent plant condition.

**Methods:**

Objective 1)

The economic assessment will apply the previous studies' existing methodology with updated economic parameters to storage areas identified by the FM Diversion Authority. Hydrology data will be supplied to the research team in the same format as prior hydrology data, and will be evaluated using the same methods for estimating the

timing of flooding, duration of flooding, and the removal of flood waters. The economic effects of temporary water storage on those land tracts will be presented and reported using the same factors, groupings, and economic metrics as used in the previous studies.

#### Objective 2)

The acreage of land prevented from planting for sugarbeets, wheat, corn, and soybeans will be estimated using two sets of criteria. The first set of criteria would be to substitute crops to avoid prevent planting as is currently structured in the economic model. The second set of criteria would be to forego planting of a crop on acreage that cannot begin planting prior to the last recommended day of planting for that crop as defined by Federal crop insurance provisions. Federal crop provisions provide an objective set of dates to estimate conditions of prevent planting.

The Farm Financial Management Database (FINBIN) and NDSU Crop Extension production materials would be used to estimate the per-acre value of production inputs for wheat, sugarbeets, corn, and soybeans. The per-acre value of production inputs required for each crop would be used with acreage of prevent planting to generate the sales value of inputs not purchased by producers. Lost inputs would include fuel, repairs, chemical, seed, fertilizer, and custom work. An important caveat is that prevent plant acreage requires producers to control weeds, therefore it is expected some purchases of chemical, fuel, and repairs would occur even with prevent plant. Those purchases would be netted out from purchases that would occur under crop production.

Results from Objective 2 would be similar to the reporting tables used in the previous studies examining planting delays. These tables would identify acreages and lost input sales across the flood event sizes and by storage area delineation (e.g., tracts that flood longer, tracts that have new flooding). Packaging the results based on the previously developed protocols insures that treatment of flood frequencies and type of flooding behavior of tracts in the staging area are consistent between the two objectives.

#### **Timeline:**

For Objective 1, findings in the form of updated document tables will be provided to the FM Diversion authority within four months after receipt of updated hydrology modeling data. Provision of the findings prior to document completion will allow the study sponsor to use the material without potential delays due to publication of the final document. A final, published report will be delivered by six months from project initiation.

For Objective 2, preliminary findings will be summarized and delivered after document tables have been updated for Objective 1. The research team is flexible in the priority of the delivery of data for the two objectives if the FM Diversion Authority prefers an alternative priority between the two efforts.

**Deliverables:** For objective 1, a written report will be published that contains the same scope of economic results provided in the previous studies (Bangsund et al. 2015, Bangsund et al. 2016). The written report will provide information on all study inputs and include a comprehensive section on study methodology, providing for a stand-alone report. The content of the report therefore will not require accessing previous reports to compile components of the study. Presentations will be made to study sponsors and interested stakeholders as appropriate and as needed.

For Objective 2, a stand-alone written report will be published detailing prevent plant acreage and lost input sales for the flood events developed in Objective 1. Presentations will be made to study sponsors and interested stakeholders as appropriate and as needed.

**Personnel:** The research team consists of Dean Bangsund, Dr. Saleem Shaik, David Saxowsky, and Dr. Nancy Hodur, Center for Social Research, at North Dakota State University. All members of the research team have been involved in the two previous studies.

**Budget:** Forthcoming upon acceptance of scope.

**GRANT APPLICATION TRANSMITTAL**

**This page indicates university endorsement of the referenced proposal and is intended to be submitted to the sponsor organization.**

**Sponsor Organization:** FM Diversion Authority

**Project Title:** *Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion: Re-alignment of FM Diversion Storage Area*

**Project Director:** Dean Bangsund

**Department:** ABAE

**Project Budget:**

Total Direct Costs \$ 77,583  
F&A/In-direct Costs \$ 34,912  
F&A/IDC Rate 45%  
Total Requested \$112,495

**Authorized University Representative:**

**Title:** Amy Scott Assistant Director      Jill Mackenzie Award and Program Officer

**Address:** Office of Sponsored Programs Administration  
North Dakota State University  
NDSU Dept. 4000, PO Box 6050  
Fargo ND 58108-6050

**Phone:** (701) 231-8045

**Signature:** *Amy B Scott*

**Date:** 5-10-19

**Any future notifications regarding this proposal, including award notices, should be directed to the authorized university representative at the address listed above.**

**Thank you.**

**SPONSORED PROGRAMS ADMINISTRATION**

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