



**DIVERSION AUTHORITY  
Land Management Committee  
City Commission Room  
Fargo City Hall  
Wednesday, May 24, 2017  
3:00 p.m.**

1. Agenda Review
2. Approve April 26, 2017 Minutes (**item A**)
3. Property Acquisition Report (**item B**)
4. CCJWRD Update
5. Bio/Geo Surveys & Rights of Entry in MN (**item C**)
6. Flowage Easement Valuation Proposal (**item D**)
7. Use and Access of Project Owned Lands
8. Other business
9. Next meeting June 21, 2017

**DIVERSION AUTHORITY  
Land Management Committee  
City Commission Room  
Fargo City Hall  
Wednesday, April 26, 2017  
3:00 p.m.**

Present: Cass County Commission Representative Mary Scherling; Clay County Commission Representative Kevin Campbell; Moorhead City Engineer Bob Zimmerman; Fargo City Administrator Bruce Grubb; Fargo Division Engineer Nathan Boerboom; Cass County Commission Representative Chad Peterson; and Cass County Joint Water Resource District Representative (CCJWRD) Rodger Olson.

Others present: Eric Dodds and Rocky Schneider - AE2S; Mark Brodshaug - CCJWRD; and Robert Wilson - Cass County Administrator.

Absent: Moorhead Mayor Del Rae Williams; Moorhead City Council Representative Heidi Durand; Oxbow Mayor Jim Nyhof; and Clay County Commission Representative Jenny Mongeau.

The meeting was called to order by Chair Mary Scherling.

Agenda Review

All the members voted aye to approve the agenda and the motion was declared carried.

Minutes Approved

Mr. Olson moved the minutes from the March 22, 2017 meeting be approved. Mr. Campbell seconded the motion. All the members voted aye and the motion was declared carried.

Property Acquisition Report

Mr. Dodds said the acquisition report is current as of a few days ago and shows some status changes. He said he would present the information to the FM Diversion Authority Board. In regards to the budget, he said, the lands team has been reaching out to local resources and ag land realtors who track and monitor land prices. He said the land budget is solid but it will have to be sliced and diced to fit in the buckets in the property report and getting feedback about land prices will help with that process. He said in the report, parcels with no shading are impacted and not in a definitive step at this point. He said the orange areas are appraisals pending and the blue category shows areas where appraisals have been reviewed and offers have been presented and are in negotiation. He said on the north end there is a lot of blue, which is Phase 1, and includes the aqueduct structures in the Maple and Sheyenne river areas. He said there are 15 purchase agreements and some are waiting for closings, which are shown in purple, and 147 parcels acquired or easements secured to date, which are shown in green. He said quick-take condemnation has been used on five parcels.

In response to a question from Ms. Scherling regarding offers, Mr. Brodshaug said counter offers are coming back and many of those will be worked towards a deal. He said things are coming together and it is good to get the ball rolling and get some deals done.

In response to a question from Ms. Scherling about the policy being consistent in negotiations, Mr. Brodshaug said it is good to come to an agreement so the same deal can be made with the neighbors.

#### CCJWRD Update

Mr. Brodshaug said in addition to the Diversion, other activities include the Schmidt house move contract on Schnell Drive in Oxbow, which was slowed down due to weather, and there is still work on River Bend Road. He said the final phase of the assessment district process is about done and in about a month mailings will go out.

In response to a question from Mr. Grubb about legislation and quick-take eminent domain legislation, what is left in committee and if there is any angst about impacts those pieces of legislation could have, Mr. Brodshaug said he had not heard anything; however, there are always suspicions. He said he has been in contact with attorneys and the Water Resource District and he has not heard any new news. He said they have been discussing procedures so the county can match any new legislation; however, unless there are drastic changes in the next few days, it seems it is something the county can live with.

In response to a question from Ms. Scherling about procedures in Bismarck, Mr. Peterson said he has been the liaison and he sees no indication funding will be withdrawn this late in the game; however, everything else slows the process. He said regarding how quick quick-take really is, he is not too keen on it. He said all of sudden the five county commissioners are going to have to be up to speed on a series of projects the commissioners would not otherwise have to address. He said it would take additional time to learn about very important, large projects at the last minute and he said they would be brought in at the end stage rather than at infancy. He said he struggles with that and does not think it is fair these people are impacted and he is going to be thrown in on things done in the past. He said the commissioners should get involved sooner in a project due to the fact it is a time commitment.

Mr. Dodds said the legislation that will likely pass is a compromise and is very prescriptive in the steps required to take before Water Resource Districts can use quick-take. Nobody wants to use quick-takes, he said; however, with 1,500 parcels to get property rights on, quick-take will probably have to happen in some cases. If these very prescriptive steps are followed, he said, there is a case history with a lot of documentation that should keep us out of trouble. He said if quick-take does have to be used, by the time it is documented and the procedural steps followed, it is now a six-month process, which is not quick.

Mr. Schneider advised the group Governor Doug Burgum has signed the quick-take legislation. He said the funding was approved by the House last night and the Senate approved it this morning.

### Outreach Plan to Impacted Property Owners

Mr. Dodds said property owners have been in contact with the Diversion Authority at a steady pace with many wanting to know how they will be impacted and what their options are. He said his group needs to get out, talk to these people and begin the process of making connections. The strategy of when the Diversion Authority should reach out and what is the right strategy will be known once FEMA approves the project's Conditional Letter of Map Revision (CLOMR). The CLOMR defines the impact area for the project and once that is defined, he said, it can be used for an outreach campaign and will have more information about how property is impacted. He said this is important and there are many other steps to finalize mitigation details. He said once the CLOMR is known, letters will be mailed to property owners printed on Diversion Authority letterhead. He said the letters will include how the property will be impacted by the project construction and/or operation, an individual map of each property with 100-year impacts, an invitation to a one-on-one meeting regarding the impacts to their property either by email, a phone call or online. The letter will also identify the land agent assigned to the property along with contact information and a link to the online interactive map of land acquisition status, he said. For properties with impacted structures, he said, phone calls from staff or land agents would be made in advance of the letter. Personal contact is critical, he said, due to the need for additional acquisition steps involving the property.

### Agricultural Policy Subcommittee Meeting Recap

Mr. Olson said 25 to 30 people attended the meeting on April 4, 2017 and there was good discussion about the draft Mitigation Plan relating to agricultural impacts and mitigation plans. He said he made it clear to the group the Mitigation Plan was still a draft and things can be added or subtracted. He said compensation for impacts was discussed and the pros and cons of the pay for damages approach versus flowage easements. He said other topics included how to capture an appropriate value of flowage easement for an event that may not occur for 10 years or more and a dynamic flowage easement that relates to impact due to the fact every flood is different and each flood causes different damage. Transfer of revenue and how to spread out the revenue to future generations was talked about and another topic of discussion, he said, was the crop assurance programs and how to compensate for those damages, especially in a summer event. He said multi-peril crop insurance would not cover a summer event due to the fact it is a man-made disaster. In those cases, he said, they are looking at purchasing crop insurance. He said an operator at the meeting said he was a sugar beet grower and if he is going to plant beets in the staging area, but is not able to plant because the Diversion is in operation, he will still get a bill from the coop which would be \$500.00 to \$600.00 per acre if he cannot plant the amount of beets he was contracted to plant. He said this is the first time this issue has come to the ag committee and it needs to be considered. He said there is also a risk due to changes to the federal crop program and if it can be kept flexible enough to work for generations. He said another topic of discussion at the meeting was when the Diversion project operates and it delays planting, a farmer does get the crop in; however, because of the delay, it is at a lower yield. He said the farmer puts this yield information in his database and it could affect his operations for 10 years or more due to one year of low yields. He said there were questions about clean up and debris removal, who collects the material and will the flowage easement payment compensate enough with the volume of debris that is

cleaned up. With organic farms, he said, there is a plan that seems to be working. He said residents in the Comstock and Wolverton area want to know what the plan is for one-on-one meetings. He said there have been public meetings in Comstock; however, as far as acquisitions in Minnesota, he said he did not know which entities would serve in that role. He said he wanted this committee to know the question did come up.

Mr. Dodds said with Minnesota acquisitions, originally the thought was Moorhead and Clay County would form a joint entity that would have the ability to acquire lands. He said the Minnesota permit so far has been unsuccessful. He said the PPA provides a mechanism for the Corps to do acquisitions; however, not much has developed beyond that.

Mr. Campbell said he would want to work with the city and do a joint city/county effort and he is hopeful dialogue will happen. He said he is being cautious and once litigation is done, the city and county will be able to come up with a plan. As of right now, he said, the DNR is telling the city and the county not to deal with land acquisitions.

In response to a question from Mr. Peterson about a study by North Dakota State University and their help with data gathering, Mr. Olson said the study was done and the impacts they found are small.

Mr. Peterson said the one thing about all of this transpiring is people are acknowledging their land will be flooding periodically which means the Diversion is needed. He said it is needed and landowners need to know the alternative to no staging areas. He said this is a positive step to see residents are finally acknowledging the Diversion is needed.

Mr. Olson said if emergency measures are used in Fargo, the water would be stacked up south. He said it is the same land the Diversion will compensate. He said in addition to being compensated, the release of the water will be quicker because there will be two outlets.

Mr. Campbell said Clay County engineering is having discussions with the mayor of Comstock who understands if this goes through, the county wants to know what Comstock needs.

Ms. Scherling said this information emphasizes what bothers people the most is unknowns and the quicker they can be provided some answers, that input is valuable. She said with the sugar beet issue, she would have never known about it unless someone had brought it up at a meeting.

Mr. Dodds said with many of these questions it is obvious people are uncertain what a flowage easement is worth. The mitigation plan, he said, does have a sample flowage easement intended to cover all the risks including debris cleanup and sugar beet payments. He said it is a simplistic model; however, the Diversion Authority is trying to figure out the flowage easement worth and to do that, is working with appraisal experts. He said CCJWRD has retained an appraisal expert referred to us from the Corps and also reached out to a local appraisal firm. He said the firm has submitted a draft valuation of flowage easements and they are reviewing the proposal, which includes

doing small focus groups with the result being a baseline report for all easement areas as well as mass output, showing values down to the quarter section level. Initial indications are this study would be helpful, he said, and for everyone impacted it will define flowage easement value, the crop insurance perspective and which property rights are taken. He said if the go ahead is received, it should take a year, but the Diversion Authority needs to be prepared to jump in.

Mr. Peterson predicted the flowage easements and people's perception will be low; however, if all of the data is presented simultaneously, for example, a person gets \$2,000.00 for their land, and they are told they are safe. He said here is money to pay for your land and should anything happen on your land, there is no fiscal impact to you. He said those pieces of information cannot be independent of each other. He said by landowners knowing what they are getting, it is a courtesy. He said if landowners perceive they will never farm their land again, whatever transpires, in the end, they can harvest and if not they will be compensated accordingly. He said if the conversations are at the same time, landowners will know they are safe. He said the Board needs both data points to provide an accurate argument from and to assure the landowners.

Mr. Olson said the Ag committee meeting got heated at times. Due to that fact this is a federal project, he said the Diversion Authority only requires a one-time flowage easement; however, the mitigation plan goes beyond that. He said he had some individual meetings with bankers who told him the only person the Diversion Authority has to appease and compensate is the landowner. He said the Diversion Authority is going above and beyond the federal guidelines. He said if he were a farmer, he would be looking at these things as well.

#### Farmland Management Report

Mr. Dodds said Pifer's Land Management has been under contract for a number of years, managing acreage owned by the CCJWRD, collecting rents, doing crop management and more.










In response to a question from Ms. Scherling about acquiring more property for Pifer's to manage, Mr. Dodds said there have been a lot of offers made and some good counter offers received. He said some property owners have asked that entire parcels be purchased, even though the footprint says only 80 percent of a parcel is needed. He said there are some advantages for the Diversion Authority and property owners. He said due to those types of purchases, Pifer's would still be needed to manage the land. He said in 2018 when the P3 contractor is ready to start, it is not known if the contractor will start before or after harvest; therefore, Pifer's will likely manage farmland for the 2018 season. He said if farmland were damaged, there would be provisions in place for the producers. He said this is probably something that will evolve.

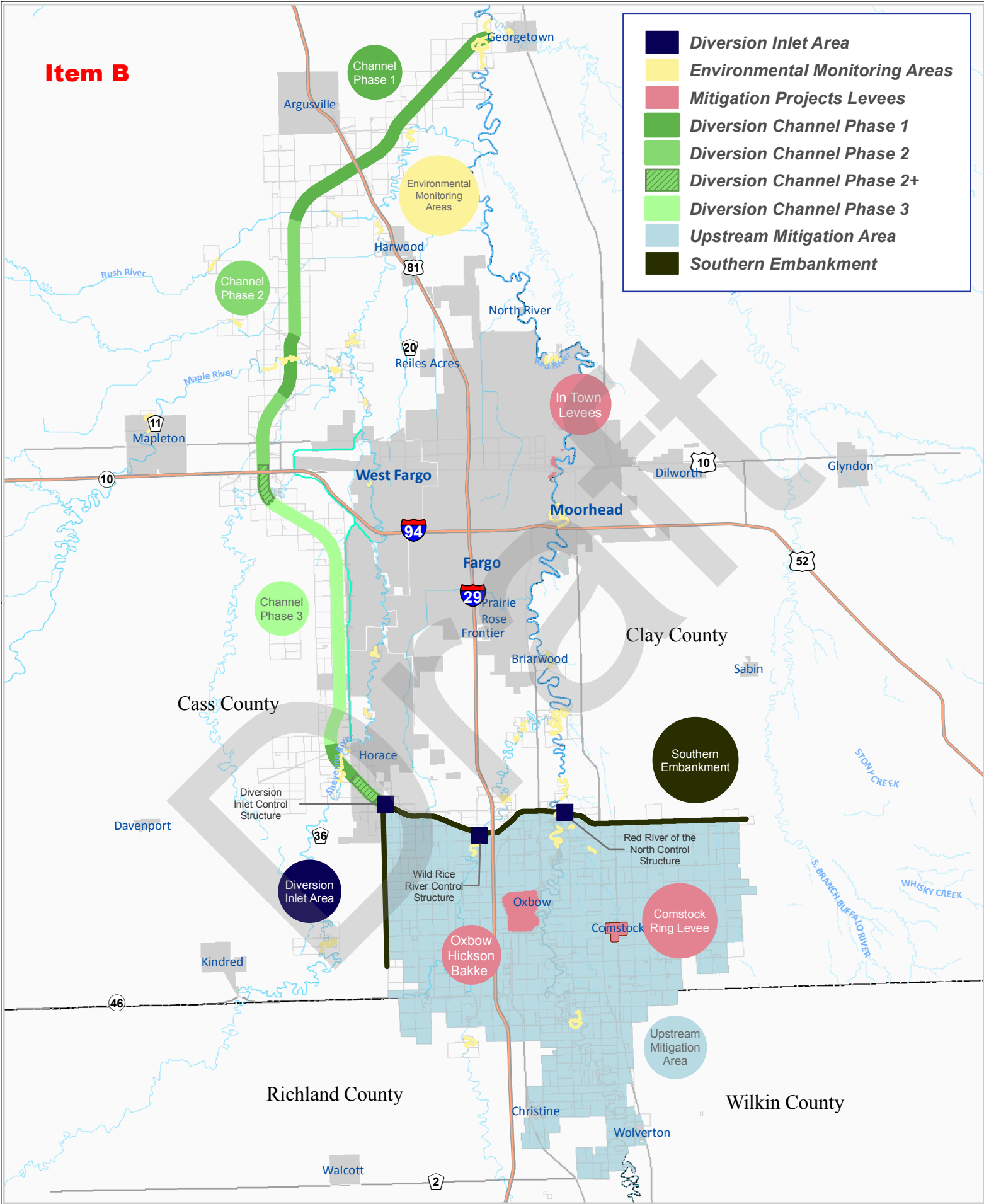
Mr. Peterson moved the meeting be adjourned. Mr. Olson seconded the motion. All the members present voted aye and the motion was declared carried.

The meeting adjourned at 3:50 p.m.

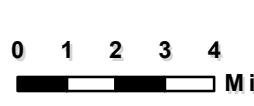
The next meeting will be May 24, 2017 at 3:00 p.m.

# Item B

-  **Diversion Inlet Area**
-  **Environmental Monitoring Areas**
-  **Mitigation Projects Levees**
-  **Diversion Channel Phase 1**
-  **Diversion Channel Phase 2**
-  **Diversion Channel Phase 2+**
-  **Diversion Channel Phase 3**
-  **Upstream Mitigation Area**
-  **Southern Embankment**



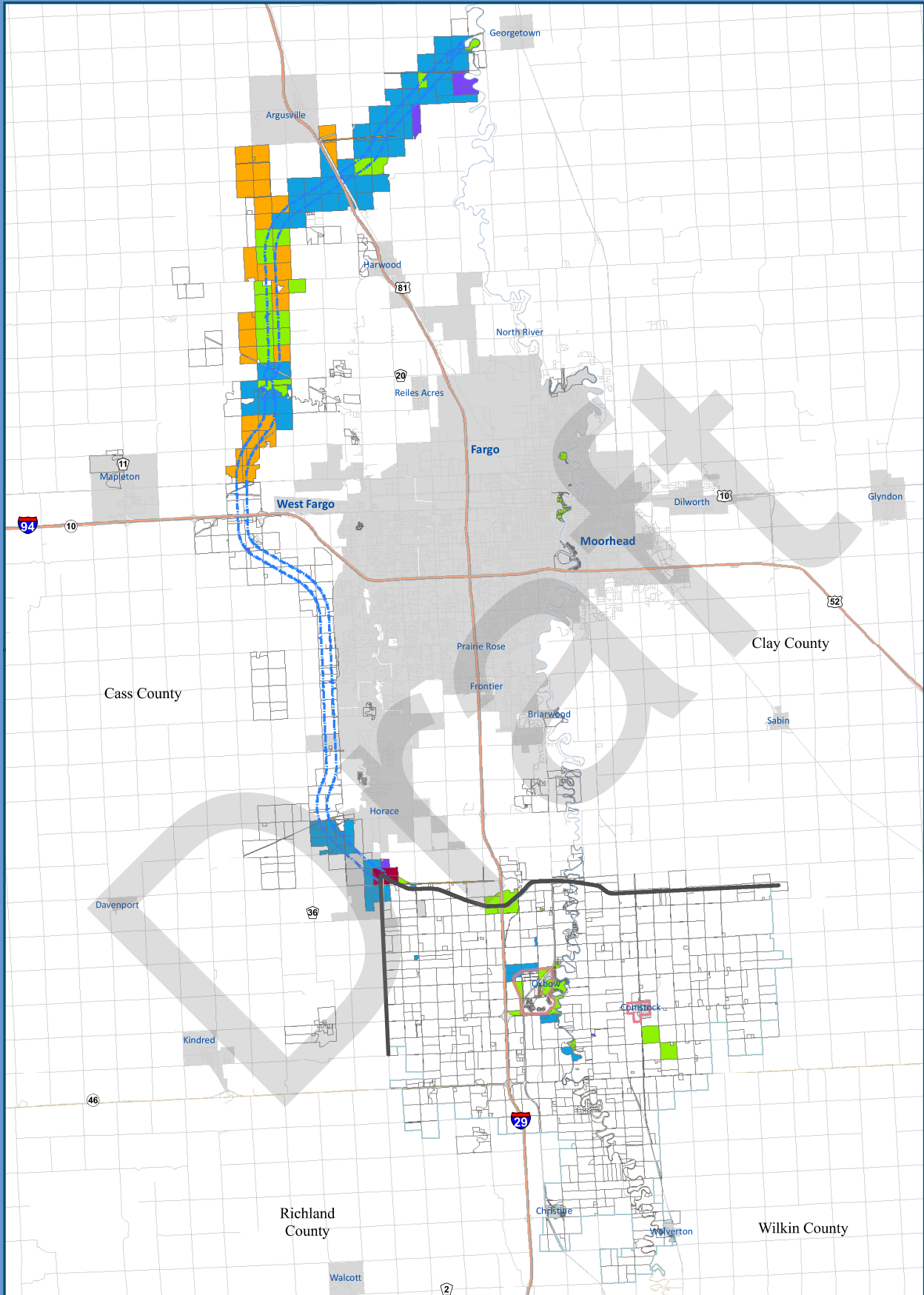
Maps are for graphical purposes only. They do not represent a legal survey. While every effort has been made to ensure that these data are accurate and reliable, The Diversion Authority does not guarantee the accuracy of the information, and waives any warranty or guarantee of any kind, express or implied.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



## FM Area Diversion Key Acquisition Areas

5/17/2017





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.  
 Date: 5/17/2017 | Coordinate System: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet

<p><b>STATUS</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #cccccc; border: 1px solid black; margin-right: 5px;"></span> Impacted Parcel (1,497)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #ff9900; border: 1px solid black; margin-right: 5px;"></span> Appraisal Pending (108)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #0099cc; border: 1px solid black; margin-right: 5px;"></span> In Negotiation (127)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #990099; border: 1px solid black; margin-right: 5px;"></span> Purchase Agreement Signed (14)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #99cc33; border: 1px solid black; margin-right: 5px;"></span> Acquired; Easement Secured (151)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #cc0000; border: 1px solid black; margin-right: 5px;"></span> Condemnation for Acquisition (5)</li> </ul>	 	<p><b>Property Acquisition Status Report</b></p> <p>5/17/2017</p>		 <small>Advanced Engineering and Environmental Services, Inc.</small>
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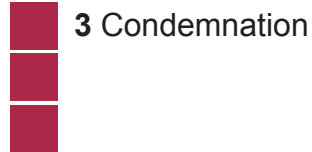
# Diversion Inlet Area



## Diversion Inlet Control Structure

(WP 26)  
Targeted Completion Date: Complete

### Parcel Status



**3 parcels total**

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

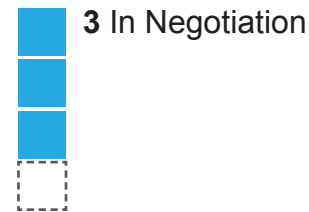
## County Roads 16 & 17 Roundabout

(WP 28)  
Targeted Completion Date: July 2017

### Parcel Status



Roundabout



Re-route after  
Channel  
Construction

**7 parcels total**

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

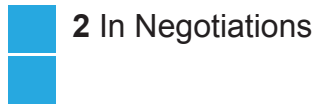


# Cultural Mitigation Areas

## Sheyenne River Phase 3 Sites

(32-CS-201) Target Completion: June 1, 2017

### Parcel Status



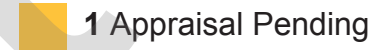
2 parcels total

(Part of Channel Phase 1)

## Drain 14 Phase 2 Site

(32-CS-5135) Target Completion: Fall 2017

### Parcel Status



1 parcel total

May change to a Phase 3 Site  
Phase 2 site requires an Easement  
(Part of Channel Phase 2)

## South of Maple River Phase 3 Site

(32-CS-5127) Target Completion: July 1, 2017

### Parcel Status



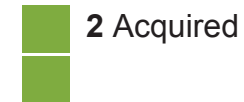
3 parcels total

(Part of Channel Phase 1)

## North of Maple River Phase 2 Site

(32-CS-5139) Target Completion: Done

### Parcel Status



2 parcels total

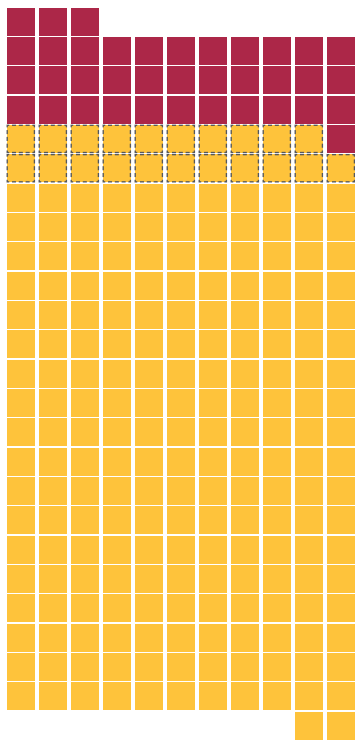
(Part of Channel Phase 1)

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

# Environmental Monitoring Areas

## Cass County

Parcel Status

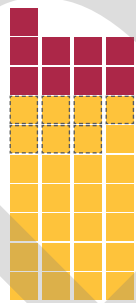


258 parcels total

- Letters Sent/Communication Initiated - Mailed 02/03/17
- 221 Signed ROE - Expires 12/31/18
- 37 Filed for Court Action
- Signed Easement
- Change from last report

## Richland County

Parcel Status

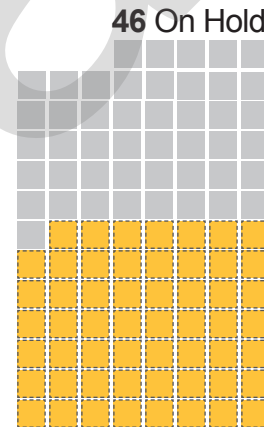


37 parcels total

- Letters Sent/Communication Initiated Mailed 02/23/17
- 28 Signed ROE - Expires 12/31/18
- 9 Filed for Court Action
- Signed Easement
- Change from last report

## Clay County

Parcel Status



101 parcels total

- Letters Sent/Communication Initiated
- 55 Signed ROE (City of Moorhead/Clay County)
- Filed for Court Action
- Signed Easement
- Change from last report

## Wilkin County

Parcel Status



8 parcels total

- Letters Sent/Communication Initiated
- Signed ROE
- Filed for Court Action
- Signed Easement
- Change from last report

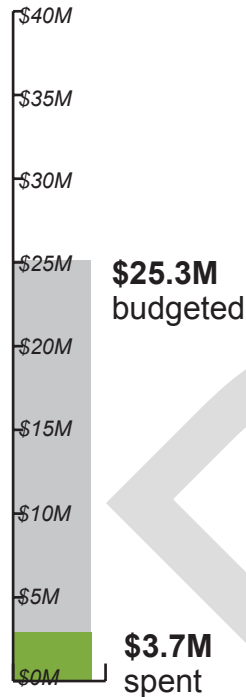
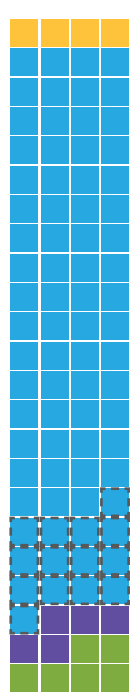
# Diversion Channel

## Phase 1

Target Completion: Feb. 2018

Parcel Status

Hard Costs paid to Property Owners



**92 parcels total**

- 4 Appraisal Pending
- 77 In Negotiation
- 5 Agreement Signed
- 6 Acquired Parcel
- Condemnation
- Change from last report

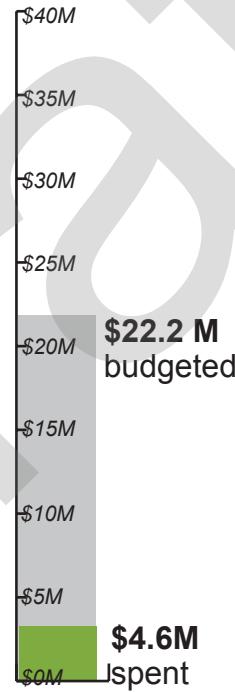
■ Budgeted  
■ Spent

## Phase 2 & 2+

Target Completion: Aug. 2018

Parcel Status

Hard Costs paid to Property Owners



**87 parcels total**

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

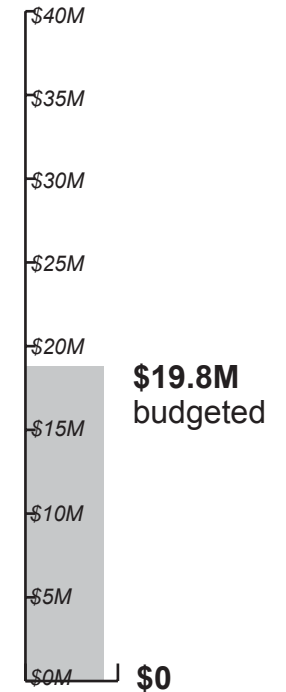
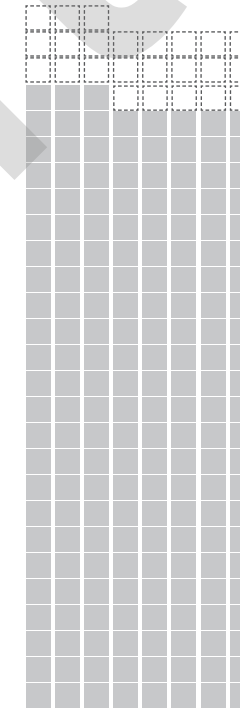
■ Budgeted  
■ Spent

## Phase 3

Target Completion: April 2019

Parcel Status

Hard Costs paid to Property Owners



**187 parcels total**

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

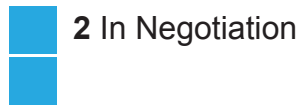
■ Budgeted  
■ Spent

# Mitigation Projects

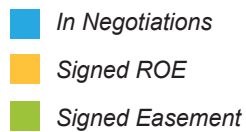
## Wild Rice Dam Removal

(WP 36)  
Targeted Completion Date: July 1, 2017

### Parcel Status



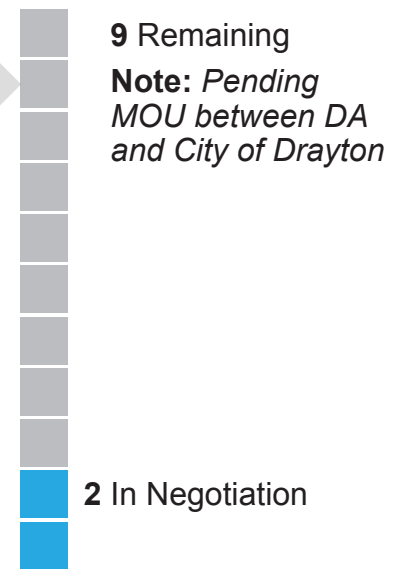
2 parcels total



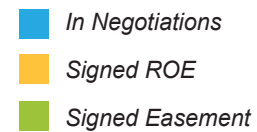
## Drayton Dam Replacement

(WP 40)  
Targeted Completion Date: July 1, 2017

### Parcel Status



11 parcels total

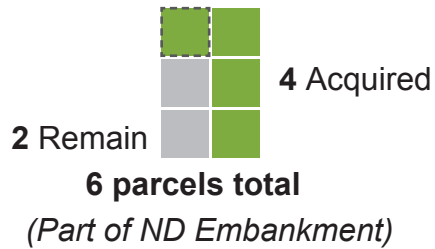


# Southern Embankment

## Wild Rice Control Structure

Target Completion: May 2018

### Parcel Status



## ND Embankment

Target Completion: May 2019

### Parcel Status



## Red River Control Structure

Target Completion: May 2019

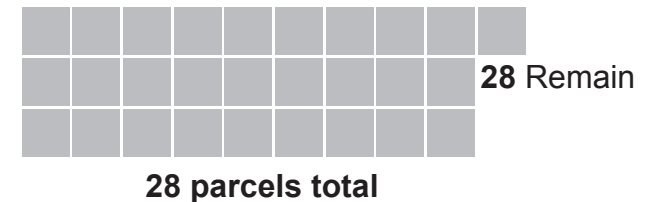
### Parcel Status



## MN Embankment

Target Completion: May 2020

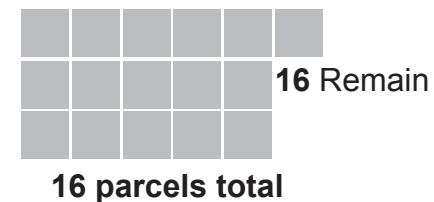
### Parcel Status



## Limited Service Spillway

Target Completion: May 2021

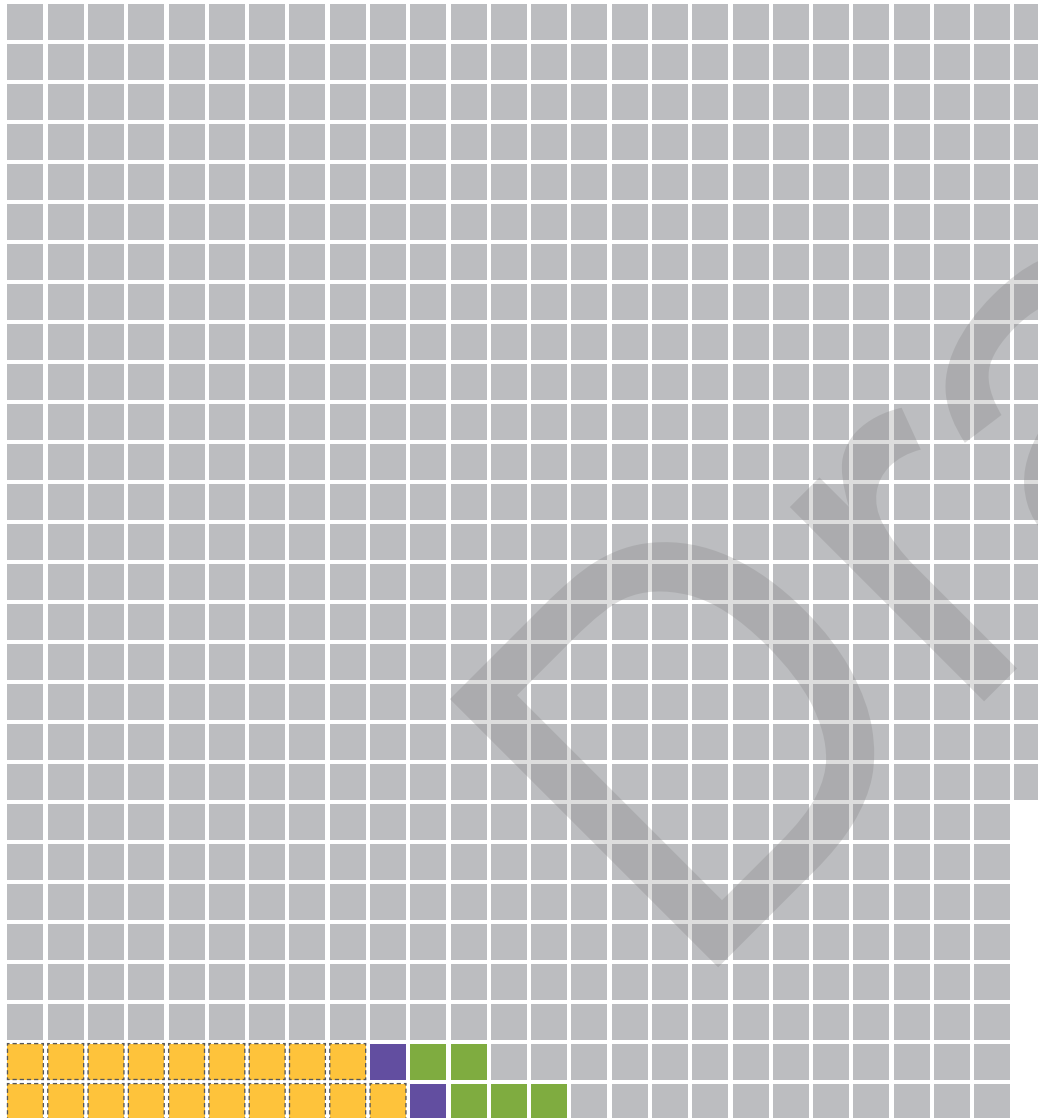
### Parcel Status



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

# Upstream Mitigation Area

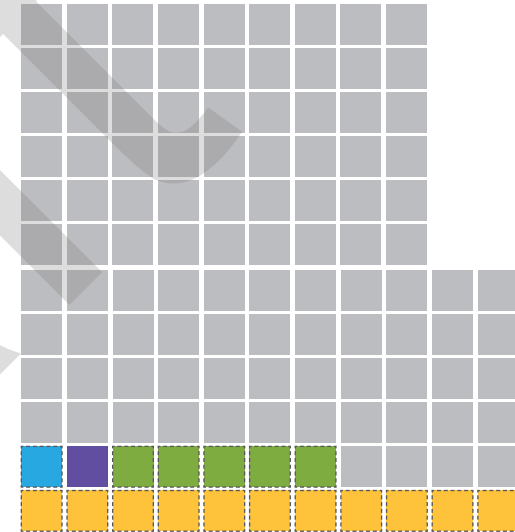
## Flowage Easements



**Approximately 720 parcels total**

- 19 Appraisal Pending
- In Negotiation
- 2 Agreement Signed
- 5 Acquired Parcel
- Condemnation
- Changed

## Structure Sites



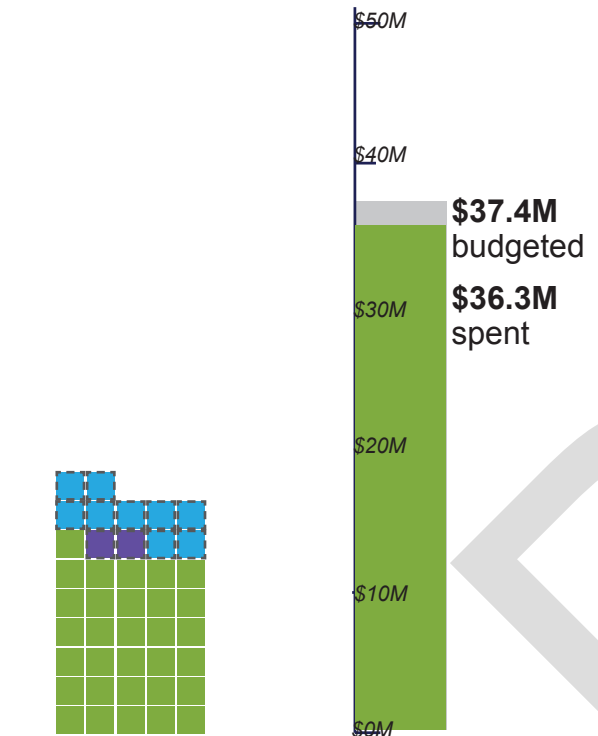
**Parcel Status  
Approximately 120 parcels total**

- 11 Appraisal Pending
- 1 In Negotiation
- 1 Agreement Signed
- 5 Acquired Parcel
- Condemnation
- Changed

# Levee Projects

## In Town Levees

Parcel Status      Hard Costs paid to Property Owners

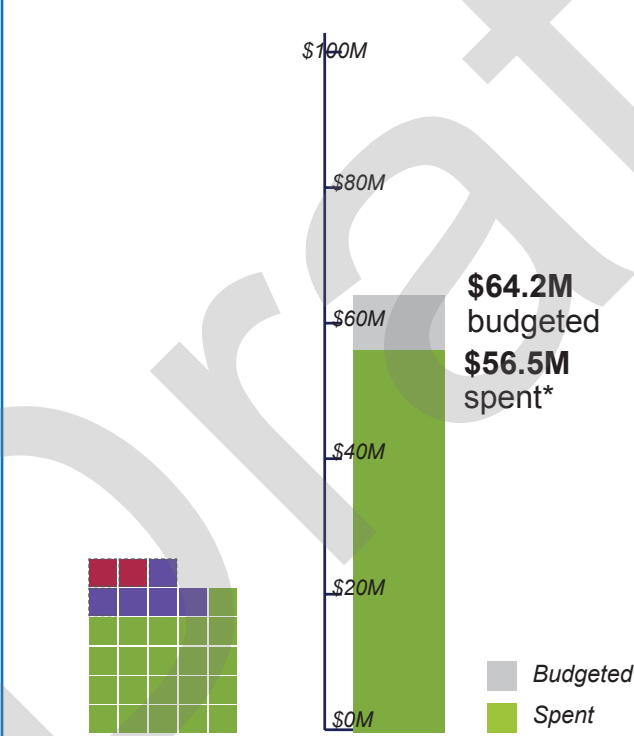


**42 parcels total**

- Appraisal Pending
- 9 In Negotiation
- 2 Agreement Signed
- 31 Acquired Parcel
- Condemnation
- Changed from last report
- Budgeted
- Spent

## OHB Ring Levee

Parcel Status      Hard Costs paid to Property Owners



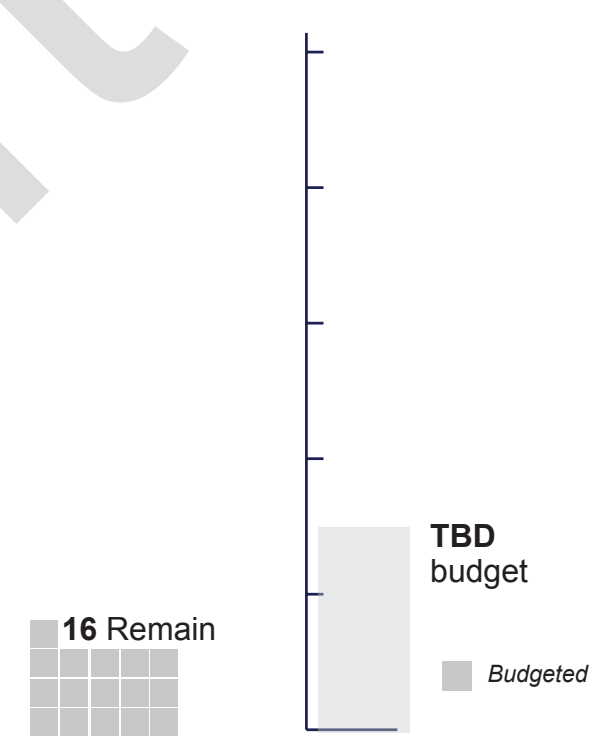
**28 parcels total**

- Appraisal Pending
- In Negotiation
- 5 Agreement Signed
- 21 Acquired Parcel
- 2 Condemnation
- Changed from last report
- Budgeted
- Spent

\* Includes parcels purchased outside the OHB Ring Levee

## Comstock Ring Levee

Parcel Status      Hard Costs paid to Property Owners

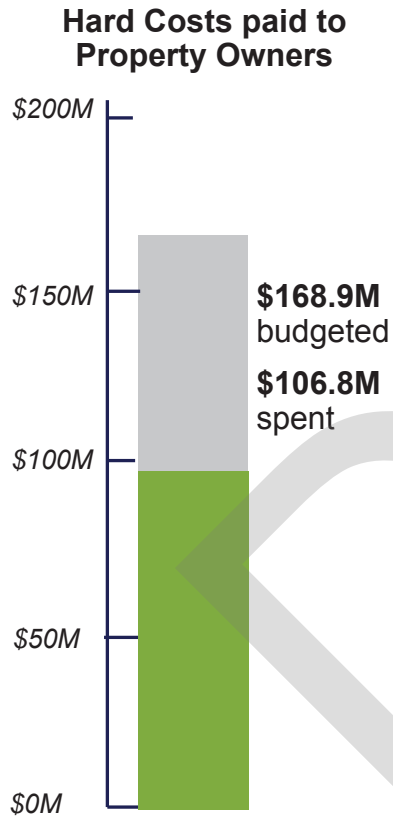


**16 parcels total**

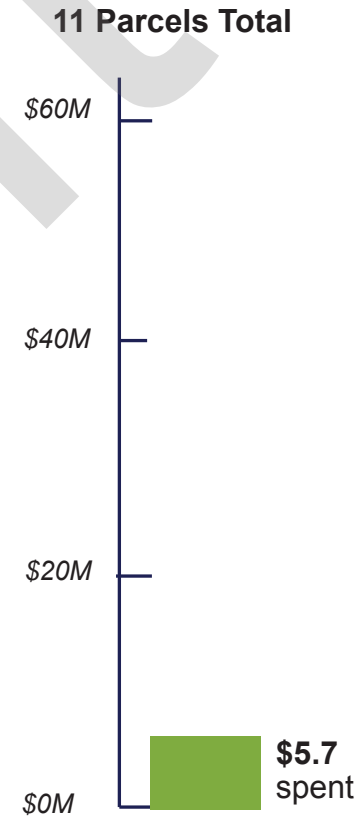


# Overall Budget

## Diversion Channel, In Town Levees, OHB Ring Levee



## Land Assets



■ Budgeted  
■ Spent



# FARGO-MOORHEAD AREA DIVERSION PROJECT

## BIOTIC AND GEOMORPHIC MONITORING PROGRAM

The U.S. Army Corps of Engineers, St. Paul District, is completing biotic/biological and geomorphic surveys in the Fargo, N.D./Moorhead, Minn., region as part of the Fargo/Moorhead Metropolitan Area Flood Damage Reduction Project. These surveys of the physical environment will provide the Corps with baseline information of the biological and geological environment before construction of the project. The Corps is committed to minimizing environmental impacts to the land and intends to have full and open communication with landowners in regards to these survey activities. All people on-site will be instructed to minimize any disturbance to property. See page 2 for a map showing all of the biotic and geomorphology survey sites.

### BIOTIC SURVEYS

The purpose of the biotic surveys is to characterize the general ecological conditions of the rivers and streams affected by the project. Work will include monitoring the physical habitat and collecting and identifying fish and invertebrates [i.e., bugs, clams]. Electrofishing techniques will be used to stun fish, collect them, observe them and return them to the river. Invertebrates will be collected from the bottom of the river and sent to a lab for analysis. Work is planned to begin in 2017 and will include approximately three half-day events per site. Initial site visits are planned for early-summer but could be scheduled to a later date based on flow conditions. Actual sampling will likely occur later in July or August. Additional surveys may occur in later years prior to construction and will occur again following project construction and operation. The results of these surveys will help biologists confirm impacts as a result of the project and the effectiveness of mitigation. Work will be done by a crew of two to three people in the water with approximately one to five people watching from the shore.



Biotic survey, 2011 Rush River

### GEOMORPHOLOGY SURVEYS

The purpose of the geomorphology surveys is to collect data at regularly spaced intervals before and after completing the project, as well as after flooding. The results of these surveys will be used to evaluate potential interactions between near and in-channel land-surface processes and the flood risk management project. Surveys will include measurement of width, depth, velocity and discharge of stream flow. Surveyors will collect stream bank and instream sediments and water samples and document vegetation types and sediment cores to establish deposit properties and depths. The anticipated timing for the regular sampling is every other year for up to three sampling cycles in a 5-year period both before and after project construction completion. Additional surveys will more than likely be performed in subsequent years and after flooding to identify any geomorphic changes. As outlined in the 2011 Final Feasibility Study and Environmental Impact Statement, no significant adverse impacts from the project are anticipated.

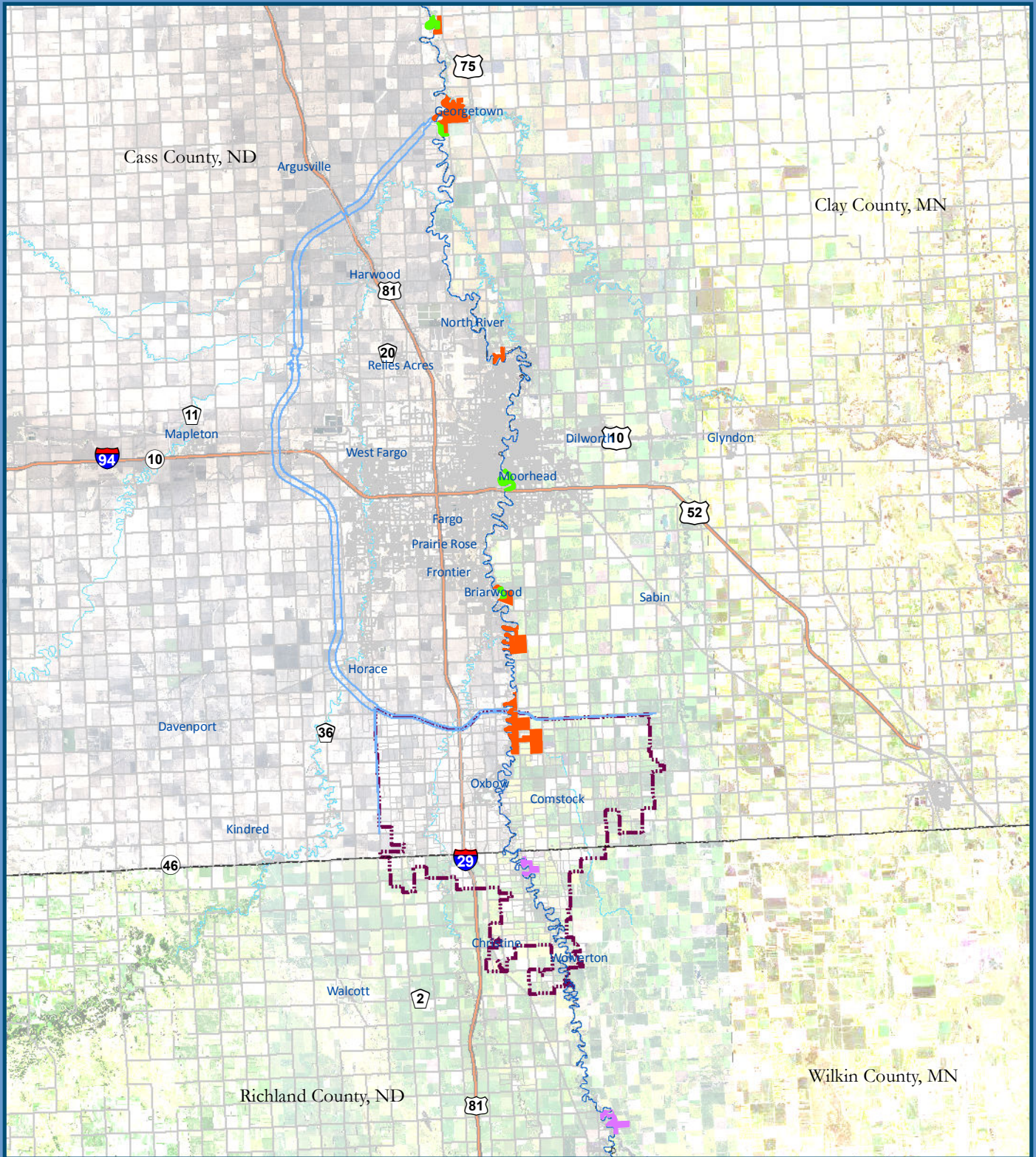


Geomorphology survey, 2011 Rush River

### CONTACT INFORMATION

For questions or comments regarding the biotic and geomorphic monitoring surveys, please contact **Kimberly Warshaw, Corps of Engineers, at 651-290-5327.**

For questions or comments regarding land acquisition, please contact **Joe Herbst, Diversion Authority, at 701-364-9111.**



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.

- Owned by Clay County (5) & Moorhead (50) ROE Signed
- MN Parcels Bio/Geo Survey - to acquire ROE
- Clay County (46)
- Wilkin County (8)
- Channel Footprint
- Upstream Mitigation Area



**Bio/Geo  
Surveys Required  
in Minnesota**  
5/17/2017



# Crown Appraisals, Inc.

April 12, 2017

# DRAFT

Eric C. Dodds  
 AE2S  
 3170 43<sup>rd</sup> Street South, Suite 100  
 Fargo, ND 58104

RE: Fargo Diversion "Pool" Valuation Project

Overview:

A portion of the Fargo Diversion Project involves a "pool" area located south of Fargo which can be utilized as a temporary impoundment area to manage Red River water flows through and around Fargo during periods of extremely high water volumes. Part or all of the "pool" area will be capable of being temporarily flooded to manage the water flows. Approximately 39,000 acres will be impacted to some degree by the Project. Land closer to the river and at a lower elevation will be flooded to a greater depth, more frequently, and of a longer duration than land located further from the river and at a higher elevation where flood depths will be shallower, less frequent and of a shorter duration.

Some parcels of land that are already located in drainage ways in the "pool" area already have some limited flooding issues, but the situation will become more pronounced.

Goal:

The purpose of this valuation project is to determine what fair and reasonable market based compensation land owners and farm operators in the "pool" area should receive. Land in the pool area will be affected by a "flowage" easement. (The "flowage" easement will be man-controlled based on the individual conditions of each flooding event.) A "flowage" easement is placed on privately owned land upon acquisition of certain specific perpetual rights from the land owner. In this case, the right to flood the land in connection with operation of a water project is the right being acquired through the easement. When conditions permit, the land may be farmed by the operator.

**Jeffrey Berg, ARA, ASA, FRICS**

Accredited Rural Appraiser, Accredited Senior Appraiser  
 Fellow Royal Institution of Chartered Surveyors

602 Front St. North - Barnesville, MN 56514-3118  
 (218) 354-7000 • FAX (218) 354-7100

Email: [jeffberg@crownappraisalsinc.com](mailto:jeffberg@crownappraisalsinc.com)  
[www.crownappraisalsinc.com](http://www.crownappraisalsinc.com)



**American Society of Farm Managers and Rural Appraisers**  
**American Society of Appraisers**

**ASA.**

Page 2  
Pool Project  
4-12-17

Land owners should be compensated for the flowage easement which allows their land to be flooded by a man-made event. Farm operators should also be compensated when flooding events occur as the flood events may or may not result in yield losses due to delayed planting dates and other potential losses.

Documents/Resources:

NDSU study (Flood frequency, duration, depth)  
Meterologic/hydrologic study  
Federal Crop Insurance data RE: delayed planting  
Steve Herzog (Oregon)  
Market land sale research RE: flowage/conservation easements  
Local land sales data

Our Team of Experts:

The Fargo Diversion Authority is familiar with Crown Appraisals, Inc., Jeffrey Berg, ARA, ASA, FRICS and Brian Field, ARA because we have performed a significant amount of valuation work for the Authority on other phases of the project. Refer to the addenda of this report for our qualification pages.

Douglas Hodge, ARA, MAI, CCIM, MRICS is a very experienced appraiser in the valuation of agricultural and agribusiness properties. He has extensive experience in the valuation of properties subject to eminent domain takings having been a lead appraiser in several large projects. His experience in condemnation includes valuation for both property owners and condemning agencies for projects located throughout the United States. Some of Doug's specialized experience is in the valuation of former rail road rights of ways that are being converted to rail/trail corridors for recreational purposes. He also has extensive experience in the valuation of properties that are being subject to takings for power lines, pipelines and other uses. A copy of Doug's qualifications is attached.

Timothy R. Hodge, PhD is an Assistant Professor of Economics at Oakland University (Rochester, MI). Tim earned his PhD in Agricultural Economics from Michigan State University in 2013. One of Tim's research interests is real estate economics, particularly using statistical techniques for property valuation. He has been involved in a variety of rural land valuation projects, including the affect ethanol plants have on residential property values, easement valuation in association with a large transmission lines (both residential property and agricultural land), and the impact of flooding on residential property values in Hampton Roads, VA.

Refer to qualification pages for all of our team members in the addenda of this proposal.

Our Proposal:

We propose to develop a multi variate (hedonic) regression analysis which will be used to provide an estimate of the compensation due to the property owner and/or operator based on the frequency, duration, and depth of flooding for individual tracts in the 39,000 acre pool. The analysis would calculate economic damages and potential rent loss for individual parcels based on a number of factors which may include soils, existing drainage, size and other factors affecting the value of farmland.

Procedures:

- Meet with land owners in the "pool" area to explain the issue and our approach to resolution of the issue and to solicit their thoughts and ideas. Build relationships with the affected land owners to provide a sense of being included in the project.
- Create a sale data base summarizing farm land sales in the general area.
- Conduct research to obtain rental rates for land both within and outside of the affected area.
- Sales of rural residential and headquarter sites will also be considered, however, the focus of this project is to isolate potential damages to farm land tracts due to the flowage easement.
- Perform research to locate comparable sales that have been acquired for inclusion in similar water projects to determine the initial market discount for properties encumbered by flowage easements.

--Research sales to support a “matched pairs” analysis to identify discounts for the following:

- Triangulation/shape
- Farm-ability
- Access (roads)
- Time/market conditions
- Easements vs. no easements
- Propensity to flooding issues vs. no flooding issues

--Incorporate the matched pairs sale data into the regression analysis.

--Incorporate flooding frequency, duration and depth data from the sources noted on a previous page into a regression analysis which will allow us to identify “flowage” characteristics for each piece of land involved in the “pool”.

Deliverables:

Our report to the Diversion Authority will include the following:

- A summary of the economic impact on property values and operations by quarter section
- A before and after valuation analysis leading to the concluded potential economic losses
- An interactive map of the properties affected and estimated levels of compensation

Our intent is to provide solid, market based evidence to the Diversion Authority and to the land owners and operators that may be affected by the inclusion of their property in the pool area. By spending time with the land owners and operators during the valuation project it would be our desire that land owners will be more receptive to the final results. While the final calculations may be regarded as “subjective” by some land owners it is the intent of the study to provide empirical evidence to support the potential losses. It is our belief that if land owners are involved in the complex issue, they will be more amenable to the final conclusions.

Page 5

Pool Project

4-12-17

Completion Proposal:

A more traditional solution to this type of project would be to contract with an appraiser to create a sales book and perform matched pairs research. The probable cost for a project of this magnitude may exceed \$100,000. In addition, each parcel of land would be required to be appraised individually. If one assumes 250 quarters of land at \$4,000 appraisal fee per quarter, the total fee would reach a level near \$1,000,000. It is our estimate that the total valuation costs could easily climb to \$1.0 to \$1.5mm.

We propose to perform the project outlined above at a cost not to exceed \$750,000 inclusive of all expenses. Delivery of the final report is estimated to be on or before June 30, 2018 with status updates provided periodically. A \$100,000 retainer is requested upon acceptance of this proposal with additional payments of \$100,000 upon 1.) completion of the sales book and matched pairs analysis; 2.) when sales data has been loaded in the regression analysis model; 3.) upon completion of research for other sites with similar impacts; 4.) submission of initial mapping. The final \$250,000 payment will be due upon submission of the completed project. If required, preparation for testimony and testimony in court procedure will be invoiced at an hourly rate over and above the basic cost of the project.

We have assembled a highly qualified team of experts that can handle this project objectively and based on market data. As questions arise, let's have a conversation regarding this project. Thanks for your consideration of our proposal.

Best regards,

A handwritten signature in blue ink that reads "Jeffrey Berg". The signature is fluid and cursive, with the first and last names clearly legible.

Jeffrey Berg, ARA, ASA, FRICS  
Crown Appraisals, Inc.





**APPRAISAL QUALIFICATIONS FOR JEFFREY BERG**

**MEMBER:**

Accredited Rural Appraiser (ARA) membership designation--the American Society of Farm Managers and Rural Appraisers, Inc.  
Accredited Senior Appraiser (ASA) membership designation--Machinery & Equipment Specialty--American Society of Appraisers  
Fellow Royal Institution of Chartered Surveyors (FRICS)  
Certified Federal General Appraiser License: MN #40360527; ND #CG-1050; SD #118CG-2017; IA #CG03191;  
CO #: 100050561; WI #: 1395-10; IL #: 553.001487; IN #: CG41500069; WY #: AP-1406; OR #: C001223  
Instructor: ASFMRA--Fundamentals, Principles, and Advanced Rural Appraisal Courses and numerous ASFMRA seminars  
Instructor: National Uniform Standards of Professional Appraisal Practice (USPAP) Course, Recertified for 2016/2017 Course  
ASFMRA National Appraisal Education Committee Chairman, 2002-2005; Accreditation Chairman, 2006-2008;  
2005 recipient of H.E. "Buck" Stalcup Excellence in Education Award from ASFMRA  
Recipient of 2008 ASFMRA Appraisal Professional of the Year Award  
National ASFMRA President, 2011/2012

**CORE APPRAISAL EDUCATION:**

American Society of Farm Managers and Rural Appraisers, Inc. courses:  
-A-27, Income Capitalization Unleveraged, December 1993, Denver, CO  
-A-20, Principles of Rural Appraisal, August 1988, Rochester, MN  
-A-25, Eminent Domain Seminar, February 1991, Denver, CO  
-A-28, Income Capitalization Leveraged, January 1994, Denver, CO  
-A-30, Advanced Rural Appraisal, February 1991, Wichita, KS  
-A-35, Advanced Appraisal Review, March 2004, St. Cloud, MN  
-A-40, Advanced Rural Appraisal Case Studies, June 1991, St. Paul, MN  
-American Society of Appraisers courses:  
-ME201 Introduction to Machinery and Equipment Valuation, 7-93, Cleveland, OH  
-ME202 Machinery and Equipment Valuation Methodology, 8-93, Atlanta, GA  
-ME203 Machinery & Equipment Valuation: Advanced Topics & Case Studies, 3-94, Atlanta, GA  
-ME204 Machinery & Equipment Valuation: Advanced Topics & Report Writing, 4-94, Washington, DC  
-ME205 Income Approach, Discount Rate Development & Complex Case Studies, 2-98, San Francisco, CA  
Appraisal Institute Courses:  
-Fundamentals of Separating Real Property, Personal Property and Intangible Business Assets, April 2012, St. Paul, MN  
B.A. Agriculture/Business Administration, Ambassador University, Big Sandy, TX, 1972  
ASFMRA, ASA & RICS conduct mandatory programs of continuing education. I am current with the requirements of the programs.  
Continuing education classes are not listed.

**BACKGROUND AND EXPERIENCE:**

Crown Appraisals specializes in the appraisal of agricultural and commercial real estate. Commercial appraisal experience includes the following classes of real estate: feed mills, grain elevators, dry edible bean processing plants, seed plants, potato warehouses, food processing facilities, fertilizer facilities, convenience stores, bulk fuel facilities, manufacturing plants and equipment dealerships. Agricultural appraisal experience includes farmland, on-farm grain handling and storage facilities, feedlots, hog confinement facilities, large freestall dairy facilities and general farm buildings. Jeff Berg has extensive experience in the appraisal of aggregate and gravel reserves. Experience includes expert witness testimony in Federal Bankruptcy court, IRS Tax court and various district courts. Equipment appraisal experience includes food processing, grain handling, seed processing, industrial manufacturing, construction and agricultural equipment. Please refer to website at crownappraisalsinc.com.

In 2014 Jeff authored an appraisal course for the ASFMRA titled "Key Elements of Grain Elevator Appraisal". He teaches the class to fellow appraisers throughout the country at various ASFMRA events.

**Jeffrey Berg, ARA, ASA, FRICS**  
Accredited Rural Appraiser, Accredited Senior Appraiser  
Fellow Royal Institution of Chartered Surveyors

602 Front St. North - Barnesville, MN 56514-3118  
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Email: jeffberg@crownappraisalsinc.com  
www.crownappraisalsinc.com



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American Society of Appraisers**





**APPRAISAL QUALIFICATIONS FOR BRIAN FIELD**

**MEMBER:**

Accredited Rural Appraiser (ARA) membership designation--American Society of Farm Managers & Rural Appraisers (ASFMRA)  
Member of both the Minnesota & North Dakota Chapters--American Society of Farm Managers & Rural Appraisers  
ASFMRA Young Professionals Network--District Representative & Chair of the national leadership team 2016/18  
ASFMRA Executive Council member 2015/19  
Candidate for Designation--Appraisal Institute  
Member of North Star Chapter--Appraisal Institute  
Certified General Appraiser Licenses: MN #20586763; ND # CG-21016; SD #1030CG-2017

**CORE APPRAISAL EDUCATION:**

*American Society of Farm Managers & Rural Appraisers courses:*

- Code of Ethics, March 2008, Apple Valley, MN
- A-20, Principles of Rural Appraisal, October 2006, St. Cloud, MN
- A-250, Eminent Domain, March 2011, Denver, CO
- A-290, General Market Analysis and Highest & Best Use, August 2008, St. Cloud, MN
- A-300, Advanced Approaches to Value for Rural Appraisal, October 2008, Denver, CO
- A-360, Introduction to Appraisal Review, October 2007, St. Cloud, MN
- A-370, Appraisal Review Under USPAP, October 2007, St. Cloud, MN
- A-400, Advanced Rural Case Studies, June 2011, Denver, CO

*Appraisal Institute courses:*

- Business Practices and Ethics, September 2008, Online
- Basic Appraisal Principles, January 2006, St. Paul, MN
- Basic Appraisal Procedures, January 2006, St. Paul, MN
- Residential Market Analysis and Highest & Best Use, February 2006, St. Paul, MN
- Income Valuation of Small, Mixed-Use Properties, February 2006, St. Paul, MN
- Basic Income Capitalization, March 2007, St. Paul, MN
- General Applications, March 2007, St. Paul, MN
- National 7 Hour USPAP Update, April 2010, St. Cloud, MN
- General Appraiser Report Writing & Case Studies, October 2008, Chicago, IL
- Real Estate Finance Statistics & Valuation Modeling, November 2008, Online
- General Appraiser Income Approach/Part 2, April 2011, Aurora, CO
- Fundamentals of Separating Real Property, Personal Property, & Intangible Business Assets, April 2012, St. Paul, MN
- Advanced Concepts & Case Studies, September 2013, St. Paul, MN
- Advanced Market Analysis and Highest & Best Use, May 2014, St. Paul, MN
- Advanced Income Capitalization, September 2014, Minneapolis, MN

*ProSource course:* National 15 Hour USPAP, May 2006, St. Paul, MN

*American Society of Appraisers courses:*

- ME 201, Introduction to Machinery and Equipment Valuation, May 2007, St. Cloud, MN
- ME 202, Machinery and Equipment Valuation Methodology, October 2007, St. Cloud, MN
- ME 203, Machinery and Equipment Valuation-Advanced Topics & Case Studies, August 2008, Minneapolis, MN
- ME 204, Machinery and Equipment Valuation-Advanced Topics & Report Writing, August 2009, Skokie, IL

- B.A. Business, Concordia College, Moorhead, MN
- M.Ed. Sports Management, University of Minnesota, Minneapolis, MN

The American Society of Farm Managers & Rural Appraisers and Appraisal Institute conduct mandatory programs of continuing education. I am current with the requirements of the programs. Continuing education classes are not listed. As of the date of this report, I have completed the Standards and Ethics Education Requirement of the Appraisal Institute for Associate Members.

**BACKGROUND AND EXPERIENCE:**

Appraisal experience includes grain elevators, fertilizer and agronomy facilities, seed plants, bulk fuel facilities, farm headquarters, horse facilities, meat processing plants, bull stud facilities, convenience stores, eminent domain, commercial buildings, manufacturing facilities, farm implement dealerships, gravel reserves, rural residential buildings and bare land including farm, commercial, industrial and hunting, as well as farm and industrial equipment. Brian also co-instructs a course for the ASFMRA titled "Key Elements of Grain Elevator Appraisal". He teaches the class to fellow appraisers throughout the country.

**Jeffrey Berg, ARA, ASA, FRICS**  
Accredited Rural Appraiser, Accredited Senior Appraiser  
Fellow Royal Institution of Chartered Surveyors

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Email: jeffberg@crownappraisalsinc.com  
www.crownappraisalsinc.com



**American Society of Farm Managers and Rural Appraisers  
American Society of Appraisers**



# DOUGLAS K. HODGE, MAI, ARA, CCIM, MRICS

2343 Fish Lake Road  
LAPEER, MICHIGAN 48446  
810-516-5339  
Dhodge173@gmail.com

---

## EDUCATION

### ***Appraisal Institute - courses completed***

Appraisal Principles, Basic Valuation Procedures, Capitalization Theory & Techniques, Part A and B, Standards of Professional Practice, Case Studies in Real Estate Valuation, Report Writing and Valuation Analysis, Valuation of Conservation Easements Certification Program, Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book), Seminars and Courses for Continuing Education, USPAP updates on a continuing basis.

### ***American Society of Farm Managers and Rural Appraisers - courses completed***

Report Writing Seminar, Principles of Rural Appraisal Challenge, Advanced Rural Appraisal, Advanced Rural Case Studies and additional courses for continuing education on a continuing basis.

### ***International Right of Way Association - courses completed***

Course 401 – Appraisal of Partial Acquisitions  
Course 403 – Easement Valuation

### ***CCIM Institute - courses completed***

Investment Analysis for Commercial Investment Real Estate  
Financial Analysis for Commercial Investment Real Estate  
Market Analysis for Commercial Investment Real Estate  
User Decision Analysis for Commercial Investment Real Estate

### ***Realtors Land Institute – courses completed***

Land Investment Analysis  
Tax Deferred 1031 Exchanges  
Fundamentals of Land Brokerage

### ***Western Forestry and Conservation Association***

The Basics of Forest Land and Timber Appraisal

1983 **Ferris State University**  
Big Rapids, Michigan  
B.S. Finance

1977 **Delta College**  
University Center, Michigan  
A.A. Business

## **EXPERIENCE**

2017 – Present **Nuveen (formerly TIAA Global Asset Management)**  
Vice President – Risk Management/Appraisal  
Services Group  
Sr. Agricultural Appraisal Reviewer

2012 – 2016 **TIAA**  
Sr. Director – Global Asset Management/Appraisal  
Services Group  
Sr. Agricultural Reviewer

2007 – 2012 **Farmers National Company**  
Eastern District Appraisal Manager

1991 – Present **Capstone Realty Resources (fka Hodge Appraisal  
Group, Ltd.)**  
Lapeer, Michigan  
President and owner

**Agri Analysts, LLC**  
President

**American Society of Farm Managers  
and Rural Appraisers**  
Certified Instructor

1989 - 1991 **Terice Tosto**  
Birmingham, Michigan  
Staff Appraiser

1986 - 1989 **Hodge and Associates, Inc.**  
President

**Provided subcontract appraisal services to:**  
Donald C. Johnson, MAI; Charles R. Green, MAI;  
Malcolm Milks, MAI; and Dean Appraisal Company in  
addition to providing appraisal services to clients of  
Hodge Appraisal and Consulting Service.

1985 - 1986	<b>Great Lakes Valuation Service</b> Partner
1985	<b><i>Doane Farm Management Co.</i></b> Regional Appraiser
1983 - 1985	<b><i>Federal Land Bank Association of Caro</i></b> Loan Officer/Appraiser Certified Appraiser #715

Prior to employment at the Federal Land Bank, self-employed as the owner of a 280 acre dairy farm in Sanilac County, Michigan.

### **MEMBERSHIP AND AFFILIATIONS**

The Appraisal Institute - MAI Designation #9213  
American Society of Farm Management and Rural Appraisers - ARA Designation #797  
CCIM Institute – CCIM Designation  
Royal Institution of Chartered Surveyors – MRICS designation  
Michigan Society of Farm Managers and Rural Appraisers  
State Certified General Appraiser, State of Michigan License #1201001482  
Licensed Real Estate Broker, State of Michigan  
Member of the Commercial Board of Realtors  
Member of Lapeer County Planning Commission, 1991-1994, 2001- 2007  
Member of Lapeer Township Planning Commission, 1993 - 1996, Chairman - 1995/96  
Member of Mayfield Township Planning Commission, 1997 - 2001  
Certified Instructor, American Society of Farm Managers and Rural Appraisers  
Director – Great Lakes Chapter of the Appraisal Institute 1998 – 2001  
Chapter officer – Vice President Great Lakes Chapter of The Appraisal Institute 2003; President 2004  
Member of ASFMRA National Education and Accreditation Committee  
ASFMRA representative to International Building Measurement Standards Committee – 2013 to present  
ASFMRA representative to International Ethics Committee – 2014 to present  
Lapeer County Board of Road Commissioners 2000 – 2012, Vice Chair 2001-2003; Chairman of the Board 2004 – 2012  
District 3 Vice President – ASFMRA 2016 – 2019  
President – Michigan Chapter of ASFMRA – 2016  
Recipient of ASFMRA Stalcup Excellence in Education Award – 2016  
Recipient of Rabo Agri Finance/ASFMRA Appraisal Professional of the Year Award – 2016

## **AREAS OF SPECIALIZATION**

Real estate valuation with emphasis on food processing, agribusiness, large production agriculture, permanent plantings, aggregate properties, right of way for roads, drains, pipeline easements, ad valorem tax appeals, commercial, industrial, multi-family, retail, subdivision analysis, vacant land, wetlands. Valuation studies include fractional interests, partition proceedings, eminent domain, leaseholds, market valuation, and providing expert witness services in accordance with the above types of valuations. Appraisal review services during employment with TIAA/Nuveen including properties in US, Australia, Brazil, Chile, New Zealand and Poland.

## **REPRESENTATIVE APPRAISAL AND CONSULTING CLIENTS**

Aegon USA Realty Advisors	Independent Bank
Aetna Life and Casualty	ITC
Aetna Realty Investors, Inc.	Jaffe, Snyder, Raitt and Heuer
Anderson, Stull and Kraft	Jay S. Kalish, Esq.
Buckeye Egg Farm	Kingston State Bank
Thomas J. Budzynski, Esq.	Lapeer County Road Commission
Butzel, Keidan, Simon, Meyers and Graham	Lambert, Leser, Dahm, Cook and Guinta
Chase Bank	LaSalle Bank
Chelsea Milling Co.	Learman, Peters, Sarow and McQuillan
Cherry-Ke Orchards	Little Forks Land Conservancy
Cigna Investments	Marlette Economic Development Corp.
Citizens First	McKay and McKay
Clark Hill	Mennel Milling, Inc.
Comerica Bank	Michigan Dept. of Natural Resources
Cubitt, Cubitt and Trowhill	Michigan Dept. of Transportation
DayLay Egg Farm, Inc.	Miller, Canfield, Paddock and Stone
Delta Investments	National City Bank
Dorsey and Whitney	Oakland Land Conservancy
Drillock, Rinn and Drillock	Pelavin and Powers
Dykema, Gossett	Providian Capital Management Real Estate Services
Exchange National Bank	RaboAgriFinance
Farm Bureau Ins. Co.	Ransford, Crews and Burgess
Greenstone Farm Credit Services	Sanilac Mutual Insurance Co.
First of America Bank	State of Michigan, Attorney General
First Central Mortgage	TCF Bank
First National Bank of Chicago	Thumb National Bank
Garard, Moehle and Smith	Total Petroleum
Grand Traverse Land Conservancy	United States Government – NRCS, IRS, FmHA, Fish and Wildlife Division, Dept. of Justice
John Hancock Mutual Life Ins. Co.	Wruble Elevator Co.
David Heyboer, Esq.	Zelenka Nursery, Inc.
Herbruck Poultry Farm, Inc.	
Herbruck Foods, Inc.	
Honigman Miller	
Huron County Road Commission	

## **TYPES OF ASSIGNMENT**

Ad Valorem Tax Valuations  
Agribusiness Properties  
Aggregate Mining Operations  
Apartment Buildings  
Appraisal Reviews  
Automobile Dealerships  
Bankruptcy Appraisals  
Branch Bank Facilities  
Condemnation, Eminent Domain  
Conservation Easements  
Corridors for Pipeline & Drainage Easements  
Development Properties  
Department Stores  
Estate Appraisal  
Food Processing Plants  
Farms, specialized (poultry, swine and dairy) and  
general  
Feasibility Studies  
Flour Mills  
Grain Elevators/Feed Mills  
Industrial Plants  
Medical & Dental Clinics  
Office Buildings  
Public Land Acquisitions  
Residential Subdivisions  
Shopping Centers  
Valuation of Development Rights  
Wetlands Valuation

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**Timothy R. Hodge**  
Oakland University

Department of Economics  
413 Elliott Hall  
Rochester, MI 48309

E-mail: trhodge@oakland.edu  
Office: (248) 370-3524  
Cell: (810) 441-7785

---

**EDUCATION**

Ph.D. Michigan State University (2013)  
M.S. Michigan State University (2011)  
B.A. Calvin College (2007)

**PROFESSIONAL EXPERIENCE**

Assistant Professor, Department of Economics, Oakland University (2016-*present*)  
Econometrician, Ford Motor Credit Company, Dearborn, MI (2015-2016)  
Visiting Assistant Professor, Department of Economics, Allegheny College (2013-2014)  
Instructor, Department of Economics, Alma College (2012)  
Graduate Research Assistant, Michigan State University (2007-2013)

**TEACHING EXPERIENCE**

Public Finance (Oakland University)  
Managerial Economics (Oakland University)  
Urban and Regional Economics (Oakland University, Allegheny College)  
Applied Econometrics (Allegheny College)  
Principles of Microeconomics (Oakland University, Allegheny College, Alma College)  
Introduction to Statistical Analysis for Appraisers (ASFMRA)

**FIELDS OF INTEREST**

Urban and Regional Economics, Real Estate Economics, Public Finance, Public Economics, Applied Econometrics

**PEER REVIEWED RESEARCH PAPERS**

Stategraft (with Bernadette Atuahene) – *Southern California Law Review*, Forthcoming  
The Land Value Gradient in a (Nearly) Collapsed Urban Real Estate Market (with Mark Skidmore and Gary Sands), *Land Economics*. Forthcoming.  
Capitalizing on Neighborhood Enterprise Zones: Are Detroit Residents Paying for the NEZ Homestead Exemption? (with Timothy M. Komarek), *Regional Science and Urban Economics*. 61, 2016, pp. 18-25.  
Assessment Inequity in a Declining Housing Market: The Case of Detroit (with Daniel McMillen, Gary Sands, and Mark Skidmore), *Real Estate Economics*. 2016  
Assessment Growth Limits and Mobility: Evidence from Home Sale Data in Detroit, Michigan. (with Mark Skidmore and Gary Sands), *National Tax Journal*. 68(3), 2015, pp. 573-600.  
Tax Base Erosion and Inequity from Michigan's Assessment Growth Limit: The Case of Detroit. (with Mark Skidmore, Gary Sands, and Daniel McMillen), *Public Finance Review*. 43(5), 2015, pp. 636-660.  
Detroit Property Tax Delinquency: Social Contract in Crisis. (with James Alm, Gary



- Sands, and Mark Skidmore), *Public Finance and Management*. 14(3), 2014, pp.280-305.
- The Effect of Ethanol Plants on Residential Property Values: Evidence from Michigan. *Journal of Regional Analysis and Policy*. 41(2), 2011, pp. 148-167.
- Property Value Assessment Growth Limits and Redistribution of Property Tax Payment: Evidence from Michigan. (with Mark Skidmore and Charles Ballard), *National Tax Journal*. 63(3), September 2010, pp. 509-37.

## **WORK IN PROGRESS**

- Assessment Growth Limits and the Redistribution of Property Tax Payments after the Great Recession: Evidence from Michigan (with Charles Ballard and Mark Skidmore)
- Recurrent Flooding, Information Asymmetries and Real Estate Prices: Evidence from Hampton Roads, VA (with Timothy M. Komarek, Larry Filer, and Jon Loftis)
- The Munchies: The Effect of Marijuana Legalization on Convenience Store Sales
- Mitigating Noncompliance through Increased Enforcement and Payment Reductions: Evidence from Property Tax Delinquencies in Detroit, MI
- When Mary Jane Moves to Town: The Effect of Medical Marijuana Provisioning Centers on Local Housing Values (with Justin Sarna and Timothy M. Komarek)
- Up In Smoke? The Effect of Pot Shops on Local Property Values in Seattle, Washington (with Timothy M. Komarek)
- School Spending and Crime: Do Better Schools Lead to Better Citizens? (with Sung Hoon Kang and Timothy M. Komarek)

## **PRESENTATIONS**

- “Economic Overview and Forecast Using the Housing Market” Rochester Area Chamber of Commerce 2017 Economic Outlook Luncheon (March 2017)
- “Capitalizing on Neighborhood Enterprise Zones: Are Michigan Residents Paying for the NEZ Homestead Exemption?” 61<sup>st</sup> Annual North American Meetings of the Regional Science Association International. Washington D.C. (November 2014)
- “Assessment Inequity in a Declining Housing Market: The Case of Detroit.” Urban Affairs Association 44<sup>th</sup> Annual Conference. San Antonio, TX (March 2014)
- “Assessment Growth Limits and Mobility: Evidence from Home Sale Data in Detroit, MI” National Tax Association 106<sup>th</sup> Annual Conference on Taxation. Tampa, FL (November 2013)
- “Assessment Inequity in a Declining Housing Market: The Case of Detroit” Mid-Continent Regional Science Association Annual Conference. Kansas City, MO (May 2013)
- “Not All Property Taxes Are Created Equal: Inequality from Assessment Growth Limits and Tax Abatements” Mid-Continent Regional Science Association Annual Conference. Minneapolis, MN (June 2012)
- “The Effect of Ethanol Plants on Residential Property Values: Evidence from Michigan” Mid-Continent Regional Science Association Annual Conference. Detroit, MI (June 2011)
- “Property Value Assessment Growth Limits and Redistribution of the Property Tax Burden: Evidence from Michigan” Mid-Continent Regional Science Association Annual Conference. Milwaukee, WI (May 2009)

“Who Benefits from Michigan’s Proposal A?” Department of Agricultural Economics  
Graduate Research Symposium. (January 2009)

### **COMMITTEE SERVICE**

Honor’s Thesis Advisor, 2017-18  
Economics Club Faculty Advisor, 2017-*present*  
Honor’s Thesis Advisor, 2016-17

### **PROFESSIONAL SERVICE**

Referee: *Environmental and Planning A, National Tax Journal, Regional Science and Urban Economics (x2), Public Finance Review (x2), Urban Studies, Public Finance and Management, Journal of Urban Affairs (x3), State and Local Government Review*

### **FELLOWSHIPS AND GRANTS**

Oakland University School of Business Administration Summer Research Grant, 2019  
Oakland University School of Business Administration Summer Research Grant, 2018  
Oakland University Faculty Research Fellowship, 2017  
C. Lowell Harriss Dissertation Fellow (Lincoln Institute of Land Policy), 2012

### **AWARDS AND HONORS**

2011 M. Jarvin Emerson Student Paper Competition Winner (Mid-Continent Regional Science Association)

### **OTHER EXPERIENCE**

#### Instructor:

Introduction to Statistical Analysis for Appraisers (ASFMRA), Indian Wells, CA, 2016  
Introduction to Statistical Analysis for Appraisers (ASFMRA), Omaha, NE, 2015

#### Consultant:

Lincoln Land Institute/Center for Community Progress (2016-2017)  
ITC Holding Corp. (2010-2014)  
Crown Appraisals, Inc. (2011-2014)

#### Extension:

Barry County – Barry County Financial Analysis and Forecast Report (2014)  
Lapeer County – The Production and Provision of Public Safety Services (2011)  
Berrien County – Berrien County Migration: Where Are the Residents Going? (2009)

#### Policy Brief:

Memo on Detroit Property Tax System (2017)  
Inventory of State Job Creation and Job Retention Incentives, 2010 (2011)

#### Other:

Tutor and Grader, Department of Economics, Calvin College (2006-2007)

### **COMPUTER SKILLS**

Stata, SAS (EG, VA, VS), R, ArcGIS, Alteryx, QlikView, Teradata, SQL, Microsoft Access, Excel, Word, PowerPoint