

MINUTES

North Dakota State Water Commission Bismarck, North Dakota

March 29, 2017

The North Dakota State Water Commission held a meeting at the State Office Building, Bismarck, North Dakota, on March 29, 2017. Governor Doug Burgum, Chairman, called the meeting to order at 1:00 p.m., and requested Garland Erbele, State Engineer, and Chief Engineer-Secretary to the State Water Commission, to call the roll. Governor Burgum announced a quorum was present.

STATE WATER COMMISSION MEMBERS PRESENT:

Governor Doug Burgum, Chairman
Doug Goehring, Commissioner, North Dakota Department of Agriculture, Bismarck
Arne Berg
Maurice Foley
Larry Hanson
George Nodland
Harley Swenson
Robert Thompson

STATE WATER COMMISSION MEMBER ABSENT:

Douglas Vosper

OTHERS PRESENT:

Garland Erbele, State Engineer, and Chief Engineer-Secretary,
North Dakota State Water Commission, Bismarck
State Water Commission Staff
Approximately 50 people interested in agenda items

The attendance register is on file with the official minutes.

The meeting was recorded to assist in compilation of the minutes.

CONSIDERATION OF AGENDA

The agenda for the March 29, 2017 State Water Commission meeting was presented; there were no modifications.

It was moved by Commissioner Berg, seconded by Commissioner Nodland, and unanimously carried, that the agenda be accepted as presented.

**CONSIDERATION OF DRAFT MINUTES
OF DECEMBER 9, 2016 STATE WATER
COMMISSION MEETING - APPROVED**

The draft final minutes of the December 9, 2016 State Water Commission meeting were approved by the following motion:

It was moved by Commissioner Foley and seconded by Commissioner Thompson that the draft final minutes of the December 9, 2016 State Water Commission meeting be approved as prepared. Because Governor Burgum took office as the 33rd Governor of North Dakota on December 15, 2016, which superseded the December 9, 2016 State Water Commission meeting, Governor Burgum requested voting abstention. Governor Burgum announced the motion carried.

**STATE WATER COMMISSION -
PROGRAM BUDGET EXPENDITURES
AND CONTRACT FUND ALLOCATIONS,
2015-2017 BIENNIUM**

penditures for the period ending February 28, 2017 were presented and discussed by David Laschkewitsch, State Water Commission's Director of Administrative Services. The expenditures, in total, are within the authorized budget amounts. **SEE APPENDIX "A"**

In the 2015-2017 biennium, the State Water Commission has two line items - administrative and support services, and water and atmospheric resources expenditures. The allocated program ex-

The Contract Fund for the 2015-2017 biennium, **APPENDIX "B"**, provides information on the committed and uncommitted funds from the Resources Trust Fund and the Water Development Trust Fund. The current Contract Fund total allocation for projects is \$881,250,642 with expenditures of \$459,382,408. A balance of \$143,757,484 remains available to commit to projects in the 2015-2017 biennium.

**STATE WATER COMMISSION -
RESOURCES TRUST FUND
AND WATER DEVELOPMENT
TRUST FUND REVENUES,
2015-2017 BIENNIUM**

end of the 2015-2017 biennium will be short by \$29,671,491.

Oil extraction tax deposits into the Resources Trust Fund total \$199,957,766 through February, 2017, and are currently \$11,532,042 below originally budgeted revenues. A revised forecast projected the oil extraction revenue at the

Deposits into the Water Development Trust Fund (tobacco settlement) total \$9,119,900 through February, 2017, and are currently \$124,900, or 1.4 percent above budgeted revenues.

**GRAND FORKS COUNTY
LEGAL DRAIN NO. 58 -
APPROVAL OF 45% STATE COST
PARTICIPATION GRANT (\$1,481,850)
(SWC Project No. 2049)**

A request from the Grand Forks County Water Resource District was presented for the State Water Commission's consideration for state cost participation for construction of the Grand Forks County Legal Drain No. 58 to reduce

overland flooding in the city of Emerado and farmland south of the city due to an inadequate conveyance capacity of the natural waterway, the Hazen Brook.

The proposed project involves the construction of 5.5 miles of channel with a 15-foot bottom width and side slopes varying from 4:1 to 6:1. Drain permit application No. 4647 was received in the Office of the State Engineer on March 20, 2016, and is pending review. An assessment district has been established.

The project engineer's cost estimate is \$3,790,600, of which \$3,293,000 was determined eligible as a rural flood control project at 45 percent (\$1,481,850). Final construction plans were completed in January, 2017, and bids for construction are anticipated to take place in the spring of 2017.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs not to exceed an allocation of \$1,481,850 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Grand Forks County Water Resource District to support the Grand Forks County Legal Drain No. 58 project.

It was moved by Commissioner Goehring and seconded by Commissioner Berg that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs not to exceed an allocation of \$1,481,850 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Grand Forks County Water Resource District to support the Grand Forks County Legal Drain No. 58 project. This approval is contingent upon the availability of funds, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

**McCLUSKY CANAL MILE MARKER
15 IRRIGATION PROJECT -
APPROVAL OF STATE COST
PARTICIPATION GRANT (\$321,781)
(SWC Project No. 1968)**

The McClusky Canal is a 74-mile long canal designed to transport 1,950 cubic feet of water per second for the irrigation of 250,000 acres and provide water for municipal and rural systems. The Dakota Water Resources Act of 2000

authorizes approximately 24,000 acres of irrigation along the canal.

The Garrison Diversion Conservancy District has determined interest in an irrigation project which will serve a total irrigable acreage of approximately 550 acres located in McLean county near mile marker 15 and the city of Turtle Lake. The project engineer's estimated total cost is \$1,274,477 for the water delivery system, of which \$594,562 was determined eligible for state cost participation as an irrigation project at 50 percent (\$297,281), and \$70,000 was determined eligible as pre-construction engineering at 35 percent (\$24,500), for a total state cost participation of \$321,781. A request from the Garrison Diversion Conservancy District was presented for the State Water Commission's consideration for state cost participation in the amount of \$321,781.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant as an irrigation project at 50 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$321,781 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Garrison Diversion Conservancy District to support the Mile Marker 15 Irrigation project.

It was moved by Commissioner Hanson and seconded by Commissioner Foley that the State Water Commission approve a state cost participation grant as an irrigation project at 50 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$321,781 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Garrison Diversion Conservancy District to support the Mile Marker 15 Irrigation project. This approval is contingent upon the availability of funds.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

**HURDSFIELD LEGAL DRAIN
(WELLS COUNTY) -
APPROVAL OF STATE COST
PARTICIPATION GRANT (\$644,292)
(SWC Project No. 1314)**

A request from the Wells County Water Resource District was presented for the State Water Commission's consideration for state cost participation for the construction of the Hurdsfield Legal Drain.

The proposed project is located northeast of the city of Hurdsfield. Local landowners, townships, and North Dakota Highway 200 are being impacted by flooding from a chain of lakes east of the city. The proposed project provides a gravity flow outlet to the James River. The Hurdsfield Area Drain Preliminary Engineering report was completed, and on June 11, 2015, the State Engineer approved an allocation of \$35,000 for the pre-construction engineering. The assessment vote passed in favor of the project on March 9, 2017. Drain Permit No. 4842 and USACE NWP #21 have been approved.

The project engineer's cost estimate is \$1,570,370, of which \$1,335,671 was determined eligible as a rural flood control project at 45 percent (\$601,052), and \$223,544 was determined eligible as pre-construction engineering at 35 percent (\$78,240), less \$35,000 approved on June 11, 2015 (\$43,240), for a total state cost participation of \$644,292.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$644,292 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Wells County Water Resource District to support the Hurdsfield Legal Drain project.

It was moved by Commissioner Berg and seconded by Commissioner Goehring that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$644,292 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Wells County Water Resource District to support the Hurdsfield Legal Drain project. This approval is contingent upon the availability of funds, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

**RICHLAND SARGENT LEGAL DRAIN
NO. 1 EXTENSION AND CHANNEL
IMPROVEMENTS, PHASE II -
APPROVAL OF 45% ADDITIONAL STATE
COST PARTICIPATION GRANT (\$378,000)
(SWC Project No. 1978)**

On October 31, 2011, the State Water Commission adopted a motion approving a state cost participation grant of 45 percent of the eligible items, not to exceed an allocation of \$245,250 from the funds appropriated to the State Water Commission in the 2011-2013

biennium (S.B. 2020), to the Richland Sargent Joint Water Resource District to support the Richland Sargent Legal Drain No. 1 Extension and Channel Improvements project, Phase I. The project consisted of approximately 5 miles of construction of the drain extension channel which will improve the flow capacity of the channel. The existing channel has limited capacity causing frequent flooding.

The proposed Phase II project involves the construction of an additional 5 miles. The channel will be constructed with a maximum bottom width of 16 feet and 4:1 side slopes. Drain permit application No. 2031 was received in the Office of the State Engineer, and a U.S. Army Corps of Engineers Section 404 permit has been applied for; both applications are pending review. An assessment district is in existence.

The project engineer's cost estimate for Phase II is \$1,000,000, of which \$840,000 was determined eligible for state cost participation as a rural flood control project at 45 percent (\$378,000). A request from the Richland Sargent Joint Water Resource District was presented for the State Water Commission's consideration for state cost participation in the amount of \$378,000.

It was the recommendation of Secretary Erbele that the State Water Commission approve a 45 percent state cost participation grant of the eligible costs as a rural flood control project, not to exceed an additional allocation of \$378,000 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Richland Sargent Joint Water Resource District to support the Richland Sargent Legal Drain No. 1 Extension and Channel Improvements project, Phase II.

It was moved by Commissioner Thompson and seconded by Commissioner Hanson that the State Water Commission approve a 45 percent state cost participation grant of the eligible costs as a rural flood control project, not to exceed an additional allocation of \$378,000 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Richland Sargent Joint Water Resource District to support the Richland Sargent Legal Drain No. 1 Extension and Channel Improvements project, Phase II. This approval is contingent upon the availability of funds, a positive assessment vote, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

This approval increases the total state allocation grants to \$623,250 to the Richland Sargent Joint Water Resource District to support the Richland Sargent Legal Drain No. 1 Extension and Channel Improvements, Phases I and II.

**WALSH COUNTY DRAIN NO. 30-1 -
APPROVAL OF STATE COST
PARTICIPATION GRANT (\$282,307)
(SWC Project No. 1520)**

A request from the Walsh County Water Resource District was presented for the State Water Commission's consideration for state cost participation for the establishment of the Walsh County Drain No.

30-1 project that would provide agricultural drainage benefits for approximately 1,610 acres within Oakwood Township.

The proposed project would provide approximately a 5-year drainage capacity for the benefitted area through the construction of a channel providing an 8-foot bottom width and 3:1 side slopes. Culverts would be replaced with the appropriate size to facilitate a 5-year design capacity, as well as meet the applicable North Dakota stream crossing standards. Drain No. 30-1 would outlet into Walsh County Drain No. 30 and ultimately into the Park River in the NE1/4 of Section 14, Oakwood Township.

The project was discussed with the assessed landowners at a public informational meeting on November 15, 2016; the voters approved the assessment district. The U.S. Army Corps of Engineers permit has been secured for the project, and drain permit application No. 4923 was received in the Office of the State Engineer, which is pending review.

The project engineer's cost estimate is \$707,972, of which \$588,459 was determined eligible as a rural flood control project at 45 percent (\$264,807), and \$50,000 was determined eligible as pre-construction engineering at 35 percent (\$17,500), for a total state cost participation of \$282,307.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$282,307 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Walsh County Water Resource District to support the Walsh County Drain No. 30-1 project.

It was moved by Commissioner Foley and seconded by Commissioner Berg that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$282,307 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Walsh County Water Resource District to support the Walsh County Drain No. 30-1 project. This approval is contingent upon the availability of funds, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

***WALSH COUNTY DRAIN NO. 87/
MCLEOD DRAIN PROJECT -
APPROVAL OF STATE COST
PARTICIPATION GRANT (\$5,273,586)
(SWC Project No. 1520)***

A request from the Walsh County Water Resource District was presented for the State Water Commission's consideration for state cost participation for the construction of the Walsh County Drain No. 87/McLeod Drain. The proposed project

is located in rural Walsh county south of the city of Grafton, and will provide agricultural drainage benefits for approximately 34,000 acres.

Approximately 21 miles of drainage ditch would be excavated, along with changes in crossings as needed. The proposed improvements would outlet into the Park River in the NE1/4 of Section 16, Oakwood Township. The proposed project is being pursued concurrently with the City of Grafton Flood Control project to provide cost efficiencies for each project. The U.S. Army Corps of Engineers and the North Dakota Drainage Permit applications have been submitted, and are pending review.

The Commission staff's review and discussions with the project sponsor determined that construction of the proposed project would likely include two phases. Phase I would involve construction of the McLeod Drain, the Drain 87 outlet, and the portion of the McLeod Drain adjacent to the Grafton Flood Control project, which would be bid in 2017 with construction commencing in late 2017. Phase II would include the portion of the McLeod Drain west of the Grafton Flood Control project, its Highway 17 Lateral, and all of Drain 87 including its 67th Street Lateral, which would be bid and constructed in 2018. In order to accommodate coordination with the Grafton Flood Control project, the Phase I portion of the project was given priority consideration.

The project engineer's total cost estimate was \$15,517,607. With construction related costs shared at 45 percent and pre-construction engineering costs at 35 percent, the total eligible state cost participation would be \$5,273,586.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible construction costs for Phase I (\$2,824,820), and a 35 percent grant of the eligible costs for pre-construction engineering for Phase II (\$545,000), not to exceed a total allocation of \$3,369,820 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Walsh County Water Resource District to support the Walsh County Drain 87/McLeod Drain project.

It was moved by Commissioner Berg and seconded by Commissioner Goehring that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs for construction of Phase I (\$2,824,820), and a 35 percent grant of the eligible costs for pre-construction engineering for Phase II (\$545,000), not to exceed a total allocation of \$3,369,820 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Walsh County Water Resource District to support the Walsh County Drain 87/McLeod Drain project.

In discussion of the motion, representatives from the Walsh County Water Resource District expressed appreciation for the Commission's support, provided detailed information relating to their project, and requested the Commission's favorable consideration of their original request, which included a state cost participation grant of \$5,273,586. The State Water Commission members deliberated the cost share participation at length and, as a result, the following amendment to the original motion was offered:

An amendment to the original motion was offered by Commissioner Swenson and seconded by Commissioner Thompson that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible construction costs, and 35 percent of the eligible cost for pre-construction engineering, not to exceed a total allocation of \$5,273,586 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Walsh County Water Resource District to support the Walsh County Drain 87/McLeod Drain project, Phases I and II. This approval is contingent upon the availability of funds, and satisfaction of the required permits.

Governor Burgum called the question on the amendment to the original motion and asked for a roll call vote.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the amendment to the original motion unanimously carried.

Governor Burgum called the question on the original motion, as amended, and asked for a roll call vote.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the original motion, as amended, unanimously carried.

EPPING DAM SPILLWAY RECONSTRUCTION (WILLIAMS COUNTY) - APPROVAL OF 75% ADDITIONAL STATE COST PARTICIPATION GRANT (\$127,089) (SWC Project No. 346)

On March 9, 2016, the State Water Commission adopted a motion approving a state cost participation grant of 75 percent of the eligible items as a dam safety project, not to exceed an allocation of \$719,045 from the funds

appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Williams County Water Resource District to support the Epping Dam spillway reconstruction project. Epping Dam was construction in 1935 and is regulated and inspected by the State Water Commission. The dam is located in Section 9, Township 155 North, Range 99 West, and is classified as a high hazard dam.

As a result of the inspection completed by the State Water Commission staff, an evaluation of the dam was recommended. The concrete chute spillway constructed in 1980 had significantly deteriorated with structural items being deficient and requiring replacement or repair for dam safety purposes. A December, 2013 engineering report documented these conditions and provided recommendations relative to the required repairs and corrective action to prevent additional future damages and increased risk of failure. The restoration work required a temporary but significant lowering of the reservoir levels which were coordinated with the North Dakota Game and Fish Department. This evaluation and design was completed in consultation with the State Water Commission and received previous cost share funding of \$66,200.

The project engineer's total revised cost estimate was \$1,128,179, which was determined eligible for state cost participation as a dam safety project at 75 percent (\$846,134). A request from the Williams County Water Resource District was presented for the State Water Commission's consideration for an additional allocation of \$127,089 (\$846,134 eligible items, less \$719,045 approved on March 9, 2016).

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant of 75 percent of the eligible costs as a dam safety project, not to exceed an additional allocation of \$127,089 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the William County Water Resource District to support the Epping Dam spillway reconstruction project.

It was moved by Commissioner Hanson and seconded by Commissioner Foley that the State Water Commission approve a state cost participation grant of 75 percent of the eligible costs as a dam safety project, not to exceed an additional allocation of \$127,089 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the William County Water Resource District to support the Epping Dam spillway reconstruction project. This approval is contingent upon the availability of funds.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

This approval increases the total state allocation grants to \$846,134 to the Williams County Water Resource District to support the Epping Dam spillway reconstruction project.

**CASS COUNTY DRAIN NO. 14
CHANNEL IMPROVEMENTS -
APPROVAL OF STATE COST
PARTICIPATION GRANT (\$741,562)
(SWC Project No. 1070)**

A request from the Maple River Water Resource District was presented for the State Water Commission's consideration for state cost participation for the Cass County Drain No. 14 channel improvements project, which is an existing legal drain that runs from the city of Davenport to the Maple River north of the city of West Fargo and intercepts drainage from Cass County Drains Nos. 34, 35, 36, 60, and Cass-Richland County Drain No. 1.

Improvements will address significant slope failures and inadequate channel depth on approximately 4.2 miles of the existing Cass County Drain 14 between Cass County Highway 6 and Cass County Highway 16 north of the city of Davenport. The project will include flattening the side slopes to improve the stability of the channel slopes and improve the capacity of the existing drain, in addition to flattening and deepening the channel profile to reduce velocities and provide adequate depth for the drainage from adjacent fields. The project will include 3 culvert crossings and a sheet pile drop structure. These improvements will reduce damages to adjacent agricultural lands and roads and provide for additional drainage capacity to Cass County Drain No. 14.

The project engineer's cost estimate was \$2,065,700, of which \$1,507,138 was determined eligible as a rural flood control project at 45 percent for construction (\$678,212), and \$181,000 was determined eligible as pre-construction engineering at 35 percent (\$63,350), for a total state cost participation of \$741,562.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$741,562 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Maple River Water Resource District to support the Cass County Drain No. 14 channel improvements project.

It was moved by Commissioner Thompson and seconded by Commissioner Berg that the State Water Commission approve a state cost participation grant as a rural flood control project at 45 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$741,562 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Maple River Water Resource District to support the Cass County Drain No. 14 channel improvements project. This approval is contingent upon the availability of funds, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

**SHEYENNE-MAPLE FLOOD CONTROL
DISTRICT 2 IMPROVEMENTS -
APPROVAL OF STATE COST
PARTICIPATION GRANT (\$1,035,358)
(SWC Project No. 2096)**

A request from the Southeast Cass Water Resource District was presented for the State Water Commission's consideration for state cost participation for the Sheyenne-Maple Flood Control District 2 Improvements project located in the city of West Fargo, Cass county.

The District completed the preliminary design of the project consisting of an improvement to one mile of the channel bottom in the Sheyenne River diversion, which has an existing assessment district. The purpose of the project is to armor the channel bottom within a portion of the Sheyenne River Diversion to prevent further deterioration due to frequent and extended use. A construction permit application was submitted to the Office of the State Engineer on February 24, 2017, which is pending review. It is anticipated the project could be bid in the summer of 2017, with the project substantially completed in the fall of 2017.

The project engineer's cost estimate was \$1,790,000, of which \$1,652,093 was determined eligible for construction of a flood control project at 60 percent (\$991,256), and \$126,007 was determined eligible as pre-construction engineering at 35 percent (\$44,102), for a total state cost participation of \$1,035,358.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant as a flood control project at 60 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$1,035,358 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Southeast Cass Water Resource District to support the Sheyenne-Maple Flood Control District 2 Improvements project.

It was moved by Commissioner Berg and seconded by Commissioner Goehring that the State Water Commission approve a state cost participation grant as a flood control project at 60 percent of the eligible costs for construction, and 35 percent of the eligible costs for pre-construction engineering, not to exceed a total allocation of \$1,035,358 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Southeast Cass Water Resource District to support the Sheyenne-Maple Flood Control District 2 Improvements project. This approval is contingent upon the availability of funds, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

***SHEYENNE RIVER VALLEY
FLOOD PROTECTION PROGRAM -
CITY OF LISBON PERMANENT FLOOD
CONTROL PROJECT, CONSTRUCTION
OF PHASE I - LEVEE D PROJECT -
APPROVAL OF ADDITIONAL STATE COST
PARTICIPATION GRANTS (\$3,600,000)
(SWC Project Nos. 1991-08 and 1991-09)***

On June 19, 2013, the State Water Commission adopted a motion approving a state cost participation grant of 90 percent not to exceed an allocation of \$700,650 from the funds appropriated to the State Water Commission in 2011 Senate Bill 2371 for the Sheyenne River Valley Flood Protection Program to assist the city of Lisbon with their preliminary engineering design and legal costs associated with the development of a permanent flood control project, Phase I - Levee C. The basis for granting this exception to the Commission's cost share policy included multiple years of flooding that the city has experienced, their limited ability to pay due to recurring flood recovery efforts, and potential impacts from Devils Lake releases.

On May 29, 2014, the State Water Commission adopted a motion approving a total state cost participation grant of 80 percent not to exceed an allocation of \$1,238,698 (60 percent of the eligible costs as a flood control project - \$929,023; and 20 percent of the eligible costs to mitigate the flood risk from the Devils Lake outlets - \$309,675), from the funds appropriated to the State Water Commission in the 2013-2015 biennium (H.B. 1020), and a 30-year loan with an interest rate of 1.5 percent from the State Water Commission's Infrastructure Revolving Loan Fund in the amount of \$536,302 for the remaining costs to the city of Lisbon to support its permanent flood protection project, Phase I - Levee A floodwall. Project estimated cost of \$1,775,000.

Previous state cost participation funding approvals include:

On September 15, 2014, the State Water Commission adopted a motion approving a total state cost participation grant of 80 percent not to exceed an additional allocation of \$680,000 (60 percent of the eligible costs as a flood control project - \$510,000; and 20 percent of the eligible costs to mitigate the flood risk from the Devils Lake outlets - \$170,000), from the funds appropriated to the State Water Commission in the 2013-2015 biennium (H.B. 1020), and a 30-year loan with an interest rate of 1.5 percent from the State Water Commission's Infrastructure Revolving Loan Fund in the amount of \$170,000 to the city of Lisbon to support its permanent flood protection project, Phase I - Levee A floodwall.

On March 11, 2015, the State Water Commission adopted a motion approving a total state cost participation grant of 80 percent not to exceed an additional allocation of \$3,166,000 (60 percent of the eligible costs as a flood control project - \$2,375,500; and 20 percent of the eligible costs to mitigate the flood risk from the Devils Lake outlets - \$791,500), from the funds appropriated to the State Water Commission in the 2013-2015 biennium (H.B. 1020), and a 30-year loan with an interest rate of 1.5 percent from the State Water Commission's Infrastructure Revolving Loan Fund in the amount of \$886,500 of the remaining costs to the city of Lisbon to support its permanent flood protection project, Phase I, Levee C.

On May 20, 2015, the State Water Commission adopted a motion to approve a state cost participation grant of 90 percent not to exceed an additional allocation of \$142,200 (90 percent of the eligible costs (\$842,850) less \$700,650 approved June 19, 2013 for Phase I - Levee C) from the funds appropriated to the State Water Commission in the 2013-2015 biennium (H.B. 1020), for the Sheyenne River Valley Flood Protection Program to the city of Lisbon, Phase I - Levee E to assist in the engineering and legal services.

On March 9, 2016, the State Water Commission adopted a motion approving a total state cost participation grant of 80 percent not to exceed an additional allocation of \$2,098,000 (60 percent of the eligible costs as a flood control project - \$1,573,500; and 20 percent of the eligible costs to mitigate the flood risk from the Devils Lake outlets - \$524,500), from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), and a 30-year loan with an interest rate of 1.5 percent from the State Water Commission's Infrastructure Revolving Loan Fund in the amount of \$527,000 of the remaining costs to the city of Lisbon to support its permanent flood protection project, Phase I - Levee E. Project estimated cost of \$2,625,000.

On July 6, 2016, the State Water Commission adopted a motion approving a total state cost participation grant of 90 percent not to exceed an additional allocation of \$2,188,800 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020); and a 30-year loan with an interest rate of 1.5 percent from the State Water Commission's Infrastructure Revolving Loan Fund in the amount of \$243,200 for the Sheyenne River Valley Flood Protection Program to the city of Lisbon to support its permanent flood protection project, preliminary engineering and legal services, Levee D and Levee F.

A request from the city of Lisbon was presented for the State Water Commission's consideration for state cost participation for the construction of Phase I - Levee D project. The proposed project will be constructed in the northern portion of the city and will include approximately 1,200 linear feet of earthen levee, 585 linear feet of concrete floodwall, and 64 linear feet of removable stop logs. This levee will provide flood protection to homes and the city's infrastructure. The

project engineer's estimated cost is \$4,500,000, which is eligible for state cost participation at 60 percent of the eligible costs as a flood control project (\$2,700,000). The city of Lisbon also requested a 30-year loan with an interest rate of 1.5 percent from the State Water Commission's Infrastructure Revolving Loan Fund for the remaining costs of \$900,000.

It was the recommendation of Secretary Erbele that the State Water Commission: 1) approve a state cost participation grant as a flood control project at 60 percent of the eligible costs (\$2,700,000); and 2) provide an exception from its current cost share policy to approve an additional state cost participation grant of 20 percent of the eligible costs (\$900,000) to mitigate the flood risk from the Devils Lake outlets, which would provide a total state cost participation grant of 80 percent not to exceed a total additional allocation of \$3,600,000 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the city of Lisbon for construction of its permanent flood protection project, Phase I - Levee D. The city of Lisbon representatives were informed that because of the current legislation capping the State Water Commission's Infrastructure Revolving Loan Fund at \$25,000,000 for the 2017-2019 biennium, no additional loan money would be available at this time.

It was moved by Commissioner Berg and seconded by Commissioner Nodland that the State Water Commission:

- 1) approve a state cost participation grant as a flood control project at 60 percent of the eligible costs (\$2,700,000); and***
- 2) approve a state cost participation grant to mitigate the flood risk from the Devils Lake outlets at 20 percent of the eligible costs (\$900,000).***

The above approvals include total state cost participation grants of 80 percent not to exceed a total allocation of \$3,600,000 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020) to the city of Lisbon for construction of its permanent flood protection project, Phase I - Levee D.

These approvals are contingent upon the availability of funds, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

The total state cost participation and loan summaries for the Sheyenne River Valley Flood Protection Program, city of Lisbon include to date:

Levee A:

60 percent state cost participation grant for construction - \$929,023; 20 percent state cost participation grant - \$309,675 to mitigate flood risk from the Devils Lake outlets; and a loan of \$536,302 from the State Water Commission's Infrastructure Revolving Loan Fund (approved May 29, 2014)

60 percent state cost participation grant for construction - \$510,000; 20 percent state cost participation grant - \$170,000 to mitigate flood risk from the Devils Lake outlets; and a loan of \$170,000 from the State Water Commission's Infrastructure Revolving Loan Fund (approved September 15, 2014)

Levee C:

90 percent state cost participation grant for preliminary engineering design and legal services - \$700,650 (approved June 19, 2013)

60 percent state cost participation grant for construction - \$2,375,500; 20 percent state cost participation grant - \$791,500; and loan of \$886,500 from the State Water Commission's Infrastructure Revolving Loan Fund (approved May 20, 2015)

Levee D:

60 percent state cost participation grant for Phase I construction - \$2,700,000; and 20 percent state cost participation grant (\$900,000) to mitigate flood risk from the Devils Lake outlets (approved March 29, 2017)

Levee D and Levee F:

90 percent state cost participation for preliminary engineering design and legal services - \$2,188,800; and loan of \$243,200 from State Water Commission's Infrastructure Revolving Loan Fund (approved July 6, 2016)

Levee E:

90 percent state cost participation grant for preliminary engineering design and legal services - \$842,850 (approved May 20, 2015)

60 percent state cost participation grant for construction - \$1,573,500; 20 percent state cost participation grant - \$524,500 to mitigate flood risk from the Devils Lake outlets; and loan of \$527,000 from State Water Commission's Infrastructure Revolving Loan Fund (approved March 9, 2016)

**SPIRITWOOD AIRBORNE
ELECTROMAGNETIC SURVEY 2016
(SWC Project No. 1395)**

Jon Patch and Dave Hisz, State Water Commission Water Appropriation Division, provided a technical presentation on the Spiritwood Airborne Electromagnetic Survey 2016 (AEM). The contract was awarded to GEOTECH (Canada) in October, 2016. The data collection survey objectives included: 1) delineate geometry of the Spiritwood aquifer; 2) identify deep channel segments; and 3) define areas of decreased conductivity. The final data was delivered in January, 2017. The power point presentation is attached as **APPENDIX "C"**.

**FARGO MOORHEAD AREA
DIVERSION PROJECT REPORT
(SWC Project No. 1928)**

Tim Mahoney, Fargo Mayor, provided updates on the local, state and federal efforts currently underway relating to the Fargo Moorhead Area Diversion project.

A summary of the presentation is included herewith as **APPENDIX "D"**.

**MOUSE RIVER ENHANCED FLOOD
PROTECTION PROJECT UPDATE
(SWC Project No. 1974)**

The Mouse River Enhanced Flood Protection project status report was provided, which is detailed in the staff memorandum dated March 8, 2017, and

included as **APPENDIX "E"**. Chuck Barney, city of Minot Mayor, and Ryan Ackerman, Ackerman-Estvold Engineering and Souris River Joint Board Administrator, provided detailed project information, and expressed appreciation for the State Water Commission's support.

**MOUSE RIVER ENHANCED FLOOD
PROTECTION PROJECT - PHASE MI-1A,
BROADWAY PUMP STATION -
APPROVAL OF 65% STATE COST
PARTICIPATION GRANT (\$15,197,000)
(SWC Project No. 1974)**

The Mouse River Enhanced Flood Protection Project includes basin-wide flood risk reduction features in four North Dakota counties bisected by the Mouse River. Phase MI-1A, Broadway pump station, includes the construction of a storm water pump station with a

capacity of approximately 178,000 gallons per minute, which is designed to convey interior drainage from a large portion of north Minot. This project can progress independently from adjacent phases as it does not have a nexus with the federal government. The proposed approach to the project will not impact the existing federal project, therefore, Section 408 permission is not required. Additionally, the project will not impact the Mouse River, wetlands or other waters of the United States, therefore, a Section 404 permit is not required. The project has undergone extensive review by the Souris River Joint Board, the city of Minot, the U.S. Army Corps of Engineers, FEMA, and an independent external peer review and safety assurance review by an independent engineering consultant.

The project engineer's estimate of cost for Phase MI-1A, construction of the Broadway pump station was \$23,380,000, which is eligible for state cost participation. A request from the Souris River Joint Board was presented for the State Water Commission's consideration for a 65 percent state cost participation grant of the eligible costs (\$15,197,000).

It was the recommendation of Secretary Erbele that the State Water Commission approve a 65 percent state cost participation grant as a flood control project not to exceed an allocation of \$15,197,000 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, Phase MI-1A, construction of the Broadway pump station.

It was moved by Commissioner Foley and seconded by Commissioner Berg that the State Water Commission approve a 65 percent state cost participation grant as a flood control project not to exceed an allocation of \$15,197,000 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, Phase MI-1A, construction of the Broadway pump station. This approval is contingent upon the availability of funds, and satisfaction of the required permits.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT - PHASE MI-2C, PETERSON COULEE OUTLET - APPROVAL OF 65% STATE COST PARTICIPATION GRANT (\$1,427,022) (SWC Project No. 1974)

The Mouse River Enhanced Flood Protection Project includes basin-wide flood risk reduction features in four North Dakota counties bisected by the Mouse River. Phase MI-2C, Peterson Coulee Outlet, includes the construction of interior improvements associated with

Phase MI-2 (Napa Valley levees) of the project. An analysis of the interior drainage was completed commensurate with the design of MI-2 of the Mouse River Plan. Various alternatives to address the interior drainage were considered; the most cost effective and lowest risk alternative was determined to divert the storm water around the levee and construct a pump station adjacent to the levee to handle local runoff and seepage flows. This sub-phase of the project is proceeding ahead of the issuance of the Record of Decision because it will provide an independent utility by reducing flood risk due to interior drainage. The project has undergone extensive review by the Souris River Joint Board, the city of Minot, the U.S. Army Corps of Engineers, FEMA, and an independent external peer review and a safety assurance review by an independent engineering consultant.

March 29, 2017 - 19

The project engineer's total cost estimate was \$2,195,418, which was determined eligible for state cost participation. A request from the Souris River Joint Board was presented for the State Water Commission's consideration for a 65 percent state cost participation grant of the eligible costs (\$1,427,022).

It was the recommendation of Secretary Erbele that the State Water Commission approve a 65 percent state cost participation grant as a flood control project not to exceed an allocation of \$1,427,022 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, Phase MI-2C, construction of the Peterson Coulee outlet.

It was moved by Commissioner Foley and seconded by Commissioner Thompson that the State Water Commission approve a 65 percent state cost participation grant as a flood control project not to exceed an allocation of \$1,427,022 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, Phase MI-2C, construction of the Peterson Coulee Outlet. This approval is contingent upon the availability of funds.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT - PHASE BU-1 (BURLINGTON LEVEE) AND PHASE MI-5 (NORTHEAST MINOT TIEBACK LEVEE) INDEPENDENT EXTERNAL PEER REVIEW - APPROVAL OF 65% STATE COST PARTICIPATION GRANT (\$171,909) (SWC Project No. 1974)

The Mouse River Enhanced Flood Protection Project includes basin-wide flood risk features in four North Dakota counties bisected by the Mouse River. The State Water Commission previously approved cost share participation for the pre-construction engineering of Phase BU-1 (Burlington Levee) and Phase MI-5 (Northeast Minot Tieback Levee)

on October 12, 2016 not to exceed an allocation of \$3,900,000. In accordance with the U.S. Army Corps of Engineers policy for flood risk management projects, the project designs must be subjected to an independent external peer review and safety assurance review. The Souris River Joint Board had previously procured the services of a consulting firm to perform these tasks.

The project engineer's total cost estimate was \$264,475 for providing the independent external peer review services, which was determined eligible for state cost participation. A request from the Souris River Joint Board was presented for the State Water Commission's consideration for a 65 percent state cost participation grant of the eligible costs (\$171,909).

It was the recommendation of Secretary Erbele that the State Water Commission approve a 65 percent state cost participation grant as a flood control project not to exceed an allocation of \$171,909 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, Phase BU-1 (Burlington Levee) and Phase MI-5 (Northeast Minot Tieback Levee) independent external peer review.

It was moved by Commissioner Goehring and seconded by Commissioner Nodland that the State Water Commission approve a 65 percent state cost participation grant as a flood control project not to exceed an allocation of \$171,909 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020), to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, Phase BU-1 (Burlington Levee) and Phase MI-5 (Northeast Minot Tieback Levee) independent external peer review. This approval is contingent upon the availability of funds.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT - CITY OF MINOT PROPERTY ACQUISITIONS - APPROVAL OF 75% STATE COST PARTICIPATION GRANT (\$3,979,656) (SWC Project No. 1974)

The Mouse River Enhanced Flood Protection Project includes basin-wide flood risk reduction features in four North Dakota counties bisected by the Mouse River. The city of Minot has been responsible for acquiring properties within the anticipated footprint of the

project within the city limits of Minot. The funding needs for property acquisitions are in excess of the current funding available; the unobligated funding in the 2015-2017 biennium appropriation for the Mouse River flood control activities is \$20,775,587. Cost share participation requests previously approved by the State Water Commission on March 29, 2017 total \$16,795,931, leaving \$3,979,656 unobligated in the 2015-2017 biennium for the Mouse River Enhanced Flood Protection Project. A request from the

Souris River Joint Board was presented for the State Water Commission's consideration for a 75 percent state cost participation grant of the eligible costs (\$3,979,656) for property acquisitions within the city of Minot as identified in the city's acquisition plan currently on file at the State Water Commission.

It was the recommendation of Secretary Erbele that the State Water Commission approve a state cost participation grant at 75 percent of the eligible costs, not to exceed an allocation of \$3,979,656 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020) to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, city of Minot property acquisition plan.

The process for properties acquisition buyouts was discussed at length, and some of the Commission members questioned the appraisal valuation guidelines for determining the final buyout expenditure. As a result of the discussion, Governor Burgum requested the Secretary to the State Water Commission and the staff provide statewide property acquisition buyout information specifically relating to the appraisal valuation and the purchase price. Governor Burgum stated that a clarification of the property acquisition guidelines and the process would provide valuable assistance to both the local sponsors and to the State Water Commission members when considering informed decisions.

It was moved by Commissioner Berg and seconded by Commissioner Thompson that the State Water Commission approve a state cost participation grant at 75 percent of the eligible costs, not to exceed an allocation of \$3,979,656 from the funds appropriated to the State Water Commission in the 2015-2017 biennium (S.B. 2020) to the Souris River Joint Board to support the Mouse River Enhanced Flood Protection Project, city of Minot property acquisition plan. This approval is contingent upon the availability of funds.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

**SOUTHWEST PIPELINE PROJECT -
PROJECT UPDATE
(SWC Project No. 1736-99)**

The Southwest Pipeline Project update was presented, which is detailed in the staff memorandum dated March 1, 2017 and included as **APPENDIX "F"**.

***SOUTHWEST PIPELINE PROJECT -
APPROVAL OF EXPENDITURES
REIMBURSEMENT FROM RESERVE
FUND FOR REPLACEMENT AND EXTRA-
ORDINARY MAINTENANCE (\$924,579.42);
AND APPROVAL TO INCREASE ELIGI-
BILITY CRITERIA FOR EXPENDITURE
FROM REM FUNDS TO \$20,000
(SWC Project No. 1736-99)***

The Southwest Water Authority collects and maintains a reserve fund for "replacement and extraordinary maintenance". This fund, which is required by authorizing legislation, exists to fund replacement and maintenance of items that exceed annual budgeted amounts. Expenditures from this fund are to be authorized by the State Water Commission.

A request from the Southwest Water Authority was presented for the State Water Commission's consideration for reimbursement of expenditures from the replacement and extraordinary maintenance fund that includes the variable frequency drive at the Jung Lake pump station (\$55,488.50); balance reimbursement on electrical service at the water treatment plant at Dickinson (\$13,877.80); replacement contactors at the intake pump station (\$80,433.89); motor reconditioning at the intake pump station (\$39,865.52); pipeline relocations at the right-of-way (\$94,928); vent repair and relocation at the six-million gallon reservoir at the water treatment plant at Dickinson (\$33,887); repair of a service line (\$30,420); replacement of stream traps and steam unit heaters at the water treatment plant at Dickinson (\$15,326.53); pipeline relocation at the BNSF railroad crossing (\$163,533.36); repair to a PRV vault (\$19,207.04); and replacement of a section of Contract 2-3E pipeline (\$377,611.78). The total cost for all of the items requested for reimbursement from the replacement and extraordinary maintenance fund is \$924,579.42.

The current eligibility criterion for authorizing expenditure from the REM funds is a single event which has a repair or replacement cost of \$10,000 or more. This criterion was set by the State Water Commission on June 19, 1996. The 1996 memorandum indicated that staff time, lost water, and vehicle replacement would not be included in the amount eligible. On August 13, 1998, the State Water Commission agreed to include staff time for reimbursement from REM funds. An adjustment of the eligibility criterion, based on the Consumer Price Index (CPI) change from June, 1996 to January, 2017, would result in increasing the \$10,000 limit to \$15,500. In an effort for future planning purposes, it was recommended that the eligibility criteria for expenditure from REM funds be increased to \$20,000 for a single event, effective in the 2018 Southwest Water Authority budget.

It was the recommendation of Secretary Erbele that the State Water Commission approve the reimbursement of expenditures from the reserve fund for replacement and extraordinary maintenance not to exceed \$924,579.42. The Southwest Water Authority adopted similar action at its December 6, 2016 and February 6, 2017 meetings.

It was also the recommendation of Secretary Erbele that the State Water Commission approve an increase in the eligibility criterion for the expenditures from REM funds from \$10,000 to \$20,000 for a single event, effective in the 2018 Southwest Water Authority budget.

It was moved by Commissioner Nodland and seconded by Commissioner Goehring that the State Water Commission:

1) approve the reimbursement of expenditures from the reserve fund for replacement and extraordinary maintenance not to exceed \$924,579.42; and

2) approve an increase in the eligibility criterion for the expenditures from the reserve fund for replacement and extraordinary maintenance from \$10,000 to \$20,000 for a single event, effective in the 2018 Southwest Water Authority budget.

Commissioners Berg, Foley, Goehring, Hanson, Nodland, Swenson, Thompson, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

***NORTHWEST AREA WATER SUPPLY
(NAWS) PROJECT UPDATE
(SWC Project No. 237-04)***

The Northwest Area Water Supply (NAWS) project update was provided, which is detailed in the staff memorandum dated March 6, 2017, and included as ***APPENDIX "G"***.

***GARRISON DIVERSION
CONSERVANCY DISTRICT
(SWC Project No. 237)***

Duane DeKrey, Garrison Diversion Conservancy District, general manager, provided a status report on the District's activities relating to the Red River Valley

Water Supply project, operations and maintenance efforts, and funding for the 2017-2019 biennium.

***DEVILS LAKE HYDROLOGIC
AND PROJECT UPDATES
(SWC Project No. 416-10)***

The Devils Lake hydrologic report and project updates are detailed in the staff memorandum dated March 10, 2017, and included as ***APPENDIX "H"***.

**MISSOURI RIVER REPORT
(SWC Project No. 1392)**

The Missouri River report was provided, which is detailed in the staff memorandum dated March 10, 2017, and included as **APPENDIX "I"**.

**2017 SPRING FLOOD OUTLOOK
(SWC Project No. 1431)**

The 2017 spring flood outlook was provided, which is detailed in the staff memorandum dated March 10, 2017, and included as **APPENDIX "J"**.

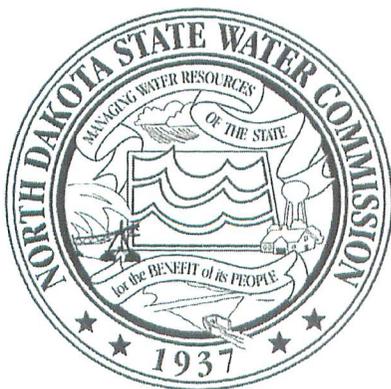
Governor Burgum offered data collection comments relating to surface water information/models and to the Spiritwood Airborne Electromagnetic Survey of 2016 presentation of this date. In summary, Governor Burgum encouraged the Secretary to the State Water Commission and the staff to make conscious efforts to effectively improve the means of how significant data collection is acquired and to a greater degree. He emphasized the importance that with the technology that is available, "we all need to do a better job of data collection."

**2017 SIXTY-FIFTH LEGISLATIVE
ASSEMBLY OF NORTH DAKOTA**

The State Water Commission staff provided a legislative summary relative to bills considered in the 2017 Sixty-

Fifth Legislative Assembly of North Dakota having a direct impact on water issues. H.B.1020, the State Water Commission's appropriation bill, was heard before the Education and Environment Division of the House Appropriations Committee on January 10, 2017; and is scheduled to be heard before the Senate Appropriations Committee on March 16, 2017. H.B. 1374 relates to the composition and operation of the State Water Commission. S.B. 2134 sets up a process to define the ordinary high water mark of the historic Missouri River channel as it existed before the Garrison Dam - the bill directs the adjustment of state-leased mineral acres and authorizes refunds to the original owners. S.B. 2047 relates to quick take eminent domain.

There being no further business to come before the State Water Commission, Governor Burgum adjourned the March 29, 2017 meeting at 5:10 p.m.





Doug Burgum, Governor
Chairman, State Water Commission



Garland Erbele, P.E.
North Dakota State Engineer,
and Chief Engineer-Secretary
to the State Water Commission

STATE WATER COMMISSION
 ALLOCATED PROGRAM EXPENDITURES
 FOR THE PERIOD ENDED FEBRUARY 28, 2017
 BIENNIUM COMPLETE: 83%

APPENDIX "A"
 MARCH 29, 2017

PROGRAM	SALARIES/ BENEFITS	OPERATING EXPENSES	GRANTS & CONTRACTS	15-Mar-17 PROGRAM TOTALS
ADMINISTRATION				
Allocated	2,729,489	2,806,129		5,535,618
Expended	2,230,214	1,438,348		3,668,562
Percent	82%	51%		66%
			General Fund:	0
			Federal Fund:	72,995
			Special Fund:	3,595,567
PLANNING AND EDUCATION				
Allocated	1,472,573	352,990		1,825,563
Expended	1,219,430	184,710		1,404,141
Percent	83%	52%		77%
			General Fund:	0
			Federal Fund:	214,717
			Special Fund:	1,189,424
WATER APPROPRIATION				
Allocated	5,762,691	1,185,300	1,372,844	8,320,835
Expended	4,536,322	554,999	824,031	5,915,352
Percent	79%	47%	60%	71%
			General Fund:	0
			Federal Fund:	59,429
			Special Fund:	5,855,923
WATER DEVELOPMENT				
Allocated	4,713,717	10,742,500	1,562,500	17,018,717
Expended	3,696,865	6,899,742	800,803	11,397,410
Percent	78%	64%	51%	67%
			General Fund:	0
			Federal Fund:	169,931
			Special Fund:	11,227,479
STATEWIDE WATER PROJECTS				
Allocated			959,003,567	959,003,567
Expended			379,776,657	379,776,657
Percent			40%	40%
			General Fund:	0
			Federal Fund:	0
			Special Fund:	379,776,657
REGULATORY DIVISION				
Allocated	2,828,565	2,947,500	15,000	5,791,065
Expended	1,927,452	1,076,937	0	3,004,389
Percent	68%	37%	0%	52%
			General Fund:	0
			Federal Fund:	1,265,678
			Special Fund:	1,738,712
ATMOSPHERIC RESOURCE				
Allocated	1,107,158	743,382	4,885,212	6,735,752
Expended	858,624	308,421	1,371,417	2,538,462
Percent	78%	41%	28%	38%
			General Fund:	0
			Federal Fund:	0
			Special Fund:	2,538,462
SOUTHWEST PIPELINE				
Allocated	512,995	10,461,744	97,502,498	108,477,237
Expended	528,533	8,545,094	49,215,679	58,289,306
Percent	103%	82%	50%	54%
			General Fund:	0
			Federal Fund:	3,000,000
			Special Fund:	55,289,306
NORTHWEST AREA WATER SUPPLY				
Allocated	705,632	13,910,277	31,611,573	46,227,482
Expended	498,757	3,235,076	1,219,052	4,952,885
Percent	71%	23%	4%	11%
			General Fund:	0
			Federal Fund:	0
			Special Fund:	4,952,885
PROGRAM TOTALS				
Allocated	19,832,820	43,149,822	1,095,953,194	1,158,935,836
Expended	15,496,197	22,243,328	433,207,639	470,947,163
Percent	78%	52%	40%	41%

STATE WATER COMMISSION
PROJECT SUMMARY
2015-2017 BIENNIUM

				<i>Feb-17</i>	
	BUDGET	SWC/SE APPROVED	OBLIGATIONS EXPENDITURES	REMAINING UNOBLIGATED	REMAINING UNPAID
FLOOD CONTROL					
FARGO	228,506,200	228,506,200	141,210,942	0	87,295,258
GRAFTON	33,925,000	33,925,000	1,534,675	0	32,390,325
MOUSE RIVER FLOOD CONTROL	46,513,397	25,737,810	9,550,023	20,775,587	16,187,787
VALLEY CITY	28,458,354	27,312,537	9,104,144	1,145,817	18,208,393
LISBON	15,227,187	8,094,752	4,941,048	7,132,435	3,153,704
FORT RANSOM	225,000	0	0	225,000	0
WILLISTON	7,000,000	3,655,517	0	3,344,483	3,655,517
RENWICK DAM	23,320	7,117	7,117	16,203	0
MISSOURI RIVER FLOOD CONTROL	4,000,000	4,000,000	4,000,000	0	0
FLOODWAY PROPERTY ACQUISITIONS					
MINOT	23,879,316	23,879,316	13,678,297	0	10,201,019
WARD COUNTY	6,046,590	6,046,590	31,243	0	6,015,347
VALLEY CITY	4,017,403	4,017,403	142,606	0	3,874,797
BURLEIGH COUNTY	232,649	(114,552)	(114,552)	347,201	0
SAWYER	184,260	184,260	48,416	0	135,844
LISBON	626,250	626,250	22,950	0	603,300
BURLINGTON	43,350	43,350	0	0	43,350
STATE WATER SUPPLY					
REGIONAL & LOCAL WATER SYSTEMS	184,835,694	184,760,694	68,976,013	75,000	115,784,681
FARGO WATER TREATMENT PLANT	22,768,775	22,768,775	22,740,900	0	27,875
SOUTHWEST PIPELINE PROJECT	104,761,201	104,761,200	55,289,306	0	49,471,894
NORTHWEST AREA WATER SUPPLY	15,754,482	15,754,482	2,546,598	0	13,207,884
WESTERN AREA WATER SUPPLY AUTHORITY	82,201,384	82,201,384	69,754,982	0	12,446,402
RED RIVER VALLEY WATER SUPPLY	12,521,328	12,521,328	8,032,845	0	4,488,483
CENTRAL NORTH DAKOTA WATER SUPPLY	70,070,800	70,800	69,804	70,000,000	997
UNOBLIGATED STATE WATER SUPPLY	2,081,155			2,081,155	
GENERAL WATER MANAGEMENT					
OBLIGATED	44,770,307	44,770,307	21,702,283	0	23,068,025
UNOBLIGATED GENERAL WATER	28,155,699			28,155,699	
DEVILS LAKE					
OUTLET	870,802	870,802	0	0	870,802
OUTLET OPERATIONS	18,534,211	18,534,210	7,310,904	0	11,223,306
DL EAST END OUTLET	2,774,011	2,774,011	505,355	0	2,268,656
REVOLVING LOAN FUND					
GENERAL WATER PROJECTS	11,000,000	10,574,214	5,649,114	425,786	4,925,100
WATER SUPPLY	25,000,000	14,966,885	12,647,395	10,033,115	2,319,490
TOTALS	1,025,008,125	881,250,642	459,382,408	143,757,484	421,868,234

STATE WATER COMMISSION
PROJECT SUMMARY
2015-2017 Biennium

PROGRAM OBLIGATION

Approver SWC		Dept	Sponsor	Project	Initial	Total	Total	Feb-17
By	No				Approved Date	Approved	Payments	Balance
Flood Control:								
SB 2020	1928-01	5000	City of Fargo	Fargo Flood Control Project	6/23/2009	99,506,200	70,585,898	28,920,302
SB 2020	1928-02	5000	City of Fargo	Interior Flood Control Project	12/11/2015	30,000,000	30,000,000	0
SB 2020	1928-03	5000	City of Fargo	Interior Disaster Relief Fund	12/11/2015	30,000,000	30,000,000	0
SB 2020	1928-05	5000	Metro Flood Diversion Authority	Fargo Metro Flood Diversion Authority 2015-2017	7/6/2016	69,000,000	10,625,044	58,374,956
	1771-01	5000	City of Grafton	Grafton Flood Control Project	10/12/2016	32,175,000	0	32,175,000
	1771-02	5000	City of Grafton	Grafton Flood Risk Reduction Project	12/5/2014	1,750,000	1,534,675	215,325
	1974-06	5000	Souris River Joint WRD	Development of 2011 Flood Inundation Maps	12/18/2015	5,600	0	5,600
SB 2371	1974-08	5000	Souris River Joint WRD	Mouse River Reconnaissance Study to Meet Fed Guid	2/15/2013	0	0	0
	1974-09	5000	Souris River Joint WRD	Mouse River Flood Control Design Engineering	8/8/2016	7,317,512	6,633,629	683,883
	1974-11	5000	Souris River Joint WRD	Funding of 214 agreement between SRJB & USACE	12/5/2014	106,500	75,000	31,500
	1974-14	5000	Souris River Joint WRD	STAR Program (Structure Acquisition, Relocation, or I	3/9/2016	7,200,000	410,237	6,789,763
	1974-15	5000	Souris River Joint WRD	Perkelt Ditch Improvements	12/2/2016	2,188,592	1,144,558	1,044,034
	1974-16	5000	Souris River Joint WRD	Corps of Engineers Feasibility Study MREFPF	12/9/2016	750,000	276,478	473,522
	1974-18	5000	Souris River Joint WRD	Rural Reaches, Preliminary Engineering	10/12/2016	260,000	4,640	255,360
	1974-19	5000	Souris River Joint WRD	4th Avenue Tieback Levee & Burlington Levee - Desig	10/12/2016	3,900,000	169,230	3,730,770
	1974-20	5000	Souris River Joint WRD	Utility Relocations	10/12/2016	467,057	16,508	450,549
	1974-21	5000	Souris River Joint WRD	Highway 83 Bypass & Bridge Replacement	10/12/2016	1,983,623	0	1,983,623
	1758	5000	Souris River Joint WRD-no agreement	International Joint Commission Study Board	5/29/2014	302,500	0	302,500
	1993-01	5000	City of Minot	Downtown Infrastructure Improvements	9/15/2014	1,256,426	819,743	436,683
SB 2371	1344-01	5000	Valley City	Sheyenne River Valley Flood Control Project	12/5/2015	156,993	156,993	0
	1344-04	5000	Valley City	Sheyenne River Valley Flood Control Project PHII	8/29/2016	1,147,500	289,749	857,751
	1504-01	5000	Valley City	Permanent Flood Protection Project	12/5/2014	9,850,444	8,657,402	1,193,042
	1504-02	5000	Valley City	Permanent Flood Protection Project (LOAN)	12/5/2014	3,000,000	0	3,000,000
	1504-03	5000	Valley City	Permanent Flood Protection PH III	12/9/2016	13,157,600	0	13,157,600
SB 2371	1344-02	5000	City of Lisbon	Sheyenne River Valley Flood Control Project	8/8/2016	2,281,610	280,621	2,000,989
	1991-01	5000	City of Lisbon	Permanent Flood Protection Project	5/29/2014	561,702	414,733	146,969
	1991-03	5000	City of Lisbon	Permanent Flood Protection - Levee C Project	3/11/2015	3,153,440	2,775,641	377,799
	1991-06	5000	City of Lisbon	Permanent Flood Protection - Levee E Project	3/9/2016	2,098,000	1,470,053	627,947
SB 2371	1344-03	5000	Fort Ransom	Sheyenne River Valley Flood Control Project	6/19/2013	0	0	0
	849	5000	Pembina Co. WRD	Renwick Dam Rehabilitation	6/26/2014	7,117	7,117	0
SB 2020	1992-02	5000	Burleigh Co. WRD	Missouri River Correctional Center	9/21/2015	1,200,000	1,200,000	0
SB 2020	1992-03	5000	Burleigh Co. WRD	Fox Island Flood Control Funding Update	9/21/2015	2,800,000	2,800,000	0
	2079	5000	City of Williston	West Williston Flood Control	12/9/2016	3,655,517	0	3,655,517
Subtotal Flood Control						331,238,933	170,347,949	160,890,984
Floodway Property Acquisitions:								
	1993-05	5000	City of Minot	Minot Phase 2 - Floodway Acquisitions	2/25/2014	23,879,316	13,678,297	10,201,019
SB 2371	1523-05	5000	Ward County	Ward County Phase 1, 2 & 3 - Floodway Acquisitions	1/27/2012	6,046,590	31,243	6,015,347
SB 2371	1504-05	5000	Valley City	Valley City Phase 1 - Floodway Acquisitions	8/29/2016	4,017,403	142,606	3,874,797
SB 2371	1992-05	5000	Burleigh Co. WRD	Burleigh Co. Phase 1 - Floodway Acquisitions	3/7/2012	(114,552)	(114,552)	0
SB 2371	2000-05	5000	City of Sawyer	Sawyer Phase 1 - Floodway Acquisitions	6/13/2012	184,260	48,416	135,844
	1991-05	5000	City of Lisbon	Lisbon - Floodway Acquisition	12/9/2016	626,250	22,950	603,300
	1987-05	5000	City of Burlington	Mouse River Enhanced Flood Plan Property Acquisitor	12/29/2015	43,350	0	43,350
Subtotal Floodway Property Acquisitions						34,682,817	13,808,980	20,873,837
State Water Supply Grants:								
	2373-35	5000	Grand Forks - Traill RWD	Grand Forks - Traill County WRD	6/13/2012	303,715	303,715	0
	2373-36	5000	Stutsman Rural RWD	Stutsman Rural Water System - Phase IIB, III	2/27/2013	4,739,672	4,443,172	296,500
	2373-38	5000	Stutsman Rural RWD	Kidder Co & Carrington Area Expansion	7/23/2013	991,361	991,361	0
	2373-39	5000	North Central Rural Water Consortium	Carpio Berthold Phase 2	5/29/2014	2,970,141	528,312	2,441,829
	2373-41	5000	North Central Rural Water Consortium	Granville-Deering Area	10/24/2016	5,940,102	3,460,454	2,479,648
	2050-01	5000	Missouri West Water System	South Mandan	3/17/2014	168,606	168,606	0
	2050-02	5000	Grand Forks Traill RWD	Improvements	3/11/2015	4,369,058	3,679,710	689,349
	2050-03	5000	Northeast Regional WD	Langdon RWD - ABM Pipeline Phase 1	10/7/2013	540,437	540,437	0
	2050-04	5000	Northeast Regional WD	Langdon RWD - North Valley Nekoma	3/11/2015	859,341	859,341	0
	2050-05	5000	Northeast Regional WD	North Valley RWD - ABM Pipeline Phase 1	3/11/2015	240,672	240,672	0
	2050-06	5000	Northeast Regional WD	North Valley WD - 93 Street	3/11/2015	937,870	937,870	0
	2050-07	5000	Northeast Regional WD	North Valley WD - Rural Expansion	5/29/2014	1,657,591	1,605,795	51,796
	2050-08	5000	Walsh RWD	Ground Storage	10/7/2013	169,977	169,977	(0)
	2050-09	5000	City of Park River	Water Tower	3/11/2015	571,225	571,225	0
	2050-10	5000	City of Surrey	Water Supply Improvements	10/7/2013	1,117,800	1,117,800	0
	2050-11	5000	Cass RWD	Phase 2 Plant Improvements	10/7/2013	3,951,363	3,912,186	39,177
	2050-13	5000	City of Mandan	New Raw Water Intake	10/7/2013	1,567,676	49,788	1,517,888
	2050-14	5000	City of Mandan	Water Treatment Plant Improvements	10/7/2013	226,762	226,762	0
	2050-15	5000	City of Washburn	New Raw Water Intake	10/7/2013	2,334,250	18,776	2,315,474
	2050-16	5000	Tri-County RWD	Improvements	10/7/2013	845,000	845,000	0
	2050-17	5000	Barnes Rural RWD	Improvements	3/11/2015	6,894,412	5,180,498	1,713,914
	2050-18	5000	City of Grafton	Water Treatment Plant Phase 3	10/7/2013	3,381,148	2,320,691	1,060,457
	2050-19	5000	City of Grand Forks	Water Treatment Plant Improvements	10/7/2013	3,849,151	3,849,151	0
	2050-20	5000	City of Dickinson	Capital Infrastructure	10/6/2015	9,875,025	7,510,749	2,364,276
	2050-21	5000	Watford City	Capital Infrastructure	2/27/2014	1,897,040	1,178,862	718,178
	2050-22	5000	City of Williston	Capital Infrastructure	2/27/2014	4,119,610	2,281,794	1,837,816
	2050-23	5000	Greater Ramsey WRD	SW Nelson County Expansion	3/17/2014	4,199,547	3,357,732	841,816
	2050-24	5000	All Seasons Water District	System 1 Well Field Expansion	9/15/2014	292,500	0	292,500
	2050-25	5000	All Seasons Water District	Bottineau County Extension, Phase I	7/29/2015	896,000	562,571	333,429
	2050-26	5000	City of Fargo	Fargo Water System Regionalization Improvements	7/29/2015	6,841,750	2,420,406	4,421,344
	2050-27	5000	City of Tioga	Tioga Water Supply Improvement Project	7/29/2015	2,190,000	1,914,381	275,619
	2050-28	5000	City of Mandan	Water Systems Improvement Project	10/6/2015	2,582,535	111,904	2,470,631
	2050-29	5000	City of Minot	Water Systems Improvement Project	10/6/2015	3,634,000	78,477	3,555,523
	2050-30	5000	Watford City	Water Systems Improvement Project	10/6/2015	5,435,087	52,092	5,382,995
	2050-31	5000	City of West Fargo	Water Systems Improvement Project	10/6/2015	3,426,210	1,824,470	1,601,740
	2050-32	5000	City of Williston	Water Systems Improvement Project	10/6/2015	10,890,472	3,033,462	7,857,010
	2050-33	5000	Stutsman RWD	Phase V Storage & Pipeline Expansion Project	10/6/2015	4,170,100	2,598,922	1,571,178
	2050-34	5000	North Prairie RWD	Storage and Water Main	10/6/2015	3,459,837	1,212,883	2,246,954
	2050-35	5000	Southeast Water Users Dist	System Wide Expansion Feasibility Study	10/6/2015	11,826,000	247,695	11,578,305
	2050-36	5000	City of Dickinson	Water Systems Improvement Project	10/6/2015	1,042,500	0	1,042,500
	2050-37	5000	City of Dickinson	Dickinson State Avenue South Water Main	12/11/2015	965,000	0	965,000
	2050-38	5000	Dakota Rural Water District	Reservoir C Expansion	12/11/2015	901,500	780,468	121,032
	2050-39	5000	Missouri West Water System	Crown Butte Service Area Expansion Phase II	12/11/2015	308,000	145,476	162,524
	2050-41	5000	Northeast Regional WD	City of Devils Lake Water Supply Project	12/11/2015	15,543,750	1,336,248	14,207,502
	2050-42	5000	Walsh RWD	Phase 1 & 2 System Expansion	12/11/2015	2,093,350	172,052	1,921,298
	2050-43	5000	All Seasons Water District	System 4 Connection to System 1	12/11/2015	4,900,000	0	4,900,000
	2050-44	5000	City of Beulah	Water Treatment Plant	3/9/2016	2,640,000	35,176	2,604,824
	2050-45	5000	Garrison Rural Water District	System Expansion Project	3/9/2016	2,003,550	29,236	1,974,314
	2050-49	5000	City of Grand Forks	Grand Forks Water Treatment Plant	10/12/2016	30,000,000	2,069,657	27,930,343
Subtotal State Water Supply						184,760,694	68,976,013	115,784,681

STATE WATER COMMISSION
PROJECT SUMMARY
2015-2017 Biennium

PROGRAM OBLIGATION

Approved SWC					Initial	Total	Total	Feb-17
By	No	Dept	Sponsor	Project	Approved Date	Approved	Payments	Balance
	1984-02	5000	City of Fargo	Fargo Water Treatment Plant	3/17/2014	22,768,775	22,740,900	27,875
	1736-05	8000	SWPP	Southwest Pipeline Project	7/1/2013	104,761,200	55,289,306	49,471,894
	2374	9000	NAWS	Northwest Area Water Supply	7/1/2013	15,754,482	2,546,598	13,207,884
	1973-02	5000	WAWSA	WAWSA- (GRANT)	10/6/2015	12,061,806	11,368,675	693,131
	1973-05	5000	WAWSA	WAWSA- (GRANT)	10/6/2015	60,000,000	48,246,729	11,753,271
	1973-03	5000	Bank of North Dakota	WAWSA - (LOAN)	10/6/2015	10,139,578	10,139,578	0
	325-102	5000	RRVWSP	Red River Valley Water Supply - Intake Design Study	5/29/2014	162,328	32,845	129,483
SB 2020	325-104	5000	Garrison Diversion	Red River Valley Water Supply Project	7/29/2015	12,359,000	8,000,000	4,359,000
	2051-101	5000	Central ND Water Supply	Black and Veatch investigation	1/27/2015	70,800	69,804	997
Subtotal State Water Supply						238,077,969	158,434,435	79,643,533
General Water Management								
Hydrologic Investigations:						1,125,267		
	2041	3000	US Geological Survey	USGS Stream Gage Joint Funding Agreement	3/9/2016	529,075	529,075	0
	2041	3000	US Geological Survey	USGS Stream Gage Joint Funding Agreement	10/12/2016	544,110	136,028	408,083
	1400	3000	Fireside Office Solutions	Document Conversion (Water Permit Scanning)	8/23/2016	50,000	7,200	42,800
Hydrologic Investigations Obligations Subtotal						1,123,185	672,302	450,883
Remaining Hydrologic Investigations Authority						2,082		
Hydrologic Investigations Authority Less Payments								
General Projects Obligated						27,137,633	7,219,385	19,918,249
General Projects Completed						16,507,407	13,810,596	2,696,811
Subtotal General Water Management						44,770,307	21,702,283	23,068,025
Devlis Lake Basin Development:								
SWC	416-07	5000	Multiple	Devlis Lake Outlet	7/1/2013	870,802	0	870,802
SWC	416-10	4700	Operations	Devlis Lake Outlet Operations	3/9/2016	18,534,210	7,310,904	11,223,306
SWC	416-15	5000	Multiple	DL East End Outlet	7/1/2013	2,774,011	505,355	2,268,656
Devlis Lake Subtotal						22,179,023	7,816,259	14,362,764
Revolving Loan Fund:								
(General Water)								
	2077-02	1050	City of Lisbon	Permanent Flood Protection - Levee C (LOAN)	3/11/2015	886,500	886,500	0
	2077-03	1050	City of Lisbon	Sheyenne River Flood Protection - Levee E (LOAN)	3/9/2016	527,000	527,000	0
	2077-09	1050	City of Lisbon	Permanent Flood Protection - Levee D & F (LOAN)	7/6/2016	243,200	0	243,200
	2077-08	1050	City of Grafton	Grafton Flood Risk Reduction (LOAN)	10/12/2016	3,375,000	3,375,000	0
	2077-06	1050	City of Valley City	Permanent Flood Protection Project (LOAN)	12/28/2016	860,614	860,614	0
	2077	1050	City of Valley City	Valley City Flood Protection - Phase II Construction (LC)	12/9/2016	3,289,400	0	3,289,400
	2077	1050	City of Valley City	Valley City Pre Design & Eng & Phase III Buyouts (LOA)	12/9/2016	1,392,500	0	1,392,500
(Water Supply)								
	2077-01	1050	Bank of North Dakota	WAWSA - (LOAN)	10/6/2015	10,000,000	10,000,000	0
	2077-04	1050	North Prairie Rural Water District	Storage & Water Mains (LOAN)	12/11/2015	239,475	239,475	0
	2077	1050	City of Beulah	Water Treatment Plant (LOAN)	3/9/2016	880,000	0	880,000
	2077-05	1050	Northeast Regional WD	City of Devils Lake Water Supply Project (LOAN)	3/9/2016	1,686,920	1,686,920	0
	2077	1050	Walsh Rural WD	Phase 1, 2, & 3 System Expansion Project (LOAN)	3/9/2016	250,490	0	250,490
	2077	1050	Barnes Rural Water District	Rural Expansion (LOAN)	10/12/2016	835,000	0	835,000
	2077	1050	North Central Rural Water Consortium	Carpio Berthold Phase 2 (LOAN)	10/12/2016	215,000	0	215,000
	2077	1050	North Central Rural Water Consortium	Granville-Surrey-Deering Water Supply Project (LOAN)	10/12/2016	139,000	0	139,000
	2077-07	1050	Stutsman Rural Water District	Phase 3 Expansion (LOAN)	10/12/2016	721,000	721,000	0
Revolving Loan Fund Subtotal						25,541,099	18,296,509	7,244,590
TOTAL						881,250,642	459,382,408	421,868,234

STATE WATER COMMISSION
PROJECT SUMMARY
2015-2017 Biennium
Resources Trust Fund

GENERAL PROJECT OBLIGATIONS

Approved SWC		Dept	Approved Biennium	Sponsor	Project	Initial	Total Approved	Total Payments	Feb-17
By	No					Approved Date			Balance
SE	274	5000	2015-17	City of Neche	Neche Levee Certification Project	3/21/2016	54,000	0	54,000
SWC	322	5000	2009-11	ND Water Education Foundati	ND Water: A Century of Challenge	2/22/2010	36,800	0	36,800
SWC	346	5000	2015-17	Williams County WRD	Epping Dam Spillway Reconstruction	3/9/2016	719,045	544,657	174,388
SWC	347	5000	2009-11	City of Velva	City of Velva's Flood Control Levee System Certificati	3/28/2011	102,000	69,503	32,497
SE	390	5000	2015-17	Logan County WRD	Beaver Lake Dam Rehabilitation Feasibility Study	6/8/2016	16,076	0	16,076
SE	394	5000	2015-17	Golden Valley Co WRD	Odland Dam Rehabilitation Feasibility Study	10/13/2016	13,220	0	13,220
SE	399	5000	2013-15	Barnes Co WRD	Kalhryn Dam Feasibility Study	9/19/2014	21,250	8,508	12,742
SE	420	5000	2015-17	Hettinger Park Board	Mirror Lake Dam Emergency Action Plan	12/2/2016	24,400	0	24,400
SE	460	5000	2015-17	Griggs Co. WRD	Ueland Dam Rehabilitation Feasibility Study	5/20/2016	17,500	0	17,500
SE	477	5000	2015-17	Valley City	Mill Dam Rehabilitation Feasibility Study	6/8/2016	15,073	0	15,073
SE	512	5000	2015-17	Emmons County WRD	Nieuwsma Dam Emergency Action Plan	11/28/2016	12,000	0	12,000
SE	531	5000	2015-17	Benson Co WRD	Bouret Dam Rehabilitation Feasibility Study	10/11/2016	12,118	0	12,118
SE	561	5000	2015-17	City of Tioga	Tioga Dam EAP	5/20/2016	40,000	0	40,000
SWC	568	5000	2013-15	Southeast Cass WRD	Sheyenne River Reaches Snagging & Clearing Projec	12/5/2014	94,238	0	94,238
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches I	12/11/2015	99,000	25,098	73,902
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches II	12/11/2015	105,000	77,095	27,905
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches III	12/11/2015	90,000	2,965	87,035
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches I,II,III	12/9/2016	294,000	0	294,000
SE	568	5000	2015-17	Barnes Co WRD	Sheyenne River Snagging & Clearing Reach 1 Proj 2	6/8/2016	49,000	0	49,000
SE	571	5000	2013-15	Oak Creek WRD	Oak Creek Snagging & Clearing Project	3/30/2015	3,672	2,565	1,107
SWC	620	5000	2007-09	Lower Heart WRD	Mandan Flood Control Protective Works (Levee)	9/29/2008	125,396	0	125,396
SE	662	5000	2015-17	Walsh Co. WRD	Park River Snagging & Clearing	1/12/2016	29,264	20,492	8,772
SE	662	5000	2015-17	Walsh Co. WRD	Park River Snagging & Clearing	2/17/2017	55,385	0	55,385
SWC	710	5000	2015-17	Maple River WRD	Upper Swan Creek Channel Improvement Project	10/6/2015	171,763	10,177	161,586
SE	841	5000	2013-15	Maple River WRD	Garsteig Dam Repair Project	1/26/2015	40,163	21,502	18,661
SWC	841	5000	2015-17	Maple River WRD	Swan Buffalo Detention Dam #5(Garsteig Dam)	11/17/2016	156,428	4,574	151,852
SWC	841	5000	2015-17	Maple River WRD	Swan Buffalo Detention Dam #12(Absaraka Dam)	11/15/2016	127,164	5,298	121,866
SE	848	5000	2015-17	Sargent Co WRD	Tewaukon WS-T-1-A (Brummond-Lubke) Dam EAP	12/18/2015	20,000	7,984	12,016
SE	848	5000	2015-17	Sargent Co WRD	Tewaukon WS-T-7 (Nelson) Dam EAP	12/18/2015	20,000	7,820	12,180
SE	849	5000	2015-17	Pembina Co. WRD	Renwick Dam Emergency Action Plan	9/29/2015	63,680	56,784	6,896
SWC	980	5000	2015-17	Cass Co. Joint WRD	Rush River Watershed Detention Study	1/7/2016	154,000	23,269	130,731
SWC	980	5000	2013-15	Cass Co. Joint WRD	Swan Creek Watershed Detention Study PHII	3/11/2015	154,000	28,287	125,713
SWC	980	5000	2015-17	Cass Co. Joint WRD	Upper Maple River Watershed Detention Study	1/11/2016	154,000	20,885	133,115
SWC	1056	5000	2015-17	Bottineau Co. WRD	Tacoma Bitz Legal Drain	7/6/2016	312,105	58,097	254,008
SE	1056	2000	2015-17	Bottineau Co. WRD	Stead Legal Drain	2/16/2017	19,142	0	19,142
SWC	1064	5000	2013-15	Rush River WRD	Cass County Drain No. 2 Channel Improvements Proj	3/11/2015	106,989	65,306	41,683
SWC	1071	5000	2015-17	Maple River WRD	Cass County Drain #15 Channel Improvements	3/9/2016	296,562	0	296,562
SWC	1088	5000	2015-17	Maple River WRD	Cass Drain #37 Channel Improvements	3/9/2016	230,326	0	230,326
SWC	1089	5000	2015-17	Maple River WRD	Cass County Drain #39 Channel Improvements	3/9/2016	221,871	0	221,871
SWC	1101	5000	2011-13	Dickey Co. WRD	Yorktown-Maple Drainage Improvement Dist No. 3	12/11/2015	798,562	0	798,562
SWC	1101	5000	2011-13	Dickey-Sargent Co WRD	Riverdale Township Improvement District #2 - Dickey	9/21/2011	500,000	0	500,000
SE	1140	5000	2015-17	Pembina Co. WRD	Drain 11 Outlet Extension Cost Overrun Project	7/7/2015	5,088	0	5,088
SWC	1174	5000	2015-17	Richland Co. WRD	Legal Drain #31 Improvements Project	3/9/2016	161,852	128,498	33,354
SWC	1176	5000	2015-17	Richland Co. WRD	Legal Drain #2 Reconstruction/Extension Project	3/9/2016	535,500	252,010	283,490
SWC	1179	5000	2015-17	Richland Co. WRD	Legal Drain #5 (Lateral 27) Reconstruction	3/9/2016	531,000	330,516	200,484
SWC	1179	5000	2015-17	North Cass Co. WRD	Drain #23 Channel Improvements	3/9/2016	137,181	0	137,181
SWC	1222	5000	2015-17	Sargent Co WRD	Drain No 11 Channel Improvements	10/12/2016	1,417,967	0	1,417,967
SWC	1227	5000	2011-13	Traill Co. WRD	Mergenthal Drain No. 5 Reconstruction	9/15/2014	18,502	6,277	12,225
SWC	1231	5000	2015-17	Traill Co. WRD	Carson Drain No. 10 Channel Improvements	10/12/2016	152,328	0	152,328
SWC	1236	5000	2015-17	Traill Co. WRD	Murray Drain No. 17 Channel Improvements	10/12/2016	138,450	0	138,450
SWC	1242	5000	2013-15	Traill Co. WRD	Rust Drain No. 24 Project	12/13/2013	25,152	3,002	22,150
SE	1264	5000	2013-15	Barnes Co WRD	Little Dam Repurposing Feasibility Study	6/17/2015	16,100	3,715	12,385
SWC	1270	5000	2013-15	Burleigh Co. WRD	Apple Creek Industrial Park Levee Feasibility Study	10/7/2013	65,180	0	65,180
SE	1270	5000	2015-17	City of Wilton	Wilton Pond Dredging Recreation Project	12/29/2015	35,707	0	35,707
SWC	1273	5000	2015-17	City of Oakes	James River Bank Stabilization	12/11/2015	262,500	0	262,500
SE	1287	5000	2013-15	McHenry Co. WRD	Souris River Snagging & Clearing Project	2/3/2015	15,000	4,500	10,500
SWC	1294	5000	2013-15	Nelson Co. Park Board	Stump Lake Park Bank Stabilization Project	3/11/2015	115,436	0	115,436
SE	1296	5000	2013-15	Pembina Co. WRD	Bathgate-Hamilton & Carlisle Watershed Study	10/17/2013	45,226	38,500	6,726
SWC	1301	5000	2015-17	Richland Co. WRD	North Branch Antelope Creek NRCS Small Watershec	3/9/2016	113,400	0	113,400
SE	1303	5000	2013-15	Sargent Co WRD	Gwinner Dam Improvement Feasibility Study Program	4/17/2015	42,844	18,750	24,094
SE	1303	5000	2015-17	Sargent Co WRD	Gwinner Dam Breach Project	2/20/2017	31,125	0	31,125
SWC	1303	5000	2015-17	Sargent Co WRD	Shortfoot Creek Watershed Planning Program	3/9/2016	154,000	44,953	109,047
SWC	1311	5000	2015-17	Traill Co. WRD	Buxton Township Improvement District No. 68	3/9/2016	512,090	384,115	127,975
SE	1328	5000	2015-17	North Cass Co. WRD	Drain No. 23 Channel Improv Preliminary Engineering	9/30/2015	5,775	4,854	921
SWC	1331	5000	2015-17	Richland Co WRD	Drain #14 Reconstruction	12/9/2016	315,000	0	315,000
SWC	1389	5000	2013-15	Bank of ND	BND AgPace Program	12/13/2013	180,316	24,737	155,578
SWC	1401	5000	2015-17	Pembina Co. WRD	International Boundary Roadway Dike Pembina	12/11/2015	786,032	491,504	294,528
SWC	1418	5000	2013-15	City of Bisbee	Big Coulee Dam Feasibility Study	5/29/2014	10,963	0	10,963
SE	1444	5000	2015-17	City of Pembina	Flood Protection System Certification	4/19/2016	75,000	73,343	1,657
SE	1453	5000	2015-17	Hettinger County WRD	Karey Dam Rehabilitation Feasibility Study	5/23/2016	13,550	6,697	6,853
SWC	1486	5000	2015-17	Griggs Co. WRD	Thompson Bridge Outlet No. 4 Project	10/6/2015	621,661	0	621,661
SE	1520	5000	2015-17	Walsh Co WRD	Walsh Co Drain #30-1	8/29/2016	14,000	10,803	3,197
SWC	1523	5000	2015-17	Ward Co. WRD	Robinwood Bank Stabilization Project	10/6/2015	256,449	38,331	218,118
SE	1625	5000	2015-17	Carlson McCain, Inc.	Ordinary High Water Mark Delineations Left Bank of N	12/2/2016	23,800	0	23,800
SWC	1638	5000	2009-11	Multiple	Red River Basin Non-NRCS Rural/Farmstead Ring Di	6/23/2009	177,864	0	177,864
SWC	1650	5000	2015-17	Sargent Co WRD	Drain #7 Improvement	7/6/2016	202,663	137,145	65,518
SE	1667	5000	2015-17	Traill Co. WRD	Goose River Snagging & Clearing	9/2/2016	47,500	0	47,500
SWC	1705	5000	2011-13	Red River Joint Water Resour	Red River Joint WRD Watershed Feasibility Study - PI	9/21/2011	60,000	40,782	19,218
SWC	1705	5000	2011-13	Red River Joint Water Resour	Red River Basin Distributed Plan Study	12/7/2012	560,000	0	560,000
SE	1808	5000	2015-17	Steele Co WRD	Beaver Creek Dam Safety Inspection	5/23/2016	2,625	0	2,625
SE	1842	5000	2013-15	Southeast Cass WRD	Wild Rice River Snagging & Clearing	10/27/2015	57,000	37,334	19,666
SE	1842	5000	2015-17	Southeast Cass WRD	Wild Rice River Snagging & Clearing	12/13/2016	57,000	0	57,000
SWC	1859	5000	2015-17	ND Dept of Health	NPS Pollution Project	7/29/2015	200,000	67,003	132,997

**STATE WATER COMMISSION
PROJECT SUMMARY
2015-2017 Biennium
Resources Trust Fund**

GENERAL PROJECT OBLIGATIONS

Approved SWC By	No	Dept	Approved Biennium	Sponsor	Project	Initial Approved Date	Total Approved	Total Payments	Feb-17 Balance
SWC	1891	5000	2015-17	Steele Co WRD	Drain No. 8 Channel Improvement	7/6/2016	411,773	400,268	11,505
SWC	1921	5000	2007-09	Morton Co. WRD	Square Butte Dam No. 6/(Harmon Lake) Recreation F	3/23/2009	231,002	38,651	192,351
SWC	1932	5000	2015-17	Nelson Co. WRD	Michigan Spillway Rural Flood Assessment	3/9/2016	1,214,256	1,188,406	25,850
SE	1934	5000	2015-17	Trall Co. WRD	Elm River Snagging & Clearing	9/2/2016	47,500	0	47,500
SE	1946	5000	2015-17	Walsh Co. WRD	Improvement of Walsh Co Drain #22 Preliminary Engi	4/19/2016	10,500	7,637	2,863
SWC	1951	5000	2015-17	Maple River WRD	Lynchburg Channel Improvements	7/6/2016	1,131,338	0	1,131,338
SWC	1951	5000	2015-17	Maple River WRD	Lynchburg Channel Improvements	7/6/2016	63,788	0	63,788
SWC	1968	5000	2013-15	Garrison Diversion	McClusky Canal Mile Marker 10 & 49 Irrigation Project	3/17/2014	256,321	204,707	51,614
SE	1974	5000	2015-17	USGS	Regulated Streamflow Frequency for the Upper Souris	12/16/2016	37,100	0	37,100
SWC	1975	5000	2015-17	Walsh Co. WRD	Drain 31-1	10/12/2016	111,543	0	111,543
SWC	1977	5000	2011-13	Dickey-Sargent Co WRD	Jackson Township Improvement Dist. #1	5/20/2015	1,601,325	1,153,672	447,653
SE	1978	5000	2015-17	Richland-Sargent Joint WRD	RS Legal Dam #1 - Pre-Construction Engineering	10/24/2016	13,680	0	13,680
SWC	1990	5000	2011-13	Mercer Co. WRD	Lake Shore Estates High Flow Diversion Project	3/7/2012	43,821	0	43,821
SWC	1991	5000	2013-15	City of Lisbon	Sheyenne Riverbank Stabilization Project	9/15/2014	163,720	115,952	47,768
SWC	2008	5000	2013-15	City of Mapleton	Recertification of Flood Control Levee System Project	3/17/2014	101,100	0	101,100
SWC	2022	5000	2011-13	Pembina Co. WRD	Drain #73 Project	6/19/2013	350,400	80,247	270,153
SWC	2043	5000	2015-17	Pembina Co. WRD	District's Drain 78 Outlet Extension Project	12/9/2016	390,041	278,826	111,215
SWC	2045	5000	2013-15	Mercer Co. WRD	LiDAR Collection Project	5/29/2014	10,425	0	10,425
SE	2050-50	5000	2015-17	Grand Forks Traill RWD	Eastern Expansion & TRWD Interconnect Fesibility & I	11/15/2016	75,000	0	75,000
SE	2055	5000	2015-17	Red River Joint Water Resour	Lower Red Basin Regional Detention Study	7/17/2015	45,500	0	45,500
SE	2058	5000	2015-17	City of Grafton	Grafton Debris Removal Plan	9/17/2015	3,900	0	3,900
SWC	2059	5000	2015-17	Park River Joint WRD	North Branch Park River NRCS Watershed Study	10/6/2015	81,200	0	81,200
SWC	2060	5000	2015-17	Walsch Co. WRD	Forest River Watershed Study	10/6/2015	114,100	0	114,100
SWC	2062	5000	2015-17	Trall Co. WRD	Trall Co. Drain #64	7/6/2016	116,558	7,787	108,771
SWC	2063	5000	2015-17	Maple River WRD	Swan Buffalo Detention Dam #8(Embden Dam)	11/17/2016	123,087	4,526	118,561
SWC	2065	5000	2015-17	Cass Co. Joint WRD	Lake Bertha Flood Control Project No. 75	3/9/2016	201,350	0	201,350
SWC	2066	5000	2015-17	Southeast Cass WRD	Sheyenne-Maple Flood Control Dist #1 Mitigation Impr	3/9/2016	198,023	0	198,023
SWC	2068	5000	2015-17	Trall Co. WRD	Stavanger-Belmont Drain No. 52 Channel Impr	10/12/2016	435,015	0	435,015
SE	2068	5000	2013-15	Trall Co. WRD	Stavanger-Belmont Drain No. 52 Channel - Study	4/20/2016	18,589	0	18,589
SE	2069	5000	2015-17	Center Township	Wild Rice River Bank Stabilization	4/19/2016	43,036	42,082	954
SE	2070	5000	2015-17	Garrison Diversion Conserva	Mile Marker 42 Irrigation Project	5/20/2016	29,741	0	29,741
SE	2071	5000	2015-17	Foster County WRD	Alkali Lake High Water Feasibility Study	4/19/2016	5,250	420	4,830
SE	2072	5000	2015-17	Barnes Co WRD	Ten Mile Lake Flood Risk Reduction Project	6/8/2016	37,800	988	36,812
SWC	2073	5000	2015-17	Walsh Co. WRD	Oslo Area Ag Levee Feasibility Study	7/6/2016	187,000	51,146	135,854
SWC	2074	5000	2015-17	City of Wahpeton	Flood Control - Levee Certification	7/6/2016	247,500	0	247,500
SWC	2074	5000	2015-17	City of Wahpeton	Toe Drain & Encroachment Project	7/6/2016	1,125,482	0	1,125,482
SWC	2074	5000	2015-17	City of Wahpeton	Breakout Easements	7/6/2016	265,000	0	265,000
SWC	2075	5000	2015-17	Ward Co. WRD	Second Larson Coulee Detention Pond	7/6/2016	602,307	0	602,307
SE	2076	5000	2015-17	Elm River Joint WRD	Elm River Dam #1 Modification Study	7/6/2016	9,503	0	9,503
SE	2078	5000	2015-17	Southeast Cass WRD	Raymond-Mapleton Township Improv Dist No. 76	11/15/2016	20,281	0	20,281
SE	2079	5000	2015-17	City of Williston	West Williston Flood Control	10/24/2016	39,900	0	39,900
SWC	2080	5000	2015-17	Walsh Co. WRD	Sam Berg Coulee Drain	10/12/2016	401,005	0	401,005
SWC	2081	5000	2015-17	Walsh Co. WRD	Drain #70	10/12/2016	898,866	0	898,866
SWC	2083	5000	2015-17	Pembina Co. WRD	Herzog Dam Gate & Catwalk Retrofit - Construction	10/12/2016	117,000	0	117,000
SE	2085	5000	2015-17	Adams Co WRD	Orange Dam Rehabilitation Feasibility Study	10/13/2016	10,770	0	10,770
SWC	2088	5000	2015-17	Pembina Co. WRD	Drain No. 79	12/9/2016	875,428	0	875,428
SE	2089	5000	2015-17	Maple River WRD	Tower Township Improvement District No. 77 Study	12/19/2016	28,175	0	28,175
SE	2090	5000	2015-17	International Water Institute	River Watch Program	1/12/2017	24,150	0	24,150
SE	2094	5000	2015-17	McLean Co WRD	Lower Buffalo Creek Flood Management Feasibility	2/16/2017	7,539	0	7,539
SE	2093/1427	5000	2015-17	Bottineau Co. WRD	Moen Legal Drain	9/6/2016	63,458	44,916	18,542
SE	1396-01	5000	2013-15	Trout, Raley, Montano, Witwe	Missouri River Recovery Program	11/17/2015	75,000	26,565	48,435
SE	1878-02	5000	2015-17	Maple-Steele Joint WRD	Upper Maple River Dam EAP	5/20/2016	12,800	0	12,800
SWC	849-01	5000	2015-17	Pembina Co. WRD	Tongue River NRCS Watershed Plan	3/9/2016	104,703	0	104,703
SWC	AOC/ASS	5000	2015-17	Assiniboine River Basin	Assiniboine River Basin Initiative Funding	7/29/2015	100,000	75,000	25,000
SWC	AOC/IRA	5000	2015-17	ND Irrigation Association (NDI	ND Irrigation Association	10/6/2015	100,000	75,000	25,000
SWC	AOC/RRBC	5000	2015-17	Red River Basin Commission	Red River Basin Commission Contractor	5/20/2015	200,000	150,000	50,000
SWC	AOC/WEF	5000	2015-17	ND Water Education Foundati	ND Water Magazine	5/20/2015	36,000	27,000	9,000
SE	AOC/WUA	5000	2011-13	ND Water Users Association	Dave Koland Term as WUA President	3/23/2015	9,672	5,772	3,899
SWC	PS/WRD/ELM	5000	2013-15	Elm River Joint WRD	Dam #3 Safety Improvements Project	9/15/2014	7,297	1,625	5,672
SWC	PS/WRD/MRJ	5000	2015-17	Missouri River Joint WRB	Missouri River Joint Water Board, (MRJWB) Start up	5/20/2015	20,000	6,347	13,653
SWC	PS/WRD/MRJ	5000	2015-17	Missouri River Joint WRB	Missouri River Joint Water Board (MRRIC) T. FLECK	5/20/2015	45,000	20,212	24,788
SWC	PS/WRD/UJP	5000	2015-17	Upper Sheyenne River Joint V	Upper Sheyenne River WRB Administration (USRJWF	5/20/2015	12,000	3,398	8,602
TOTAL							27,137,633	7,219,385	19,918,249

STATE WATER COMMISSION
PROJECT SUMMARY
2015-2017 Biennium
Resources Trust Fund

COMPLETED GENERAL PROJECTS

Approved SWC By	No	Dept	Approved Biennium	Sponsor	Project	Initial	Total Approved	Total Payments	Feb-17
						Approved Date			Balance
SWC	228	5000	2013-15	U.S. Geological Survey	(USGS) Operation & Maint of Gaging Station on the Missouri R	12/8/2014	8,970	8,970	0
SWC	240	5000	2011-13	Eddy County WRD	Warwick Dam Repair Project	12/7/2012	110,150	110,150	0
SE	274	5000	2013-15	City of Neche	FEMA Levee Certification Feasibility Study	10/17/2014	37,500	37,500	0
SWC	281	5000	2009-11	Three Affiliated Tribes	Three Affiliated Tribes/Fort Berthold Irrigation Study	10/26/2010	37,500	0	37,500
SWC	346	5000	2011-13	Williams County WRD	Epping Dam Evaluation Project	2/27/2013	66,200	60,840	5,360
SE	346	5000	2013-15	Williams County WRD	Design Engineering for Epping Dam Safety Repair	7/6/2016	24,658	24,658	0
SE	391	5000	2011-13	Sargent Co WRD	Sargent Co WRD, Silver Lake Dam Emergency Repairs	10/12/2011	2,800	0	2,800
SE	568	5000	2013-15	Barnes Co WRD	Sheyenne River Snagging & Clearing Project	4/17/2015	49,500	49,500	0
SWC	645	5000	2009-11	City of Fargo	Hickson Dam Recreation Retrofit Project	10/26/2010	44,280	44,280	0
SWC	646	5000	2009-11	City of Fargo	Christine Dam Recreation Retrofit Project	10/26/2010	184,950	139,034	45,916
SWC	829	5000	2011-13	Rush River WRD	Rush River WRD Berlin's Township Improvement District No. 7	10/19/2011	101,317	0	101,317
SE	849	5000	2015-17	Pembina Co. WRD	Renwick Dam Gate Repair	9/4/2015	53,700	50,066	3,634
SWC	980	5000	2011-13	Maple River WRD	Maple River Watershed Flood Water Retention Study/ Maple R	2/19/2015	3,687	3,687	0
SE	1069	5000	2015-17	North Cass & Rush River	Drain #13 Channel Improvements Project	9/29/2015	46,150	12,293	33,857
SWC	1082	5000	2013-15	Rush River WRD	Cass Co. Drain No. 30 Channel Improvement Project	3/17/2014	5,976	5,970	6
SWC	1135	5000	2011-13	Pembina Co. WRD	Drain #4 Reconstruction Project	6/19/2013	2,673	0	2,673
SWC	1161	5000	2009-11	Pembina Co. WRD	Drain 55 Improvement Reconstruction	3/28/2011	13,846	0	13,846
SE	1179	5000	2013-15	Richland Co. WRD	Drain #5 (27) Reconstruction Project	3/30/2015	13,543	13,543	0
SWC	1183	5000	2013-15	Richland Co. WRD	Drain No. 15 Reconstruction Project	9/15/2014	60,300	49,055	11,245
SWC	1217	5000	2013-15	Tri-County WRD	Tri-County Drain Reconstruction Project	3/11/2015	911,881	590,679	321,202
SE	1219	5000	2013-15	Sargent Co WRD	Drain No. 8 Channel Improvement Preliminary Engineering Pro	5/7/2015	6,650	6,650	0
SWC	1219	5000	2011-13	Sargent Co WRD	City of Forman Floodwater Outlet	12/13/2016	47,012	47,012	0
SWC	1224	5000	2013-15	Traill Co. WRD	Palace Drain Improvement District No. 80	5/20/2015	149,828	130,947	18,881
SE	1289	5000	2011-13	McKenzie Co. Weed Con	Control of Noxious Weeds on Sovereign Lands	9/30/2015	12,514	12,514	0
SE	1290	5000	2015-17	McLean Co. WRD	Painted Woods Lake Flood Mitigation Study	4/1/2016	53,200	53,200	0
SE	1301	5000	2009-11	City of Lidgerwood	City of Lidgerwood Engineering & Feasibility Study for Flood Cc	2/4/2011	15,850	0	15,850
SE	1301	5000	2011-13	City of Wahpeton	City of Wahpeton Water Reuse Feasibility Study/Richland Co	9/8/2011	2,500	0	2,500
SE	1303	5000	2013-15	Sargent Co WRD	Upper Wild Rice Watershed Study	6/24/2015	73,500	73,485	15
SE	1311	5000	2013-15	Traill Co. WRD	Buxton Township Improvement District No. 68	6/17/2015	15,745	15,745	0
SE	1312	5000	2011-13	Walsh Co. WRD	Skyrud Dam 2011 EAP	12/15/2011	10,000	8,073	1,927
SE	1312	5000	2011-13	Walsh Co. WRD	Union Dam 2011 EAP	12/15/2011	10,000	8,350	1,650
SWC	1314	5000	2013-15	Wells Co. WRD	Oak Creek Drain Lateral E Reconstruction Project	9/15/2014	73,057	73,057	0
SE	1314	5000	2015-17	Wells Co. WRD	Oak Creek Lateral E Reconstruction	12/29/2015	20,173	20,173	0
SE	1314	5000	2013-15	Wells Co. WRD	Hurdsville Area Drain Preliminary Engineering Project	6/11/2015	35,000	35,000	0
SWC	1396	5000	2011-13	U.S. Geological Survey	(USGS) Missouri River Geomorphic Assessment	3/7/2012	10,000	10,000	0
SE	1403	5000	2015-17	ND Water Resources Re: (NDWRR)	Student Fellowship Program	12/23/2015	18,850	18,850	0
SE	1403	5000	2015-17	ND Water Resources Re: (NDWRR)	Student Fellowship Program	1/18/2017	18,850	18,850	0
SWC	1418	5000	2013-15	City of Bisbee	Design & Repair of Big Coulee Dam	8/23/2016	1,015,983	1,015,983	0
SWC	1438	5000	2011-13	Cavalier County WRD	Mulberry Creek Phase IV Reconstruction Project	6/19/2013	102,019	2,250	99,769
SWC	1444	5000	2013-15	City of Pembina	2014 Flood Protection System Modification Project	5/29/2014	61,331	61,331	0
SWC	1523	5000	2015-17	Ward Co	Flood Control County Road 18	5/29/2015	325,208	325,208	0
SWC	1554	5000	2013-15	McLean Co. WRD	City of Underwood Floodwater Outlet Project	12/13/2013	1,483,268	1,483,268	0
SWC	1577	5000	2013-15	City of Killdeer & Dunn Co	Floodplain Mapping Project	5/29/2014	55,000	55,000	0
SE	1607	5000	2011-13	Ward Co. WRD	Flood Inundation Mapping of Areas Along Souris & Des Lacs R	6/15/2011	13,011	0	13,011
SWC	1613	5000	2013-15	North Cass Co. WRD	Cass County Drain No. 55 Channel Improvements Project	9/15/2014	99,923	48,703	51,220
SWC	1625	5000	2013-15	Houston Engineering	(OHWM) Ordinary High Water Mark Delineations	8/20/2014	4,560	0	4,560
SE	1625	5000	2015-17	Ross Engineering, LLC	Gather infor regarding pipeline waterway crossings	2/9/2016	25,000	8,745	16,255
SE	1625	5000	2015-17	HDR Engineering, Inc	Dakota Access Pipeline Missouri River crossing sour analysis	2/9/2016	25,000	21,315	3,685
SB2020	1625	5000	2015-17	ND Parks & Recreation	Sovereign Lands Recreation Use Grant	1/10/2017	1,000,000	1,000,000	0
SE	1640	5000	2013-15	U.S. Geological Survey	(USGS) Maintenance of gaging station on Missouri River below	9/25/2013	8,710	0	8,710
SE	1650	5000	2015-17	Sargent Co WRD	Drain #7 Channel Improvements Study	1/17/2016	6,214	6,214	0
SE	1667	5000	2015-17	Traill Co. WRD	Goose River Snagging & Clearing	12/18/2015	47,500	47,500	0
SE	1701	5000	2013-15	US Army Corps of Engine	Red River of the North Unsteady Flow Model	1/25/2015	17,825	17,825	0
SWC	1758	5000	2013-15	U.S. Geological Survey	(USGS) Stochastic Model for the Mouse River Basin	12/13/2013	40,000	40,000	0
SWC	1792	5000	2009-11	Southeast Cass WRD	SE Cass Wild Rice River Dam Study Phase II	1/29/2015	32,252	32,252	0
SE	1814	5000	2013-15	Richland Co. WRD	Wild Rice River Snagging & Clearing - Bridge #121-2	5/28/2015	16,000	16,000	0
SE	1815	5000	2013-15	Ransom Co. WRD	Sheyenne River Snagging & Clearing - Fort Ransom Reach	6/11/2015	6,350	6,350	0
SE	1842	5000	2013-15	Southeast Cass WRD	Wild Rice River Snagging & Clearing - Bridge Location Sites	2/3/2015	11,063	0	11,063
SE	1842	5000	2015-17	Southeast Cass WRD	Wild Rice River Snagging & Clearing	7/6/2016	24,948	24,948	0
SE	1891	5000	2015-17	Steele Co WRD	Drain No. 8 Channel Improvement Preliminary Engineering Pro	9/29/2015	17,500	17,500	0
SWC	1960	5000	2009-11	Ward Co. WRD	Puppy Dog Coulee Flood Control Diversion Ditch Construction	8/18/2009	796,976	0	796,976
HB 2305	1963	5000	2009-11	Emmons County WRD	Beaver Bay Embankment Feasibility Study	8/10/2009	18,078	0	18,078
SE	1967	5000	2009-11	Grand Forks Co. WRD	Grand Forks County Legal Drain No. 55 2010 Construction	11/30/2010	9,652	9,652	0
SWC	1970	5000	2009-11	Walsh Co. WRD	Walsh Co. Construction of Legal Assessment Drain # 72	3/28/2011	39,115	39,115	0
SE	1974	5000	2015-17	USGS	USGS Web-Based Mouse River Information Page	1/19/2016	24,700	24,700	0
SWC	1975	5000	2011-13	Walsh Co. WRD	Walsh Co. Drain No. 31 Reconstruction Project	9/21/2011	37,742	37,742	0
SWC	1978	5000	2011-13	Richland & Sargent Joint	Richland & Sargent WRD RS Legal Drain No. 1 Extension & Cl	7/23/2015	245,250	168,791	76,459
SWC	1983	5000	2011-13	City of Harwood	City of Harwood Engineering Feasibility Study	12/9/2011	62,500	0	62,500
SWC	1989	5000	2011-13	Barnes Co WRD	Hobart Lake Outlet Project	3/7/2012	266,100	0	266,100
SE	1991	5000	2011-13	City of Lisbon	Sheyenne River Snagging & Clearing Project	2/12/2013	5,000	5,000	0
SWC	1992	5000	2011-13	Burleigh Co. WRD	Burnt Creek Flood Restoration Project	7/29/2015	179,890	176,524	3,366
SE	1998	5000	2011-13	Grand Forks Co. WRD	Upper Turtle River Dam #1 2012 EAP	6/28/2012	10,000	9,365	635
SE	2002	5000	2011-13	Grand Forks Co. WRD	Turtle River Dam #4 2012 EAP	6/29/2012	10,000	8,656	1,344
SWC	2004	5000	2013-15	Grand Forks Co. WRD	Drain No. 57 Project	10/7/2013	413,576	413,576	0
SE	2005	5000	2011-13	Grand Forks Co. WRD	Turtle River Dam #8 2012 EAP	6/29/2012	10,000	9,069	931
SWC	2007	5000	2011-13	Maple River WRD	Pontiac Township Improvement District No. 73 Project	5/11/2015	747,093	594,183	152,910
SWC	2013	5000	2011-13	Richland-Cass Joint WRC	Wild Rice River Watershed Retention Plan	6/8/2015	45,905	45,905	0
SWC	2019	5000	2011-13	Valley City	Sheyenne River Snagging & Clearing Project	12/7/2012	75,000	0	75,000
SWC	2040	5000	2013-15	Walsh Co. WRD	Drain #74 Project	10/7/2013	211,600	211,600	0
SWC	2042	5000	2013-15	Bottineau Co. WRD	Haas Coulee Drain Project	9/15/2014	500,000	500,000	0
SE	2045	5000	2013-15	Stark County	Stark County LiDAR Collection Project (FEMA)	7/17/2015	33,584	33,584	0
SWC	2045	5000	2013-15	McKenzie Co. Commissi	LiDAR Collection Project	9/15/2014	262,308	262,308	0

STATE WATER COMMISSION
PROJECT SUMMARY
2015-2017 Biennium
Resources Trust Fund

COMPLETED GENERAL PROJECTS

Approved SWC By	No	Dept	Approved Biennium	Sponsor	Project	Initial Approved Date	Total Approved	Total Payments	Feb-17 Balance
SWC	2046	5000	2013-15	Walsch Co. WRD	North Branch Park River Comprehensive Flood Damage Redu	12/13/2013	134,400	108,772	25,628
SWC	2047	5000	2013-15	LaMoure County	LaMoure Co Memorial Park Streambank Restoration	8/3/2016	91,042	64,240	26,802
SWC	2048	5000	2013-15	City of Marion	Marion Flood Mitigation & Lagoon Drainage Project	5/29/2014	116,659	116,599	60
SWC	1878-02	5000	2011-13	Maple-Steele Joint WRD	Upper Maple River Dam Construction Phase	12/13/2013	4,702,936	4,415,496	287,440
SB2020	1928-04	5000	2015-17	NDSU	Fargo Moorhead Diversion Agricultural Impact (Study)	1/20/2016	80,000	79,716	284
SB2009	1986-03	5000	2015-17	USDA-APHIS,ND Dept A	USDA Wildlife	9/9/2015	250,000	250,000	0
SWC	2003-02	5000	2011-13	Southeast Cass WRD	Re-Certification of the West Fargo Diversion Levee System	7/23/2015	52,564	32,813	19,751
SWC	2009-02	5000	2011-13	Southeast Cass WRD	Recertification of the Horace to West Fargo Diversion Levee S	9/17/2012	25,504	25,504	0
SE	ASNDS	5000	2015-17	NDSU	Oaks Irrigation Research Site - New Linear Irrigation System	11/18/2015	25,636	25,636	0
SE	CON/CAR	5000	2015-17	Garrison Diversion	Will and Carlson Consulting Services	1/12/2016	17,500	10,795	6,705
SWC	CON/WIL/CAF	5000	2013-15	Garrison Diversion Conse	Will and Carlson Consulting Contract	12/13/2013	26,451	1,828	24,623
SE	NDAWN	5000	2015-17	NDSU	NDAWN CENTER	2/11/2016	1,500	1,500	0
SE	NDAWN	5000	2015-17	NDSU	NDAWN CENTER	1/31/2017	1,500	1,500	0
SWC	PS/WRD/DEV	5000	2015-17	Devils Lake Joint WRB	DL Manager	5/20/2015	60,000	60,000	0
SWC	PS/WRD/MRJ	5000	2013-15	Missouri River Joint WRB	Missouri River Coordinator	10/7/2013	37,094	14,327	22,767
SE	PSIRRBUR	5000	2015-17	Buford Trenton Irrigation I	Upgrade to 3-Phase Power	4/19/2016	32,770	32,770	0
SE	PSWRDBUR	5000	2015-17	Burleigh Co. WRD	Pebble Creek Golf Course - Hay Creek Bank Stabilization	10/15/2015	22,782	22,782	0
SE	PSWRDCAS	5000	2015-17	Cass Co. Joint WRD	Red River Watershed Comprehensive Detention Plan Updates	11/19/2015	34,025	34,025	0
TOTAL							16,507,407	13,810,596	2,696,811

Presentation to the North Dakota State Water Commission
Spiritwood Aquifer AEM Study
March 29, 2017

Governor, members of the commission, my name is Jon Patch, I'm the Director of the Water Appropriations Division.

I'd like to update you on the results of a new technology that we recently employed. It's called AEM. And that stands for Airborne Electro-magnetic. It's a geophysical survey method that helps us characterized the resistivity of earth materials, that in turn is an indicator of the sediment texture – the clays, sands, gravels, shale, etc.

Using resistivity to characterize sediment texture is not new, but the way that it's being done with this new technology is truly amazing. Dave Hisz is going to give you a short presentation in a bit but I wanted to take a moment to make a few comments on AEM.

When people ask me "What is AEM?" I say it's like giving the earth an MRI. You'll see what I mean when Dave gives his presentation.

We became aware of this technology a few years ago when our Canadian neighbors used it on the Spiritwood aquifer just on the other side of the international border. Recently, when we were working on a potential appropriation from the Spiritwood for the CHS fertilizer facility near Jamestown, we realized the need for a better understanding of the geometry of the aquifer. We have a pretty good idea of the exterior boundaries of the aquifer, it's overall width, and even the flow segments within the aquifer. But, it would really be nice to know where the deep channel is, if it's continuous, it's depth, and so forth. The Canadian work looked very promising in that regard, and even though the CHS project never happened, the demand for water from that area hasn't gone away, so we undertook this AEM study on the Spiritwood in that area.

It was quite a procurement process, but, this is one of those examples where the mandatory hoops we were required to jump through really paid off. We got what we consider to be a real bargain price. In the end we spent less than ½ what we anticipated at the start. Part of the reason for that is the in-house expertise we were able to bring to the table.

Still, there were a lot of nerves, a little anxiety, that we were spending a good sum of the state's money on this new technology with a company with no track record in the state, and very little use of their system in ground water investigations.

So, it was with great anticipation and anxiety that I opened the first graphical file when the preliminary results were in, and I have to admit that I was elated. Needless to say, I was both delighted and relieved.

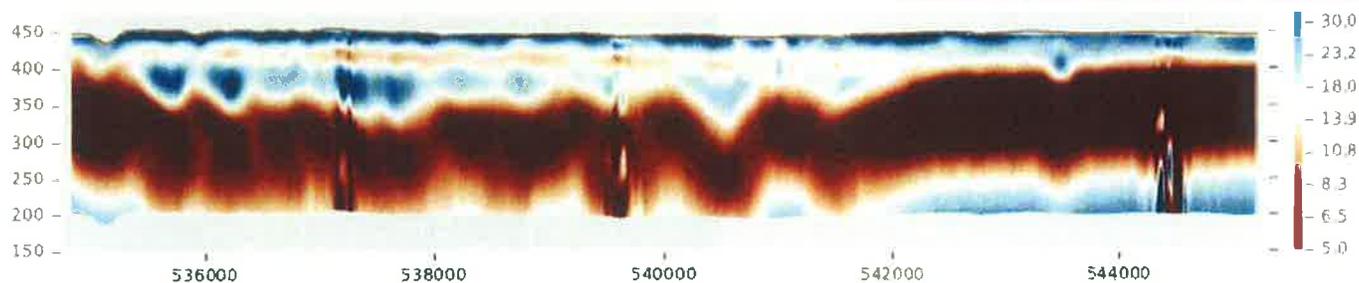
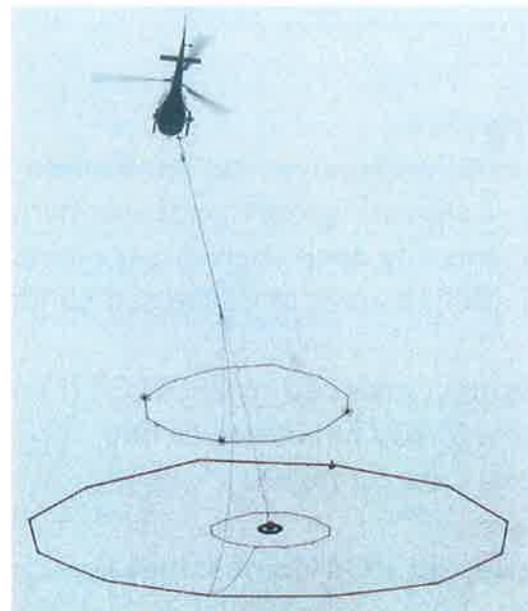
Before Dave gives his presentation, I just want to say that this new methodology has huge potential for us. Not to do away with any of our existing data collection activities, but to help us

target them and use them more effectively. Dave is going to show you a graph – the first one we got, that shows a relatively narrow 1/4-mile wide blue ribbon running down the axis. That is the deep channel of the Spiritwood aquifer that we were hoping this technology would reveal. Mapping the deep channel at this level of precision could have literally taken years of test drilling. Knowing precisely where the deep channel lies is necessary before one of the next important steps can be taken – that being a pilot study for another newer innovative technology called ASR – that stands for aquifer storage and recovery. This is the concept of recharging and storing excess surface water in an aquifer. It allows our major aquifers to serve as reservoirs and would allow for additional appropriations to be made from them.

But that is another topic for another time.

One last thing I want to say about the AEM study, you are going to be among the first humans to see a new unknown aquifer that we never knew existed, that pre-dates the Spiritwood. This was one of those serendipitous bonuses of the study. Now let's hear more about the AEM study from Dave.

Spiritwood Airborne Electromagnetic Survey 2016



State Water Commission Meeting 29 March 2017



ND State Water Commission Meeting
29 March 2017

North Dakota State Water Commission
900 EAST BOULEVARD AVENUE
BISMARCK, ND 58505-0850

Survey Area

Objectives:

Use AEM data over the Jamestown Spiritwood

- 1) Delineate geometry of Spiritwood Aquifer
- 2) Identify deep channel segments
- 3) Define areas of decreased conductivity

Contract awarded to GEOTECH (Canada)

Price \$120 / km of survey line

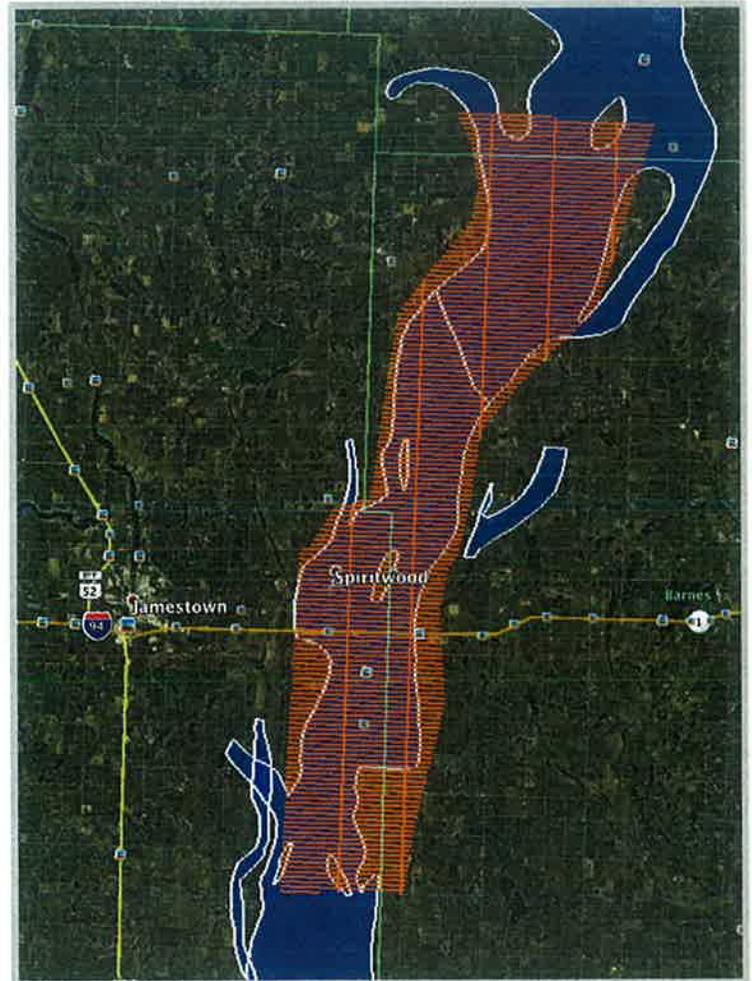
Total Cost: \$234,000

Collected 1950 km of survey lines
from Montpelier to Walum over an 280 mi²
area

East / West lines spaced 500 meters apart
North / South lines spaced 5000 meters

Data Collection occurred October 2016

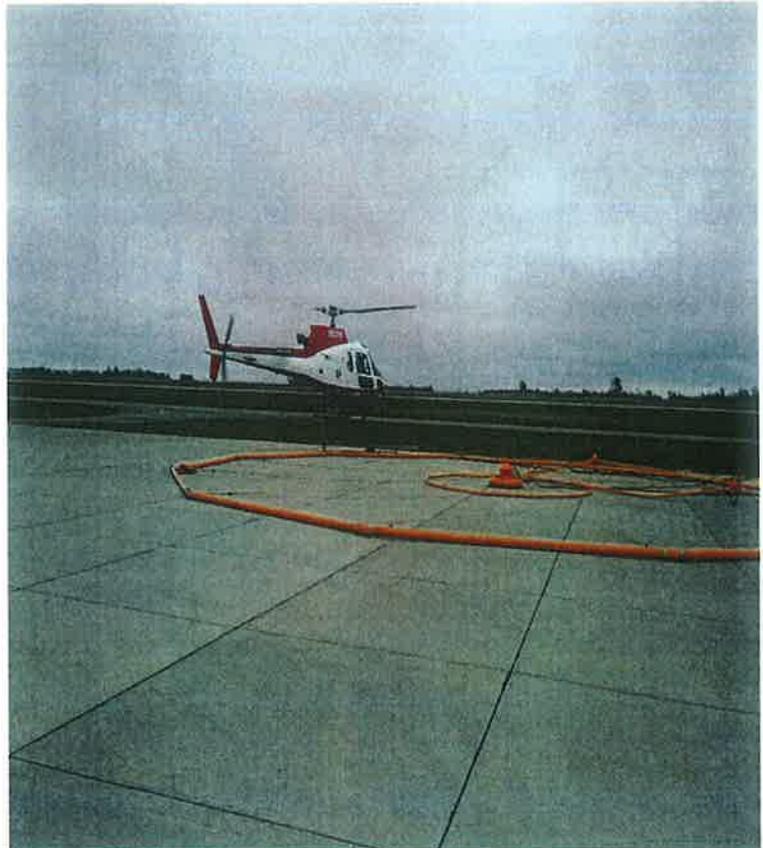
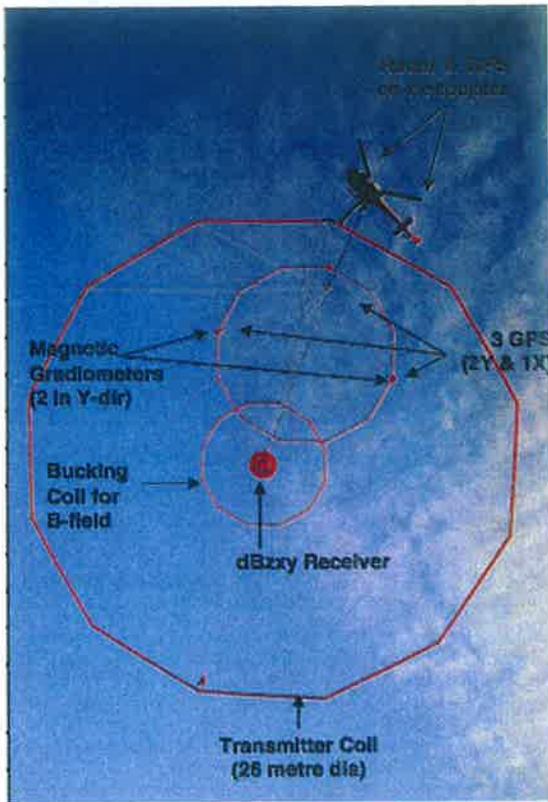
Final Data delivered in January 2017



ND State Water Commission Meeting
29 March 2017

North Dakota State Water Commission
900 EAST BOULEVARD AVENUE
BISMARCK, ND 58505-0850

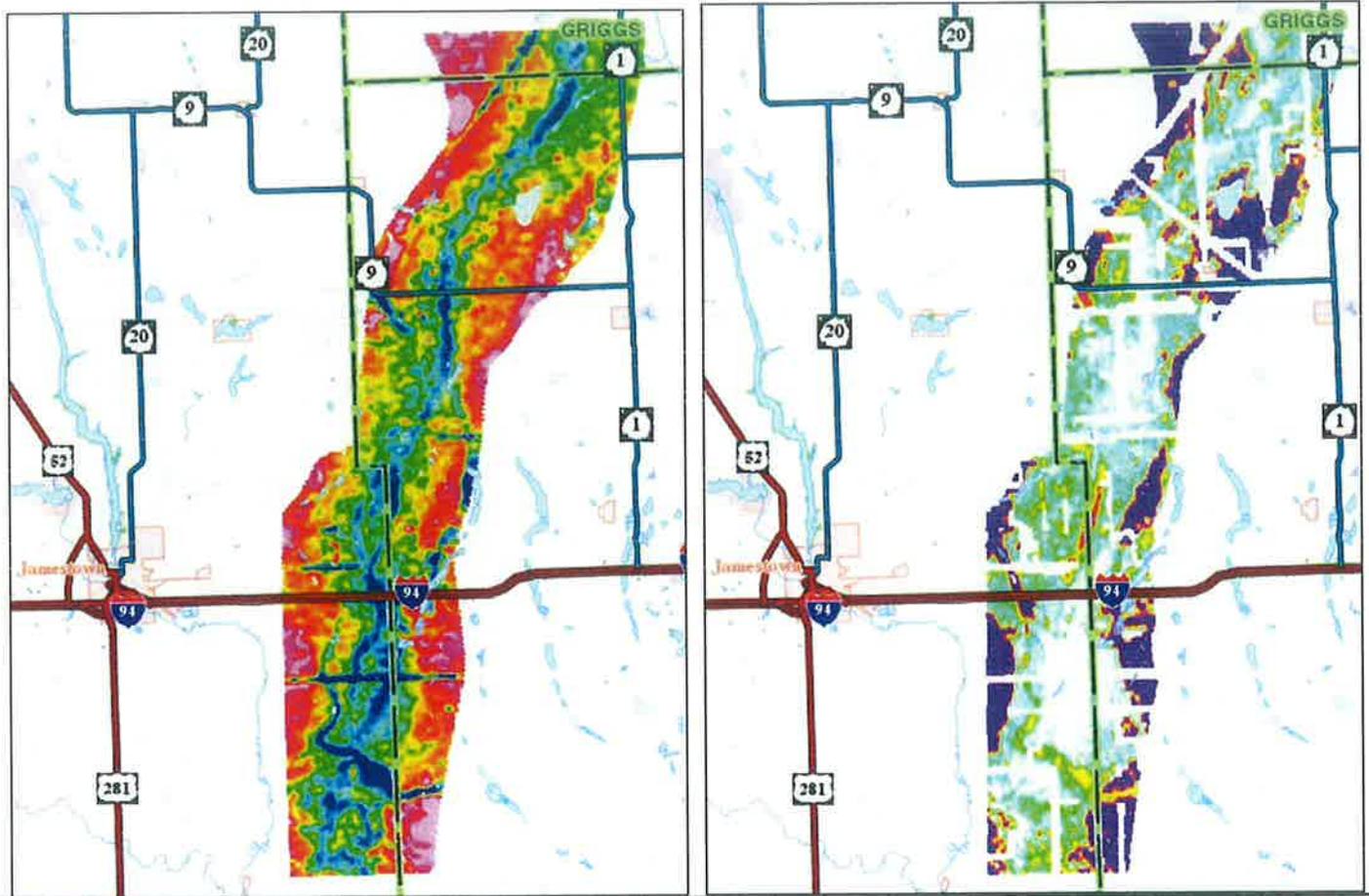
Flying gear



Collected Time Domain Data



Processed Resistivity

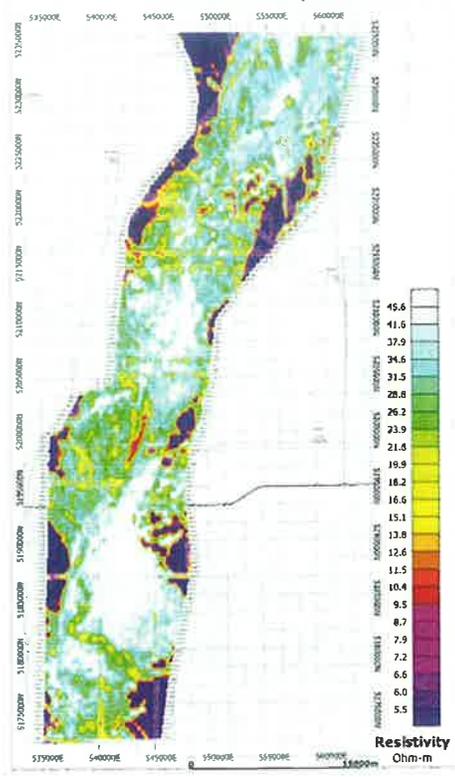


ND State Water Commission Meeting
29 March 2017

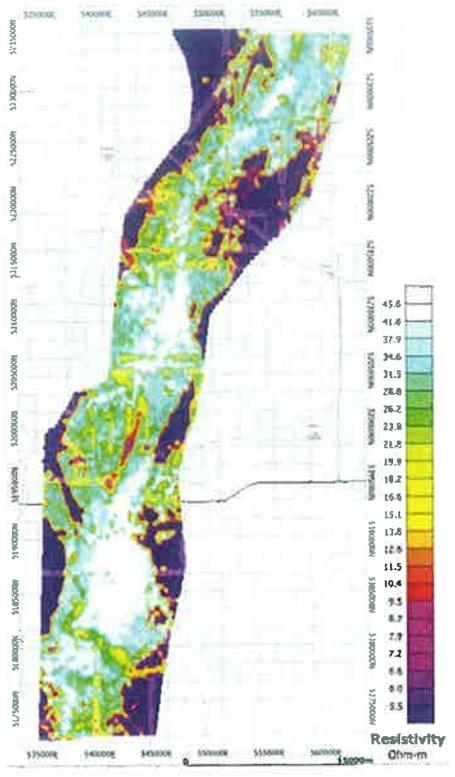
North Dakota State Water Commission
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Data Results

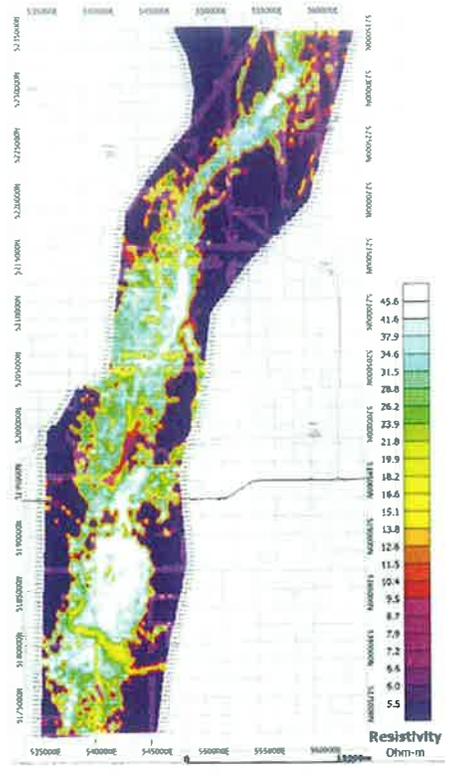
VTEM Inverted Resistivity - 60m



VTEM Inverted Resistivity - 70m



VTEM Inverted Resistivity - 80m

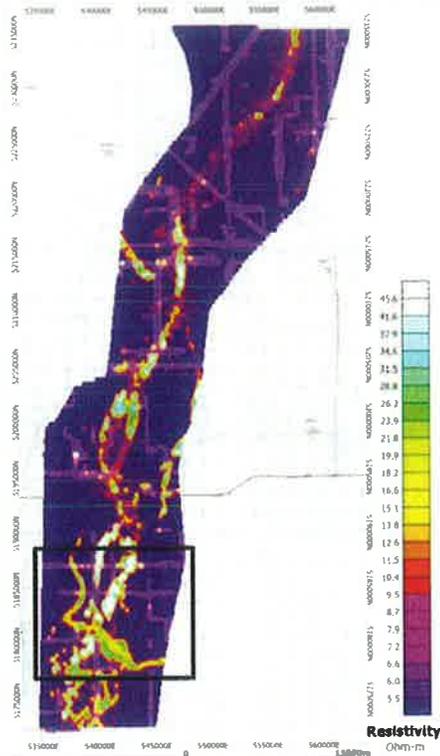


ND State Water Commission Meeting
29 March 2017

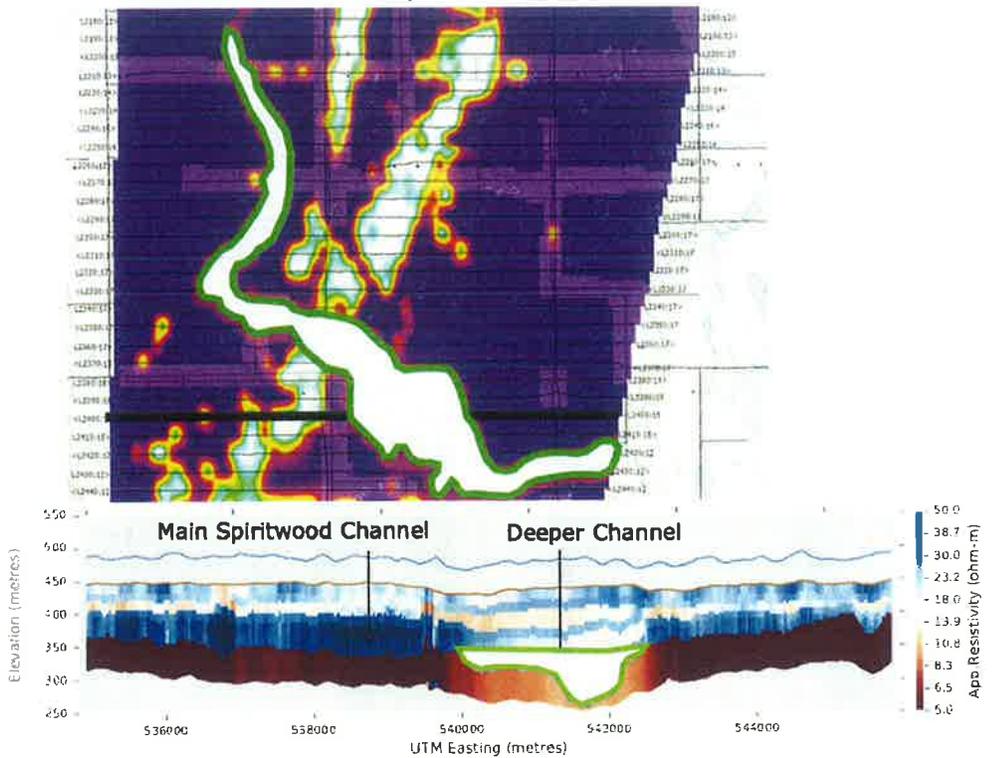
North Dakota State Water Commission
900 EAST BOULEVARD AVENUE
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Results – Potential Deep Aquifer

VTEM Inverted Resistivity – 100m



VTEM Inverted Resistivity – 100m

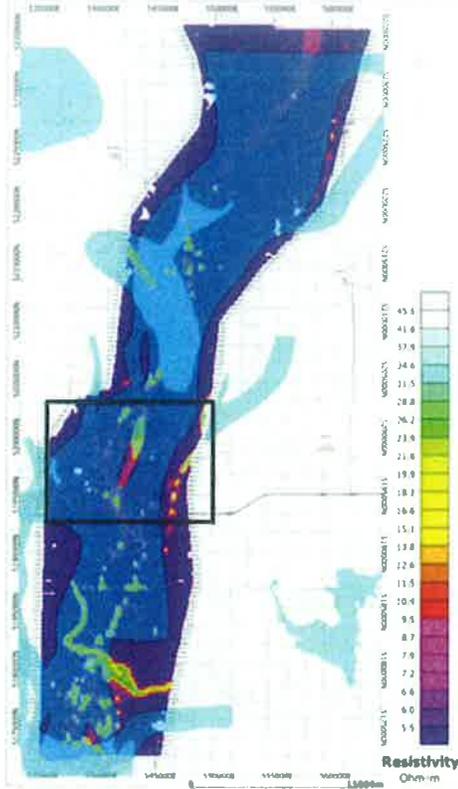


ND State Water Commission Meeting
29 March 2017

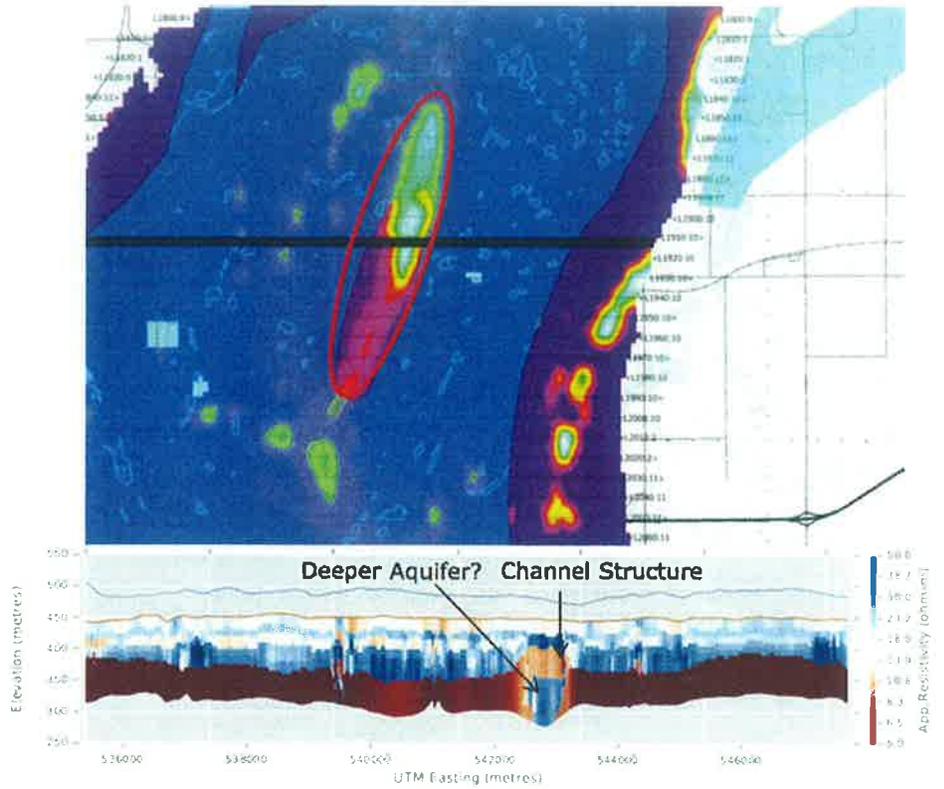
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Confirmation of NDSWC Drilling

VTEM Inverted Resistivity - 110m + Existing Aquifer Layer



VTEM Inverted Resistivity - 110m

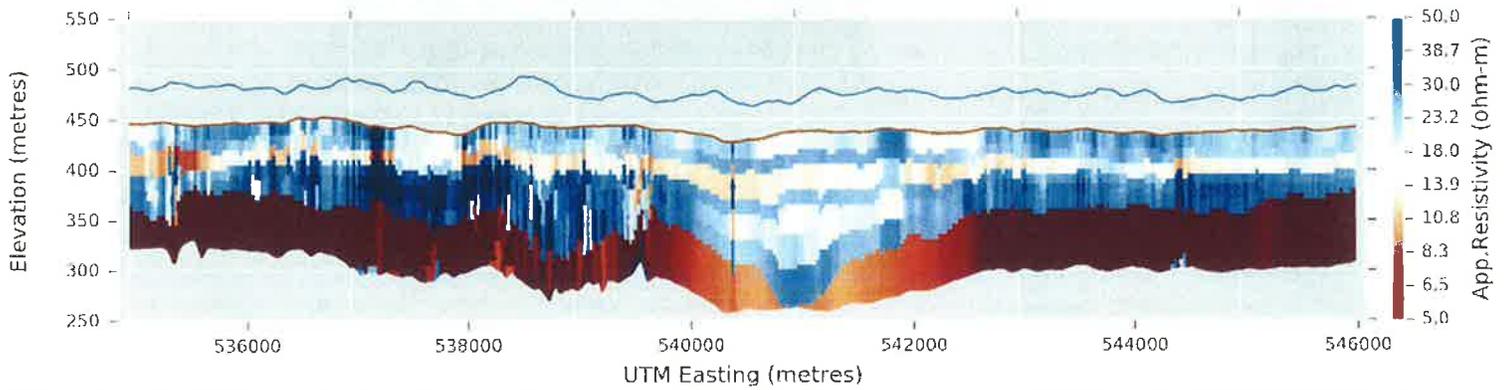
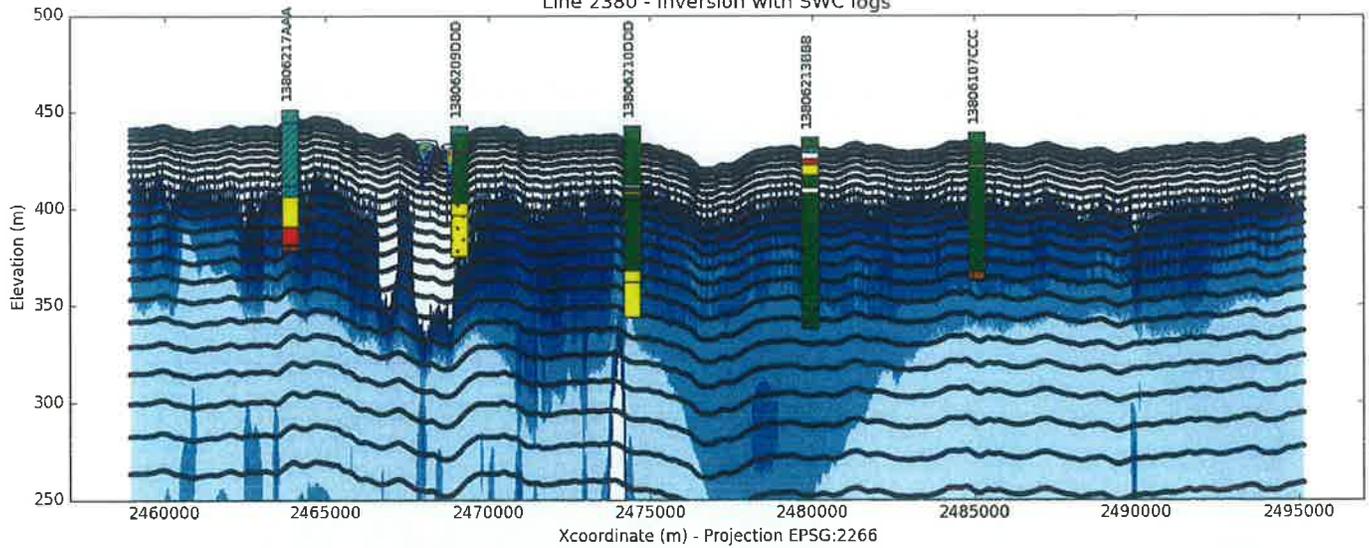


ND State Water Commission Meeting
29 March 2017

North Dakota State Water Commission
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Confirmation of NDSWC Drilling

Line 2380 - Inversion with SWC logs



ND State Water Commission Meeting
29 March 2017

North Dakota State Water Commission
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Path Forward

Results from survey were successful at delineating the geometry of the Spiritwood Aquifer to depths upwards of 600 feet below land surface.

Potential discovery of 2 deeper channel systems – will confirm during drilling season.

AEM could be used in many buried aquifers throughout the state:

WEST FARGO

PAGE

WAHPETON BURIED CHANNEL

SPIRITWOOD BURIED CHANNEL

WHITE SHIELD BURIED CHANNEL

NEW ROCKFORD BURIED CHANNEL

AEM survey proved cost effective at surveying a large area over a short time period

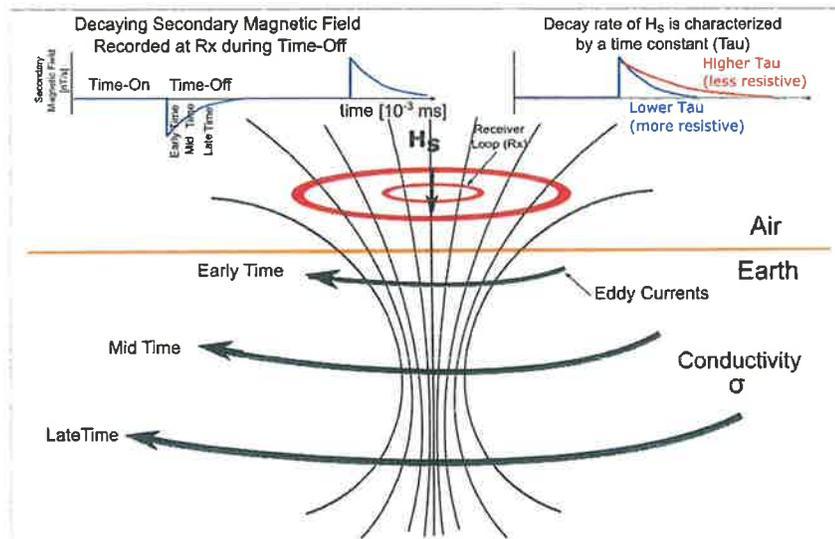
-week of flying produced decades of drilling data

-allows targeted aquifer characterization with drilling program

Currently this approach is being used in Nebraska, California, Texas and ND



Questions?





March 2017

At a Glance FM Area Diversion Inlet and Control Structure

ABOUT THE STRUCTURE

The Diversion Inlet and Control Structure is being built by Ames Construction Inc. from Burnsville, MN.

The structure includes:

- Three 50-foot wide radial arm floodgates
- A service bridge across the top of the structure
- A mechanical platform and control building

The control structure at the inlet of the Diversion Channel allows:

- Water during a 100-year event to flow at 20,000 cubic feet per second into the Diversion Channel
- The structure is necessary to control impacts downstream

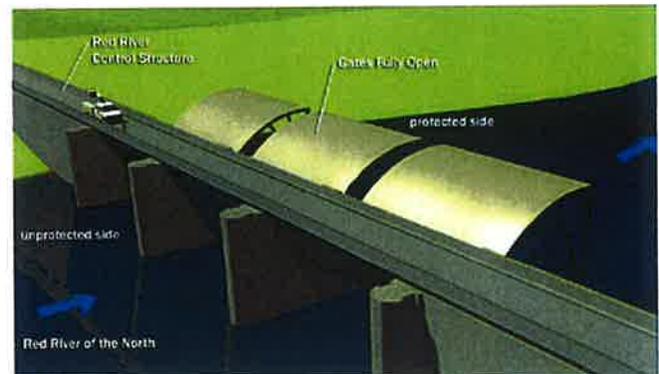
Construction of the structure is being administered by the U.S. Army Corps of Engineers.

CONSTRUCTION FACTS

- The structure is expected to be complete in 2020
- The contract to build the structure is \$46 Million
- Each radial arm flood gate weighs 87,000 pounds
- The structure is located just south of Horace near the intersection of County 16 and County 17
- Construction in the spring of 2017 will begin with preloading the site, or piling dirt to stabilize soils



A rendering of the Diversion Inlet and Control Structure.



Three radial arm floodgates control the amount of water that enters the Diversion Channel.

Please Join Us

Remembering the Flood of 1997 & Groundbreaking Event

1 p.m. Monday, April 17, 2017

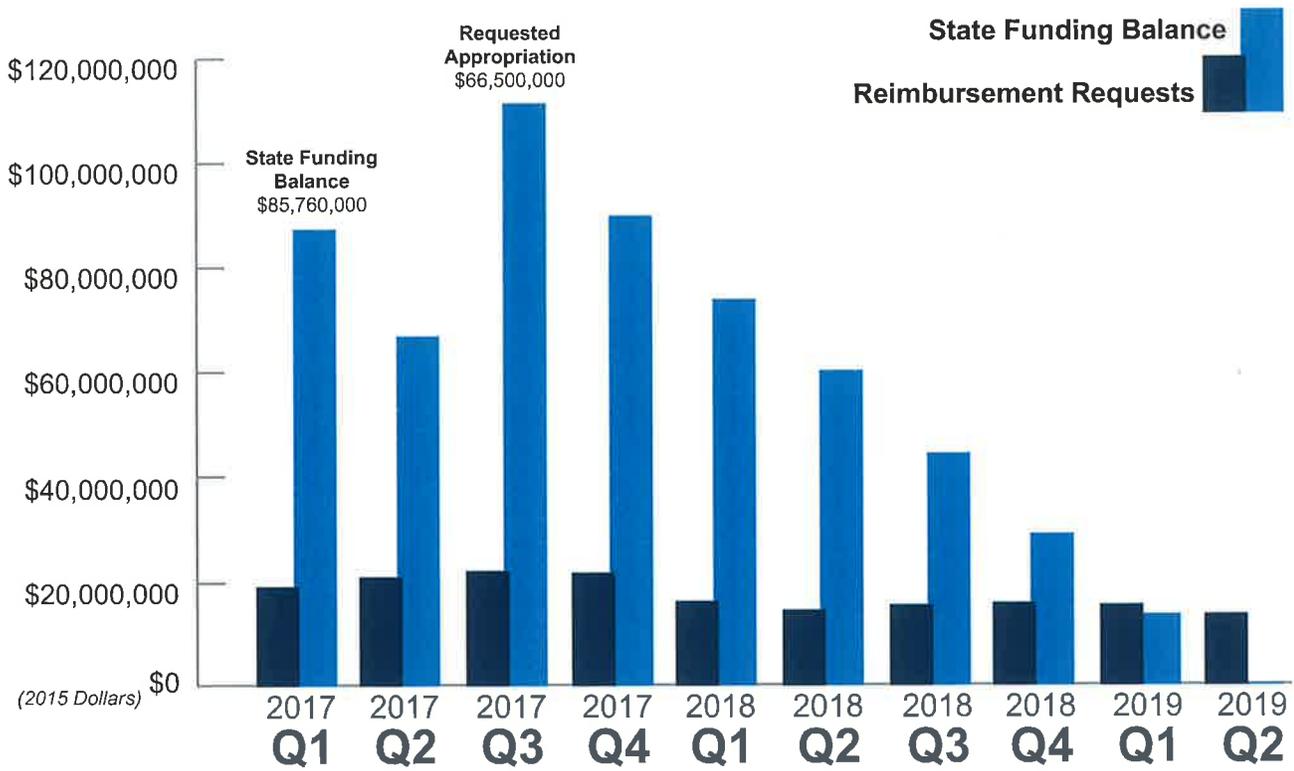
Park and ride will be available

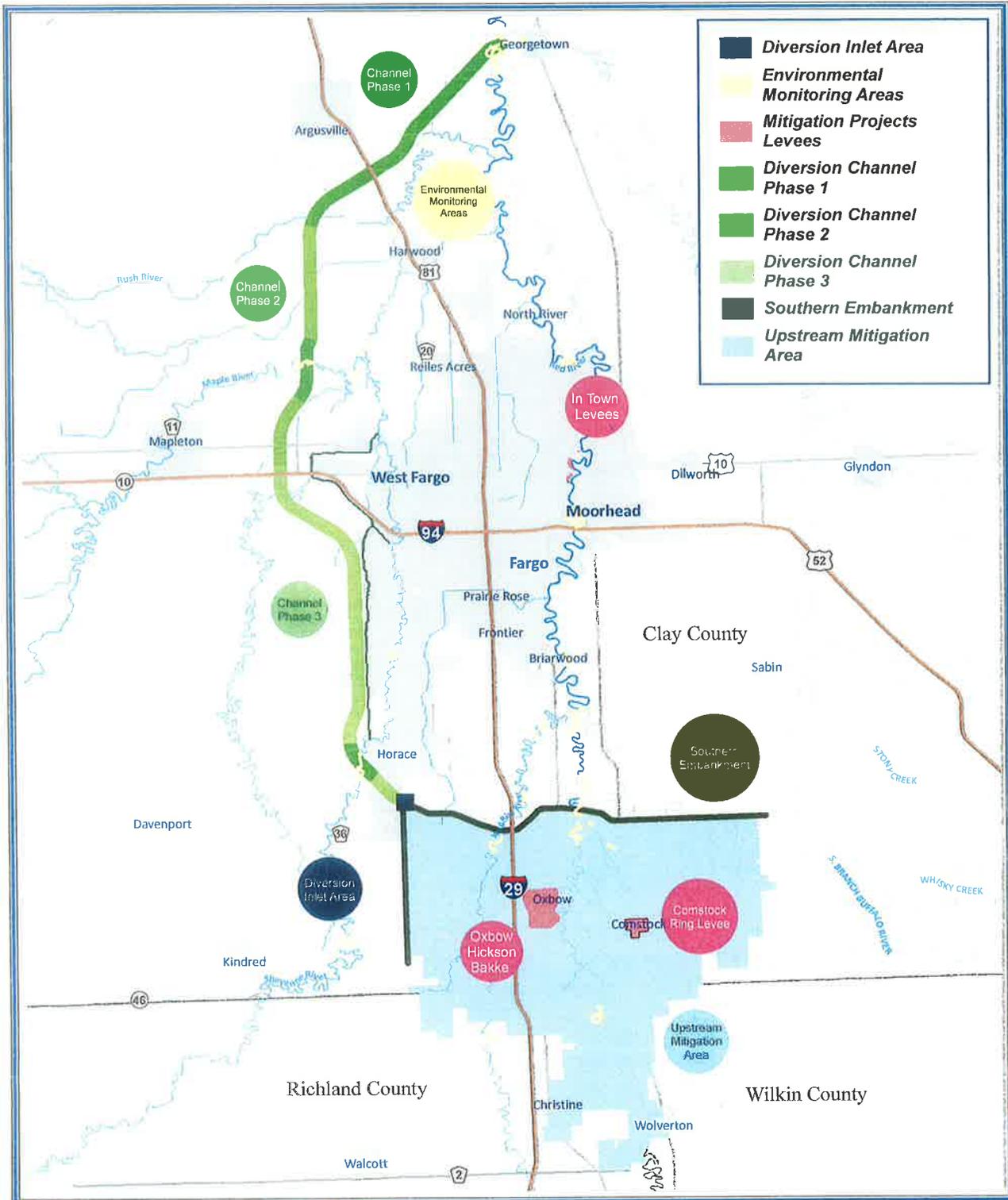
For more information visit
www.fmdiversion.com/97floodstories



2017-2019 Forecasted State Funding Balance

Federal and Fargo Interior Flood Protection Projects





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

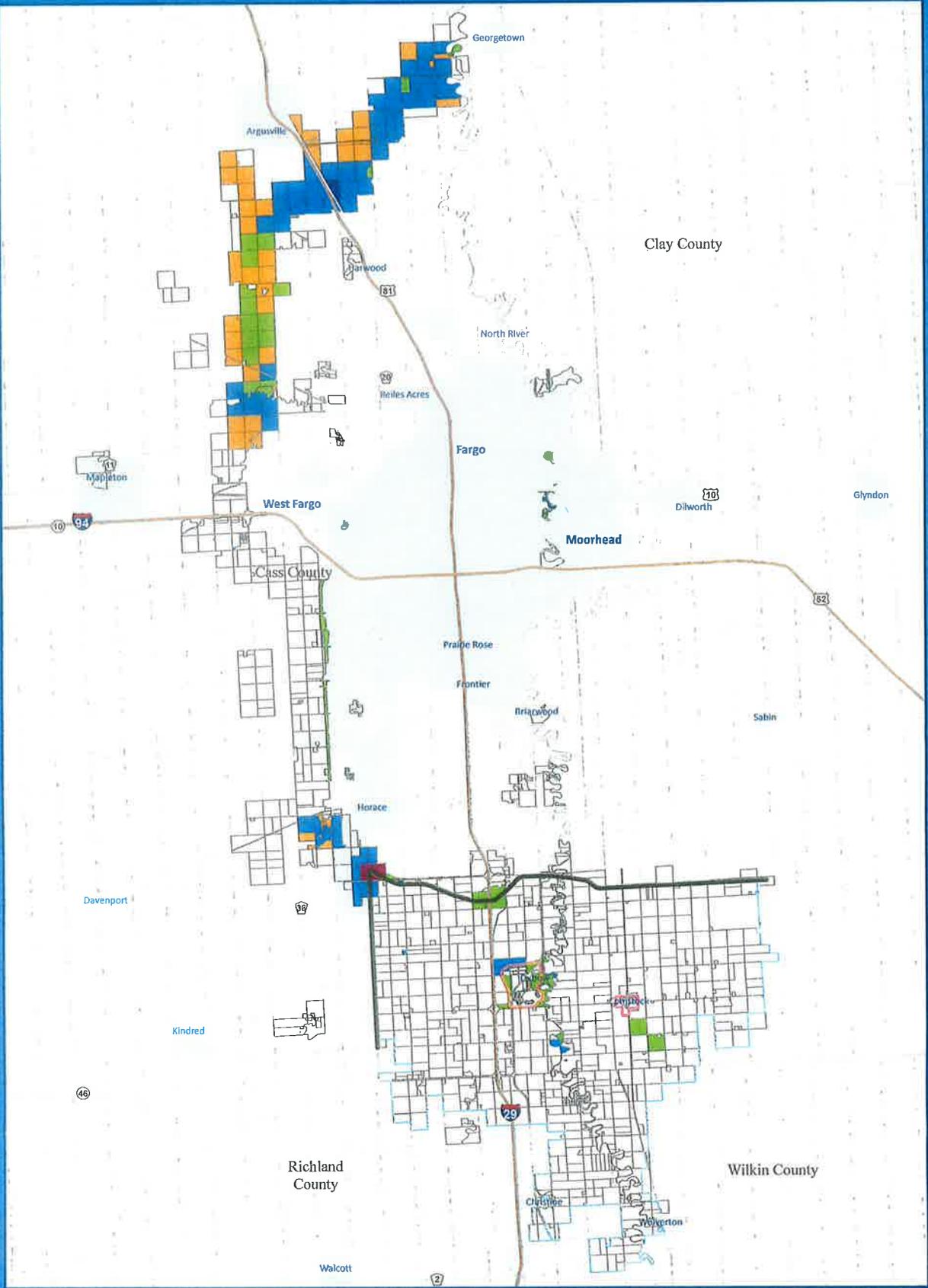
Maps are for graphical purposes only. They do not represent a legal survey. While every effort has been made to ensure that these data are accurate and reliable, the Division Authority does not guarantee the accuracy of the information, and makes any warranty or guarantee of any kind, express or implied.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



FM Area Diversion Key Acquisition Areas

3/10/2017





Any reliance on this map is at the user's risk. AEGIS does not warrant the map or its contents are either spatially or temporally accurate or fit for a particular use.
 Date: 3/15/2017 | Coordinate System: NAD 1983 StatePlane North Dakota South (EPS: 3207 Feet)

STATUS	
	Impacted Parcel
	Appraisal Pending
	In Negotiation
	Purchase Agreement Signed
	Acquired; Easement Secured
	Condemnation for Acquisition



Property Acquisition Status Report

3/15/2017



Informational Sheet

Richland County

Richland County Impacts

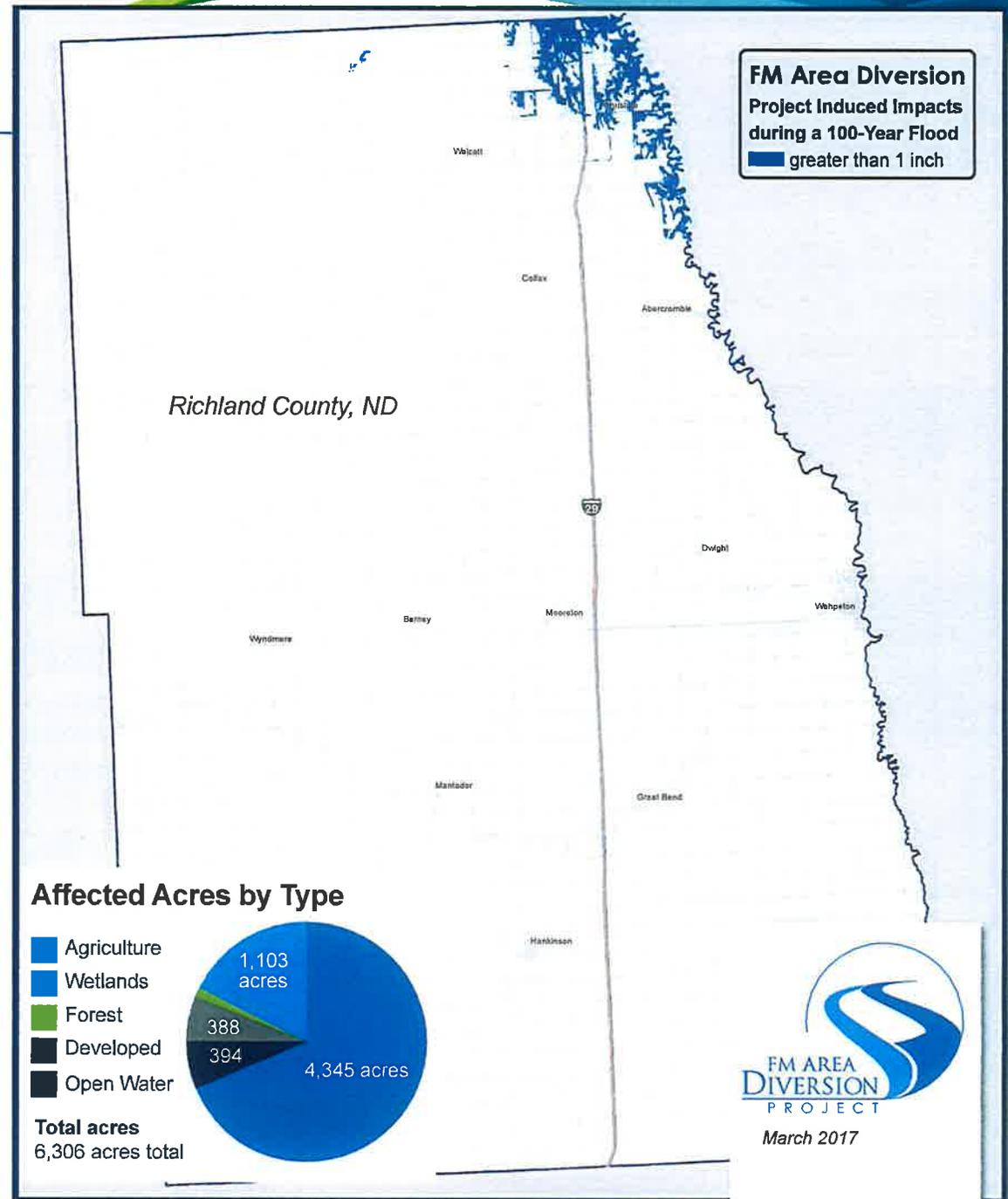
- Due to the dry dam, impacts would only be seen during large flood events when the Diversion Project was operated.
- There would be no impacts until water in the Red River exceeds 35 feet in Fargo. Thirty-feet is considered major flood stage.
- 42% of the acres impacted are already included in the current FEMA 100-year floodplain.
- If the Diversion Project would have been built 100 years ago, it would have operated an estimated 11 times for a total of 69 days.
- During a 100-year flood event, five residential structures would be impacted, two of these structures would be impacted with less than six inches during a 100-year event
- During a 100-year flood, approximately 6,300 acres would have an additional water between one inch to a maximum of three feet.
- The additional duration of flooding is estimated to be two to three days.

Richland County Mitigation

- Flowage Easements will be purchased on impacted land. They will be valued by independent, professional appraisal.
- Development can continue.
- Impacted residences and structures will be acquired in accordance with state and federal law.
- Project impacts will be mitigated consistent with the Mitigation Plan online at www.fmdiversion.com/studies-technical-documents/

Richland County Benefits

- 1,872 Richland County residents, 22% of the county workforce, work in Fargo-Moorhead.
- Flood protection for regional resources including healthcare, entertainment, universities/colleges, transportation and other services.



Informational Sheet

Wilkin County

Wilkin County Impacts

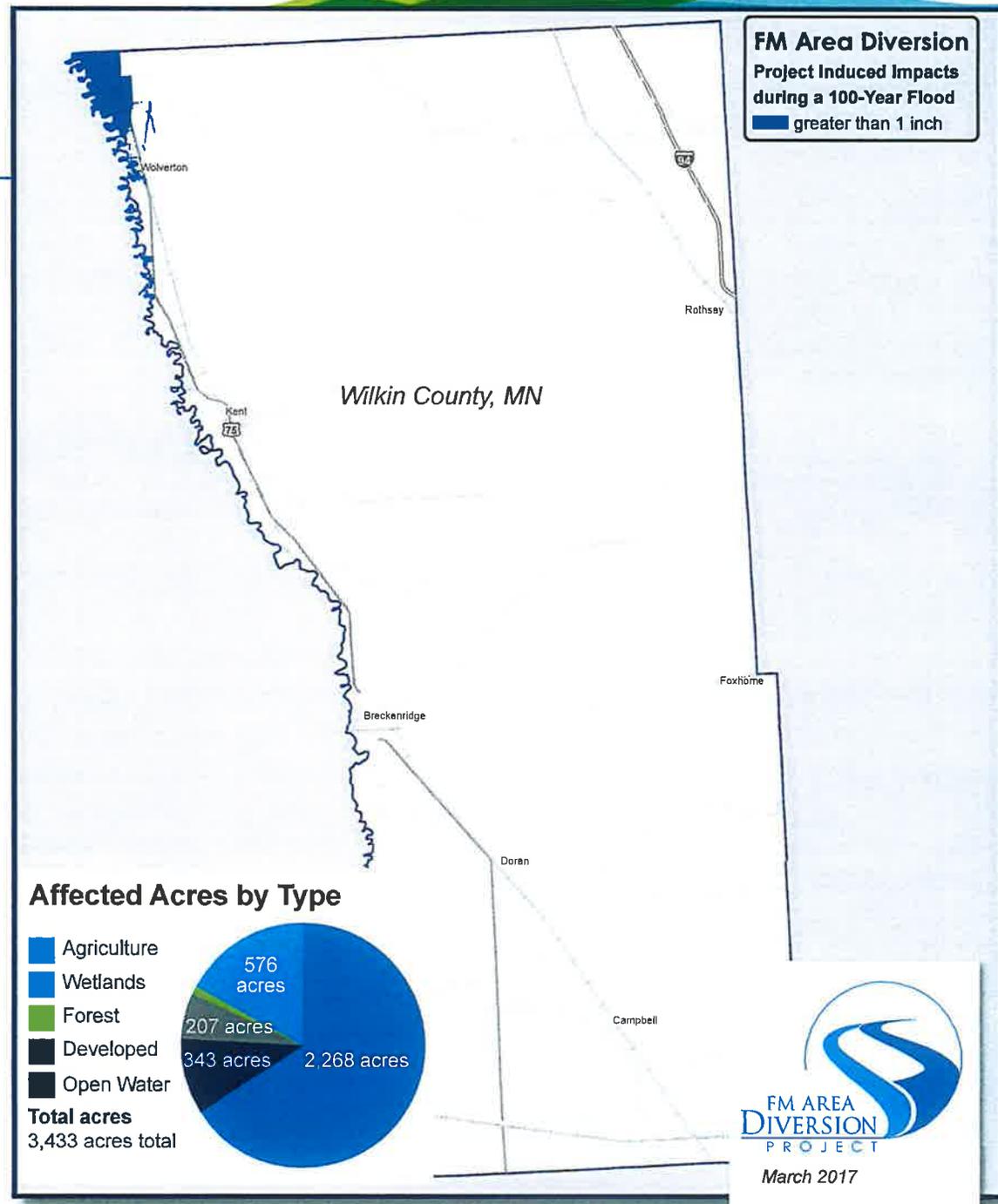
- Due to the dry dam, impacts would only be seen during large flood events when the Diversion Project was operated.
- There would be no impacts until water in the Red River exceeds 35 feet in Fargo. Thirty-feet is considered major flood stage.
- 46% of the acres impacted are already included in the current FEMA 100-year floodplain.
- If the Diversion Project would have been built 100 years ago, it would have operated an estimated 11 times for a total of 69 days.
- During a 100-year flood event, six residential structures would be impacted.
- During a 100-year flood, approximately 3,443 acres would have an additional water between one inch to a maximum of three feet.
- The additional duration of flooding is estimated to be two to three days.

Wilkin County Mitigation

- Flowage Easements will be purchased on impacted land. They will be valued by independent, professional appraisal.
- Development can continue.
- Impacted residences and structures will be acquired in accordance with state and federal law.
- Project impacts will be mitigated consistent with the Mitigation Plan online at www.fndiversion.com/studies-technical-documents/

Wilkin County Benefits

- 318 Wilkin County residents, 8% of the county workforce, work in Fargo-Moorhead.
- Flood protection for regional resources including healthcare, entertainment, universities/colleges, transportation and other services.





November 2016

Informational Sheet

Farm Impacts & Mitigation

UPSTREAM RETENTION AREA

The FM Area Diversion Project includes upstream retention of flood waters during times of extreme flooding. This is an essential component to safely control the flood waters upstream and downstream of the metro area and is the most effective and efficient storage. In the past 100 years, the Project would have operated 11 times for a total of 69 days.

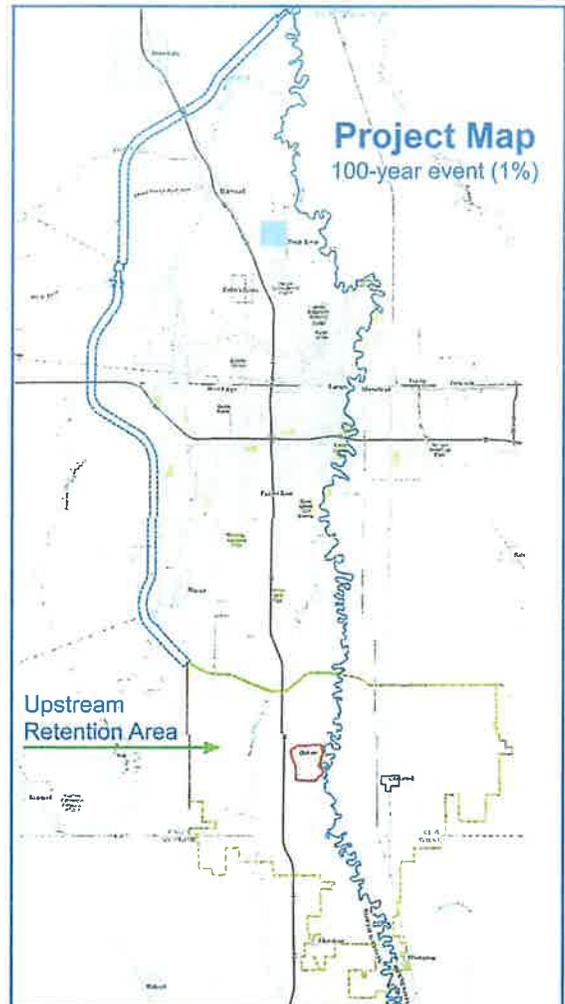
During operation of the Project, the upstream retention area will temporarily store various amounts of flood waters, depending on the magnitude of the flood event. The retention area will not be used every year and will not be used until a flood event exceeds 35-foot flood stage through Fargo-Moorhead. An NDSU study concluded there is an 85% chance every year that no water will be stored upstream. Under an extreme flood event, such as the 100-year flood, the upstream retention area will impact about 39,000 acres, and approximately half of those acres would be impacted today under the same flood event without the project.

AGRICULTURAL RISK STUDY OF IMPACTS

NDSU Agribusiness and Applied Economics department studied the risks and impacts of the Project on farm revenue in the upstream retention area. The study identified the following:

- The study indicated that “the key is to determine when producers can begin planting and if planting is delayed due to the diversion what, if any, planting delays cost the producer in lost revenue.”
- Accordingly, the NDSU research team studied two particular dates:
 - When flood water leaves the land, and
 - When spring planting begins in the retention area.
- Historical data indicates that spring planting starts most frequently about the same time as the effects of man-made flooding are over.
- Between 10,800 and 18,500 acres (depending on flood event size) will flood due to diversion that would not flood otherwise.
- Cumulative revenue losses across the entire study area ranged from \$0 in the best-case (no flood) situations to slightly over \$3 million per event over the entire area of 39,000 acres in the worst-case (extreme flood) situations.
- Conclusions from the study indicated that “there is a high-probability of incurring planting delays associated with man-made water storage. But, planting delays created by the proposed FM Diversion, at this time, do not appear to be extensive – at least not several weeks in length. Large delays are possible, but those situations are not as likely as shorter delays.”

“The study considered numerous factors and concluded that the revenue losses to agricultural producers would not be substantial.”

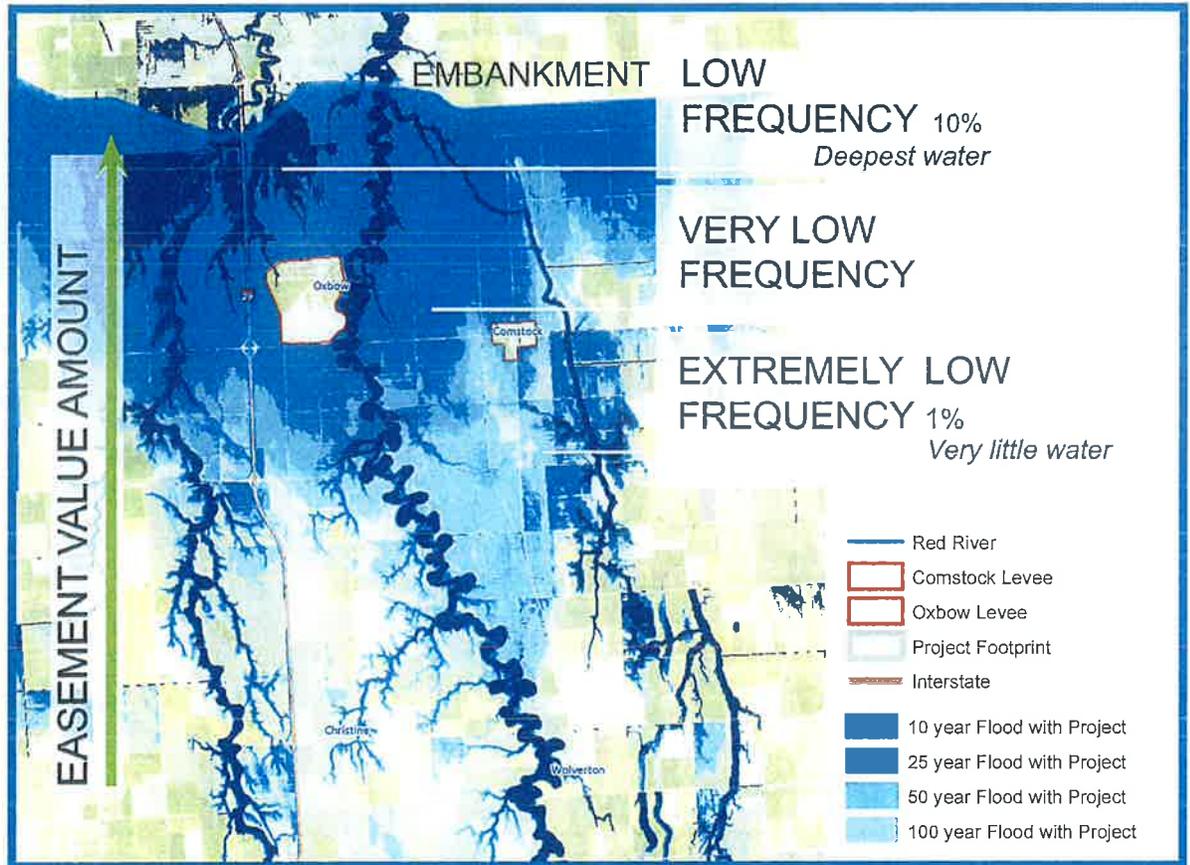


AT A GLANCE

- The retention area will not be used every year. The area will only be used when a flood event exceeds 35-feet.
- There is an 85% chance every year that no water will be stored upstream.
- Smaller storage areas distributed upstream do not provide the level of protection necessary and would have greater impacts.
- Upstream retention in planned location is most effective and efficient because it's close to the area being protected.

MITIGATION: FLOWAGE EASEMENTS

- Upfront payment to property owners impacted by the retention of flood waters.
- Easement provides legal ability to temporarily and occasionally retain flood waters.
- Easement will allow farming to continue, however, development may be regulated depending on extent of impacts.
- Easement value is determined by a market-based appraisal, considering depth, duration, and frequency of flooding, highest and best use of the property, and property impacts.
- Easement values will vary by parcel with the general trend of higher easement values closer to the embankment and lower easement values farther from the embankment.



- Easements are required by Federal law for the Project.
- The purchase of flowage easements is included in the Project cost estimate and financial plan.

MITIGATION: SUMMER FLOOD CROP INSURANCE

- On-going payment to producers for the crop loss caused by summer operation of the Project.
- Summer operation of the Project is extremely unlikely, but summer operation could cause devastating damage to growing crops.
- Diversion Authority has committed to provide greater mitigation than required by Federal or State laws, and greater than what has historically been provided.
- Diversion Authority will purchase an insurance product and provide coverage free of charge to producers.
- Ongoing O&M costs incurred after initial Project construction will be paid by sales taxes or a maintenance assessment to the properties benefited by the Project.

FM Diversion Litigation in brief summary (as of 3/28/17)

Legal Overview

The Richland/Wilkin JPA (RWJPA) initially alleged 10 Counts in its Complaint – five against the Corps and five against the Diversion Authority.

- All five counts against the Corps have been dismissed and three against the Diversion Authority have been dismissed.
- Two procedural claims remain against the Diversion Authority that assert that it violated the Minnesota Environmental Policy Act (“MEPA”) and the Minnesota Environmental Rights Act (“MERA”).

Recent Updates:

- The RWJPA asked the Court on Jan. 23rd, 2017 to amend its complaint for the fourth time to bring new federal and state allegations against the Corps and the Diversion Authority.
 - The Court refused to allow the RWJPA to reassert the already dismissed federal NEPA claims against the Diversion Authority.
 - The Court reinstated the Corps as an active defendant.
- The RWJPA and the MDNR filed amended complaints on March 24th, 2017. The complaint asserts new federal NEPA claims against the Corps and additional state claims against the Diversion Authority.
- The City of Oxbow requested the Court to remove the injunction against the Oxbow-Hickson-Bakke ring levee.
 - The Court asked the MDNR and RWJPA whether they would agree to lifting that injunction. The MDNR has stated that it will not object to lifting the injunction on OHB ring levee; the lawyer for the RWJPA said he needed to talk to his client.
 - All parties are scheduled to meet with the federal Magistrate judge on April 4th, 2017.

Anticipated Next Steps

The judge stated his desire to move the case along “expeditiously.”

The Corps of Engineers has awarded the contract for the gated inlet structure in North Dakota and has given the notice to proceed. All North Dakota permits for this construction have been obtained. The MDNR has previously stated that it does not issue permits for activities in North Dakota.

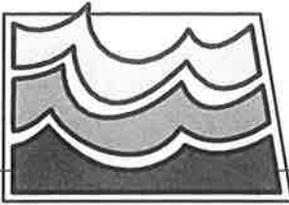
The MDNR has indicated that it will require the Diversion Authority to obtain a permit for construction of the Red River control structure and associated tiebacks in Minnesota.

- As an accommodation to the MDNR, the Diversion Authority previously submitted a “Preliminary Report” for the control structure, but in October 2016, MDNR denied it.
 - The Diversion Authority challenged the denial by requesting a contested case hearing, which restarts the entire process from scratch and requires an evidentiary hearing and fact finding by an administrative law judge. The MDNR has not yet acted on that request, but is expected to do so soon.

- Since the Corps, and not the Diversion Authority, will be responsible for construction in Minnesota and the Judge previously ruled that the Corps had sovereign immunity from state regulation, it is not apparent that any Minnesota permits are legally needed at this time, if ever.

The RWJPA, and potentially the MDNR, is expected to request a new injunction against either the Corps, the Diversion Authority, or potentially both, to attempt to stop any further construction of the Project unless and until a Minnesota permit is issued. No date has been set for when any hearing on that request might take place, or how quickly the Court might rule.

At a minimum, that process is expected to take several more weeks, and perhaps months.



North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
(701) 328-2750 • TTY 1-800-366-6888 or 711 • FAX (701) 328-3696 • <http://swc.nd.gov>

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele, P.E., Chief Engineer-Secretary
SUBJECT: Mouse River Plan Project Status Update
DATE: March 8, 2017

As reported last meeting, Phases 1, 2, and 3 (The 4th Avenue Floodwall, the Napa Valley and Forest Road levees) will require 404 (fill in wet lands) and 408 (modification of existing federal works) permits, which require a final decision on the EIS. The EIS has been completed by Corps of Engineers and was released for public comment on November 4. Public meetings were held beginning in mid-December. The public comment period closed on December 16, however a modification to plans required an addendum to the EIS, which was delivered to affected persons. All comments will be addressed in the final EIS and a signed Record of Decision is expected in July. A favorable decision in this time frame will allow construction to begin in 2017. The first components will be Phase MI-1 (the 4th Ave. flood wall) and MI-2&3 (the Forest Road and Napa Valley levees). Phase MI-2 includes 2 pump stations. Part of this phase, the Peterson Coulee Outlet, can be bid before the EIS process is complete, in the spring of 2017. The remainder is scheduled for summer of 2017. Expected cost of MI-2 and MI-3 is \$46.7 Million.

The Perkett Ditch Improvement (Phase MI-2A) is approximately 65 percent complete and should be finished by mid-summer of 2017.

Progress on the feasibility study continues. Current efforts are directed at coordinating continuing progress on the Mouse River Plan with the Corps on a number of issues. These include definition of existing conditions, or "future without project" vs. "future with project". If something which has benefits is built before the "future without" is identified, those benefits can't be counted in the feasibility calculations. If it is built after, its cost may be subtracted from the overall cost, thereby improving the B/C ratio. Also under discussion are matters of hydrology, environmental improvements, bank stabilization and many other details. Fortunately, the discussions are open and cooperative and appear to be making progress. The key milestone for the feasibility decisions is the selection of the "Tentatively Selected Plan". This is expected to occur in August of 2017, followed by actions at the higher levels of the Corps and culminating in the "Chief's Report", expected by April of 2019.

Design on Phase BU-1 (Burlington levee) is approximately 30 percent complete and Phase MI-5 (Northeast Minot Tieback Levee) is about 10 percent complete. They are projected to be complete by the end of 2017 and summer of 2018, respectively. These components are included in the EIS, so they will not be delayed by federal permitting issues. Additional work includes evaluation of potential conveyance improvements in the downstream reaches.

The Souris River Joint Board's StARR acquisition program is currently being implemented. Approximately 165 rural structures have been identified, and about 100 of the owners have indicated an interest in the program. Of these, about 50 have entered agreements with the SRJB to evaluate options. Several closings have recently occurred and this will continue as interest persists and funding allows.

GE:JTF:pdh/1974

February 27, 2017

MEMORANDUM

David Ashley
Chairman – McHenry County
dwasley56@gmail.com

Roger Sauer
Member – Renville County
rasauer@srt.com

Tom Klein
Member – Ward County
thokle@srt.com

Clif Issendorf
Member – Bottineau County
issbros@srt.com

Dan Jonasson
Member – City of Minot
dan.jonasson@minotnd.org

To: North Dakota State Water Commission
Garland Erbele, PE – State Engineer
Tim Fay, PE – MREFPP Project Manager
Craig Odenbach, PE – Director of Project Development

From: Souris River Joint Water Resource Board
Ryan Ackerman, PE – Administrator



Re: **Mouse River Enhanced Flood Protection Project
Project Status Update and Cost Share Requests**

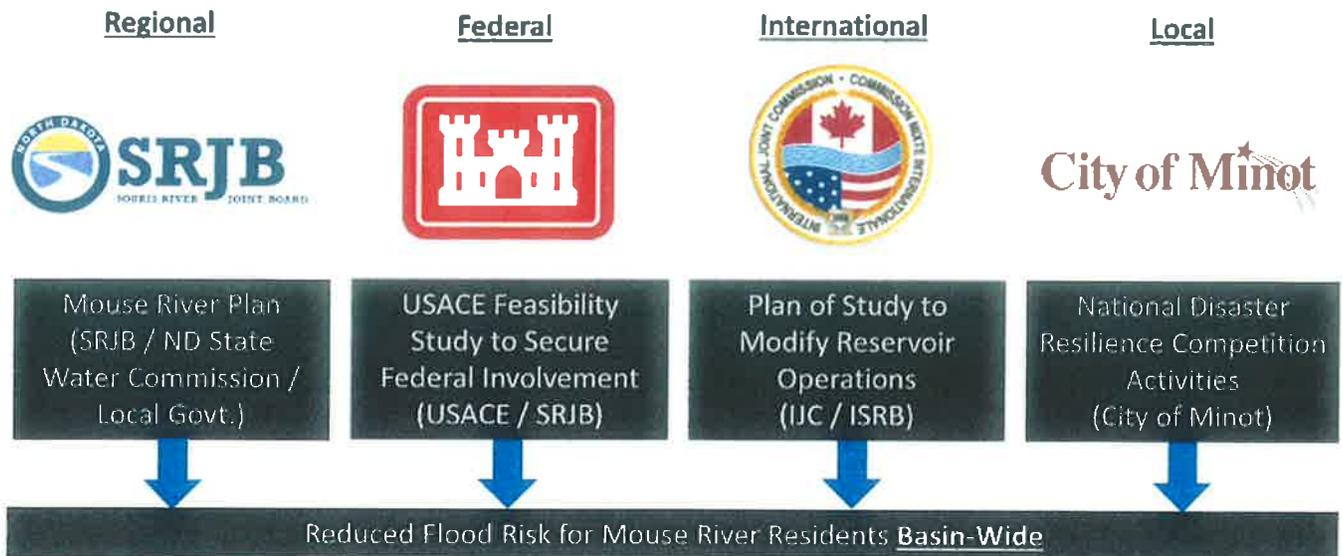
The purpose of this memorandum is to document progress on the Mouse River Enhanced Flood Protection Project and to formally request consideration of several cost share request applications at the State Water Commission's March 29, 2017 meeting.

1. Project Update

The Mouse River Enhanced Flood Protection Project (Mouse River Plan) has seen significant progress since the last State Water Commission meeting held in December 2016. Though the Mouse River Plan is the most visible initiative geared towards reducing flood risk within the Mouse River basin in North Dakota, there are other initiatives proceeding in parallel. Those parallel initiatives include the federal US Army Corps of Engineers (USACE) Feasibility Study, the International Joint Commission (IJC) Plan of Study, and the local National Disaster Resilience Competition (NDRC) initiatives being advanced by the City of Minot.

The intent of this update is to provide a more comprehensive overview of these activities and the coordination occurring to deliver the most cost-effective and resilient solution for the residents of the basin and the State of North Dakota.

A graphical illustration of the various parallel efforts geared to reducing flood risk is shown below:



1.1 Mouse River Enhanced Flood Protection Project (Mouse River Plan)

The Mouse River Plan is a regional initiative being advanced by the Souris River Joint Water Resource Board (SRJB) in conjunction with the State Water Commission and local governments including the City of Minot. The genesis of the Mouse River Plan occurred in the wake of the 2011 Mouse River flood of record, when the North Dakota State Water Commission, under the guidance of Governor Jack Dalrymple, developed Preliminary Engineering Reports (PERs) for a project that would mitigate flood risk along the Mouse River throughout the State of North Dakota.

The resulting project was named the Mouse River Enhanced Flood Protection Project. It has since taken on an abbreviated version of the name – Mouse River Plan. In 2014, following the completion of the PERs, the State Water Commission transferred the direction of the project over to the local sponsor of the project, the Souris River Joint Water Resource Board (SRJB).

The following sub-sections describe several ongoing activities associated with the Mouse River Plan.

1.1.1 Environmental Impact Statement

An Environmental Impact Statement (EIS) has been developed for the portion of the Mouse River Plan that extends from just upstream of Burlington to just downstream of Minot. This section was chosen for a detailed environmental study due to the highly urbanized nature of this section of the basin and the extent of damages that this reach of the river experienced as a result of the 2011 flood.

Analysis of impacts associated with the project have been conducted basin-wide to identify potential upstream and downstream impacts associated with the project in the urbanized areas.

The Draft Environmental Impact Statement (DEIS) was prepared by the Souris River Joint Board on behalf of the USACE and was published for public review in November 2016. The official comment period for the DEIS expired in December 2016.

Concurrently, the City of Minot has moved forward with acquisitions associated with the National Disaster Resilience Competition (NDRC) activities that would have an impact on the alignment of some features identified in the DEIS. As a result, an addendum to the DEIS was issued and delivered to the property owners who would be affected by the alignment changes.

Comments associated with the DEIS and the addendum will be addressed in the Final EIS and delivered to the USACE for review and approval. Based on the most recent schedule provided by the USACE, it is anticipated that the Record of Decision for the Mouse River Plan EIS will be signed in July 2017. W

The issuance of the Record of Decision will represent a significant regulatory milestone for the project and will pave the way for efficient regulatory approvals for future phases of the Mouse River Plan.

1.1.2 Phase MI-1 (4th Avenue Floodwalls) Design

Phase MI-1 (4th Avenue Floodwalls) is currently 100% designed. The design documents for this phase of the project have been submitted to the US Army Corps of Engineers at the 30%, 60%, 90% and 100% design levels for review and comment. Final comments have been addressed and this phase of the project will receive Section 408 permission and a Section 404 permit once the Record of Decision on the Mouse River Plan EIS is signed, anticipated to be in July 2017.

This phase of the project generally consists of approximately 3,000 linear feet of concrete floodwall from US Highway 83 (Broadway) to 3rd Street Northeast in Minot and a large stormwater pump station (178,000 gallons per minute) that will be located on the west side of Broadway.

The estimated cost of this phase of the project is \$72.5 million. It is anticipated that this project will be bid in two sub-phases, with the pump station (\$23.4 million) being awarded in the spring of 2017 and the floodwalls (\$49.1 million) being awarded in the summer of 2017.

1.1.3 Phases MI-2 (Napa Valley Levee) and MI-3 (Forest Road Levee) Design

Phases MI-2 (Napa Valley Levee) and MI-3 (Forest Road Levee) are currently 100% designed. The design documents for these phases of the project have been submitted to the US Army Corps of Engineers at the 30%, 60%, 90% and 100% design levels for review and comment. Final comments have been addressed and these phases of the project will receive Section 408 permission and a Section 404 permit once the Record of Decision on the Mouse River Plan EIS is signed, anticipated to be in July 2017.

This phase of the project generally consists of approximately 9,000 linear feet of earthen levee from the US Highway 83 Bypass to the Canadian Pacific Railroad's crossing of the Mouse River in west Minot, a small stormwater pump station (6,000 gallons per minute), a moderate stormwater pump station (40,000 gallons per minute), and a roadway closure structure located on the north side of the Mouse River at 16th Street Southwest.

The combined estimated cost of these phases of the project is \$46.7 million. It is anticipated that Phase MI-2 will be bid in two sub-phases, with the Peterson Coulee Outlet (\$2.2 million) being awarded in the spring of 2017 and the Napa Valley levees (\$34.6 million) being awarded in the summer of 2017. Phase MI-3 (Forest Road levees) is estimated to cost \$9.9 million and is anticipated to be awarded in the summer of 2017.

1.1.4 Phase BU-1 (Burlington Levee) Design

Phase BU-1 (Burlington Levee) is approximately 30% designed. Design is expected to be complete by the end of 2017.

1.1.5 Phase MI-5 (Northeast Minot Tieback Levee) Design

Phase MI-5 (Northeast Minot Tieback Levee) is approximately 10% designed. Design is expected to be complete by summer 2018.

1.1.6 Rural Reaches Design

The evaluation of potential conveyance improvements in the downstream reaches of the basin is currently ongoing. The initial phase of the evaluation is expected to be complete in early April. Depending on the results of the evaluation, the SRJB may move forward with programming a capital project to improve conveyance through McHenry County near the J. Clark Salyer National Wildlife Refuge

1.1.7 Phase MI-2A (Perkett Ditch Improvements) Construction

The construction of Phase MI-2A was awarded to Scherbenske, Inc. in early summer 2016. The improvements associated with this phase include interior drainage modifications and creation of stormwater detention storage that significantly reduces the size of the required Perkett Pump Station, which will be constructed with Phase MI-2.

Construction of this phase of the project is approximately 65% complete and is expected to be fully complete by mid-summer 2017.

1.1.8 Phase MI-2B (Souris Valley Golf Course Improvements) Construction

The construction of Phase MI-2B was awarded to Cordova, Inc. in early summer 2016. The improvements associated with this phase include modifications to the Souris Valley Golf Course to accommodate the construction of Phase MI-2.

Construction of this phase of the project is 95% complete and is expected to be fully complete by mid-summer 2017.

1.1.9 StARR Program Implementation

The SRJB's Rural Structure Acquisition, Relocation or Ring Dike (StARR) Program is currently being implemented. This voluntary program offers assistance to rural structure owners that are not included in the urban portions of the Mouse River Plan.

There are approximately 165 rural structure owners within the Mouse River floodplain. Of the 165 structure owners, approximately 100 have indicated an interest in the program, and approximately 50 have entered into agreements with the SRJB to evaluate options for reducing flood risk at their individual rural sites. Closings have recently occurred for multiple sites and will continue as interest persists and funding allows.

1.2 US Army Corps of Engineers Feasibility Study

The SRJB entered into a Feasibility Cost Share Agreement with the USACE in May 2016. The execution of that agreement started a three-year process intended to identify a component of the project having a federal interest.

Recently, a milestone within the Feasibility Study was reached. In January 2017, the Alternatives Milestone was reached, which identifies the array of alternatives that will be evaluated in further detail based on preliminary assessments of costs and benefits.

Based on best available information and the depth of analysis completed thus far, it appears that there will be a federal interest in portions of the Mouse River Plan. The location of this future federal project is likely within the city limits of Minot on the north side of the river.

At present, the federal Project Delivery Team is working towards the next milestone of identifying the Tentatively Selected Plan. It is anticipated that this will be achieved in August 2017. Future milestones include the Agency Decision, presentation to the Civil Works Review Board in Washington, DC, and the preparation of the Chief's Report, which is expected to be completed by April 2019.

Funding for the project is then dependent upon two congressional actions (Authorization and Appropriation) that are typically taken in the form of federal Water Resources Development Act (WRDA) legislation.

As the non-federal sponsor to the USACE Feasibility Study, the SRJB is working closely with USACE officials to maximize the potential for federal funds to be utilized within the basin for reducing flood risk. A key example of the value of this coordination effort is the definition of the baseline condition by which the USACE is evaluating the future project against, also known as the Future Without Project Condition. Through close consultation with the USACE, the SRJB has worked to establish the baseline such that it includes the construction of Phases MI-1, MI-2 and MI-3 already completed. Without this consideration, it is highly unlikely that a federal funding would be secured for a portion of the project.

1.3 International Joint Commission Plan of Study

The International Joint Commission (IJC) has developed a scope and budget for a Plan of Study to evaluate the operation of reservoirs on the Souris (Mouse) River system in Saskatchewan and North Dakota.

It is anticipated that a Reference to the Plan of Study will be issued by the IJC in the near future. At the International Souris River Board (ISRB) meeting held in Regina, Saskatchewan on February 23, 2017, representatives from the IJC indicated that the issuance of the Reference could occur as early as the end of February 2017.

This Reference would officially authorize the Plan of Study group and would get the study underway. It is anticipated that the study and analysis would take at least three years to complete. At the conclusion of the study, it is anticipated that a modified operations plan of the reservoirs on the system would be recommended to the federal governments to balance the competing interests of water supply and flood risk management.

The SRJB has been actively engaged with the ISRB and has been pursuing a study of the reservoir operations since 2011. The SRJB will continue to inform the study group of the concerns within North Dakota as the study progresses. Likewise, the SRJB is promoting the coordination of activities between the local, regional and federal activities.

1.4 City of Minot National Disaster Resilience Competition Activities

In January 2016, the City of Minot was notified that it was the recipient of \$74.3 million from the federal government through the US Department of Housing and Urban Development's (HUD) National Disaster Resilience Competition.

Following the announcement of the grant award, the City of Minot worked with HUD on the terms of the grant agreement that accompanied the \$74,340,770 award. This agreement stipulates how the City may utilize the grant award and which projects within the City's application would be eligible for funding through the CDBG-NDR

program. This agreement was signed by HUD on September 21, 2016 and by the City of Minot on September 26, 2016.

Based on the grant agreement, the amount of funding made available to the City of Minot through the CDBG-NDR program for reducing flood risk is \$20,975,000. These funds will be used for acquisition of properties, relocation or demolition of structures, restoration of the land, and planning activities associated with reducing flood risk.

The City of Minot has indicated that it intends to utilize this funding to acquire properties that are within the footprint of the project as defined in the November 2016 Draft Programmatic Environmental Impact Statement (DEIS) for the Mouse River Enhanced Flood Protection Project.

Additionally, the City of Minot has indicated that they intend to acquire properties outside of the original footprint, which may eliminate the need for significant lengths of levee or floodwall.

2. Cost Share Requests

The following sections describe various project activities that the SRJB is requesting cost-share approval for.

2.1 Phase MI-1A Construction (Broadway Pump Station)

The Broadway pump station has a design capacity of approximately 178,000 gallons per minute. This phase of the project can be advanced in parallel with the permitting and environmental review of the balance of Phase MI-1 (4th Avenue floodwalls) because this portion of the project lacks a federal nexus. The proposed pump station project will not impact portions of the existing federal flood control project or the existing USACE right of way, meaning that it can proceed without Section 408 permissions being issued by the USACE.

Additionally, the project will not impact the Mouse River, any wetlands or other Waters of the United States, meaning that it can also proceed without a Section 404 permit from the USACE.

The project has undergone significant technical review from the Souris River Joint Board, the City of Minot, the US Army Corps of Engineers and also an independent external peer review by an outside engineering consultant.

The estimated project cost is \$23.38 million. ***The SRJB requests 65% of the total cost of the project, or \$15,197,000, from the State Water Commission.***

2.2 Phase MI-2C Construction (Peterson Coulee Outlet)

The construction of Phase MI-2 (Napa Valley Levee) and Phase MI-6 (Tierrecita Vallejo Levee) will block interior drainage from reaching the Mouse River. An analysis of interior drainage was completed commensurate with the design of Phase MI-2 of the Mouse River Plan. The interior drainage could be addressed through a number of various alternatives, including: conveying stormwater along its current route and constructing a large pump

station adjacent to the levee; capturing the stormwater in an upper portion of the watershed and conveying it through the levee under pressure to minimize the size of the required pump station; or diverting the stormwater around the levee to minimize the size of the required pump station. The most cost-effective and lowest risk alternative is to divert the stormwater around the levee and to construct a small pump station adjacent to the levee designed to handle local runoff and seepage flows.

Phase MI-2C (Peterson Coulee Outlet) is a separable portion of Phase MI-2 that can proceed independent of other Mouse River Plan activities because the project would provide independent utility once constructed.

The estimated project cost is \$2,195,418. ***The SRJB requests 65% of the total cost of the project, or \$1,427,022, from the State Water Commission.***

2.3 Phases BU-1 & MI-5 Independent External Peer Review Services

In accordance with USACE guidelines for the review of flood control projects, an independent external peer review and safety assurance review must be completed and submitted to the USACE as part of the permitting process. The State Water Commission previously approved cost share for the design of Phase BU-1 (Burlington Levee) and Phase MI-5 (Northeast Minot Tieback Levee). The cost of providing the Independent External Peer Review services is estimated to be \$264,475. ***The SRJB is requesting a 65% cost share from the State Water Commission for these services, or \$171,909.***

2.4 City of Minot Acquisitions Authorization

The City of Minot has been acquiring properties within the footprint of the Mouse River Plan using funding provided through previous authorizations from the State Water Commission. In total, the total cost of acquisitions remaining are significantly in excess of the funding that has previously been approved by the State Water Commission.

The City will continue to acquire properties within the footprint of the Mouse River Plan within the city limits of Minot.

The most recent estimate of funding remaining in the 2015-2017 appropriation for Mouse River flood control activities that is currently unobligated is \$20,775,587. Assuming that the State Water Commission approves the aforementioned requests of \$15,197,000 for Phase MI-1A (Broadway Pump Station), \$1,427,022 for Phase MI-2C (Peterson Coulee Outlet), and \$171,909 for the Independent External Peer Review services for Phases MI-5 and BU-1, there will be \$3,979,656 remaining unobligated.

The SRJB requests that \$3,979,656 be approved for acquisitions within the City of Minot as identified in the City of Minot acquisition plan currently on file at the State Water Commission. This amount is the anticipated State share of 75% of the total cost of acquisitions.

2.5 Acquisition Funding Return & Reobligation – Ward County

Ward County was previously approved for cost share to complete acquisitions within the county related to the Mouse River Plan. While additional acquisitions within the county remain, the County's current voluntary acquisition program is drawing to a close. At present, there is \$6,015,347 that remains unspent. In discussing with Ward County, they anticipate \$700,000 in remaining acquisitions under that program. At a 75% cost share, that equates to \$525,000 from the State of North Dakota.

In November 2016, the Ward County Commission authorized the release of \$5,490,347 (\$6,015,347-\$525,000) to the Souris River Joint Board and the City of Minot to be utilized for acquisitions within the City of Minot. Ward County anticipates utilizing the remaining \$525,000 for Ward County acquisitions in the near future. While these funds have been previously approved by the State Water Commission for use by Ward County, the fact is that these funds are assets of the State of North Dakota.

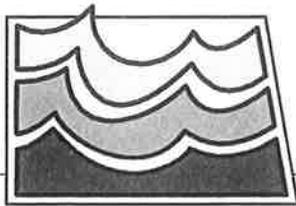
Thus, the SRJB is requesting the following concurrent actions from the State Water Commission:

- (1) Unobligate \$5,490,347 of the \$6,015,347 that is currently obligated and unspent for Ward County acquisitions.***
- (2) Approve \$5,490,347 for acquisitions within the City of Minot that are included within the City of Minot acquisition list, less those additional properties added via the National Disaster Resilience Program.***

Enclosures: Cost Share Request Form – Broadway Pump Station
Supporting Data – Broadway Pump Station
Cost Share Request Form – Peterson Coulee Outlet
Supporting Data – Peterson Coulee Outlet
Cost Share Request Form – Independent External Peer Review Services
Supporting Data – Independent External Peer Review Services
Cost Share Request Form – City of Minot Acquisitions

Copy to: David Ashley, SRJB Chairman
Dan Jonasson, SRJB Member, Minot
Mike Dwyer, SRJB Counsel
Devra Smestad, Ward County Auditor

MARCH 29, 2017



North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
 (701) 328-2750 • TTY 1-800-366-6888 or 711 • FAX (701) 328-3696 • <http://swc.nd.gov>

MEMORANDUM

TO: Governor Doug Burgum
 Members of the State Water Commission

FROM: Garland Erbele, P.E., Chief Engineer - Secretary

SUBJECT: SWPP – Project Update

DATE: March 1, 2017

Oliver, Mercer, North Dunn (OMND) Regional Service Area
Center SA Rural Distribution System 7-9E & 7-9F:

Final change order has been executed by all parties on both Contracts 7-9E and 7-9F. Final administrative items remain before final payments can be made and contracts closed out.

Contract 7-9G Halliday and Dunn Center Service Area:

This contract includes furnishing and installing approximately 330 miles of 6"-1 ½" ASTM D2241 gasketed joint pipe; 395 services; road crossings; connections to existing pipelines and other related appurtenances. The project is located in Mercer and Dunn Counties of North Dakota. The contract has two Bid Schedules. The State Water Commission (SWC) awarded Bid Schedule 1 to Swanberg Construction, Inc., and Bid Schedule 2 to Northern Improvement Company at its March 11, 2015 meeting.

Bid Schedule 1 consists of furnishing and installing approximately 170 miles of 6" – 1 ½" ASTM D2241 PVC gasketed joint pipe and 173 services. This contract had an intermediate completion date of November 1, 2015 for installation of 37 miles of pipeline and 32 users. Because of the 50 additional users added to Contract 7-9E and removal of intermediate completion date, a new milestone completion date was added to this contract. The milestone completion date was August 1, 2016 for 123 users. The contractor requested a 21-day extension on the milestone completion date because of delays caused by easement problems, permit delays and changes made in the field. The 21-day extension was granted to the contractor. The contractor turned over 123 users on August 27, 2016. Twenty-six change orders have been signed by all parties to date, which added 98 additional users and 45 more miles of pipeline to the contract. The Dakota Access Pipeline (DAPL) crossed at five locations in this contract. A change order was issued to bore the crossings with a minimum of 7-foot separation between the proposed DAPL line and the rural water line and to case the water line with fusible PVC. This change order cost was reimbursed by DAPL through an agreement with Southwest Water Authority (SWA). The substantial completion date including modifications through Change Order No. 26 is June 7, 2018. The contract has two additional intermediate dates November 20, 2016 for the original 173 users and September 27, 2017 for 212 users. To date, the contractor has turned over 180 users. The contractor refused to install a few items added by field orders to the contract. Those items were included in a Change Order to Contract 7-9G Bid Schedule 2. The Bid Schedule 2 contractor agreed to complete those items with their unit price cost and remobilization charges for each location.

Bid Schedule 2 consists of furnishing and installing approximately 164 miles of 6" – 1 ½" ASTM D2241 PVC gasketed joint pipe and 218 services. The area is west of Halliday.

Twenty-two change orders have been signed by all parties to date which added 104 additional users and 38 more miles to the contract. The substantial completion date including modifications through Change Order No. 22 is September 18, 2017. The contractor has turned over 315 users.

Contract 5-17 Dunn Center Elevated Reservoir:

This contract includes furnishing and installing a 1,000,000-gallon elevated composite reservoir. The substantial completion date on this contract was August 15, 2014. The tank was turned over for service on August 13, 2015. \$260,250 is currently being withheld in liquidated damages for 347 days' delay. We granted a 16-day extension through a change order. The contractor's attorney sent a letter to Bartlett & West indicating that the contractor is willing to pay the actual damages incurred by the Owner. The damage caused by the delay in completion of this tank is the delay in serving the City of Killdeer. We estimated the actual damages to be \$212,058.32. This information has been relayed to the contractor's attorney by our legal counsel.

Other Contracts

Contract 8-1A New Hradec Reservoir:

This contract involves furnishing and installing a 296,000-gallon fusion powder coated bolted steel reservoir. Olander Contracting Company is the contractor. The contract documents were executed on May 16, 2013, and the Notice to Proceed was issued on June 3, 2013. The substantial completion date on this contract was September 15, 2013. The tank was put into service on February 20, 2014. The contractor disputes the liquidated damages withheld. The contractor has not provided any justification for the delays. The contractor has filed a lawsuit against us and their tank sub-contractor. Our legal counsel has filed an answer to their lawsuit.

Contract 1-2A Supplemental Raw Water Intake:

The first section of the intake pipe was lowered on July 15, 2015. Through October 31, 2015 tunneling had proceeded to approximately 1786 feet.

In the early morning of November 1, 2015, the contractor's employees heard a loud pop and noticed uncontrolled flow of sand and water entering the pipe approximately 40-50 feet from the caisson end of the pipe. The water and sand flowed out from the pipe and into the caisson shaft, and the employees quickly evacuated the caisson shaft as the water and sand level began to rise.

To remedy the problem, the contractor stabilized the existing pipe to stop the inflow of sand and water with jet grouting. Jet grouting was also completed at the microtunnelling launch zone. Jet grouting is a construction process using high pressure to loosen up the ground and mix it with thin slurry and forming soilcrete columns. The contractor's plan includes a new secondary floor and installing a new intake pipe at a higher elevation. The new intake pipe is proposed to be 12 feet above the center line of the existing installed intake pipe. The new alignment will be rotated 7 degrees to the east from the installed intake alignment. This would result in the intake screen center line to be at 1785 feet compared to 1782 feet originally specified in the Bid Documents. For comparison, the permanent pool elevation for Lake Sakakawea is 1776.3 feet.

The contractor is currently cleaning out the shaft bottom. A plug has been welded on to the installed intake pipe. Few shipments of the new pipeline and few parts of the new microtunneling

boring machine have been delivered to site. The new secondary floor is expected to be poured in the next few weeks.

An application for a new easement and temporary construction license from US Army Corps of Engineers has been submitted by the Bureau of Reclamation on behalf of the project.

The contractor has been working with the project's builder's risk insurance policy for reimbursements for the failed project and for rebuilding the intake pipe. The insurance policy has reimbursed the contractor \$7,002,500.64 to date. The SWC submitted a claim of \$835,000 for the additional engineering expense to the Contract's Builder's Risk Policy. The insurance company responded that the Contract's builder's risk policy has a sublimit of \$100,000 for "Architects and Engineers Fee", and that has been already paid to the contractor. The builder's risk insurance company ACE American Insurance Company has filed a lawsuit against the contractor, James W. Fowler Company and the SWC regarding the insurance payouts.

The pipe submittal and the microtunnelling alignment submittal have been reviewed by BW/AECOM and have been incorporated into a proposed change order which is under review by the contractor. A new schedule received from the contractor indicates completion of the project by December 14, 2017. The contractor has requested extension of contract completion to December 14, 2017. The proposed change order provided to the contractor before the lawsuit was filed by ACE American Insurance Company included provisions for the contractor seeking reimbursement for additional construction management costs incurred by SWC with the builder's risk policy and also SWC agreeing to execute a future no-cost change order extending the substantial completion date to December 14, 2017 contingent on the contractor achieving the substantial completion by that date.

Contract 3-2D Six (6) MGD Water Treatment Plant (WTP) at Dickinson:

The preconstruction conference for Contract 3-2D was held on January 13, 2016 with both the General contractor, John T. Jones Construction Co., Inc., and the Mechanical contractor, Williams Plumbing and Heating, Inc. Bids for Contract 3-2D Electrical Contract were opened on January 28, 2016, and the contract was awarded to Edling Electric, Inc. at the March 3, 2016 meeting.

The General contractor, John T. Jones has completed all of the basement walls and slabs. The first-floor slab is complete with the exception of the slab over the wet well lid. The contractor is working on shoring and decking of the second-floor slab. Precast wall installation has begun. Steel joists and beams are getting installed in the administration area. Rubbing of the basement walls and painting is ongoing.

Two change orders have been signed by all parties on this contract. The net increase in contract price is \$38,088, and the intermediate completion date was extended to December 16, 2016, and the substantial completion date extended to November 28, 2017. The milestone completion date is for completing all site piping and completing the backfill against the WTP structure foundation walls. The contractor did not complete the items for the intermediate completion. The intent of the milestone completion date was to allow for some secondary settlement prior to the installation of paving. In order to meet the intent of the milestone completion date, the contractor was asked to complete the remaining areas of backfill at least 100 days prior to placement of

paving. With regards to remaining pipeline installation that are under areas with paving, the contractor was instructed to use trench backfill material classified as fill or structural fill. A certificate of milestone completion was signed by all parties with the contractor agreeing to the above conditions.

The Electrical contractor, Edling Electric, Inc. and the Mechanical contractor, Williams Plumbing and Heating, Inc., are following the General contractor in their work. The Electrical contractor is installing conduits in the basement. The Mechanical contractor is working on HVAC duct installation and fire sprinkler pipe installation.

Contract 4-1F/4-2C Generator Upgrades:

The scope of this contract includes relocating the existing 1000 kW generator at the Dodge pump station to the Dickinson Finished Water Pump Station and installing a new standby engine generator at the Dodge pump station. This contract also includes relocating the existing 1,500 kW generator at the Richardton Pump Station to the intake booster pump station and installing a new generator at the Richardton Pump Station. Bids for this contract were opened on January 28, 2016, and the contract was awarded to Edling Electric, Inc. at the March 3, 2016 meeting. The preconstruction conference for this contract was held on May 19, 2016.

The installation and startup of the generators at all four locations is complete. Testing in late November 2016 was not successful because of programming issues. Changes needed to resolve programming issues that were beyond the scope of the contract were included as a change order to the contract. The SCADA contractor on the Project, Microcomm, will need to be involved to facilitate programming changes in some locations. Two change orders have been executed by all parties on this contract.

Contract 5-1A and 5-2A 2nd Richardton Reservoir and 2nd Dickinson Reservoir:

The SWC at its October 12, 2016 meeting awarded Contract 5-2A, 2nd Dickinson Reservoir, to John T. Jones Construction Co. A preconstruction conference for this contract is scheduled for March 30, 2017.

The SWC at its December 9, 2016 meeting awarded Contract 5-1A, 2nd Richardton Reservoir, to Engineering America, Inc. Contract documents have been executed by all parties.

Raw Water Line Capacity Upgrade:

Design on the 4-mile parallel piping segment between the intake and the OMND Water Treatment plant is mostly complete. Easement acquisitions will begin soon. We anticipate bidding this contract soon.

Condemnation:

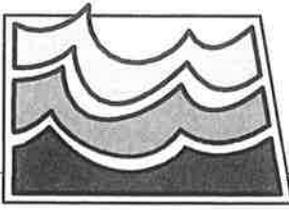
Mr. Robert Braun, a landowner on Contract 7-9G BS 1 was condemned for easement in June 2016. We received a notice of appeal for the compensation on July 7, 2016. An email from Mr. Braun's attorney on August 24, 2016 requested \$20,542.50 in just compensation for an easement for 4,107 feet of pipeline on Mr. Braun's property. Our field staff reviewed the route again and were able to get the neighboring landowners to remove some trees at their own expense and reroute the pipeline on the neighboring landowner's property. Mr. Braun's attorney has asked that the SWC pay Mr. Braun's attorney's fees of \$5,863 based on North Dakota

Century Code § 32-15-35. The payment was made on November 15, 2016.

Transfer of Service Agreements:

At the December 12, 2015 SWC meeting, the Commission approved the Transfer of Service agreement between City of Killdeer, SWA and SWC. This was the first annexation agreement negotiated between a City served by Southwest Pipeline Project and SWA. In early January 2016, SWA mailed similar agreements to 33 communities within the SWPP service area except for City of Dickinson using the same template as used for City of Killdeer. SWA has been negotiating different terms with the City of Dickinson. Some communities executed the agreement, while many communities expressed concerns about terms of the annexation agreement that was mailed to them. SWA continues to meet with the communities to negotiate the terms.

GE:SSP:pdh/1736-99



MARCH 29, 2017

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MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission

FROM: Garland Erbele, P.E., Chief Engineer-Secretary

SUBJECT: NAWS – Project Update

DATE: March 6, 2017

Supplemental EIS

Reclamation issued the Record of Decision for the Final Supplemental Environmental Impact Statement (FSEIS) for the Northwest Area Water Supply on August 21, 2015. Reclamation received seven comment letters on the FSEIS, which along with point-by-point responses were included as an appendix to the Record of Decision. The Preferred Alternative includes a supply from the Missouri River (Lake Sakakawea) with an intake at Snake Creek Pumping Station along with a conventional treatment option for the Biota Water Treatment Plant near Max. This level of treatment includes five treatment processes versus two from the draft SEIS and the initial Environmental Assessment. Although all biota treatment options were considered sufficient by Reclamation, the conventional treatment option was chosen to address drinking water issues raised by the EPA.

Manitoba & Missouri Lawsuit

A Joint Motion for Entry of Case Management and Scheduling Order was submitted to the District of Columbia District Court December 22, 2015 and accepted with minor modifications December 23, 2015. The plaintiffs filed supplemental Complaints January 29, 2016, and the defendants lodged and served the Administrative Record February 5, 2016. A Motion to Modify Injunction *Pendente Lite* was filed by the State of North Dakota as intervenor defendant March 1, 2016. Oppositions by the plaintiffs were filed April 4, 2016, and a reply was filed April 25, 2016 by the State. The Plaintiffs filed a Motion for Leave to sur-reply May 18, 2016, and an opposition to that motion was filed May 20, 2016, by the State of North Dakota. The Plaintiffs then filed a response to our opposition May 25, 2016, and the Motion for Leave was accepted by the Court May 27, 2016. The Motion for Modification to the Injunction was denied by the Court June 14, 2016. A notice of appeal was filed with the DC Appellate court July 1, 2016. A Statement of Issues for Appeal and Motion to Expedite Appeal were filed August 15th, 2016. A Motion for Summary Affirmance and Opposition to Motion to Expedite Appeal were filed by Manitoba and joined by Missouri August 29, 2016. Opposition to Summary Affirmance was filed September 6, 2016, and a Reply in Motion to Expedite Appeal was filed September 8, 2016. A Reply in Support of the Motion for Summary Affirmance was filed September 22, 2016. The Briefing Schedule was set for the Appeal, the Motion for Summary Affirmance was denied and the Motion to Expedite Appeal was granted September 28th, 2016. The Brief of Merits was filed October 7, 2016 by the Appellants and Brief of Plaintiff-Appellees was filed November 7, 2016. The Reply by the Appellants was filed November 22nd, 2016. Oral arguments were held January 13, 2017 in front of circuit judges Brown and Wilkins and senior circuit judge Edwards. The decision was filed by

circuit judge Brown March 3, 2017 remanding the decision to Judge Collyer with instruction to grant the modification to the injunction. This decision, while a single step in the right direction, is a significant victory for us as it is the first ruling in our favor. There have been six other modifications to the injunction, but this is the first that wasn't consented to or unopposed by the plaintiffs in the case.

Motions for Summary Judgment were originally to be filed by the defendants April 11, 2016 with combined cross-motions/opposition by the plaintiffs due May 13, 2016 and combined oppositions/replies by the defendants due June 17, 2016. However, the briefing schedule was delayed once due to a desire by the federal defendants for additional time for review and a medical issue for the plaintiff's legal counsel and then again for the same medical issue for the plaintiffs' legal counsel. We consented on both requests to delay the briefing but filed a joinder on the second request to ask the court to expedite the judgment on the injunctive relief motion. The Motions for Summary Judgment filed by the defendants June 3, 2016 with combined Opposition/Cross-Motion by the plaintiffs filed July 8, 2016 and combined Reply/Opposition by the defendants filed August 16, 2016. Plaintiffs Manitoba filed a motion for leave to sur-reply September 12th which was accepted by the Court the next day. Motions for Leave to Sur-reply were filed by the defendants September 26, 2016, and a reply by the Plaintiffs was filed October 7, 2016. Oral argument for the cross-motions for summary judgement is scheduled for March 30, 2017, in DC District Court. The first summary judgement in this case was delivered eight months after briefing was completed and four months after oral argument, and the second summary judgement was issued four months after the final briefings. There was no oral argument for the second summary judgement.

NAWS Contract 2-2A-1

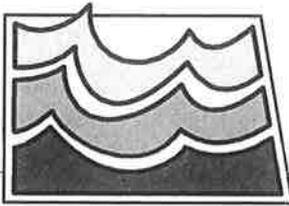
Contract 2-2A-1 included furnishing and installing roughly 300 feet of split casing to encase existing pipeline for upcoming road work in the western portion of Minot in 2017. The contract was awarded to Wagner construction in the amount of \$763,575 on August 24th. The preconstruction conference was held September 8, 2016. Work commenced October 24th, 2016 and was substantially complete prior to the end of November.

Sundre Aquifer Supply Pipeline

The Sundre raw water supply pipeline from the Sundre aquifer wellfield is currently the major water supply for the Minot water treatment plant and subsequently the NAWS system. The existing Sundre pipeline is 43,300 linear feet in length is comprised of fiberglass pipe installed between 1972 and 1974 and has reached the end of its usable life as it has become very brittle and great care must be taken when any work is performed in its vicinity. This pipeline represents nearly two thirds of the raw water capacity to the Minot treatment plant. Features of the Mouse River Enhanced Food Protection Project will cross the current Sundre pipeline which creates numerous difficulties as design standards for pipelines crossing flood control features are very strict. Additionally, the NDDOT plans to replace the Broadway Bridge in Minot, and the foundation for the new abutment will be immediately adjacent to the existing Sundre pipeline. For all these reasons, the existing Sundre Raw Water Supply Pipeline must be replaced to ensure continuity of service through the coming years. The most logical and least cost alternative is to tie a new pipeline from the Sundre well field in to the existing NAWS 'raw' water line

immediately downstream of the NAWS pressure reducing station approximately four miles south of Minot. This approach would greatly reduce the costs to the City of Minot to replace the existing Sundre line, take advantage of 7.5 miles of currently unused NAWS infrastructure, and provide multiple benefits to the NAWS project in the future. It would also require connecting the existing NAWS line to the Minot water treatment plant, which requires modification of the injunction. This modification was granted by the DC district court February 8, 2017.

GE:TJF:pdh/237-04



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MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele P.E., Chief Engineer – Secretary
SUBJECT: Devils Lake Hydrologic and Outlet Updates
DATE: March 10, 2017

Hydrologic Update

The March 10th Devils Lake water surface elevation is 1450.2 feet. The lake elevation was relatively stable in 2016, but with current conditions projections are for a major rise in the lake elevation in 2017. The most recent forecast predicts a rise of 3 to 4 feet and potentially the largest annual inflow volume recorded in recent history. As a reminder, the record inflow of 595,000 acre-feet occurred in 2011.

The total precipitation recorded at Devils Lake in 2016 was 26.5 inches which is over 5 inches greater than the average since 1991. Wet conditions persisted throughout the fall and the basin entered winter with high soil moisture content. Snowpack and snow water equivalent are at near record levels and the threat for significant, impactful snowmelt flooding is very high for the Devils Lake Basin.

Potential lake levels provided in the National Weather Service long-range probabilistic outlook for the period of February 26, 2017 to September 30, 2017 are provided in the table below. Also shown are the increases in volume and area from the current level to the potential levels.

Probability	90%	50%	10%
Lake Elevation	1452.8 ft.	1453.6 ft.	1454.6 ft.
Lakes Vol. Increase	462,000 ac-ft	618,000 ac-ft	825,000 ac-ft
Lakes Area Increase	26,000 ac	35,000 ac	47,000 ac

Outlet Update

The Devils Lake Outlets are ready for operation in 2017 except for one motor on the West End Outlet. The Josephine number 2 pump (50 cfs) was sent to the GE Denver Service Center for maintenance and repair in December and the motor is expected to be returned in April prior to start-up. If the return is delayed, West Outlet operations could begin at reduced capacity as soon as streamflow in the Upper Sheyenne River allows. Stand Pipes were modified in January to help alleviate the foaming issue that reduced discharge capacity in 2016.

A meeting of the Devils Lake Outlets Management Advisory Committee to discuss 2017 operations has been scheduled for Thursday, May 4, from 1:00 to 4:00PM, in Carrington, North Dakota.

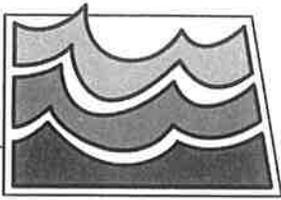
Tolna Coulee Control Structure

As the water level rises in Stump Lake, additional stop logs will be added to the control structure to keep the stop logs approximately 1 foot below the water surface elevation, the stop logs are currently at an elevation of 1449 ft. The natural outlet spill elevation of Stump Lake through Tolna Coulee is approximately 1458 ft.

GE:JK:TD:ph/416-10

DOUG BURGUM, GOVERNOR
CHAIRMAN

GARLAND ERBELE, P.E.
CHIEF ENGINEER-SECRETARY



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MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM:  Garland Erbele, P.E., Chief Engineer-Secretary
SUBJECT: Missouri River Update
DATE: March 10, 2017

System/Reservoir Status

System volume on March 10 in the six mainstem reservoirs was 57.3 million acre-feet (MAF), 1.2 MAF above the base of flood control. This is 4.4 MAF above the average system volume for the end of February and 0.4 MAF more than last year. The volume of water in the system on March 10, 2011 was 57.7 MAF.

On March 10, Lake Sakakawea was at an elevation of 1838.8 feet, 1.3 feet above the base of flood control. This is 0.7 feet higher than a year ago and 7.8 feet above its average end of February elevation. The minimum end of February elevation was 1806.9 feet in 2007, and the maximum end of February elevation was 1842.8 feet in 1973. The elevation of Lake Sakakawea on March 10, 2011 was 1838.0 feet.

On March 10, the elevation of Lake Oahe was 1608.3 feet, 0.8 feet above the base of flood control. This is 0.4 feet lower than a year ago and 7.7 feet higher than the average end of February elevation. The minimum end of February elevation was 1572.3 feet in 2007, and the maximum end of February elevation was 1611.1 feet in 1996. The elevation of Lake Oahe on March 10, 2011 was 1608.4 feet.

On March 10, the elevation of Fort Peck was 2235.1 feet, which is 1.1 feet above the base of flood control. This is 1.0 feet higher than a year ago and 8.3 feet higher than the average end of February elevation. The minimum end of February elevation was 2196.3 feet in 2007, and the maximum end of February elevation was 2243.5 feet in 1976. The elevation of Fort Peck on March 10, 2011 was 2235.9 feet.

Runoff and Reservoir Forecasts

Warm temperatures melted much of the plains snowpack in the upper Missouri River Basin resulting in above average runoff for the month of February (219 percent of average). On March 6, mountain snowpack in the "Above Fort Peck" reach was 98 percent of average. In the "Fort Peck to Garrison" reach it was 131 percent of average, similar to mountain snowpack conditions on that day in 2011. Typically, 79 percent of the peak mountain snowpack has accumulated by the beginning of March, and it normally peaks in mid-April.

The U.S. Army Corps of Engineers' (Corps) latest 2017 runoff forecast predicts annual runoff above Sioux City to be 29.1 MAF or 115 percent of average. The Corps' most recent reservoir forecast shows that releases from Garrison Dam are predicted to be 14,000 cfs through March and then increased to 22,000 – 26,000 cfs in April and May. Lake Sakakawea is forecasted to peak at elevation 1846.8 feet in July (9.3 feet above base of flood control) with peak releases of approximately 30,000 cfs throughout the summer.

Annual Operating Plan

The Corps will host public meetings in April throughout the basin to update the public on current hydrologic conditions and the planned operation of the system. The meeting in Bismarck will take place on April 12 at Bismarck State College. The State Water Commission will be providing comments.

Missouri River Recovery Implementation Committee (MRRIC)

Section 5018 of the 2007 Water Resources Development Act (WRDA) authorized the Missouri River Recovery Implementation Committee (MRRIC). The Committee is to make recommendations and provide guidance on activities of the Missouri River Recovery Program (MRRP). MRRIC has nearly 70 members representing local, state, tribal, and federal interests throughout the Missouri River Basin. The representatives for the State of ND on MRRIC are John Paczkowski (primary) and Laura Ackerman (alternate).

The Corps released for public comment on December 16 their Missouri River Recovery Management Plan and Environmental Impact Statement (MRRMP-EIS). The MRRMP-EIS evaluates a range of alternatives for the purposes of avoiding jeopardy to species on the Missouri River protected under the Endangered Species Act, specifically the threatened piping plover and endangered least tern and pallid sturgeon.

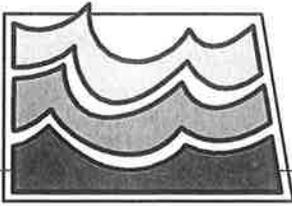
The Preferred Alternative (PA), as identified in the MRRMP-EIS, includes mechanical construction of habitat for the piping plover, least tern, and pallid sturgeon. In North Dakota, this would include the construction of new or maintenance of existing emergent sandbar habitat on the Garrison Reach. The PA also includes a one-time flow test for the pallid sturgeon spawning cue if naturally high flow does not occur on the Missouri River within about the next ten years. This one-time flow test would require a deviation from or change in the Master Manual.

The comment period for the MRRMP-EIS ends on April 24. The State Water Commission, through the State of ND's MRRIC representatives, is currently coordinating comments with other state agencies.

Water Supply Rule

On December 16, the Corps released their proposed Water Supply Rule for public comment (comment period ends on May 15). The proposed rule pertains to the use of Corps reservoirs for domestic, municipal, and industrial water supply. It attempts to define how the Corps would require users to enter into storage contracts and be charged for the use of water for those purposes. The main issue with the proposed rule is that it is fundamentally flawed because of the Corps' misunderstanding of state versus federal jurisdictions with respect to water appropriation and western water law, and its interpretation of the 1944 Flood Control Act. The proposed rule does not recognize states' rights to allocate water and interferes with states' sovereign rights.

GE:LCA:pdh/1392



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APPENDIX "J"

MARCH 29, 2017

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission

FROM: Garland Erbele, P.E., Chief Engineer-Secretary

SUBJECT: Spring Flooding Outlook

DATE: March 10, 2017

After the very heavy snowfalls of early winter, many areas of the State have benefited from optimal melt conditions and flooding risks are much lower than previously expected. Conditions on the Missouri River and Devils Lake are addressed in the reports on those basins, so this memo will focus on the other areas of the State. All these forecasts are from the NWS AHPS system. They are based on current conditions with expected precipitation through June.

The most serious flood risks persist in the northeast part of the State.

Pembina River:

Neché – 90 percent chance of major flood stage
Walhalla – 90 percent chance of minor flood stage

Park River:

Grafton – 50 percent chance of major flood stage

Forest River:

Minto – 25 percent to 50 percent chance minor flood stage

Goose River:

No flooding is forecast.

Sheyenne River:

Valley City – 25 percent to 50 percent chance of minor flood stage
Lisbon – 10 percent to 25 percent chance of moderate flood stage
Kindred – 10 percent chance of major flood stage
West Fargo Diversion – 10 percent chance of major flood stage
Harwood – 10 percent chance of moderate flood stage

Wild Rice River:

Abercrombie – 10 percent chance of moderate flood stage

Red River Mainstem:

Wahpeton – 25 percent chance of minor flood stage

Hickson – No flooding forecast

Fargo – 10 percent to 25 percent chance of moderate flood stage

Grand Forks – 10 percent to 25 percent chance of moderate flood stage

Oslo – 25 percent to 50 percent chance of moderate flood stage

Drayton – 10 percent to 25 percent chance of moderate flood stage

Pembina – 10 percent to 25 percent chance of major flood stage

Mouse River:

The International Souris River Board met in late February and was informed that volumes in the upper basin were approximately equal to a 15 year return period. This places the reservoir operation plan in flood control mode. Forecasts for stations in North Dakota are as follows.

Sherwood – 10 percent to 25 percent chance of minor flood stage

Minot – 10 percent to 24 percent chance of moderate flood stage

Logan – 25 percent to 50 percent chance of minor flood stage

Sawyer – less than 10 percent

Velva – 10 percent to 25 percent chance of minor flood stage

James River:

No flooding forecast

Apple Creek: 25 percent chance of moderate flood stage

Beaver Creek:

Linton – 10 percent to 25 percent chance of minor flood stage

Knife River:

Hazen – 10 percent to 25 percent chance of minor flood stage

Heart River:

No flooding forecast.

Little Missouri River:

No flooding forecast.