MINUTES

North Dakota State Water Commission
Bismarck, North Dakota

August 8, 2019

The North Dakota State Water Commission (SWC or Commission) held a meeting at the State Capitol, Brynhild Haugland Room, Bismarck, North Dakota, on August 8, 2019.

An informal orientation for commissioners was held from 9:15-10:00 a.m. State Engineer Erbele briefed Commissioners Anderson, Hemmer, Pedersen, and Schneider on the 2019-2021 budget. Pat Fridgen, Director of Planning and Education, gave an overview of the Water Development Plan. Jeffrey Mattern, Engineer Manager, presented information on the cost-share policy.

From 10:00-11:15 Lt. Governor Sanford led discussion on prioritization of projects, low head dams, economic analysis and life cycle cost analysis, and a pilot watershed project.

Governor Burgum called the regular meeting to order at 1:02 p.m., and requested Garland Erbele, State Engineer, and Chief Engineer-Secretary to the SWC, call the roll. Governor Burgum announced a quorum was present.

STATE WATER COMMISSION MEMBERS PRESENT:
Governor Burgum, Chairman (1:00 p.m.)
Tom Bodine, Deputy Commissioner, ND Department of Agriculture, Bismarck (1:00-5:20 p.m.)
Michael Anderson, Hillsboro (9:15 a.m.)
Katie Hemmer, Jamestown (9:15 a.m.)
Richard Johnson, Devils Lake (9:30 a.m.)
Mark Owan, Williston (9:40 a.m.)
Matthew Pedersen, Valley City (9:15 a.m.)
Steven Schneider, Dickinson (9:15 a.m.)

STATE WATER COMMISSION MEMBERS ABSENT:
Doug Goehring, Commissioner, ND Department of Agriculture, Bismarck
Jay Volk, Bismarck
Jason Zimmerman, Minot

OTHERS PRESENT:
Lt. Governor Brent Sanford (10:00-11:15 a.m. and 1:55-2:30 p.m.)
Garland Erbele, State Engineer, and Chief Engineer-Secretary
SWC Staff

Jennifer Verleger, General Counsel, Attorney General's Office
Approximately 50 people interested in agenda items.

CONSIDERATION OF AGENDA

The agenda for the August 8, 2019, SWC meeting was presented; there were no modifications.

CONSIDERATION OF DRAFT MEETING MINUTES FOR JUNE 19, 2019

The draft minutes for the June 19, 2019, SWC meeting were reviewed. There were no modifications.

It was moved by Commissioner Owan, seconded by Commissioner Hemmer, and unanimously carried, that the minutes for June 19, 2019, be approved as presented.

CONSIDERATION OF DRAFT MEETING MINUTES FOR JULY 24, 2019, SUBCOMMITTEE MEETINGS

The draft minutes for the July 24, 2019, subcommittee meetings were reviewed. There were no modifications.

It was moved by Commissioner Owan, seconded by Commissioner Pedersen, and carried, that the minutes for the July 24, 2019, subcommittee meetings be approved as presented. Governor Burgum abstained.

STATE WATER COMMISSION FINANCIAL REPORTS

The allocated program expenditures for the period ending May 31, 2019, were presented and discussed by Heide Delorme, Director of Administrative Services. The total expenditures were within the authorized budget amounts.

A bar chart summarizing project expenditures and commitments and Project Summary for the 2017-2019 Biennium, **APPENDIX A**, provided information on the committed and uncommitted funds from the Resources Trust Fund and the Water Development Trust Fund. The final summary for projects showed approved projects totaling $665,758,852 with expenditures of $309,119,151. A balance of $13,389,467 remains available to commit to projects in the 2017-2019 biennium.

The oil extraction tax deposits into the Resources Trust Fund total $357,306,957 through June 2019 and are $90,203,614 or 33.77 percent above budgeted revenues.

Deposits received for the Water Development Trust Fund total $33,314,811 through June 2019 and are currently $15,314,811 above the budget revenues of $18,000,000. The large increase was due to a settlement agreement between the state and the major tobacco companies over enforcement of the 1998 Tobacco Master Settlement agreement. We will not receive additional funds into this account.

BANK OF NORTH DAKOTA AG PACE PROGRAM

Heide Delorme requested an additional $150,000 be allocated to the Bank of North Dakota (BND) Ag PACE Program for interest buy-down for new irrigation development.

The Commission approved a request from the ND Irrigation Association allocating $1,000,000 in 2001 to supplement the Ag PACE program administered by the BND to buy down interest on loans for first time borrowers to enhance on-farm enterprises. Those funds provided an additional $20,000 of interest buy-down after the initial BND maximum was reached. Unused funds from this authorization have been carried over each biennium since that time.

An additional $200,000 was authorized in the 2013-2015 biennium, when the balance of the fund was at $21,312. The balance is now $30,365.

Secretary Erbele recommended approval of the funds for the BND interest buy-down program.

It was moved by Commissioner Pedersen and seconded by Commissioner Schneider the Commission approve $150,000 for the BND Ag PACE interest buy-down program for new irrigation from the funds appropriated to the Commission in the 2019-2021 biennium.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

ND DEPARTMENT OF ENVIRONMENTAL QUALITY NONPOINT SOURCE POLLUTION

Heide Delorme presented a request from the ND Department of Environmental Quality (DEQ) for state cost-share participation of their nonpoint source pollution (NPS) project.

The estimated total cost of the project is $200,000, of which all is eligible for state cost-share participation. The Commission previously approved a request for the 2017-2019 biennium. These funds would continue to support the delivery of

engineering services during the 2019-2021 biennium. The funds would be allocated to local NPS projects to match Clean Water Act-Section319(h) funds committed for engineering assistance.

Secretary Erbele recommended approval of the state cost-share participation.

It was moved by Commissioner Owan and seconded by Commissioner Anderson the Commission approve the request of the DEQ for state cost-share participation in the NPS for the amount of $200,000 from the funds appropriated to the Commission in the 2019-2021 biennium.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

NORTHWEST AREA WATER SUPPLY (NAWS)

(SWC Project No. 237-04)

Tim Freije, NAWS Project Manager, presented an update on the NAWS' project and provided details for the 2020 interim water rate and bid information on NAWS' contract 7-2A. The project update memorandum, 2020 interim water rate memorandum, and the 7-2A dissolved air flotation (DAF) system procurement contract memorandums are attached as **APPENDIX B.**

After Commission review and discussion, the following motions were made and approved:

2020 INTERIM WATER RATE

It was moved by Commissioner Hemmer and seconded by Commissioner Schneider the Commission approve NAWS interim water rates for the 2020 calendar year of $3.05/1,000 gallons for NAWS contract customers and $0.41/1,000 gallons for Minot contract customers.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

CONTRACT 7-2A DAF SYSTEM PROCUREMENT

It was moved by Commissioner Anderson and seconded by Commissioner Johnson the Commission authorize the Chief Engineer/Secretary to award NAWS Contract 7-2A DAF System

Procurement to the low responsive bidder pending review of the bids received in an amount no greater than $2.25 million, and in concurrence from Garrison Diversion Conservancy District.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

SNAGGING AND CLEARING COST-SHARE POLICY REVISIONS

Pat Fridgen presented proposed Cost-Share Policy revisions for Commission's approval, attached as **APPENDIX C.**

During the 2017 Legislative Assembly, legislation was passed that prohibited the Commission from providing cost-share for snagging and clearing projects. This resulted in changes to the agency's Project Funding Policy, Procedure, and General Requirements; and the Project Prioritization Guidance. These changes included the removal of language and sections related to the funding of snagging and clearing.

During the 2019 Legislative Assembly, new legislation was passed, allowing the Commission to fund snagging and clearing in natural water courses. As such, the agency's cost-share policy and prioritization guidance require modification to allow for the change.

In addition to changes related to snagging and clearing, two additional modifications were presented. The first related to the completion of preliminary designs as part of the pre-application process. The purpose of striking "preliminary designs" is this information is not necessary as part of the pre-application process and it allows those costs to be eligible if the project is approved for cost-share and costs are incurred after the approval date.

The second suggested change was related to striking language requiring the completion of final designs as part of applications for rural flood control cost-share requests. The purpose of striking the final design requirement is that it allows those costs to be reimbursed if the project is approved for cost-share, and they are incurred after the approval date.

After discussion, the following motion was made:

It was moved by Commissioner Pedersen and seconded by Commissioner Hemmer the Commission approve the policy language as written and included in APPENDIX C to 1) Project Funding Policy, Procedure, and General Requirements, and 2) Prioritization Guidance and become effective immediately.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

LOW HEAD DAM SURVEY

At the April Commission meeting, there were a number of cost-share requests related to modifications or rehabilitations of low head dams. These requests then prompted additional questions about the number of these structures in North Dakota, and potential costs associated with their repair or rehabilitation.

Planning and Education Division staff were directed to proceed with efforts to identify the number and location of low head dams throughout the state and to estimate a range of costs for mitigating public safety concerns related to the "roller effect" that these types of dams can cause.

In early May, the SWC reached out to water resource districts, joint water boards, and every city to collect information about existing low head dams. As a result of the survey, the agency was able to identify 40 additional low head dams. To date, the total number of known low head dams in North Dakota is now 103. Locations of those dams, low head dam mitigation costs and scenarios, as well as photos of modified low head dams are attached as **APPENDIX D.**

A range of costs to remove, modify, or rehabilitate remaining low head dams using historic cost estimates from previously completed projects was also provided as part of **APPENDIX D**.

After discussion, the following motion was made:

It was moved by Commissioner Pedersen and seconded by Commissioner Johnson that SWC staff develop a prioritization process for ranking low head dams for repair/replacement and identify the ownership of the dams.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

WATER SUPPLY PROJECT PRIORITIZATION

At the June Commission meeting Commissioners directed SWC staff to identify or develop a system of ranking municipal water supply projects within the agency's existing priority categories. Currently, projects are ranked using the agency's "Project

Prioritization Guidance" as Essential, High, Moderate, or Low, with no further ranking or prioritization.

Many of the water supply projects submitted for SWC cost-share are also ranked in the Department of Environmental Quality's (DEQ) "Intended Use Plan" for the Drinking Water State Revolving Loan Fund Program. These project rankings are based on point allocations for water quality, water quantity, affordability, infrastructure adequacy, consolidation or regionalization of water supplies, and operator safety. In addition, DEQ's annual Intended Use Plan is reviewed and approved by the Commission.

The attached table shows how the municipal water supply projects identified in the 2019 Water Development Plan would rank using the Water Commission's prioritization as the *primary* ranking factor, and DEQ's Intended Use Plan rankings as a *secondary* factor, **APPENDIX E.** Those projects that did not apply to the Drinking Water State Revolving Loan Fund Program could be assigned a rank by Water Commission staff in cooperation with DEQ staff using project information forms submitted by the project sponsors as part of the 2019 Water Development Plan inventory process.

Shannon Fisher, DEQ Program Manager, clarified how the DEQ's point system and ranking was compiled and determined. The 2019 Intended Use Plan, as well as the priority ranking system used in that effort are also attached in **APPENDIX E**.

After discussion, the following motion was made:

> **It was moved by Commissioner Owan and seconded by Commissioner Johnson the Commission begin using the Intended Use Plan ranking system as a mechanism to provide a secondary ranking to municipal water supply projects within the SWC's existing priority categories. It was also recommended that in addition to the total points assigned to each project under the DEQ ranking system, that staff also provide the points awarded by DEQ for each of the ranking categories.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.**

STATE COST-SHARE REQUESTS

FLOOD CONTROL REQUESTS:

SOUTHEAST CASS WATER RESOURCE DISTRICT, WILD RICE RIVER - $120,000 (SWC Project No. 1868)

Southeast Cass Water Resource District requested cost-share for 2019-2020 Wild Rice River snagging and clearing costs to keep the river clear of obstructions.

The total project estimate was $240,000 and eligible for 50 percent cost-share. The recommendation was to provide cost-share of 50 percent in the amount of $120,000. The cost-share request is attached as **APPENDIX F.**

> **It was moved by Commissioner Pederson and seconded by Commissioner Hemmer the Commission approve the request by Southeast Cass Water Resource District for state cost-share participation at 50 percent of eligible costs in the 2019-2020 Wild Rice River snagging and clearing project at an amount not to exceed $120,000. This approval is subject to the entire contents of the recommendation contained herein and the availability of funds.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.**

SOUTHEAST CASS WATER RESOURCE DISTRICT, SHEYENNE RIVER - $294,000 (SWC Project No. 0568)

Southeast Cass Water Resource District requested cost-share for 2019-2020 Sheyenne River snagging and clearing costs to keep the river clear of obstructions.

The total project estimated for three reaches combined is $588,000 and eligible for 50 percent cost-share. The recommendation was to provide cost-share of 50 percent in the amount of $294,000. The cost-share request is attached as **APPENDIX G.**

> **It was moved by Commissioner Pederson and seconded by Commissioner Anderson the Commission approve the request by Southeast Cass Water Resource District for state cost-share participation at 50 percent of eligible costs in the 2019-2020 Sheyenne River snagging and clearing Reaches 1, 2 and 3 at an amount not to exceed $294,000. This approval is subject to the**

entire contents of the recommendation contained herein and the availability of funds.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

PEMBINA COUNTY WATER RESOURCE DISTRICT, TONGUE RIVER - $98,337 (SWC Project No. 1694)

Pembina County Water Resource District requested cost-share for 2019-2020 Tongue River snagging and clearing costs to keep the river clear of obstructions.

The initial step will be a drone flight to identify the critical reaches that require snagging and clearing. The project will build off the seven miles of snagging and clearing completed in 2018-2019. The total estimated cost is $196,674 which is eligible for 50 percent cost-share. The recommendation was to provide cost-share of 50 percent in the amount of $98,337. The cost-share request is attached as **APPENDIX H.**

It was moved by Commissioner Owan and seconded by Commissioner Schneider the Commission approve the request by the Pembina County Water Resource District for state cost-share participation at 50 percent of eligible costs in the Tongue River snagging and clearing at an amount not to exceed $98,337. This approval is subject to the entire contents of the recommendation contained herein and the availability of funds.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

BURLEIGH COUNTY WATER RESOURCE DISTRICT, SIBLEY ISLAND - $96,420 (SWC Project No. 2129)

Burleigh County Water Resource District (District) requested cost-share for the Sibley Island flood control project. Because some of the flood control benefits will be achieved through highway grade raises, the project is coordinated with the Burleigh County Highway Department.

This project represents the remaining southern segment of the Burleigh County 20-Foot Flood Control Plan and was specifically considered during the budgeting efforts of the last legislative session. After the preliminary engineering report and design is completed, a vote will be taken by the benefitted landowners. A petition was initiated by

the landowners and a public informational meeting was held on November 27, 2018. Final design is planned for 2020-2021 and construction is planned for 2021-2022. The total estimated cost of the project is $4,850,876.

The total project estimate for pre-construction is $160,700. The project is eligible for 60 percent cost-share as a flood control project. The recommendation was to provide cost-share of 60 percent in the amount of $96,420. The cost-share request is attached as **APPENDIX I.**

It was moved by Commissioner Schneider and seconded by Commissioner Johnson the Commission approve the request by the Burleigh County Water Resource District for state cost-share participation at 60 percent of eligible costs in the Sibley Island Flood Control Pre-Construction at an amount not to exceed $96,420. This approval is subject to the entire contents of the recommendation contained herein and the availability of funds.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

CITY OF MINOT, 2019 BANK STABILIZATION SWIF ACTION E - $823,180 (SWC Project No. 2128)

Minot requested cost-share for the Minot 2019 System Wide Improvement Framework (SWIF) Action E project. The USACE performs annual inspections on the Mouse River flood control system through Minot to assess the condition of the system. These inspections identified multiple deficient areas that pose a risk to the integrity of the flood control system. SWIF was created to address the system's deficiencies. This project will stabilize the existing bank erosion areas threatening the stability of existing flood control levee. The project is currently under design and will be bid later this summer. The project is scheduled to begin construction in 2019 and completed in 2020.

The total project estimate is $1,861,480. The project is eligible for 50 percent cost-share as a flood control project. The eligible cost is $1,646,360 and the recommendation was to provide cost-share of 50 percent in the amount of $823,180. The cost-share request is attached as **APPENDIX J.**

It was moved by Commissioner Pedersen and seconded by Commissioner Johnson the Commission approve the request by Minot for state cost-share participation at 50 percent of eligible costs in the Minot 2019 SWIF Action E at an amount not to exceed $823,180. This approval is subject to the entire contents of the recommendation contained herein and the availability of funds.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

TRI-COUNTY WATER RESOURCE DISTRICT, DRAIN NO. 6 - $738,846 (SWC Project No. 1217)

The Tri-County Water Resource District requested cost-share for reconstruction of Tri-County Drain No. 6 Phase II project in February 2018. The project was deferred due to limited funding for conveyance projects in the 2017-2019 biennium. Approximately seven miles of drain would be reconstructed along the center section of the drain. The project will flatten channel slopes, re-grade the drain flow line and increase opening sizes at roadway crossings.

The project is eligible for 45 percent cost-share as a rural flood control project. The project eligible cost is $1,641,879, which amounts to $738,846. Economic analysis (EA) on flood control projects greater than $1,000,000 is now required. The benefit-to-cost for this project was 0.406. The Commission needs to determine how the EA will be utilized. Secretary Erbele provided two alternative recommendations to aid in the discussion: 1) approval of the cost-share request at 45 percent of eligible costs at an amount not to exceed $738,846, and 2) deny the cost-share request because of the EA being 0.406, the Commission has a fiduciary responsibility to ensure the state is investing in projects that will provide a positive return on investment. Secretary Erbele and staff strongly recommended alternative 2. The cost-share request is attached as **APPENDIX K.**

Commission discussed low EA ratings, the desire to build a data set with more than one drain project, definition of maintenance or repair, and further benefits or solutions to the reconstruction of drain as proposed. The project sponsor and SWC staff were instructed to provide additional information to the Commission.

After discussion, the following motion was made:

It was moved by Commissioner Owan and seconded by Commissioner Schneider the Commission table the request of Tri-County Water Resource District for state cost-share participation at 45 percent of eligible costs in the amount of $738,846.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

MAPLE RIVER WATER RESOURCE DISTRICT, DAVENPORT FLOOD RISK REDUCTION - $2,083,600
(SWC Project No. 2111)

The Maple River Water Resource District's request for cost-share funding for the Davenport flood risk reduction was withdrawn and not presented to the Commission.

SARGENT COUNTY WATER RESOURCE DISTRICT, DRAIN NO. 12 - $146,233
(SWC Project No. 2127)

Sargent County Water Resource District requested cost-share for Sargent County Drain No. 12. The improvements address channel stability by reducing the channel slope. The proposed project includes sizing culverts, installing permanent rock checks to reduce channel velocities, and improves conveyance through County Road 5 roadway by increasing the culvert size.

A sediment analysis is not necessary for this project since the project addresses erosion control due to high velocities because of the steep channel, which results in very minimal sediment in the drain.

The total project estimate is $358,000. The project is eligible for 45 percent cost-share as a rural flood control project. The ineligible costs include $7,500 for legal, $2,500 for administrative, and $23,037 in contingencies with a total eligible cost at $324,963. Contingencies up to 10 percent are eligible. The recommendation was to provide cost-share of 45 percent in the amount of $146,233. The cost-share request is attached as **APPENDIX L.**

Commission discussed completion of an EA for this project.

> **It was moved by Commissioner Johnson and seconded by Commissioner Hemmer the Commission table the request of Sargent County Water Resource District for state cost-share participation at 45 percent of eligible costs in the amount of $146,233.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.**

GENERAL WATER REQUEST:

REVISION AND REVIEW OF IDENTIFIED ND NAVIGABLE WATERS - $400,000

Aaron Carranza, Director of Regulatory Division, presented SWC's request for funding up to $400,000 for the selection and hiring of multiple firms to conduct a

navigability study of 16 waterbodies in North Dakota. The study will be used to inform the public process outlined in House Bill 1202 (HB1202), sections 2 and 4.

Due to the passage of HB1202 by the 66th Legislative Assembly, the Office of the State Engineer must collaborate with the Commission to develop defensible review of all claimed navigable waterbodies in North Dakota during the 2019-20 interim. The review will then be opened to public input and appeal. This cost-share request will provide the research and information necessary upon which to build a defensible review for each referenced water body. The request and HB1202 with fiscal note are attached as **APPENDIX M.**

It was moved by Commissioner Owan and seconded by Commissioner Schneider the Commission approve up to $400,000 for the selection and hiring of multiple firms to conduct a navigability study of 16 identified waterbodies.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

MUNICIPAL WATER SUPPLY REQUESTS:

CITY OF MINOT, SOUTHWEST WATER TOWER - $2,855,000 (SWC Project No. 2050MIN)

Minot submitted a cost-share request for pre-construction and construction costs for a new 1,500,000-gallon elevated water tower to help meet water demands of the new Trinity Hospital to be completed in 2022, other continued growth, and future growth in the southwest portion of Minot.

Minot serves 47,370 people and had an annual population growth rate of 2 percent since 2010. A "Do Nothing" alternative is insufficient in providing water for Minot's future growth. SWC's life cycle cost analysis only considered the alternative of an elevated storage tank because Minot's design for water pressure zones is based on elevated storage and not ground storage.

Minot's ¾" water meter flat-water rate is $10.78 per month and $5.09 per 1,000 gallons used. The local share of the project is programmed into Minot's capital improvement plan and the rates will cover the bonding for this project. Minot will complete plans and specifications for bidding in late 2019, bid and start construction in 2020, and complete final construction in summer of 2021. The project's estimated total cost is $4,758,334 with pre-construction costs of $195,060 and construction costs of $4,563,274. The recommendation was to provide cost-share of 60 percent in the amount of $2,855,000. The cost-share request is attached as **APPENDIX N.**

Commission discussed further review of state funding for water towers and possible economic analysis needed for water tower projects.

It was moved by Commissioner Hemmer and seconded by Commissioner Schneider the Commission table Minot's request for state cost-share participation of $2,855,000 at 60 percent.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

CITY OF SYKESTON, WATER TOWER - $598,800
(SWC Project No. 2050SYK)

Sykeston submitted a cost-share request for a constructing a new 50,000-gallon elevated water tower to replace their existing 50,000-gallon tower to meet water demands for domestic and fire. Sykeston's 2018 reported annual water use was 2,220,604 gallons and serves 110 people. Sykeston had an annual population growth rate of -1.0 percent since 2010.

A "Do Nothing" alternative is insufficient based on a 2017 KLM Engineering study which found structural deficiencies, open holes, numerous exterior and interior coating failures throughout the roof, eaves, sidewalls, and legs on a tower built in 1915. The SWC life cycle cost analysis (LCCA) considered two alternatives; doing rehabilitation of the existing tower or building a new tower. The present value cost is $48,000 more for a new tower over rehabilitation of the existing tower.

Sykeston receives bulk water pumped into the tower from Central Plains Water District with a rate $6 per 1,000 gallons used. The schedule is to complete plans and specifications by November 2019, bid and award construction by February 2020, start construction in April 2020, and complete construction by November 2020. The estimated total cost is $1,070,000. Policy requires ineligible items to be excluded from cost-share for funding contributions provided by other state entities that supplant costs. Sykeston applied for a $72,000 community development block grant and the local share of the project would be from the Drinking Water State Revolving Loan Fund. The recommendation was to provide 60 percent of eligible costs in the amount of $598,800. The cost-share request is attached as **APPENDIX O.**

Commission discussed further information is needed in LCCA and benefits.

It was moved by Commissioner Hemmer and seconded by Commissioner Johnson the Commission table the request for cost-share of $598,800 at 60 percent.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

CITY OF LINCOLN, WATER STORAGE TANK - $1,268,000 (SWC Project No. 2050LIN)

Lincoln submitted a cost-share request for constructing a new 1,000,000-gallon water storage tank to replace their existing 549,000-gallon tank to meet water demands from continued growth and future growth. Lincoln serves 3,730 people and had an annual population growth rate of 7 percent since 2010. Lincoln's water rate is $23.50 per month and $4 per 1,000 gallons used.

A "Do Nothing" alternative is insufficient in providing water for current and future growth based on the existing tank having settlement issues, delamination of the glass coating of the steel, ice damage, and extensive corrosion on base ring on a tank built in 1985. The SWC life cycle cost analysis considered three alternatives; new steel tank, new concrete tank, and new steel/glass tank. A concrete tank has the lowest present value cost by $250,000.

The schedule is to complete plans and specifications in winter 2019, bid and start construction in spring 2020, and complete project in summer 2021. The estimated total cost is $2,113,335. The local share of the project would be from the Drinking Water State Revolving Loan Fund. The recommendation was to provide cost-share of 60 percent in the amount of $1,268,000. The cost-share request is attached as **APPENDIX P.**

Commission discussed further information is needed in LCCA and benefits.

It was moved by Commissioner Hemmer and seconded by Commissioner Johnson the Commission table the request of Lincoln for cost-share of $1,268,000 at 60 percent.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

CITY OF GRAND FORKS, WATER TREATMENT PLANT - $9,875,000 (SWC Project No. 2050GRF)

Grand Forks submitted a request for additional cost-share toward construction costs for replacing their existing 16.5 million gallons per day water treatment plant with a new 20 million gallons per day plant to meet water demand projections through 2050. The design allows for expanding to 40 million gallons per day. Grand Forks serves 57,000

people and the water rate $9.49 per month and $4.42 per 1,000 gallons used. The local share of the project is from the Drinking Water State Revolving Loan Fund. The plant construction started in December 2016 and final completion is expected by June 2020.

Section 13 of the SWC's 2015 - 2017 biennium appropriation bill, Senate Bill 2020, had legislative intent that the state provides grants for one-half of the cost to construct the Grand Forks water treatment plant project, provide a $30,000,000 grant for the project during the 2015-17 biennium, and a $30,000,000 grant for the project during the 2017-19 biennium. Also, in 2013 Grand Forks received a 50 percent grant of $4,990,000 on project design. The previous cost was $130,000,000 with total cost-share approved of $64,990,000.

The current estimated total cost is $149,750,000 or an additional $19,750,000. The recommendation was to provide cost-share of 50 percent, for an additional $9,875,000. The cost-share request is attached as **APPENDIX Q.**

Commission discussed confirmation of legislative intent for original funding.

It was moved by Commissioner Johnson and seconded by Commissioner Owan the Commission table the request of Grand Forks for the cost-share of $9,875,000 at 50 percent.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

RURAL WATER SUPPLY REQUESTS:

MISSOURI WEST WATER SYSTEM, NORTH MANDAN/HIGHWAY 25 ($530,000) AND HARMON LAKE ($565,000) - $1,095,000
(SWC Project No. 2050MIS)

Missouri West Water System (MWWS) requested cost-share for pre-construction and construction costs for North Mandan/Highway 25 and Harmon Lake Area Projects to meet water demands from continued growth and future growth in the water system. The project benefits 400 existing customers and approximately 200 new customers in the service area.

MWWS serves 7,486 people in Morton County and has a population growth of 30 percent since 2010. The system receives approximately 80 percent of its water from Mandan, which charges $1.89 per 1,000 gallons used, through a 1992 water purchase agreement, and the remaining 20 percent from the Southwest Pipeline Project at a rate of $5.23 per 1,000 gallons used. MWWS rural water rate is $40 per month minimum

and $5.91 per 1,000 gallons used. Rural systems across the state have a median rate of $45 per month minimum and $6 per 1,000 gallons.

The schedule is to complete plans and specifications for bidding in late 2019, bid and start construction in early 2020, and complete final construction in summer of 2021. MWWS is requesting a 50 percent cost-share of $530,000 on the North Mandan/Highway 25 project at an estimated total cost of $1,060,000 and a 75 percent cost-share of $565,000 on the Harmon Lake Area project with an estimated total cost of $753,333. The recommendation was to provide cost-share in a combined project in the amount of $1,095,000. The local share would be from the North Dakota Drinking Water State Revolving Loan Fund with a term of 30 years and an interest rate of 2 percent. The cost-share request is attached as **APPENDIX R.**

It was moved by Commissioner Owan and seconded by Commissioner Johnson the Commission approve cost-share of $1,095,000, for the MWWS North Mandan/Highway 25 Project at 50 percent and for the Harmon Lake Area Project at 75 percent. The funding is in the form of a cost-share towards eligible costs, and contingent on available funding.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

TRI-COUNTY WATER DISTRICT, PHASE 5 - $1,990,000
(SWC Project No. 2050TRI)

Tri-County Water District (District) requested cost-share for Phase 5 expansion costs to expand the rural distribution to 50 or more new users throughout the northern service area. The District's main water supply is from the Elk Valley Aquifer and receives water from Greater Ramsey Water District.

The system water rate is $54 per month minimum and $6 per 1,000 gallons used. After the initial sign-up phase, users pay a $1,500 connection fee. Rural systems across the state have a median rate of $45 per month minimum and $6 per 1,000 gallons. The District will purchase capacity from McVille at a water rate of $1.25 per 1,000 gallons for up to 58,220,000 gallons and pay $3 per 1,000 gallons above that amount. McVille's water supply is from the McVille Aquifer and they can treat 800,000 gallons per day at their water treatment plant.

The estimated project cost is $3,525,000. The schedule is to complete design by November, bid in December, do construction from March to October of 2020, and complete the project by December 2020. The District is requesting $1,990,000 and will cover the remaining amount with a North Dakota Drinking Water State Revolving Loan

Fund with a term of 30 years and an interest rate of 2 percent. The recommendation was to provide cost-share of 75 percent in the amount of $1,990,000. The cost-share request is attached as **APPENDIX S.**

It was moved by Commissioner Hemmer and seconded by Commissioner Owan the Commission approve cost-share of up to $1,990,000, for the Tri-County Water District Phase 5 Project funded at 75 percent. The funding is for eligible costs and is contingent on available funding.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

SOUTHWEST PIPELINE PROJECT (SWPP)

Sindhuja S.Pillai-Grinolds, SWPP Project Manager, presented an update on the SWPP project and SWPP's request to authorize Secretary Erbele award Contract 2019-1 to the lowest responsible bidder. The project update memorandum and the request for contract award are attached as **APPENDIX T.**

It was moved by Commissioner Owan and seconded by Commissioner Hemmer the Commission authorize State Engineer/Secretary Erbele to award Contract 2019-1 to the lowest responsible bidder contingent upon the consultant engineer's recommendation and legal review of the contract documents by SWC legal counsel.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Bodine, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion carried.

PROJECT UPDATES

Commission staff provided brief updates on the following projects with the summary updates attached as **APPENDIX U:**

Jon Kelsch, Construction Section Chief, Devils Lake Outlet;
Laura Ackerman, Investigations Section Chief, Missouri River and Mouse River.

ROUNDTABLE UPDATES WITH COMMISSIONERS

Commissioner Johnson announced he testified at the Water Topics Overview Committee meeting on August 1 and thanked Governor for the emergency clause associated with the SWC funding bill. This allowed funding be released at the June meeting in the amount of $111 million.

Commissioner Anderson thanked SWC staff for their involvement in the recent Forest River Colony tour.

LEGAL UPDATES

Jennifer Verleger, General Counsel, Attorney General's Office, provided brief legal updates on State Water Commission and Office of the State Engineer litigation, attached as **APPENDIX V.**

PERFORMANCE REVIEW/SALARY INCREASE

Governor Burgum informed the Commission that the Legislative Assembly passed an act to allow salary increases for state employees. The salary increase was capped at $200 per month. Secretary Erbele was asked to complete a self-review. Governor Burgum asked Commissioners for feedback.

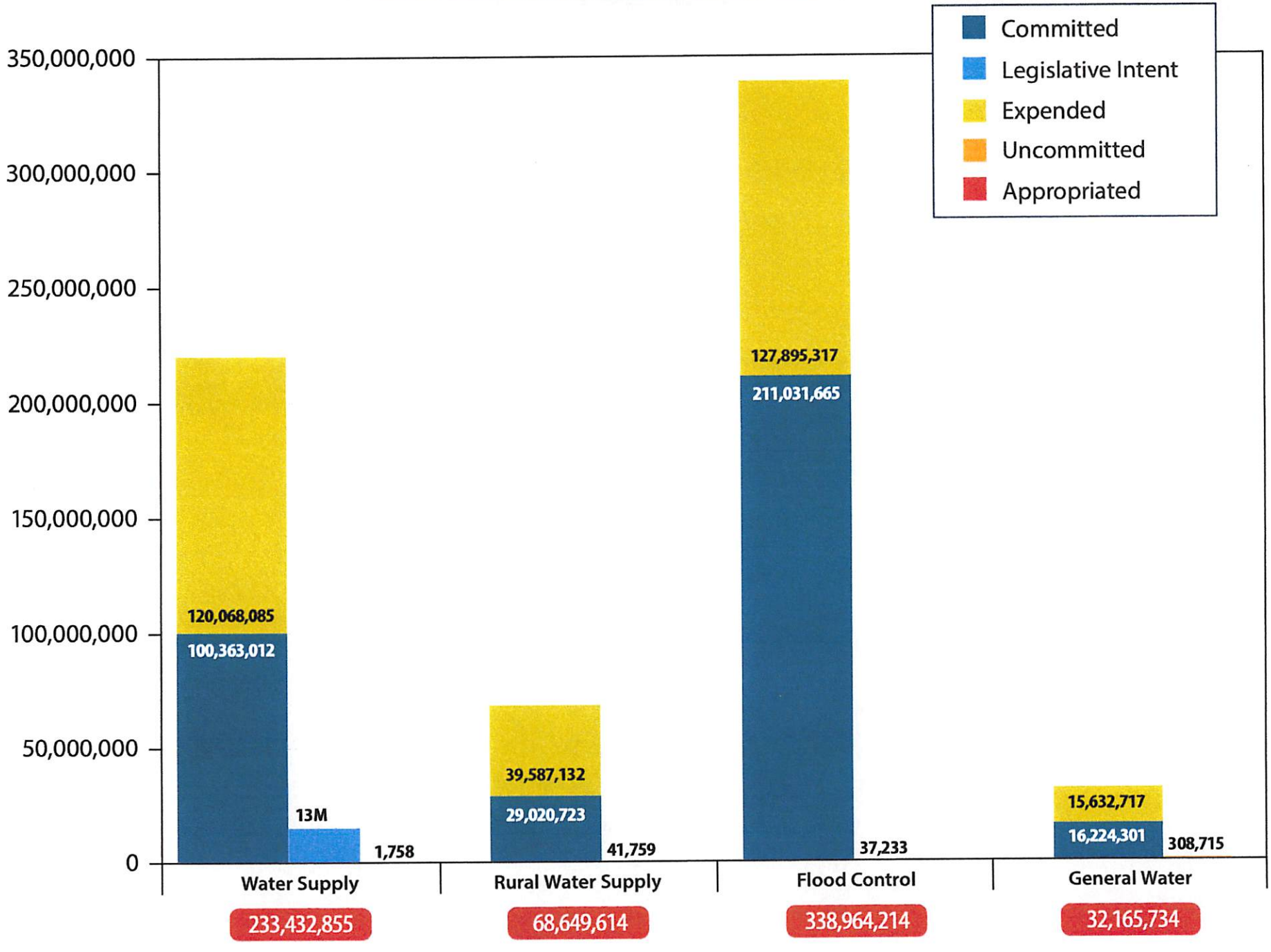
> **It was moved by Commissioner Hemmer, seconded by Commissioner Pedersen, and unanimously carried, that the Commission approve Secretary Erbele's 2019 salary increase effective July 1, 2019, in the amount of $200 per month.**

There being no further business to come before the Commission, Governor Burgum adjourned the August 8, 2019, meeting at 5:52 p.m.

Brent Sanford, Lt. Governor
Chairman, State Water Commission

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

PROJECT FUNDS



APPENDIX A

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 BIENNIUM

May-19

	2015-2017 CARRYOVER	2017-2019 FUNDING	2017-2019 BUDGET	SWC/SE APPROVED	REMAINING UNOBLIGATED
MUNICIPAL & REGIONAL WATER SUPPLY:					
MUNICIPAL WATER SUPPLY	54,802,659	40,225,561	95,028,220	95,028,220	0
RED RIVER VALLEY	0	30,000,000	30,000,000	17,000,000	13,000,000
OTHER REGIONAL WATER SUPPLY	60,241,296	48,161,581	108,402,877	108,402,877	0
UNOBLIGATED MUNICIPAL/REG WATER SUPPLY		1,758	1,758		1,758
TOTAL			233,432,855		
% OBLIGATED		89.02%			
RURAL WATER SUPPLY:					
RURAL WATER SUPPLY	41,195,208	27,412,647	68,607,855	68,607,854	1
UNOBLIGATED RURAL WATER SUPPLY		41,759	41,759		41,759
TOTAL			68,649,614		
% OBLIGATED		99.85%			
FLOOD CONTROL:					
FARGO	78,376,087	66,500,000	144,876,087	144,876,087	0
MOUSE RIVER	29,187,970	58,359,005	87,546,975	87,546,975	0
VALLEY CITY	13,693,459	3,180,637	16,874,096	16,874,096	0
LISBON	9,000,010	0	9,000,010	9,000,010	0
OTHER FLOOD CONTROL	36,063,386	1,614,825	37,678,211	37,678,211	0
PROPERTY ACQUISITIONS	16,849,083	7,473,013	24,322,096	24,322,096	0
WATER CONVEYANCE	19,914,006	(1,284,498)	18,629,508	18,629,508	0
UNOBLIGATED FLOOD CONTROL		37,233	37,233		37,233
TOTAL			338,964,214		
% OBLIGATED		99.97%			
GENERAL WATER:					
GENERAL WATER	16,886,983	14,970,036	31,857,019	31,857,019	0
UNOBLIGATED GENERAL WATER		308,715	308,715		308,715
TOTAL			32,165,734		
% OBLIGATED		97.98%			
REVOLVING LOAN FUND:					
GENERAL WATER PROJECTS	4,681,900	900,000	5,581,900	5,581,900	0
WATER SUPPLY	354,000	0	354,000	354,000	0
% OBLIGATED		100.00%			
TOTALS	381,246,045	297,902,279	679,148,319	665,758,852	13,389,467

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 BIENNIUM

May-19

	SWC/SE APPROVED	EXPENDITURES	REMAINING UNPAID
MUNICIPAL & REGIONAL WATER SUPPLY:			
MUNICIPAL WATER SUPPLY	95,028,220	49,244,553	45,783,667
RED RIVER VALLEY	17,000,000	13,000,000	4,000,000
OTHER REGIONAL WATER SUPPLY	108,402,877	57,823,532	50,579,345
TOTAL	220,431,097	120,068,085	100,363,012
RURAL WATER SUPPLY:			
RURAL WATER SUPPLY	68,607,854	39,587,132	29,020,723
FLOOD CONTROL:			
FARGO	144,876,087	22,863,526	122,012,561
MOUSE RIVER	87,546,975	36,364,879	51,182,095
VALLEY CITY	16,874,096	9,756,306	7,117,790
LISBON	9,000,010	7,336,092	1,663,918
OTHER FLOOD CONTROL	37,678,211	20,034,571	17,643,640
PROPERTY ACQUISITIONS	24,322,096	23,007,857	1,314,239
WATER CONVEYANCE	18,629,508	8,532,085	10,097,423
TOTAL	338,926,982	127,895,317	211,031,665
GENERAL WATER:			
GENERAL WATER	31,857,019	15,632,717	16,224,301
REVOLVING LOAN FUND:			
GENERAL WATER PROJECTS	5,581,900	5,581,900	0
WATER SUPPLY	354,000	354,000	0
TOTALS	665,758,852	309,119,151	356,639,701

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 Biennium

WATER SUPPLY

Approved By	SWC No	Dept	Sponsor	Project	Approved Date	Total Approved	Total Payments	*May-19* Balance
			Municipal Water Supply:					
	2050-13	5000	Mandan	New Raw Water Intake	10/7/13	1,515,672	270,291	1,245,381
	2050-15	5000	Washburn	New Raw Water Intake	10/7/13	2,281,927	233,049	2,048,878
	2050-18	5000	Grafton	Water Treatment Plant Phase 3	10/7/13	48,822	48,822	(0)
	2050-20	5000	Dickinson	Capital Infrastructure	10/6/15	1,731,926	0	1,731,926
	2050-21	5000	Watford City	Capital Infrastructure	8/1/15	536,627	13,873	522,754
	2050-26	5000	Fargo	Fargo Water System Regionalization Improvements	7/29/15	4,131,788	1,988,627	2,143,161
	2050-28	5000	Mandan	Water Systems Improvement Project	10/6/15	1,812,123	1,812,123	0
	2050-29	5000	Minot	Water Systems Improvement Project	10/6/15	3,478,647	2,879,346	599,301
	2050-30	5000	Watford City	Water Systems Improvement Project	10/6/15	5,374,639	548,390	4,826,249
	2050-31	5000	West Fargo	Water Systems Improvement Project	10/6/15	392,388	392,388	0
	2050-32	5000	Williston	Water Systems Improvement Project	10/6/15	7,857,010	0	7,857,010
	2050-36	5000	Dickinson	Water Systems Improvement Project	10/6/15	0	0	0
	2050-37	5000	Dickinson	Dickinson State Avenue South Water Main	12/11/15	963,920	0	963,920
	2050-44	5000	Beulah	Water Treatment Plant	3/9/16	1,639,813	1,639,813	0
	2050-49	5000	Grand Forks	Grand Forks Water Treatment Plant	8/23/17	50,645,520	37,631,134	13,014,386
	2050-51	5000	Mercer	Connect to McLean-Sheridan	8/23/17	0	0	0
	2050-52	5000	New Town	Water Transmission Storage	10/11/18	1,940,000	1,093,822	846,178
	2050-53	5000	West Fargo	Brooks Harbor Water Tower	8/23/17	1,950,000	0	1,950,000
	2050-54	5000	West Fargo	North Loop Connection	8/23/17	510,000	0	510,000
	2050-55	5000	West Fargo	West Loop Connection	8/23/17	1,110,000	0	1,110,000
	2050-56	5000	Williston	US Highway 2 Water Main	8/23/17	434,400	419,029	15,371
	2050-66	5000	Lincoln	Lincoln Water System Improvement Project	2/8/18	1,130,000	43,313	1,086,688
	2050-67	5000	Williston	Williston Water System Improvements	2/8/18	2,336,000	0	2,336,000
	2050-69	5000	Mandan	Sunset Reservoir Water Transmission Line	4/12/18	3,135,000	158,534	2,976,466
	2050-70	5000	Wing	Water Tower Repair	4/12/18	72,000	72,000	0
				TOTAL MUNICIPAL WATER SUPPLY		***95,028,220***	***49,244,553***	***45,783,667***
			Regional Water Supply:					
	1736-05	8000	SWPP	Southwest Pipeline Project	7/1/17	52,249,989	34,941,911	17,308,079
	2374	9000	NAWS	Northwest Area Water Supply	2/8/18	27,108,462	4,564,570	22,543,892
HB 1020	1973-02	5000	WAWSA	WAWSA	9/15/14	155,603	155,603	(0)
	1973-05	5000	WAWSA	WAWSA Phase IV	10/6/15	8,888,823	5,886,855	3,001,967
	1973-06	5000	WAWSA	WAWSA Phase V	12/8/17	20,000,000	12,274,593	7,725,407
	325-105	5000	RRVWSP	RRVWSP Garrison Diversion	8/23/17	17,000,000	13,000,000	4,000,000
				TOTAL REGIONAL WATER SUPPLY		***125,402,877***	***70,823,532***	***54,579,345***
			Rural Water Supply:					
	2050-17	5000	Barnes Rural RWD	Improvements	3/11/15	1,096,634	1,096,634	0
	2050-23	5000	Greater Ramsey WRD	SW Nelson County Expansion	8/23/17	1,323,874	1,323,874	0
	2050-25	5000	All Seasons Water District	Bottineau County Extension, Phase I	7/29/15	299,358	57,503	241,855
	2050-33	5000	Stutsman RWD	Phase V Storage & Pipeline Expansion Project	10/6/15	1,172,760	1,172,760	0
	2050-34	5000	North Prairie RWD	Storage and Water Main	10/6/15	1,968,086	949,565	1,018,520
	2050-35	5000	Southeast Water Users Dist	System Wide Expansion Feasibility Study	8/23/17	13,159,145	9,113,202	4,045,944
	2050-38	5000	Dakota Rural Water District	Reservoir C Expansion	12/11/15	52,601	52,601	0
	2050-41	5000	Northeast Regional WD	City of Devils Lake Water Supply Project	12/11/15	12,789,020	12,789,020	0
	2050-42	5000	Walsh RWD	Phase 1 & 2 System Expansion	12/11/15	1,639,753	1,382,441	257,312
	2050-43	5000	All Seasons Water District	System 4 Connection to System 1	12/11/15	4,900,000	0	4,900,000
	2050-45	5000	Garrison Rural Water District	System Expansion Project	3/9/16	1,271,241	1,271,241	0
	2050-50	5000	Grand Forks Traill RWD	Eastern Expansion & TRWD Interconnect Fesibility	8/23/17	126,000	126,000	0
	2373-39	5000	North Central Rural Water Consortium	Carpio Berthold Phase 2	4/1/15	2,425,167	1,498,285	926,882
	2373-41	5000	North Central Rural Water Consortium	Granville-Deering Area	10/24/16	1,831,540	1,372,403	459,137
	2050-57	5000	North Central Regional Water District	Mountrail Expansion Phase II	8/23/17	3,086,000	47,128	3,038,873
	2050-58	5000	North Central Regional Water District	Mountrail Co. Watery Phase III	8/23/17	3,430,000	0	3,430,000
	2050-59	5000	Cass Rural Water District	Horace Storage Tank	10/11/18	1,846,000	0	1,846,000
	2050-60	5000	North Prairie Rural District	Reservoir 9 Water Supply	6/12/18	1,114,620	613,716	500,904
	2050-61	5000	North Prairie Rural District	Surrey/Silver Spring	6/12/18	107,430	85,079	22,351
	2050-62	5000	Traill Rural District	Expansion/Interconnect	8/23/17	150,880	150,880	0
	2050-63	5000	Walsh RWD	System Expansion Project	4/12/18	1,300,000	488,708	811,292
	2050-64	5000	McLean-Sheridan Water District	Turtle Lake Water Tower	8/9/18	2,378,450	1,210,123	1,168,327
	2050-65	5000	Tri-County Rural Water District	System Expansion Project	8/9/18	2,803,250	168,223	2,635,027
	2050-71	5000	East Central RWD	Grand Forks/Traill Project	12/7/18	6,091,545	3,766,882	2,324,663
	2050-72	5000	Stutsman RWD	Phase 6 Pettibone Project	4/12/18	2,100,000	850,863	1,249,137
	2050-73	5000	Northeast Regional WD	Master Plan	10/11/18	107,000	0	107,000
	2050-74	5000	Walsh RWD	Drayton Long-Term Water Supply Feasibility Study	5/8/19	37,500	0	37,500
				TOTAL RURAL WATER SUPPLY		***68,607,854***	***39,587,132***	***29,020,723***
				TOTAL		***289,038,951***	***159,655,217***	***129,383,734***

SWC Board Approved to Continue

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 Biennium

FLOOD CONTROL

Approved By	SWC No	Dept	Sponsor	Project	Approved Date	Total Approved	Total Payments	*May-19* Balance
			Flood Control:					
SB 2020	1928-01	5000	Fargo	Fargo Flood Control Project	4/19/16	20,001,131	20,001,131	0
SB 2020	1928-05	5000	Fargo Metro Flood Diversion	Fargo Metro Flood Diversion Authority 2015-2017	2/14/19	124,874,956	2,882,395	122,012,561
	1771-01	5000	Grafton	Grafton Flood Control Project	10/12/16	32,175,000	18,722,542	13,452,458
	1974-06	5000	Souris River Joint WRD	Development of 2011 Flood Inundation Maps	12/18/15	1,522	0	1,522
	1974-09	5000	Souris River Joint WRD	Mouse River Flood Control Design Engineering	4/12/18	276,696	276,696	(0)
	1974-11	5000	Souris River Joint WRD	Funding of 214 agreement between SRJB & USACE	12/5/14	31,500	0	31,500
	1974-12	5000	Souris River Joint WRD	Maple Diversion Design MI-4	4/12/18	1,345,000	646,000	699,000
	1974-14	5000	Souris River Joint WRD	StARR Program (Structure Acquisition, Relocation, or Ring Dike)	3/9/16	5,895,975	4,325,172	1,570,803
	1974-13	5000	Souris River Joint WRD	Tierrecita Villejo Levee Design	4/12/18	1,170,000	274,083	895,917
	1974-15	5000	Souris River Joint WRD	Perkett Ditch Improvements	12/2/16	404,593	274,341	130,252
	1974-16	5000	Souris River Joint WRD	Corps of Engineers Feasibility Study MREFPP	4/12/18	505,546	443,439	62,107
	1974-18	5000	Souris River Joint WRD	Rural Reaches, Preliminary Engineering	10/12/16	236,941	21,579	215,362
	1974-19	5000	Souris River Joint WRD	4th Avenue Tieback Levee & Burlington Levee - Design Engineerr	4/12/18	2,854,240	2,609,214	245,026
	1974-20	5000	Souris River Joint WRD	Utility Relocations	10/12/16	422,034	386,355	35,679
	1974-21	5000	Souris River Joint WRD	Highway 83 Bypass & Bridge Replacement	10/12/16	1,983,623	1,079,526	904,097
	1974-22	5000	Souris River Joint WRD	Broadway Pump Station Phases MI-1	3/29/17	35,271,200	8,592,876	26,678,324
	1974-23	5000	Souris River Joint WRD	Peterson Coulee Outlet	3/29/17	1,427,022	0	1,427,022
	1974-25	5000	Souris River Joint WRD	Flood Specific Emergency Action Plan for Ward Co.	7/20/17	182,000	173,493	8,507
	1974-26	5000	Souris River Joint WRD	Phases MI-2, MI-3 Construction	8/23/17	29,348,843	16,707,971	12,640,872
	1974-27	5000	Souris River Joint WRD	Corps of Engineers Section 408 Review Through Section 2145	8/23/17	74,750	74,750	0
	1974-28	5000	Souris River Joint WRD	Burlington Bridge Construction	4/12/18	2,535,000	0	2,535,000
	1974-29	5000	Souris River Joint WRD	Outlaw Creek Construction	4/12/18	1,397,500	0	1,397,500
	1974-30	5000	Souris River Joint WRD	Mouse River Park Bridge Design	4/12/18	390,000	43,800	346,200
	1974-31	5000	Souris River Joint WRD	Sawyer Bridge Design Project	4/12/18	260,000	60,780	199,220
	1974-32	5000	Souris River Joint WRD	Velva Bridge Design Project	4/12/18	260,000	63,666	196,334
	2107-02	5000	City of Minot	SWIF 2018 Outfall Pipe Project	10/11/18	970,490	90,069	880,421
	2122	5000	US Army Corps of Engineers	Development of Comprehensive Plan for Souris Basin	9/5/17	302,500	221,072	81,428
	1344-04	5000	Valley City	Sheyenne River Valley Flood Control Project PHII	8/29/16	58,414	38,278	20,136
	1504-01	5000	Valley City	Permanent Flood Protection Project	5/1/15	477,445	422,018	55,427
SB 2371	1504-03	5000	Valley City	Permanent Flood Protection PH III	12/9/16	13,157,600	8,747,488	4,410,112
	1504-06	5000	Valley City	Permanent Flood Protection PH III & PH V	12/8/17	914,175	548,522	365,653
	1504-07	5000	Valley City	Permanent Flood Protection PH III Construction	10/11/18	1,786,179	0	1,786,179
	1504-08	5000	Valley City	Permanent Flood Protection Erosion Sites	4/9/19	480,283	0	480,283
	1344-02	5000	Lisbon	Sheyenne River Valley Flood Control Project	8/8/16	1,000,582	896,611	103,971
	1991-01	5000	Lisbon	Permanent Flood Protection - Levee A Project	5/29/14	0	0	0
	1991-03	5000	Lisbon	Permanent Flood Protection - Levee C Project	3/11/15	6,989	6,989	0
	1991-06	5000	Lisbon	Permanent Flood Protection - Levee E Project	3/9/16	52,000	52,000	0
	1991-08	5000	Lisbon	Permanent Flood Protection - Levee D Project	4/12/18	2,639,562	2,639,562	0
	1991-10	5000	Lisbon	Permanent Flood Protection - Levee F Project	4/12/18	4,264,000	3,740,931	523,069
	1991-13	5000	Lisbon	Permanent Flood Protection - Levee C & E Extension	2/14/19	1,036,877	0	1,036,877
	2079-01	5000	Williston	West Williston Flood Control	12/9/16	3,655,517	807,820	2,847,697
	2131	5000	Lower Heart River WRD	Flood Risk Reduction Project	6/14/18	280,000	0	280,000
	1059	5000	Bottineau Co WRD	Baumann Legal Drain	12/7/18	391,742	0	391,742
	1180	5000	Richland Co WRD	Legal Drain #7 Channel Improvements	12/7/18	274,541	0	274,541
	2008	5000	City of Mapleton	Recertification of Flood Control Levee System Project	4/12/18	314,770	314,770	0
	2111	5000	Maple River WRD	Davenport Flood Risk Reduction	7/20/17	35,000	34,999	1
	2118	5000	Cass Count Joint WRD	Sheldon Subdivision Levee	10/11/18	370,200	0	370,200
	2124	5000	City of Belfield	Heart River & Tributaries Flood Control Study	11/6/18	27,000	0	27,000
	620	5000	Lower Heart WRD	Mandan Flood Control Protective Works (Levee)	6/22/17	14,855	14,855	0
	1932	5000	Nelson Co. WRD	Michigan Spillway Rural Flood Assessment	3/9/16	67,903	67,903	0
	1705	5000	Red River Joint Water Resource District	Red River Joint WRD Watershed Feasibility Study - Phase 2	9/21/11	0	0	0
	2073	5000	Walsh Co. WRD	Oslo Area Ag Levee Feasibility Study	7/6/16	71,683	71,683	0
				Subtotal Flood Control		***295,975,378***	***96,355,374***	***199,620,004***
			Floodway Property Acquisitions:					
	1993-05	5000	Minot	Minot Phase - Floodway Acquisitions	4/12/18	14,093,720	13,970,443	123,277
SB 2371	1523-05	5000	Ward County/Minot	Ward County - Floodway Acquisitions	1/27/12	6,015,347	5,941,736	73,611
SB 2371	1504-05	5000	Valley City	Valley City - Floodway Acquisitions	12/8/17	3,406,947	2,447,107	959,840
SB 2371	2000-05	5000	Sawyer	Sawyer Phase - Floodway Acquisitions	6/13/12	135,844	0	135,844
	1991-05	5000	Lisbon	Lisbon - Floodway Acquisition	5/8/19	668,072	646,404	21,668
	1987-05	5000	Burlington	Mouse River Enhanced Flood Plan Property Acquistion	5/10/17	2,166	2,166	0
				Subtotal Floodway Property Acquisitions		***24,322,096***	***23,007,857***	***1,314,239***
				TOTAL FLOOD CONTROL		***320,297,474***	***119,363,232***	***200,934,243***
			Revolving Loan Fund:					
			(General Water)					
	2077-16	1050	Valley City	Valley City Flood Protection - Phase II Construction (LOAN)	12/9/16	3,289,400	3,289,400	0
	2077-15	1050	Valley City	Valley City Pre Design & Eng & Phase III Buyouts (LOAN)	12/9/16	1,392,500	1,392,500	0
	2077-14	1050	Lisbon	Permanent Flood Control	8/23/17	900,000	900,000	0
			(Water Supply)					
	2077-13	1050	North Central Rural Water Consortium II	Carpio Berhold Phase 2 (LOAN)	10/12/16	215,000	215,000	0
	2077-12	1050	North Central Rural Water Consortium	Granville-Surrey-Deering Water Supply Project (LOAN)	10/12/16	139,000	139,000	0
				REVOLVING LOAN TOTAL		***5,935,900***	***5,935,900***	***0***
				TOTAL		***326,233,374***	***125,299,132***	***200,934,243***

SWC Board Approved to Continue

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 Biennium
Resources Trust Fund

WATER CONVEYANCE

Approved By	SWC No	Dept	Approved Biennum	Sponsor	Project	Approved Date	Total Approved	Total Payments	*May-19* Balance
				Drain & Channel Improvement Projects:					
SE	1056	2000	2015-17	Bottineau Co. WRD	Stead Legal Drain	2/16/17	14,738	11,670	3,068
SE	1059	5000	2017-19	Bottineau Co WRD	Baumann Legal Drain	3/7/18	41,427	0	41,427
SWC	1070	5000	2015-17	Maple River WRD	Drain #14 Channel Improvements	3/29/17	741,562	344,656	396,906
SWC	1071	5000	2015-17	Maple River WRD	Cass County Drain #15 Channel Improvements	3/9/16	282,561	179,516	103,045
SWC	1088	5000	2015-17	Maple River WRD	Cass Drain #37 Channel Improvements	3/9/16	215,157	77,902	137,255
SWC	1089	5000	2015-17	Maple River WRD	Cass County Drain #39 Channel Improvements	3/9/16	210,568	89,616	120,952
SE	1140	5000	2015-17	Pembina Co. WRD	Drain 11 Outlet Extension Cost Overrun Project	7/7/15	5,088	0	5,088
SWC	1222	5000	2015-17	Sargent Co WRD	Drain No 11 Channel Improvements	10/12/16	1,378,376	0	1,378,376
SWC	1311	5000	2015-17	Traill Co. WRD	Buxton Township Improvement District No. 68	3/9/16	110,418	81,285	29,133
SWC	1314	5000	2015-17	Wells Co. WRD	Hurdsfield Legal Drain	3/29/17	644,292	0	644,292
SWC	1331	5000	2015-17	Richland Co WRD	Drain #14 Reconstruction	12/9/16	252,738	179,852	72,886
SE	1413-01	5000	2017-19	Traill Co. WRD	Camrud Drainage Improvement District No. 79	4/11/19	20,250	0	20,250
SWC	1486	5000	2015-17	Griggs Co. WRD	Thompson Bridge Outlet No. 4 Project	10/6/15	621,661	0	621,661
SWC	1520	5000	2015-17	Walsh Co. WRD	Walsh County Drain 30-1	3/29/17	282,307	184,245	98,062
SWC	1520	5000	2017-19	Walsh Co. WRD	Walsh County Drain 30-2	10/11/18	328,042	20,780	307,262
SWC	1951	5000	2015-17	Maple River WRD	Lynchburg Channel Improvements	7/6/16	1,131,338	0	1,131,338
SWC	1951	5000	2015-17	Maple River WRD	Lynchburg Channel Improvements	7/6/16	23,412	20,584	2,828
SWC	1978	5000	2015-17	Richland-Sargent Joint WRD	RS Legal Drain #1 Extension & Channel Improvemen	3/29/17	378,000	301,388	76,612
SWC	1990	5000	2011-13	Mercer Co. WRD	Lake Shore Estates High Flow Diversion Project	3/7/12	43,821	0	43,821
SE	2016	5000	2015-17	Pembina Co. WRD	Establishment of Pembina County Drain No. 80	4/10/17	74,965	50,356	24,609
SWC	2049	5000	2015-17	Grand Forks Co. WRD	Grand Forks Legal Drain No. 58	3/29/17	1,481,850	0	1,481,850
SWC	2068	5000	2015-17	Traill Co. WRD	Stavanger-Belmont Drain No. 52 Channel Impr	10/12/16	414,652	294,513	120,139
SWC	2087	5000	2015-17	Walsh Co. WRD	Drain #87/McLeod Drain	3/29/17	5,273,586	2,447,424	2,826,162
SWC	2088	5000	2015-17	Pembina Co. WRD	Drain No. 79	12/9/16	875,428	791,026	84,402
SE	2101	5000	2017-19	Walsh Co. WRD	Walsh Co Drain #90	4/11/19	70,603	0	70,603
SWC	2108	5000	2015-17	Walsh Co. WRD	Walsh Co Drain #22	6/22/17	266,086	184,910	81,176
SE	2112	5000	2017-19	Pembina Co. WRD	Pembina Co Drain #81	7/30/17	56,000	0	56,000
SE	2133	5000	2017-19	Burleigh Co. WRD	Missouri River Section 32 Bank Stabilization Projects	4/11/19	22,500	0	22,500
SE	2093/1427	5000	2015-17	Bottineau Co. WRD	Moen Legal Drain	9/6/16	18,542	1,130	17,412
				Snagging & Clearing Projects:					
SE	662	5000	2015-17	Walsh Co. WRD	Park River Snagging & Clearing	2/17/17	51,435	25,827	25,608
SE	2095	5000	2015-17	Nelson Co WRD	Sheyenne River Snagging & Clearing	4/10/17	19,700	0	19,700
SE	2110	5000	2015-17	Ward Co. WRD	Meadowbrook Snagging & Clearing	6/21/17	33,000	0	33,000
					TOTAL		15,384,103	5,286,680	10,097,423
					SWC Board Approved to Continue				

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 Biennium
Resources Trust Fund

COMPLETED WATER CONVEYANCE

May-19

Approvec By	SWC No	Dept	Approved Biennum	Sponsor	Project	Approved Date	Total Approved	Total Payments	Balance
SWC	568	5000	2013-15	Southeast Cass WRD	Sheyenne River Reaches Snagging & Clearing Project	12/5/14	10,312	10,312	0
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches II	12/11/15	27,905	2,451	25,454
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches I	12/11/15	73,902	0	73,902
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches III	12/11/15	87,035	0	87,035
SE	571	5000	2013-15	Oak Creek WRD	Oak Creek Snagging & Clearing Project	3/30/15	1,107	0	1,107
SWC	710	5000	2015-17	Maple River WRD	Upper Swan Creek Channel Improvement Project	10/6/15	62,061	33,484	28,577
SWC	1056	5000	2015-17	Bottineau Co. WRD	Tacoma Bitz Legal Drain	7/6/16	210,572	49,978	160,594
SWC	1064	5000	2013-15	Rush River WRD	Cass County Drain No. 2 Channel Improvements Project	3/11/15	41,683	0	41,683
SWC	1101	5000	2015-17	Dickey Co. WRD	Yorktown-Maple Drainage Improvement Dist No. 3	11/1/17	798,562	459,210	339,352
SWC	1176	5000	2015-17	Richland Co. WRD	Legal Drain #2 Reconstruction/Extension Project	3/9/16	224,231	33,758	190,473
SWC	1179	5000	2015-17	Richalnd Co. WRD	Legal Drain #5 (Lateral 27) Reconstruction	3/9/16	180,353	10,937	169,416
SE	1180	5000	2015-17	Richland Co WRD	Legal Drain No. 7 Channel Improvements	5/11/17	24,926	24,926	0
SWC	1227	5000	2011-13	Traill Co. WRD	Mergenthal Drain No. 5 Reconstruction	9/15/14	12,225	0	12,225
SWC	1231	5000	2015-17	Traill Co. WRD	Carson Drain No. 10 Channel Improvements	10/12/16	141,322	110,912	30,410
SWC	1236	5000	2015-17	Traill Co. WRD	Murray Drain No. 17 Channel Improvements	10/12/16	127,759	127,759	0
SE	1328	5000	2015-17	North Cass Co. WRD	Drain No. 23 Channel Improv Preliminary Engineering	9/30/15	921	0	921
SWC	1328	5000	2015-17	North Cass Co. WRD	Drain #23 Channel Improvements	3/9/16	81,612	53,103	28,509
SE	1334	5000	2017-19	Traill Co WRD	Norway Drain No. 38	3/28/18	61,917	61,917	0
SWC	1891	5000	2015-17	Steele Co WRD	Drain No. 8 Channel Improvement	7/6/16	2,599	2,599	0
SWC	1975	5000	2015-17	Walsh Co. WRD	Drain 31-1	10/12/16	111,543	94,533	17,010
SWC	1977	5000	2011-13	Dickey-Sargent Co WRD	Jackson Township Improvement Dist. #1	5/20/15	447,653	106,287	341,366
SE	1978	5000	2015-17	Richland-Sargent Joint W	RS Legal Dam #1 - Pre-Construction Engineering	10/24/16	13,680	13,680	0
SWC	2042	5000	2015-17	Bottineau Co. WRD	Haas Coulee Legal Drain Phase II	6/22/17	86,361	86,361	0
SWC	2062	5000	2015-17	Traill Co. WRD	Traill Co. Drain #64	7/6/16	19,549	13,729	5,820
SWC	2074	5000	2015-17	City of Wahpeton	Toe Drain & Encroachment Project	7/6/16	1,125,482	1,125,482	0
SE	2078	5000	2017-19	Southeast Cass WRD	Raymond-Mapleton Township Imp Dist #76	7/20/17	3,043	3,043	0
SWC	2080	5000	2015-17	Walsh Co. WRD	Sam Berg Coulee Drain	10/12/16	182,775	86,233	96,542
SWC	2081	5000	2015-17	Walsh Co. WRD	Drain #70	10/12/16	562,429	474,608	87,821
SWC	1523	5000	2015-17	Ward Co. WRD	Robinwood Bank Stabilization Project	10/6/15	98,648	18,238	80,410
SWC	1991	5000	2013-15	City of Lisbon	Sheyenne Riverbank Stabilization Project	9/15/14	47,768	0	47,768
SE	2058	5000	2015-17	City of Grafton	Grafton Debris Removal Plan	4/10/17	8,177	8,170	7
					SNAGGING & CLEARING PROJECTS				
SWC	568	5000	2015-17	Southeast Cass WRD	Sheyenne River Snagging & Clearing Reaches I,II,III	12/9/16	150,073	150,073	0
SE	1287	5000	2013-15	McHenry Co. WRD	Souris River Snagging & Clearing Project	2/3/15	10,500	0	10,500
SE	1667	5000	2015-17	Traill Co. WRD	Goose River Snagging & Clearing	6/21/17	47,500	43,811	3,689
SE	1934	5000	2015-17	Traill Co. WRD	Elm River Snagging & Clearing	6/21/17	47,500	39,812	7,688
					TOTAL		5,133,685	3,245,405	1,888,280

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 Biennium
Resources Trust Fund

GENERAL PROJECTS

Approved By	SWC No	Dept	Approved Biennum	Sponsor	Project	Approved Date	Total Approved	Total Payments	May-19 Balance
				Hydrologic Investigations:					
SE	1400	3000	2015-17	Fireside Office Solutions	Document Conversion (Water Permit Scanning)	3/28/18	21,125	23,002	(1,877)
SWC	2041	3000	2017-19	USGS	Stream Gage Joint Funding Agreement	12/7/18	422,870	140,957	281,913
					Subtotal Hydrologic Investigations		***443,995***	***163,959***	***280,036***
				Devils Lake Basin Development:					
SWC	416-10	4700	2015-17	Operations	Devils Lake Outlet Operations	4/9/19	12,527,973	8,258,288	4,269,685
					Subtotal Devils Lake Basin Development		***12,527,973***	***8,258,288***	***4,269,685***
				General Water Management:					
SWC	160	5000	2017-19	McLean Co WRD	Painted Woods Lake Flood Damage Reduction & Habita	8/9/18	284,768	0	284,768
SE	274	5000	2015-17	City of Neche	Neche Levee Certification Project	3/21/16	54,000	44,684	9,316
SE	390	5000	2015-17	Logan County WRD	Beaver Lake Dam Rehabilitation Feasibility Study	6/8/16	16,076	0	16,076
SE	391	5000	2017-19	Sargent Co WRD	Silver Lake Dam Improvements	12/20/18	74,625	23,101	51,524
SWC	394	5000	2017-19	Golden Valley Co WRD	Odland Dam Rehabilitation Project	12/7/18	110,055	0	110,055
SWC	399	5000	2017-19	Barnes Co WRD	Kathryn Dam Project	8/9/18	754,875	0	754,875
SE	420	5000	2015-17	Hettinger Park Board	Mirror Lake Dam Emergency Action Plan	12/2/16	24,400	12,827	11,573
SE	460	5000	2015-17	Griggs Co. WRD	Ueland Dam Rehabilitation Feasibility Study	5/20/16	17,500	0	17,500
SE	477	5000	2015-17	Valley City	Mill Dam Rehabilitation Feasibilty Study	6/8/16	15,073	12,136	2,937
SE	512	5000	2015-17	Emmons County WRD	Nieuwsma Dam Emergency Action Plan	11/28/16	7,532	812	6,720
SE	531	5000	2017-19	Benson Co WRD	Bouret Dam Rehabilitiation	12/20/18	79,352	18,272	61,080
SWC	531	5000	2017-19	Benson Co WRD	Bouret Dam Rehabilitiation	4/9/19	591,750	0	591,750
SWC	551	5000	2015-17	McHenry Co. WRD	Buffalo Lodge Lake Outlet	6/22/17	134,915	73,375	61,540
SE	561	5000	2015-17	City of Tioga	Tioga Dam EAP	5/20/16	40,000	0	40,000
SE	667	5000	2017-19	Burke Co WRD	Northgate Dam 2 Emergency Action Plan	9/5/17	26,396	0	26,396
SWC	848	5000	2017-19	Sargent Co WRD	Brummond/Lubke Dam	10/11/18	317,111	28,814	288,298
SE	849	5000	2015-17	Pembina Co. WRD	Renwick Dam Emergency Action Plan	9/29/15	2,212	0	2,212
SE	849-01	5000	2017-19	Pembina Co. WRD	Goschke Dam Spillway Gate Retrofit	4/9/19	119,010	0	119,010
SWC	980	5000	2015-17	Cass Co. Joint WRD	Rush River Watershed Detention Study	1/7/16	127,697	24,257	103,440
SWC	980	5000	2015-17	Cass Co. Joint WRD	Upper Maple River Watershed Detention Study	1/11/16	128,039	51,540	76,499
SE	1264	5000	2013-15	Barnes Co WRD	Little Dam Repurposing Feasibility Study	6/17/15	12,385	0	12,385
SE	1270	5000	2015-17	City of Wilton	Wilton Pond Dredging Recreation Project	12/29/15	35,707	0	35,707
SE	1289	5000	2015-17	McKenzie Co. Weed Board	Control of Noxious Weeds on Sovereign Land	4/10/17	44,010	16,461	27,549
SWC	1296	5000	2015-17	Pembina Co. WRD	Tongue River NRCS Watershed Plan	3/9/16	104,703	40,369	64,334
SWC	1301	5000	2015-17	Richland Co. WRD	North Branch Antelope Creek NRCS Small Watershed	3/9/16	113,400	44,092	69,308
SE	1303	5000	2013-15	Sargent Co WRD	Gwinner Dam Improvement Feasibility Study Program	4/17/15	20,181	0	20,181
SWC	1303	5000	2015-17	Sargent Co WRD	Shortfoot Creek Watershed Planning Program	3/9/16	109,047	18,638	90,409
SWC	1389	5000	2013-15	Bank of ND	BND AgPace Program	12/13/13	170,365	120,000	50,365
SWC	1401	5000	2015-17	Pembina Co. WRD	International Boundary Roadway Dike Pembina	7/20/17	294,528	46,209	248,319
SE	1431	5000	2017-19	USGS	Rapid Deplyment Gage on the James River at Adrian	3/20/19	4,900	0	4,900
SE	1444	5000	2015-17	City of Pembina	Flood Protection System Certification	4/19/16	1,657	0	1,657
SE	1453	5000	2015-17	Hettinger County WRD	Karey Dam Rehabilitation Feasibility Study	5/23/16	6,853	0	6,853
SE	1453	5000	2017-19	Hettinger County WRD	Karey Dam Rehabilitation Design & Planning	12/14/18	67,916	19,632	48,284
SE	1453	5000	2017-19	Hettinger County WRD	Karey Dam Rehabilitation Project	4/9/19	971,325	0	971,325
SWC	1851-01	5000	2015-17	ND State Water Commission	Drought Disaster Livestock Water Supply Assistance	2/8/18	2,025,000	1,347,165	677,835
SWC	1859	5000	2017-15	ND Dept of Health	NPS Pollution	8/23/17	200,000	91,955	108,045
SWC	1878-02	5000	2017-19	Maple-Steele Joint WRD	Upper Maple River Dam Outlet Channel Improvements	4/9/19	82,320	0	82,320
SWC	1968	5000	2015-17	Garrison Diversion	MM 15 Irrigation Project	3/29/17	321,781	228,166	93,615
SWC	1968	5000	2015-17	Garrison Diversion	MM 42L Irrigation Project	8/23/17	937,207	888,547	48,660
SWC	1968	5000	2017-19	Garrison Diversion	MM 0 and MM 0.4 Irrigation Project	12/7/18	1,673,793	0	1,673,793
SWC	2050-68	5000	2017-19	Valley City	Valley City Membrane Replacement Project	2/8/18	586,350	0	586,350
SE	2055	5000	2015-17	Red River Joint Water Resource District	Lower Red Basin Regional Detention Study	7/17/15	45,500	0	45,500
SWC	2059	5000	2015-17	Park River Joint WRD	North Branch Park River NRCS Watershed Study	10/6/15	81,200	0	81,200
SWC	2060	5000	2015-17	Walsh Co. WRD	Forest River Watershed Study	4/10/17	154,012	0	154,012
SWC	2060	5000	2017-19	Walsh Co. WRD	Matejcek Dam Rehabilitation	10/11/18	279,750	0	279,750
SE	2070	5000	2015-17	Garrision Diversion Conservancy Dist	Mile Marker 42 Irrigation Project	5/20/16	29,741	0	29,741
SE	2071	5000	2015-17	Foster County WRD	Alkali Lake High Water Feasibilitty Study	4/19/16	4,830	0	4,830
SE	2072	5000	2015-17	Barnes Co WRD	Ten Mile Lake Flood Risk Reduction Project	6/8/16	36,812	0	36,812
SWC	2074	5000	2015-17	City of Wahpeton	Flood Control - Levee Certification	7/6/16	247,500	0	247,500
SWC	2074	5000	2015-17	City of Wahpeton	Breakout Easements	7/6/16	265,000	0	265,000
SWC	2075	5000	2015-17	Ward Co. WRD	Second Larson Coulee Detention Pond	7/6/16	602,307	0	602,307
SWC	2083	5000	2015-17	Pembina Co. WRD	Herzog Dam Gate & Catwalk Retrofit - Construction	10/12/16	114,632	8,444	106,188
SE	2085	5000	2015-17	Adams Co WRD	Orange Dam Rehabilitation Feasibility Study	10/13/16	10,770	1,930	8,840
SE	2089	5000	2015-17	Maple River WRD	Tower Township Improvement District No. 77 Study	12/19/16	28,175	11,717	16,458
SE	2090	5000	2015-17	International Water Institute	River Watch Program	1/12/17	24,150	18,916	5,234
SE	2090-02	5000	2017-19	International Water Institute	River of Dreams Program	6/6/18	23,275	14,944	8,331
SWC	2096	5000	2015-17	Southeast Cass WRD	Sheyenne-Maple Flood Control Dist #2 Improvements	3/29/17	1,035,358	642,154	393,204
SE	2109	5000	2017-19	Logan County WRD	McKenna Lake Feasibility Study	6/21/17	2,247	0	2,247
SE	2109	5000	2017-19	Logan County WRD	McKenna Lake Hydrologic Study	9/12/18	72,167	0	72,167
SWC	2115	5000	2017-19	Applied Weather Associates, LLC	(PMP) Probable Maximum Precipitation Estimates	10/11/18	600,000	0	600,000
SWC	2120	5000	2017-19	Apex Engineering	SWPP Transfer of Ownership Study	4/9/19	176,579	0	176,579
SWC	2123	5000	2017-19	Geotech, Inc.	Airborne Electromagnetic (AEM) 2018	8/9/18	425,000	202,085	222,915
SE	1396-01	5000	2013-15	Trout, Raley, Montano, Witwer, & Freema	Missouri River Recovery Program	11/17/15	46,785	275	46,510
SWC	PS/IRR/LOW	5000	2017-19	Lower Yellowstone Irrigation District #2	Lateral W Irrigation Project	6/14/18	692,500	116,706	575,794
SE	AOC/WEF	5000	2017-19	ND Water Education Foundation	ND Water Magazine	8/2/17	26,000	19,500	6,500
SWC	AOC/RRC	5000	2017-19	Red River Basin Commission	Red River Basin Commission Contractor	6/22/17	200,000	150,000	50,000
SWC	AOC/ASS	5000	2017-19	Assiniboine River Basin Inititiative	ARBI's Outreach Efforts	6/22/17	100,000	75,000	25,000
SE	PS/WRD/UPP	5000	2017-19	Upper Sheyenne River Joint WRB	USRJWB Operational Costs	6/20/17	6,000	5,143	857
SE	PS/WRD/MRJ	5000	2017-19	Missouri River Joint WRB	MRRIC Terry Fleck	6/7/17	45,000	18,140	26,860
SE	PS/WRD/MRJ	5000	2017-19	Missouri River Joint WRB	Board Operational Costs	6/7/17	10,000	4,658	5,342
SE	PS/WRD/LOW	5000	2015-17	Lower Heart WRD	Lower Heart Flood Contral Study	5/10/17	21,140	0	21,140
					Subtotal General Projects		***16,115,244***	***4,440,663***	***11,674,581***
					TOTAL		29,087,211	12,862,910	16,224,301
					SWC Board Approved to Continue				

STATE WATER COMMISSION
PROJECT SUMMARY
2017-2019 Biennium
Resources Trust Fund

COMPLETED GENERAL PROJECTS

Approvec By	SWC No	Dept	Approved Biennum	Sponsor	Project	Approved Date	Total Approved	Total Payments	*May-19* Balance
					Hydrologic Investigations:				
SE	1396	3000	2017-19	USGS	Maintain Gaging Station East of Lisbon Sheyenne River	9/25/17	10,500	10,500	0
SE	989	3000	2017-19	ND Dept of Health	Water Sampling Testing	9/25/17	105,500	105,500	0
SWC	2041	3000	2017-19	USGS	Stream Gage Joint Funding Agreement	12/8/17	553,790	553,790	0
SWC	2041	3000	2015-17	USGS	Stream Gage Joint Funding Agreement	10/12/16	136,028	136,028	0
					Subtotal Hydrologic Investigations		***805,818***	***805,818***	***0***
SWC	322	5000	2009-11	ND Water Education Fou	ND Water: A Century of Challenge	2/22/10	36,800	35,000	1,800
SWC	346	5000	2015-17	Williams County WRD	Epping Dam Spillway Reconstruction	3/29/17	19,499	19,439	60
SWC	347	5000	2009-11	City of Velva	City of Velva's Flood Control Levee System Certification	3/28/11	32,497	32,497	0
SE	364	5000	2017-19	McLean Co WRD	Yanktonai Dam Emergency Action Plan	1/30/19	11,793	11,644	149
SE	394	5000	2015-17	Golden Valley Co WRD	Odland Dam Rehabilitation Feasibility Study	10/13/16	13,220	13,220	0
SE	399	5000	2013-15	Barnes Co WRD	Kathryn Dam Feasibility Study	9/19/14	12,742	7,061	5,681
SE	479	5000	2017-19	Morton Co Parks & Recre	Fish Creek Dam Rehabilitation	10/4/17	62,970	62,970	0
SE	494	5000	2015-17	Nelson Co. WRD	McVille Dam Emergency Action Plan	5/3/18	10,000	10,000	0
SE	841	5000	2013-15	Maple River WRD	Garsteig Dam Repair Project	1/26/15	18,661	0	18,661
SE	848	5000	2015-17	Sargent Co WRD	Tewaukon WS-T-7 (Nelson) Dam EAP	12/18/15	12,180	1,132	11,048
SE	848	5000	2015-17	Sargent Co WRD	Tewaukon WS-T-1-A (Brummond-Lubke) Dam EAP	12/18/15	12,016	1,180	10,836
SWC	980	5000	2013-15	Cass Co. Joint WRD	Swan Creek Watershed Detention Study PHII	3/11/15	122,666	2,152	120,514
SWC	1273	5000	2015-17	City of Oakes	James River Bank Stabilization	12/11/15	262,500	76,927	185,573
SE	1296	5000	2013-15	Pembina Co. WRD	Bathgate-Hamilton & Carlisle Watershed Study	10/17/13	6,726	6,726	0
SE	1303	5000	2015-17	Sargent Co WRD	Gwinner Dam Breach Project	3/21/18	44,364	42,673	1,691
SE	1396	5000	2017-19	USGS	Water Level Monitoring of Missouri River	9/7/17	15,000	15,000	0
SE	1403	5000	2017-19	NDSU	ND Water Resource Institute grant student stipends	1/9/18	25,000	25,000	0
SE	1403	5000	2017-19	NDSU	ND Water Resource Institute grant student stipends	1/14/19	25,000	25,000	0
SE	1418	5000	2015-17	City of Bisbee	Big coulee Dam EAP	5/10/17	11,320	11,095	225
SE	1625	5000	2015-17	Carlson McCain, Inc.	Ordinary High Water Mark Delineations Left Bank of Missouri F	12/2/16	2,000	2,000	0
SWC	1638	5000	2009-11	Mutiple	Red River Basin Non-NRCS Rural/Farmstead Ring Dike Progra	6/23/09	177,864	0	177,864
SE	1808	5000	2015-17	Steele Co WRD	Beaver Creek Dam Safety Inspection	5/23/16	2,625	2,625	0
SE	1878-02	5000	2015-17	Maple-Steele Joint WRD	Upper Maple River Dam EAP	5/20/16	12,800	6,146	6,654
SWC	1968	5000	2013-15	Garrison Diversion	McClusky Canal Mile Marker 10 & 49 Irrigation Project	3/17/14	51,614	0	51,614
SE	1974	5000	2015-17	USGS	Installation of 5 Rapid Deployment Gages in the Mouse River	3/23/17	23,200	23,200	0
SE	1974	5000	2015-17	USGS	Regulated Streamflow Frequency for the Upper Souris River B	12/16/16	12,367	12,367	0
HB1009	1986	5000	2017-19	ND Dept Agriculture	Wildlife Services 17-201	8/22/17	125,000	125,000	0
SWC	2065	5000	2015-17	Cass Co. Joint WRD	Lake Bertha Flood Control Project No. 75	3/9/16	201,350	201,350	0
SWC	2066	5000	2015-17	Southeast Cass WRD	Sheyenne-Maple Flood Control Dist #1 Mitigation Improvemen	3/9/16	169,201	169,201	0
SE	2069	5000	2015-17	Center Township	Wild Rice River Bank Stabilization	4/19/16	954	954	0
SE	2076	5000	2015-17	Elm River Joint WRD	Elm River Dam #1 Modification Study	7/6/16	9,503	9,503	0
SE	2094	5000	2015-17	McLean Co WRD	Lower Buffalo Creek Flood Management Feasibility	6/7/17	7,539	7,534	5
SE	2079-01	5000	2015-17	City of Williston	West Williston Flood Control	10/24/16	39,900	39,900	0
SE	2099	5000	2017-19	City of Hunter	Hunter Dam Emergency Action Plant	2/22/18	46,108	46,108	0
SWC	2107-01	5000	2015-17	City of Minot	Levee Repair & Bank Stabilization Project	6/14/18	581,476	581,476	0
SE	2114	5000	2017-19	HDR Engineering	LCCA & EA Guidance Workshop	5/17/18	9,804	9,804	0
HB1020	2114	5000	2017-19	HDR Engineering	Economic Analysis-Flood Control & Conveyance Projects	12/28/17	74,093	74,093	0
HB1020	2119	5000	2017-19	HDR Engineering	Life Cycle Cost Analysis Guidelines & Process Development	12/28/17	59,263	59,263	0
SE	AOC/IRA	5000	2017-19	ND Irrigation Association	Water Irrigation Funding	3/29/19	100,000	100,000	0
SE	AOC/MIS	5000	2017-19	Missouri River Advisory C	MRAC Startup Funding	8/3/17	2,000	2,000	0
SE	AOC/WRD	5000	2015-17	ND Water Resource Distri	ND Water Managers Handbook	6/21/17	24,750	24,750	0
SE	AOC/WEF/TOL	5000	2017-19	ND Water Education Fou	Summer Water Tours	4/30/18	2,500	2,500	0
SE	AOC/WEF/TOL	5000	2017-19	ND Water Education Fou	Summer Water Tours	5/7/19	2,500	2,500	0
SE	NDAWN	5000	2017-19	NDSU	NDAWN CENTER	3/4/19	1,500	1,500	0
SE	NDAWN	5000	2017-19	NDSU	NDAWN CENTER	3/13/18	1,500	1,500	0
SWC	PS/WRD/ELM	5000	2013-15	Elm River Joint WRD	Dam #3 Safety Improvements Project	9/15/14	5,672	0	5,672
SE	PS/WRD/DEV	5000	2017-19	Devils Lake Basin Joint W	Board Manager	6/14/17	60,000	60,000	0
					Subtotal General Projects		***2,562,036***	***1,963,990***	***598,046***
					TOTAL		3,367,854	2,769,807	598,046

Water Supply Bucket 2017-2019		
Bucket Total		**$120,125,000**
Obligated This Biennium	Grand Forks - Water Treatment Plant	$30,000,000
	Lake Agassiz Water Authority - Red River Valley Water Supply	$17,000,000
	Lincoln - Water Supply Main	$1,459,100
	Mandan - Sunset Reservoir Transmission Line	$3,135,000
	Mercer - McLean Sheridan Connection	$166,950
	State Water Commission - Northwest Area Water Supply	$14,600,000
	New Town - Water Tower	$1,940,000
	State Water Commission - Southwest Pipeline Project	$13,500,000
	West Fargo - Brooks Harbor Water Tower	$1,950,000
	West Fargo - North Loop Connection	$510,000
	West Fargo - West Loop Connection	$1,110,000
	Western Area Water Supply - Phase 5	$20,000,000
	Williston - US Highway 2 Water Main	$434,400
	Williston - 9th Ave E Water Main	$246,000
	Williston - 18th St Water Main	$2,090,000
	Wing - Water Tower	$72,000
	Mandan - Raw Water Intake	$1,407,000
2019-2021 Intent	Lake Agassiz Water Authority - Red River Valley Water Supply	$13,000,000
Remaining Balance		**($2,495,450)**
Money Turned Back		$2,497,208
Remaining Balance		**$1,758**
June 2019 Agenda		
Remaining Balance		**$1,758**

June-2019

Rural Water Supply Bucket 2017-2019		
Bucket Total		**$27,000,000**
Obligated This Biennium	East Central Regional Water District - Grand Forks System	$4,150,000
	East Central Regional Water District - Traill System	$1,396,880
	East Central Regional Water District - Agassiz WUD	$232,795
	East Central Regional Water District - Larimore	$513,750
	Greater Ramsey Water District - Devils Lake Regionalization	$599,000
	Northeast Regional Water District - Master Plan	$107,000
	North Prairie Rural Water District - Mountrail County	$6,516,000
	Southeast Water User District - Expansion System Wide	$2,749,000
	Stutsman Rural Water District - Phase 6 Pettibone	$2,100,000
	Walsh Rural Water District - System Improvements	$1,300,000
	Walsh Rural Water District - Drayton Water Supply	$37,500
	North Prairie Rural Water District - Silver Spring Surrey	$107,430
	North Prairie Rural Water District - Reservoir 9	$1,114,620
	Cass Rural Water User District - Horace Tank	$1,846,000
	McLean-Sheridan Rural Water District - Turtle Lake Tower	$2,378,450
	Tri-County Rural Water District - McVille Connection	$2,803,250
Remaining Balance		**($951,675.00)**
Money Turned Back		$993,434
Remaining Balance		**$41,759**

June-2019

Flood Control Bucket 2017-2019		
Bucket Total		**$136,000,000**
Obligated This Biennium	Mouse River Flood Control	$63,907,784
	Valley City Flood Control	$2,171,925
	*Pembina Co. WRD	$56,000
	*SE Cass WRD	$3,043
	*Bottineau Co. WRD	$41,427
	*Traill Co. WRD	$61,917
	Mapleton Re-Certification	$213,670
	Lower Heart Flood Control	$280,000
	Davenport Flood Risk Reduction	$35,000
	Michigan Spillway Flood Assessment	$42,053
	Valley City Flood Control Phase III Construction	$1,786,179
	City of Minot SWIF	$387,433
	Sheldon Subdivision Levee	$370,200
	City of Belfield	$27,000
	*Walsh County Drain 30-2	$328,042
	*Richland County Drain 7	$274,541
	*Bottineau County Bauman Drain	$391,742
	Fargo Flood Control	$66,500,000
	Valley City Flood Control	$480,283
	Minot SWIF	$214,279
	City of Lisbon Floodway Property Acquisition	$64,772
	*Walsh County Drain 90	$70,603
	*Traill Co. WRD Camrud Drain	$20,250
	*Burleigh Co. WRD Missouri River Section 32 Bank Stabilization	$22,500
	*Traill Co. WRD Drain 38	$1,838
	*Center Township Bank Stabilization	$3,720
Remaining Balance		($1,756,201)
Money Turned Back		$1,907,661
Remaining Balance		**$151,460**
June Meeting	*Sargent Co. Drain 7 Cost Overrun	$114,227
Remaining Balance		**$37,233**
Likely 2019-2021 Funding	City of Davenport	$2,083,600
	*Cass County Drain 40 Pre-Con	$192,533
	*Tri-County Drain	$737,050

* Conveyance Projects

General Water Management Bucket 2017-2019		
Bucket Total		**$15,750,000**
Obligated This Biennium	Garrison Diversion Unit, Mile 42 Irrigation	$937,207
	Drought Disaster Livestock Water Supply	$500,000
	Drought Disaster Livestock Water Supply	$775,000
	Drought Disaster Livestock Water Supply	$500,000
	Valley City Water Treatment Plant	$586,350
	USGS Cooperative Hydrologic Monitoring	$553,790
	Wildlife Services - ND Dept. of Agriculture	$125,000
	Yellowstone Irrigation District	$692,500
	NPS Pollution – Dept. of Health	$200,000
	Red River Basin Commission	$200,000
	Painted Woods Lake Flood Damage Reduction	$284,768
	Kathryn Dam	$754,875
	AEM	$425,000
	Assiniboine Outreach	$100,000
	Various State Engineer Approvals	$775,379
	Matacjek Dam	$279,750
	Brummond-Lubke Dam	$317,111
	PMP Update	$600,000
	Garrison Diversion MM 0 and 0.4 Irrigation Project	$1,673,793
	USGS Cooperative Gaging Network	$422,870
	Odland Dam Engineering	$110,055
	Karey Dam Rehabilitation Engineering	$67,916
	Silver Lake Dam Improvements	$74,625
	Bouret Dam Rehabilitation Engineering	$67,234
	Devils Lake Mitigation	$2,500,000
	Upper Maple River Dam	$82,320
	Bouret Dam	$591,750
	Karey Dam	$971,325
	Goschke Dam	$119,010
	ND Irrigation Association	$100,000
	SWPP Transfer Study	$176,579
Remaining Balance		**$185,793**
Money Turned Back		$597,897
Remaining Balance		**$783,690**
June 2019 Agenda	Larimore Dam Planning	$91,800
	Fordville Dam Planning	$122,595
	Bylin Dam Planning	$131,370
	Senator Young Dam Planning	$129,210
Remaining Balance		**$308,715**

June-2019

	Flood Control Funding 2019-2021	
Funding Total		**$197,000,000**
Obligated This Biennium	Souris River Joint WRD Mouse River Enhanced Flood Protection Project	$82,500,000
	MREFPP: Minot (C-$34,650,000 A-$11,950,000) Rural (C-$32,675,000 A-$3,225,000)	
	*Southeast Cass WRD Cass Co Drain 40 Improvements	$192,600
		$0
	Sub-Total Balance	**$114,307,400**
Money Turned Back		$0
	Sub-Total Balance	**$114,307,400**
August 2019 Agenda	Burleigh County WRD Sibley Island Flood Control pre-construction	$96,420
	City of Minot 2019 Flood Bank Stabilization Project, SWIF Action E	$823,179
	Maple River WRD Davenport Flood Risk Reduction	$2,083,600
	*Pembina County WRD Tongue River Snagging/Clearing	$98,337
	*Southeast Cass WRD Wild Rice River Snagging/Clearing	$120,000
	*Southeast Cass WRD Sheyenne River Snagging/Clearing	$294,000
	*Tri-County WRD Drain #6 Reconstruction	$733,300
	Sub-Total Balance	**$110,058,564**
Planned This Biennium	Metro Flood Diversion Authority Fargo Moorhead Metro Area Flood Risk Mgt Project	$66,500,000
	*Pembina County WRD Drain #39 Outlet Reconstruction	$179,403
	*Pembina County WRD Drain #82 Construction	$1,053,128
	*Pembina County WRD Drain #81 Construction	$290,832
	Funding Balance	**$42,035,201**

July-2019

	General Water Management Funding 2019-2021	
Funding Total		**$27,093,776**
Obligated This Biennium	Red River Basin Commission Initiative Base Funding 2019-2021	$200,000
	Assiniboine River Basin Initiative Base Funding 2019-2021	$100,000
	FY2020 SWC/USGS Cooperative Hydrologic Monitoring Program	$553,575
	2019 Airborne Electromagnetic (AEM) Projects	$425,000
	Atmospheric Resource Operations and Research Grants	$875,722
	Aerial Imagery Project	$790,000
		$0
	Sub-Total Balance	**$24,149,479**
Money Turned Back		$0
	Sub-Total Balance	**$24,149,479**
August 2019 Agenda	Sovereign Land Navigability Determination	$400,000
	Sub-Total Balance	**$23,749,479**
Planned This Biennium		
	Funding Balance	**$23,749,479**

July-2019

	Rural Water Funding 2019-2021	
Funding Total		**$37,200,000**
Obligated This Biennium	Dakota Rural Water District - 2019 Expansion	$461,250
	McLean-Sheridan Water District - Expansion Phase 1	$327,075
	Northeast Regional Water District - Devils Lake Supply Phase 2	$1,328,000
	South Central Regional Water District - North Burleigh WTP	$920,000
	Stutsman Rural Water District - Phase 7	$1,812,000
		$0
	Sub-Total Balance	**$32,351,675**
Money Turned Back		$0
	Sub-Total Balance	**$32,351,675**
August 2019 Agenda	Missouri West Water System - North Mandan / Highway 25	$530,000
	Missouri West Water System - Harmon Lake Area	$565,000
	Tri-County Water District - Phase 5	$1,990,000
		$0
		$0
	Sub-Total Balance	**$29,266,675**
Planned This Biennium	Dakota Rural Water District - 2019 Expansion	$4,188,750
	McLean-Sheridan Water District - Expansion Phase 1	$4,652,925
	Remaining 14 Rural Projects	$20,425,000
	Funding Balance	**$0**

July-2019

	Water Supply Funding 2019-2021	
Funding Total		**$128,000,000**
Obligated This Biennium	Mandan - Raw Water Intake	$9,570,000
	Bismarck - Lockport Pump Station	$2,280,000
	Mapleton - Water Storage Tank	$840,000
	Western Area Water Supply Authority - WAWS Phase 6	$5,476,000
	Sub-Total Balance	**$109,834,000**
Money Turned Back		$0
	Sub-Total Balance	**$109,834,000**
August 2019 Agenda	Minot - SW Water Tower	$2,855,000
	Sykeston - Water Tower	$642,000
	Lincoln - Water Storage	$1,268,000
	Grand Forks - Water Treatment Plant	$9,875,000
		$0
	Sub-Total Balance	**$95,194,000**
Planned This Biennium	Lake Agassiz Water Authority - Red River Valley Water Supply	$43,000,000
	Western Area Water Supply Authority - WAWS Phase 6	$34,524,000
	Funding Balance	**$17,670,000**

July-2019

APPENDIX B

NORTH Dakota | Water Commission
Be Legendary.™

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele, P.E., Chief Engineer-Secretary
SUBJECT: NAWS – Project Update
DATE: July 25, 2019

Biota Water Treatment Plant Design

A value planning workshop was held July 30, 2018 through August 2, 2018 for this project. The 30 percent design kickoff workshop was held October 3, 2018 through October 5, 2018. A 60 percent design review meeting was held the first week in June. A value engineering workshop was held the week of June 24, 2019. Three alternatives and twelve design considerations were developed. A report responding to the input will be developed upon receipt of the value engineering report.

Equipment procurement contracts will be issued for the ultraviolet (UV) disinfection equipment and the dissolved air flotation (DAF) equipment. A bid opening for the UV equipment was held July 16, 2019. One bid was received and opened from Xylem for low-pressure high intensity UV units in the amount of $707,125. We are awaiting a review and recommendation letter. One bid from Trojan was received late and could not be opened. The DAF equipment procurement will be procured ahead of time with design and delivery phases. Information obtained from the design phase will be used to complete the overall design for the facility. The specifications for the DAF equipment procurement was submitted to the Bureau of Reclamation, Garrison Diversion Conservancy District, and State Water Commission June 19, 2019 and will be advertised upon receipt of approval from Reclamation and Garrison. The overall project should be ready to bid early next year.

NAWS Contract 7-1B – Minot WTP Phase II Improvements

NAWS Contract 7-1B was awarded by the State Water Commission at its February 8, 2018 meeting to PKG Contracting and generally consists of construction of a new primary treatment building at the Minot water treatment facility to replace the aging softening basins, chemical storage and feed systems, laboratory, break room, and IT facilities. All contract documents have been executed, and the notice to proceed was signed March 21, 2018. A preconstruction conference was held that same day in Minot. Work on this project is currently underway. The substantial completion date for this contract is December 20, 2019.

NAWS Contract 2-4A – Renville Corner to Westhope

This contract will involve roughly 17.5 miles of pipe and related appurtenances to extend the potable distribution system from the corner of US Highway 83 and State Highway 5 to six miles south of Westhope. Bids were opened for this contract February 28, 2019. Six bids were received, and Kemper

Construction of Minot, North Dakota was the low bidder at $4,274,260.50. The contract was awarded to Kemper March 21, 2019. A preconstruction conference was held in Minot May 8, 2019 and the contract documents were executed and the Notice to Proceed as issued May 16, 2019. As of July 19, 2019, seven of the fifteen bores were complete and 33,939 of the 83,160 feet of pipe (40.8%) had been installed. The substantial completion date is October 31, 2019, and the final completion date is June 1, 2020.

NAWS Contract 2-3C – Lansford to Renville Corner

This contract will involve roughly 18 miles of pipe and related appurtenances to extend the potable distribution system north of Minot near Lansford to tie into the existing pipeline along Highway 5. Six bids were opened June 18, 2010, with Kemper Construction of Minot being the low bid. The bid received are summarized below.

	Engineer's OPCC	Kemper Construction	Northern Improvement Co.	Wagner Construction	Carstensen Construction	Abbot, Arne, Schwindt, Inc.	SJ Louis Co.
Total:	$5,525,115	$4,602,078.95	$5,196,895	$5,243,244	$5,343,291	$5,467,823	$5,666,000
Amount above low bid:	$ 923,036	$ -	$ 594,816	$ 641,165	$ 741,212	$ 865,744	$1,063,921

All reviews are complete and all approvals have been received. The Notice of Award will be executed upon receipt from the consulting engineer. The substantial completion date for this contract is September 1, 2020 and the final completion date is October 1, 2020.

NAWS Contract 6-1A – Intake Modifications to Snake Creek Pumping Plant

The design kickoff meeting for Contract 6-1A was held October 3-5 in Denver. A 30 percent design review is scheduled for the first week of June and a value engineering workshop was scheduled for the week of June 24, 2019 but was pushed back to the week of August 19, 2019. We anticipate a procurement contract for the variable frequency drive (VFD) equipment for this project being beneficial due to the incoming voltage and power rating of the motors. This facility will have to come on line coincident with the completion and commissioning of the Biota Water Treatment Plant.

Remaining project components

Preliminary design has begun for the two remaining pipeline contracts to Bottineau. A 30 percent route alignment review was held for the Contract 2-4B April 25, 2019. Design has also been initiated for other critical project components necessary to deliver water to Bottineau and deliver water from Lake Sakakawea to Minot. Hydraulic analyses, water allocations, and water needs are all being performed to maximize benefit to our citizens as the project moves forward.

GE:TJF:pdh/237-04

NORTH Dakota | Water Commission
Be Legendary.™

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele, P.E., Chief Engineer-Secretary
SUBJECT: NAWS – 2020 Interim Water Rate
DATE: July 25, 2019

The NAWS Water Service Agreements require an annual review and adjustment of water rates to go into effect January 1st of the following year.

The NAWS system started water service to Berthold, Minot's South Hill, and North Prairie rural water near Burlington and Minot in August 2008; Kenmare and Upper Souris Water District at Donnybrook in December 2009; West River Water District and North Prairie Rural Water in Des Lacs in 2010; and Burlington in August 2010. Mohall, Sherwood, and All Seasons Water Users District near Antler received service in the fall of 2011. Upper Souris started taking water for the city of Glenburn, near Mohall, and the rural system near Glenburn in 2012 along with Minot's North Hill and the Minot Air Force Base. Two turnouts for North Prairie Rural Water near the Air Force Base were also installed.

The Operations and Maintenance fee charged to NAWS contract customers ($1.26/1000 gallons for 2019) should be adequate to cover projected electrical and maintenance costs. The Replacement and Extraordinary Maintenance rate of $0.15/1000 gallons should stay the same for both the NAWS Region and the City of Minot as they were in 2019. The cost for Supply and Treatment from the City of Minot increased from $1.54/1000 gallons in 2019 to $1.64/1000 gallons for 2020, which is a straight pass-through to the NAWS Region customers. As a result, overall water rate for the NAWS Region customers should increase from the 2019 rate of $2.95/1000 gallons to $3.05/1000 gallons and the Minot rate will remain at $0.41/1000 gallons. If the 2020 water rate results in more revenue than expenses for the year, then the revenue would be factored into the rate for 2021.

The NAWS water rate is based on capital costs, supply and treatment costs, operation and maintenance costs, and reserve for replacements and extraordinary maintenance (REM). The recommendations for the NAWS water rate to Minot and the NAWS Region (including Berthold, Kenmare, Upper Souris Water District, Burlington, West River Water District, Mohall, Sherwood, and All Seasons Water Users District) are broken down as follows:

Capital Costs - $0.00/1000 gallons. Minot paid 35 percent of capital costs during construction and there are no capital costs to recover in the water rate.

Supply and treatment costs - The City of Minot has developed a supply and treatment rate for 2020 of $1.64/1000 gallons. Minot water moved through the NAWS facilities will be metered and billed at the NAWS turnouts. No Minot water moved through the NAWS facilities to Minot turnouts will be charged a supply and treatment cost.

Operation and maintenance costs - $0.26/1000 gallons for Minot, $1.26/1000 gallons for NAWS contract customers. The difference is power/pumping costs for the NAWS Region and maintenance staff costs.

REM costs - $0.15/1000 gallons. The REM cost was set at $0.15/1000 during Rugby Phase I. It is recommended that this rate remain at $0.15/1000 gallons during the interim period with water supply from Minot.

I recommend the State Water Commission approve NAWS interim water rates for the 2020 calendar year of $3.05/1000 gallons for NAWS Contract Customers and $0.41/1000 gallons for Minot Contract Customers.

GE:TJF:pdh/237-04

NORTH Dakota | Water Commission

Be Legendary.™

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele, P.E., Chief Engineer-Secretary
SUBJECT: NAWS – Contract 7-2A DAF Equipment Procurement Award
DATE: July 25, 2019

NAWS Contract 7-2A Biota Water Treatment Plant Dissolved Air Flotation (DAF) System Procurement contract is a two phase contract (design and construction) for the DAF clarification system for the Biota Water Treatment Plant located at Max, ND. The NAWS Supplemental Environmental Impact Statement (SEIS) and Record of Decision (ROD) dictate the use of DAF clarification as part of the treatment process prior to any water crossing the continental divide.

DAF is a type of flocculation and sedimentation process of clarifying water in which water is saturated with dissolved air to form microbubbles which float suspended particles to the surface rather than the traditional flocculation and sedimentation processes in which suspended particles settle down to the bottom of a basin. The primary advantages of DAF are increased efficacy in cold waters and greater ability to remove suspended particles with a low specific gravity.

The estimated cost of this contract is approximately $2,250,000. The contract documents and specifications have reviewed and approved for advertisement. Bids will be able to be opened in the late August or early September timeframe. Concurrence for award from Reclamation and Garrison Diversion Conservancy District does not initiate until after the Commission has taken action on a contract award. I am recommending the Commission authorize the Chief Engineer/Secretary to award this contract as delaying until the next meeting would likely impact the Contract 7-2A design completion.

I recommend the State Water Commission authorize the Chief Engineer/Secretary to award NAWS Contract 7-2A DAF System Procurement to the low responsive bidder pending review of the bids received and concurrence from Garrison Diversion Conservancy District.

GE:TJF:pdh/237-04

APPENDIX C

NORTH Dakota | Water Commission
Be Legendary.™

PROJECT FUNDING POLICY, PROCEDURE, AND GENERAL REQUIREMENTS

The State Water Commission has adopted this policy to support local sponsors in development of sustainable water related projects in North Dakota. This policy reflects the State Water Commission's cost-share priorities and provides basic requirements for all projects considered for prioritization during the agency's budgeting process. Projects and studies that receive funding from the agency's appropriated funds are consistent with the public interest. The State Water Commission values and relies on local sponsors and their participation to assure on-the-ground support for projects and prudent expenditure of funding for evaluations and project construction. It is the policy of the State Water Commission that only the items described in this document will be eligible for cost-share upon approval by the State Water Commission, unless specifically authorized by State Water Commission action.

I. DEFINITIONS

A. CAPITAL IMPROVEMENT FUND is money set aside using a portion of user fees for future asset replacement and a cost share application shall include documentation of the following:

1. Current capital improvement fund balance
2. Existing and new assets
3. Replacement cost of assets
4. Average life of assets
5. Current and future monthly reserve per user

B. CONSTRUCTION COSTS include earthwork, concrete, mobilization and demobilization, dewatering, materials, seeding, rip-rap, crop damages, re-routing electrical transmission lines, moving storm and sanitary sewer system and other underground utilities and conveyance systems affected by construction, mitigation required by law related to the construction contract, water supply works, irrigation supply works, and other items and services provided by the contractor. Construction costs are only eligible for cost-share if incurred after State Water Commission approval and if the local sponsor has complied with North Dakota Century Code (N.D.C.C.) in soliciting and awarding bids and contracts, and complied with all applicable federal, state, and local laws.

C. COST-SHARE means funds appropriated by the legislative assembly or otherwise transferred by the Commission to a local entity under commission policy as reimbursement for a percentage of the total approved cost of a project approved by the Commission.

D. ECONOMIC ANALYSIS means an estimate of the economic benefits and direct costs that result from the development of a project.

E. ENGINEERING SERVICES include pre-construction and construction engineering. Pre-construction engineering is the engineering necessary to develop plans and specifications for permitting and construction of a project including preliminary and final design, material testing, flood insurance studies, hydraulic models, and geotechnical investigations. Construction engineering is the engineering necessary to build the project designed in the pre-construction phase including construction contract management, and construction observation. Administrative and support services not specific to the approved project are not engineering services. Engineering services are eligible costs if incurred after State Water Commission approval. If the total anticipated engineering costs are greater than the threshold stipulated in NDCC 54-44.7-04, then the local sponsor must follow the engineering selection process provided in NDCC 54-44.7 and provide a copy of the selection committee report to the Chief Engineer. The local sponsor will be considered to have complied with this requirement if they have completed a selection process for a general engineering services agreement at least once every three years and have formally assigned work to a firm or firms under an agreement. The local sponsor must inform the Chief Engineer of any change in the provider of general engineering services.

F. EXPANSIONS are construction related projects that increase the project area or users served. Expansions do not include maintenance, replacement, or reconstruction activities.

G. EXTRAORDINARY MAINTENANCE COSTS include the repair or replacement of portions of facilities or components that extends the overall life of the system or components that are above

and beyond regular or normal maintenance. Extraordinary maintenance activities extend the asset's useful life beyond its originally predicted useful life.

H. GRANT means a one-time sum of money appropriated by the legislative assembly and transferred by the commission to a local entity for a particular purpose. A grant is not dependent on the local entity providing a particular percentage of the cost of the project.

I. IMPROVEMENTS are construction related projects that upgrade a facility to provide increased efficiency, capacity, or redundancy. Improvements do not include any activities that are maintenance, replacement, or reconstruction.

J. LIFE CYCLE COST ANALYSIS means the summation of all costs associated with the anticipated useful life of a project, including project development, land, construction, operation, maintenance, and disposal or decommissioning.

K. LOAN means an amount of money lent to a sponsor of a project approved by the commission to assist with funding approved project components. A loan may be stand-alone financial assistance.

L. LOCAL SPONSOR is the entity submitting a cost-share application and must be a political subdivision, state entity, or commission legislatively granted North Dakota recognition that applies the necessary local share of funding to match State Water Commission cost-share. They provide direction for studies and projects, public point of contact for communication on public benefits and local concerns, and acquire necessary permits and rights-of-way.

M. REGULAR MAINTENANCE COSTS include normal repairs and general upkeep of facilities to allow facilities to continue proper operation and function. These maintenance items occur on a regular or annual basis. Regular maintenance activities simply help ensure the asset will remain serviceable throughout its originally predicted useful life.

N. SUSTAINABLE OPERATION, MAINTENANCE, AND REPLACEMENT PLAN is a description of the anticipated operation, maintenance, and replacement costs with a statement that the operation, maintenance, and replacement of the project will be sustainable by the local sponsor. For water supply projects, a summary of the project sponsor's Capital Improvement Fund must also be included.

O. WATER CONVEYANCE PROJECT means any surface or subsurface drainage works, bank stabilization, or snagging and clearing of water bodies.

II. INELIGIBLE ITEMS excluded from cost-share include:

1 Administrative costs, including salaries for local sponsor members and employees as well as consultant services that are not project specific and other incidental costs incurred by the sponsor;

2 Property and easement acquisition costs paid to the landowner unless specifically identified as eligible within the Flood Recovery Property Acquisition Program, the Flood Protection Program, or Water Retention Projects;

3 Work and costs incurred prior to a cost-share approval date, except for emergencies as determined by the Chief Engineer;

4 Project related operation and regular maintenance costs;

5 Funding contributions provided by federal, other state, or other North Dakota state entities that supplant costs;

6 Work incurred outside the scope of the approved study or project;

7 ~~The removal of vegetative material and sediment for water conveyance projects;~~ and

8 Local requirements imposed beyond State and Federal requirements for the project may be ineligible.

III. COST-SHARE APPLICATION AND APPROVAL PROCEDURES

The State Water Commission will not consider any cost-share applications unless the local sponsor first makes an application to the Chief Engineer. No funds will be used in violation of Article X, § 18 of the North Dakota Constitution (Anti-Gift Clause).

A. APPLICATION REQUIRED. An application for cost-share is required in all cases and must be submitted by the local sponsor on the State Water Commission Cost-Share Application form. Applications for cost-share are accepted at any time. Applications received less than 45 days before a State Water Commission meeting will not be considered at that meeting and will be held for consideration at a future meeting unless specifically exempted by the Chief Engineer. The application form is maintained and updated by the Chief Engineer. A completed application must include the following:

1 Category of cost-share activity

2 Location of the proposed project or study area shown on a map

3 Description, purpose, goal, objective, narrative of the proposed activities

4 Delineation of costs

5 Anticipated timeline of project from preliminary study through final closeout

6 Potential federal, other state, or other North Dakota state entity participation

7 Documentation of an engineering selection process if engineering costs are anticipated to be greater than the threshold provided in NDCC 54-44.7-04

8 Engineering plans, if applicable

9 Status of required permitting

10 Potential territorial service area conflicts or service area agreements, if applicable

11 Sustainable operation, maintenance, and replacement plan for projects

12 Completed economic analysis worksheet for water conveyance and flood-related projects expected to cost more than one million dollars. (Required at the time applications include a request for construction cost-share.)

13 Completed life cycle cost analysis worksheet for municipal water supply construction projects

14 Additional information as deemed appropriate by the Chief Engineer

Applications for cost-share are separate and distinct from the State Water Commission biennial project information collection effort that is part of the budgeting process and published as the State Water Plan. All local sponsors are encouraged to submit project financial needs for the State Water Plan. Projects not submitted as part of the State Water Plan development process may be held until action can be taken on those that were included during budgeting, unless determined to be an emergency that directly impacts human health and safety or that are a direct result of a natural disaster.

B. PRE-APPLICATION. A pre-application process is allowed for cost-share of assessment projects. This process will require the local sponsor to submit a brief narrative of the project, ~~preliminary designs,~~ and a delineation of costs. The Chief Engineer will then review the material presented, make a determination of project eligibility, and estimate the cost-share funding the project may anticipate receiving. A project eligibility letter will then be sent to the local sponsor noting the percent of cost-share assistance that may be expected on eligible items as well as listing those items that are not considered to be eligible costs. In addition, the project eligibility letter will state that the Chief Engineer will recommend approval when all cost-share requirements are addressed. The local sponsor may use the project eligibility letter to develop a project budget for use in the assessment voting process. Upon completion of the assessment vote and all other requirements an application for cost-share can be submitted.

C. REVIEW. Upon receiving an application for cost-share, the Chief Engineer will review the application and accompanying information. If the Chief Engineer is satisfied that the proposal meets all requirements, the local sponsor will be asked to present the application, and the Chief Engineer will provide a recommendation to the State Water Commission for its action. The Chief Engineer's review of the application will include the following items and any other considerations that the Chief Engineer deems necessary and appropriate.

1 Applicable engineering plans;

2 Field inspection, if deemed necessary by the Chief Engineer;

3 The percent and limit of proposed cost-share determined by category of cost-share activity and eligible expenses;

4 Assurance of sustainable operation, maintenance, and replacement of project facilities by the local sponsor;

5 Status of permitting and service area agreements;

6 Available funding in the State Water Commission budget, if in the State Water Plan, and a priority ranking when appropriate;

7 Results of economic analysis of water conveyance or flood-related projects, when applicable; and

8 Results of life cycle cost analysis for municipal water supply projects, when applicable.

For cost-share applications over $100 million, additional information requested by the State Water Commission will be used to determine cost-share.

The Chief Engineer is authorized to approve cost-share up to $75,000 and also approve cost overruns up to $75,000 without State Water Commission action. The Chief Engineer will respond to such requests within 60 days of receipt of the request. A final decision may be deferred if warranted by funding or regulatory consideration.

D. NOTICE. The Chief Engineer will give a 10-day notice to local sponsors when their application for cost-share is placed on the tentative agenda of the State Water Commission's next meeting.

E. AGREEMENT AND DISTRIBUTION OF FUNDS. No funds will be disbursed until the State Water Commission and local sponsor have entered into an agreement for cost-share participation. No agreement for construction funding will be entered into until all required State Engineer permits have been acquired.

For construction projects, the agreement will address indemnification and vicarious liability language. The local sponsor must require that the local sponsor and the state be made an additional insured on the contractor's commercial general liability policy including any excess policies, to the extent applicable. The levels and types of insurance required in any contract must be reviewed and agreed to by the Chief Engineer. The local sponsor may not agree to any provision that indemnifies or limits the liability of a contractor.

For any property acquisition, the agreement will specify that if the property is later sold, the local sponsor is required to reimburse the Commission the percent of sale price equal to the percent of original cost-share.

The Chief Engineer may make partial payment of cost-sharing funds as deemed appropriate. Upon notice by the local sponsor that all work or construction has been completed, the Chief Engineer may conduct a final field inspection. If the Chief Engineer is satisfied that the work has been completed in accordance with the agreement, the final payment will be disbursed to the local sponsor, less any partial payment previously made.

The project sponsor must provide a progress report to the Commission at least once every four years if the term of the project exceeds four years. If a progress report is not received in a timely fashion or, if after a review of the progress report the Commission determines the project has not made sufficient progress, the Commission may terminate the agreement for project funding. The project sponsor may submit a new application to the Commission for funding for a project for which the Commission previously terminated funding.

F. LITIGATION. If a project submitted for cost-share is the subject of litigation, the application may be deferred until the litigation is resolved. If a project approved for cost-share becomes the subject of litigation before all funds have been disbursed, the Chief Engineer may withhold funds until the litigation is resolved. Litigation for this policy is defined as legal action that would materially affect the ability of the local sponsor to construct the project; that would delay construction such that the authorized funds could not be spent; or is between political subdivisions related to the project.

G. ECONOMIC ANALYSIS. Project sponsors seeking cost-share for construction of flood control or water conveyance projects with a total cost of one million dollars or more must complete the Water Commission's economic analysis worksheet. The results of the economic analysis must be

provided with the sponsor's application for cost-share assistance for agency review. When the results of the economic analysis are determined by the agency to be accurate, the results will then be presented to the State Water Commission for their consideration as part of the cost-share request.

H. LIFE CYCLE COST ANALYSIS. Project sponsors seeking cost-share for construction of municipal water supply projects must complete the Water Commission's life cycle cost analysis worksheet. The results of the life cycle cost analysis must be provided with the sponsor's application for cost-share assistance for agency review. When the results of the life cycle cost analysis are determined by the agency to be accurate, the results will then be presented to the State Water Commission for their consideration as part of the cost-share request.

IV. COST-SHARE CATEGORIES

The State Water Commission supports the following categories of projects for cost-share. Engineering expenses related to construction are cost-shared at the same percent as the construction costs when approved by the State Water Commission.

A. PRE-CONSTRUCTION EXPENSES. The State Water Commission supports local sponsor development of feasibility studies, engineering designs, and mapping as part of pre-construction activities to develop support for projects within this cost-share policy. The following projects and studies are eligible.

1 Feasibility studies to identify water related problems, evaluate options to solve or alleviate the problems based on technical and financial feasibility, and provide recommendation and cost estimate, of the best option to pursue.

2 Engineering design to develop plans and specifications for permitting and construction of a project, including associated cultural resource and archeological studies.

3 Mapping and surveying to gather data for a specific task such as flood insurance studies and flood plain mapping, LiDAR acquisition, and flood imagery attainment, which are valuable to managing water resources.

Copies of the deliverables must be provided to the Chief Engineer upon completion. The Chief Engineer will determine the payment schedule and interim progress report requirements.

B. WATER SUPPLY

1 RURAL AND MUNICIPAL WATER SUPPLY PROJECTS. The State Water Commission supports water supply efforts. The local sponsor may apply for funding, and the application will be reviewed to determine project priority. Debt per capita, water rates and financial need may be considered by the Commission when determining an appropriate cost share percentage. The Commission reserves flexibility to adjust percentages on a case by case basis, but generally:

Up to 75% cost-share may be provided for:

- Rural Water System Expansions and Improvements
- Connection of communities to a regional system

- Improvements required to meet primary drinking water standards

Up to 60% cost-share may be provided for:

- Municipal Water Supply Expansions and Improvements
- Connection of new rural water customers located within extraterritorial areas of a municipality

Water Depots for industrial use receiving water from facilities constructed using State Water Commission funding or loans have the following additional requirements:

a) Domestic water supply has priority over industrial water supply in times of shortage. This must be explicit in the water service contracts with industrial users.

b) If industrial water service will be contracted, public notice of availability of water service contracts is required when the depot becomes operational.

c) Public access to water on a non-contracted basis must be provided at all depots.

2 FEDERAL MUNICIPAL, RURAL, AND INDUSTRIAL WATER SUPPLY PROGRAM. The Municipal, Rural, and Industrial Water Supply Program, which uses federal funds, is administered according to North Dakota Administrative Code Article 89-12.

3 DROUGHT DISASTER LIVESTOCK WATER SUPPLY PROJECT ASSISTANCE PROGRAM. This program is to provide assistance with water supply for livestock impacted during drought declarations and is administered according to North Dakota Administrative Code Article 89-11.

C. FLOOD CONTROL. The State Water Commission may provide cost-share for eligible items of flood control projects protecting communities from flooding and may include the repair of dams that provide a flood control benefit.

1 FLOOD RECOVERY PROPERTY ACQUISITION PROGRAM. This program is used to assist local sponsors with flood recovery expenses that provide long term flood damage reduction benefits through purchase and removal of structures in areas where flood damage has occurred. All contracted costs directly associated with the acquisition will be considered eligible for cost-share. Contracted costs may include: appraisals, legal fees (title and abstract search or update, etc.), property survey, closing costs, hazardous materials abatement needs (asbestos, lead paint, etc.), and site restoration.

The State Water Commission may provide cost-share of the eligible costs of approved flood recovery expenses that provide long term flood reduction benefits based on the following criteria and priority order:

a) Local Sponsor has flood damage and property may be needed for construction of temporary or long-term flood control projects, may be cost-shared up to 75 percent.

b) Local Sponsor has flood damage and property would increase conveyance or provide other flood control benefits, may be cost-shared up to 60 percent.

Prior to applying for assistance, the local sponsor must adopt and provide to the Chief Engineer an acquisition plan (similar to plans required by Hazard Mitigation Grant Program (HMGP)) that includes the description and map of properties to be acquired, the estimated cost of property acquisition including contract costs, removal of structures, the benefit of acquiring the properties, and information regarding the ineligibility for HMGP funding. Property eligible for HMGP funding is not eligible for this program. The acquisition plan must also include a description of how the local sponsor will insure there is not a duplication of benefits.

Over the long-term development of a flood control project following a voluntary acquisition program, the local sponsor's governing body must officially adopt a flood risk reduction plan or proposal including the flow to be mitigated. The flow used to develop the flood risk reduction plan must be included in zoning discussions to limit new development on other flood-prone property. An excerpt of the meeting minutes documenting the local sponsor's official action must be provided to the Chief Engineer.

Local sponsor must fund the local share for acquisitions; this requirement will not be waived. Federal funds are considered "local" for this program if they are entirely under the authority and control of the local sponsor.

The local sponsor must include a perpetual restrictive covenant similar to the restrictions required by the federal HMGP funding with the additional exceptions being that the property may be utilized for flood control structures and related infrastructure, paved surfaces, and bridges. These covenants must be recorded either in the deed or in a restrictive covenant that would apply to multiple deeds.

The local sponsor must provide justification, acceptable to the Chief Engineer, describing the property's ineligibility to receive federal HMGP funding. This is not meant to require submission and rejection by the federal government, but rather an explanation of why the property would not be eligible for federal funding. Example explanations include: permanent flood control structures may be built on the property; project will not achieve required benefit-cost analysis to support HMGP eligibility; or lack of available HMGP funding. If inability to receive federal funding is not shown to the satisfaction of the Chief Engineer, following consultation with the North Dakota Department of Emergency Services, the cost-share application will be returned to the local sponsor for submittal for federal funding prior to use of these funds.

2 FLOOD PROTECTION PROGRAM. This program supports local sponsor efforts to prevent future property damage due to flood events. The State Water Commission may provide cost-share up to 60 percent of eligible costs. For projects with federal participation, the cost-share may be up to 50 percent of eligible non-federal costs. The State Water Commission may consider a greater level of cost participation for projects involving a total cost greater than $100 million and having a basin wide or regional benefit.

Local share must be provided on a timely basis. The State Water Commission may lend a portion of the local share based on demonstrated financial need.

Property acquisition costs limited to the purchase price of the property that is not eligible for HMGP funding and within the footprint of a project may be eligible under this program. The local sponsor must include a perpetual restrictive covenant on any properties purchased under this program similar to the restrictions required by the federal HMGP

funding with the additional exceptions being that the property may be utilized for flood control structures and related infrastructure, paved surfaces, and bridges. These covenants must be recorded either in the deed or in a restrictive covenant that would apply to multiple deeds.

Costs for property acquired, by easement or fee title, to preserve the existing conveyance of a breakout corridor recognized as essential to FEMA system accreditation may be eligible under this program.

The cost-share application must include the return interval or design flow for which the structure will provide protection. The Commission will calculate the amount of its financial assistance, based on the needs for protection against:

1. One-hundred year flood event as determined by a federal agency;
2. The national economic development alternative; or
3. The local sponsor's preferred alternative if the Commission first determines the historical flood prevention costs and flood damages and the risk of future flood prevention costs and flood damages, warrant protection to the level of the local sponsor's preferred alternative.

Storm water management is not an eligible cost-share category. In order to differentiate between a flood control project and storm water management, the Commission may reduce the cost-share provided by the percentage of the contributing watershed that is located within the community's corporate limits as calculated on an acreage basis

3 FEMA LEVEE SYSTEM ACCREDITATION PROGRAM. The State Water Commission may provide cost-share up to 60 percent for eligible services for FEMA 44 CFR 65.10 flood control or reduction levee system certification analysis. The analysis is required for FEMA to accredit the levee system for flood insurance mapping purposes. Typical eligible costs include site visits and field surveys to include travel expenses, hydraulic evaluations, closure evaluations, geotechnical evaluations, embankment protection, soils investigations, interior drainage evaluations, internal drainage hydrology and hydraulic reports, system modifications, break-out flows and all other engineering services required by FEMA. The analysis will result in a comprehensive report to be submitted to FEMA and the Chief Engineer.

Administrative costs to gather existing information or to recreate required documents, maintenance and operations plans and updates, and emergency warning systems implementation are not eligible.

4 DAM SAFETY AND EMERGENCY ACTION PLANS. The State Water Commission supports dam safety including repairs and removals, as well as emergency action plans. The State Water Commission may provide cost-share for up to 75 percent of the eligible items for dam safety repair projects and dam breach or removal projects. Dam safety repair projects that are funded with federal or other agency funds may be cost-shared up to 75 percent of the eligible non-federal costs. The intent of these projects is to return the dam to a state of being safe from the condition of failure, damage, error, accidents, harm or other events that are considered a threat to public safety. The State Water Commission may lend a portion of the local share based on demonstrated financial need.

The State Water Commission may provide cost-share up to 80 percent, for emergency action plans (EAPs) of each dam classified as high or medium/significant hazard. The cost of a dam break model is only eligible for reimbursement for dams classified as a high hazard.

5 WATER RETENTION PROJECTS. The goal of water retention projects is to reduce flood damages by storing floodwater upstream of areas prone to flood damage. The State Water Commission may provide cost-share up to 60 percent of eligible costs for water retention projects including purchase price of the property. For projects with federal participation, the cost-share may be up to 50 percent. Water retention structures constructed with State Water Commission cost-share must meet state dam safety requirements, including the potential of cascade failure. A hydrologic analysis including an operation plan and a quantification of the flood reduction benefits for 25, 50, and 100-year events must be submitted with the cost-share application.

6 INDIVIDUAL RURAL AND FARMSTEAD RING DIKE PROGRAM. This program is intended to protect individual rural homes and farmsteads through ring dike programs established by water resource districts. All ring dikes within the program are subject to the Commission's Individual Rural and Farmstead Ring Dike Criteria provided in Attachment A. Protection of a city, community or development area does not fall under this program but may be eligible for the flood control program. The State Water Commission may provide up to 60 percent cost-share of eligible items for ring dikes up to a limit of $55,000 per ring dike.

Landowners enrolled in the Natural Resource Conservation Service's (NRCS) Environmental Quality Incentive Program (EQIP) who intend to construct rural or farmstead ring dikes that meet the State Water Commission's elevation design criteria are eligible for a cost-share reimbursement of 20 percent of the NRCS construction payment, limited to a combined NRCS and State Water Commission contribution of 80 percent of project costs.

D. WATER CONVEYANCE.

1 RURAL FLOOD CONTROL. These projects are intended to improve the drainage and management of runoff from agricultural sources. The State Water Commission may provide cost-share up to 45 percent of the eligible items for the construction of drains, channels, or diversion ditches. Construction costs for public road crossings that are integral to the project are eligible for cost-share as defined in N.D.C.C. § 61-21-31 and 61-21-32. If an assessment-based rural flood control project involves multiple districts, each district involved must join in the cost-share application.

Cost-share applications for rural assessment drains will only be processed after the assessment vote has passed, ~~the final design is complete,~~ and a drain permit has been obtained. If the local sponsor wishes to submit a cost-share application prior to completion of the aforementioned steps, a pre-application process will be followed.

A sediment analysis must be provided with any application for cost-share assistance for reconstruction of an existing drain. The analysis must be completed by a qualified professional engineer and must clearly indicate the percentage volume of sediment removal involved in the project. The cost of that removal must be deducted from the total for which cost-share assistance is being requested.

2 BANK STABILIZATION. The State Water Commission may provide cost-share up to 50 percent of eligible items for bank stabilization projects on public lands or those lands under easement by federal, state, or political subdivisions. Bank stabilization projects are intended to stabilize the banks of lakes or watercourses, as defined in N.D.C.C § 61-01-06, with the purpose of protecting public facilities. Drop structures and outlets are not considered for funding as bank stabilization projects, but may be eligible under other cost-share program categories. Bank stabilization projects typically consist of a rock or vegetative design and are intended to prevent damage to public facilities including utilities, roads, or buildings adjacent to a lake or watercourse

3 SNAGGING AND CLEARING. Snagging and clearing projects consist of the removal and disposal of fallen trees and associated debris encountered within or along the channel of a natural watercourse. Snagging and clearing projects are intended to prevent damage to structures such as bridges, and maintain the hydraulic capacity of the channel during flood flows. The Water Commission may provide cost-share for up to 50 percent of the eligible items for snagging and clearing as well as any sediment that has accumulated in the immediate vicinity of snags and any trees in imminent danger of falling in the channel or watercourses as defined in N.D.C.C § 61-01-06. Items that are not eligible include snagging and clearing of man-made channels; the dredging of watercourses for sediment removal; the clearing and grubbing of cattails and other plant vegetation; or the removal of any other unwanted materials.

E. RECREATION. The State Water Commission may provide cost-share up to 40 percent for projects intended to provide water-based recreation. Typical projects provide or complement water-based recreation associated with dams.

F. IRRIGATION. The State Water Commission may provide cost-share for up to 50 percent of the eligible items for irrigation projects. The items eligible for cost-share are those associated with the off-farm portion of new central supply works, including water storage facilities, intake structures, wells, pumps, power units, primary water conveyance facilities, and electrical transmission and control facilities. The Commission will only enter into cost share agreements with political subdivisions, including irrigation districts, and not with individual producers.

ATTACHMENT A
INDIVIDUAL RURAL AND FARMSTEAD RING DIKE CRITERIA

MINIMUM DESIGN CRITERIA

- Height: The dike must be built to an elevation 2 ft above either the 100-year flood or the documented high water mark of a flood event of greater magnitude, whichever is greater.
- Top Width:

If dike height is 5 ft or less:	4 ft top width
If dike height is between 5 ft and 14 ft:	6 ft top width
If dike height is greater than 14 ft:	8 ft top width

- Side Slopes: 3 horizontal to 1 vertical
- Strip topsoil and vegetation: 1 ft
- Adequate embankment compaction: Fill in 6-8 inch layers, compact with passes of equipment
- Spread topsoil and seed on ring dike

LANDOWNER RESPONSIBILITY

Landowners are responsible to address internal drainage on ring dikes. If culverts and flap gates are installed, these costs are eligible for cost-share. The landowner has the option of completing the work or hiring a contractor to complete the work.

IF CONTRACTOR DOES THE WORK, payment is for actual costs with documented receipts.

IF LANDOWNER DOES THE WORK, payment is based on the following unit prices:

- Stripping, spreading topsoil, and Embankment Fill: Chief Engineer will determine rate schedule based on current local rates
- Seeding: Cost of seed times 200%
- Culverts: Cost of culverts times 150%
- Flap gates: Cost of flap gates times 150%

OTHER FACTS AND CRITERIA

- The topsoil and embankment quantities will be estimated based on dike dimensions. Construction costs in excess of the 3:1 side slope standard will be the responsibility of the landowner. Invoices will be used for the cost of seed, culverts, and flap gates.
- Height can be determined by existing FIRM data or known elevations available at county floodplain management offices. Engineers or surveyors may also assist in establishing height elevations.

- The projects will not require extensive engineering design or extensive cross sections.
- A dike permit is required if the interior volume of the dike consists of 50 acre-feet, or more.

SWC PROJECT PRIORITIZATION GUIDANCE

Projects submitted during the project planning inventory process[I] that meet SWC cost-share eligibility requirements will be considered for prioritization. In the interest of strategically investing in the state's highest water development priorities, the Water Commission will give funding preference to projects designated as higher priorities for the first 12 months of each budget cycle.

ESSENTIAL PROJECTS *(No Priority Ranking)*

Agency operational expenses.

An imminent water supply loss to an existing multi-user system, an immediate flood or dam related threat to human life or primary residences, or emergency response efforts.

Existing agency debt obligations.

SWC project mitigation.

HIGH PRIORITY PROJECTS

Federally authorized water supply or flood control projects with a federal funding appropriation.

Federally authorized water supply or flood control projects that do not have a federal appropriation.

Corrects a lack of water supply for a group of water users or connects a city to a regional/rural system.

Corrects a violation of a primary water quality condition in a water supply system.

Addresses severe or anticipated water supply shortages for domestic use in a service area or city with rapid population growth.

Protects primary residences or businesses from flooding in population centers or involves flood recovery property acquisitions.

MODERATE PRIORITY PROJECTS

Dam safety repairs and emergency action plans.

Expansion of an existing water supply system.

Levee system accreditations, water retention, or flood protection property acquisitions.

Irrigation system construction.

New rural flood control projects.

Bank stabilization.

Snagging and clearing in population centers.

LOW PRIORITY PROJECTS

Studies, reports, analyses, surveys, models, evaluations, mapping projects, or engineering designs.[II]

Improvement or extraordinary maintenance of a water supply system.

Improvement or extraordinary maintenance of rural flood control projects.

Recreation projects.

Individual rural and farmstead ring dike constructions.

Snagging and clearing in sparsely populated areas.

Footnotes

I. All local sponsors are encouraged to submit project financial needs during the budgeting process. Projects not submitted as part of the project information collection effort may be held until action can be taken on those that were included during budgeting, unless determined to be an emergency that directly impacts human health and safety or that are a direct result of a natural disaster.

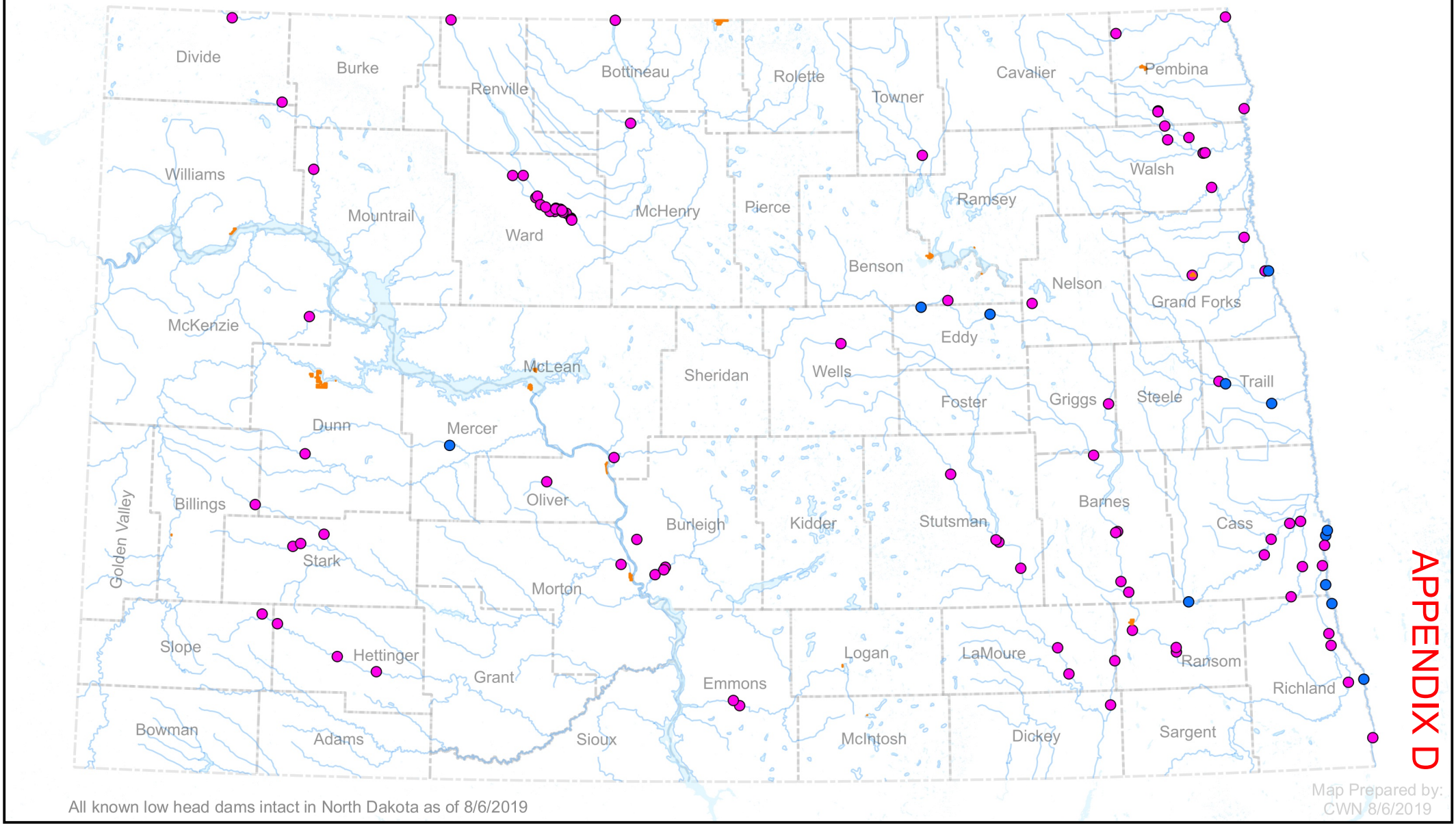
II. May be considered as a higher priority if the related project is of higher priority.

Disclaimer

This process is meant to provide guidance for prioritizing water projects during the budgeting process that may be eligible for cost-share assistance through the State Water Commission. Interpretation and deviations from the process are within the discretion of the state as authorized by the State Water Commission or Legislature.

Known Low Head Dams

In North Dakota

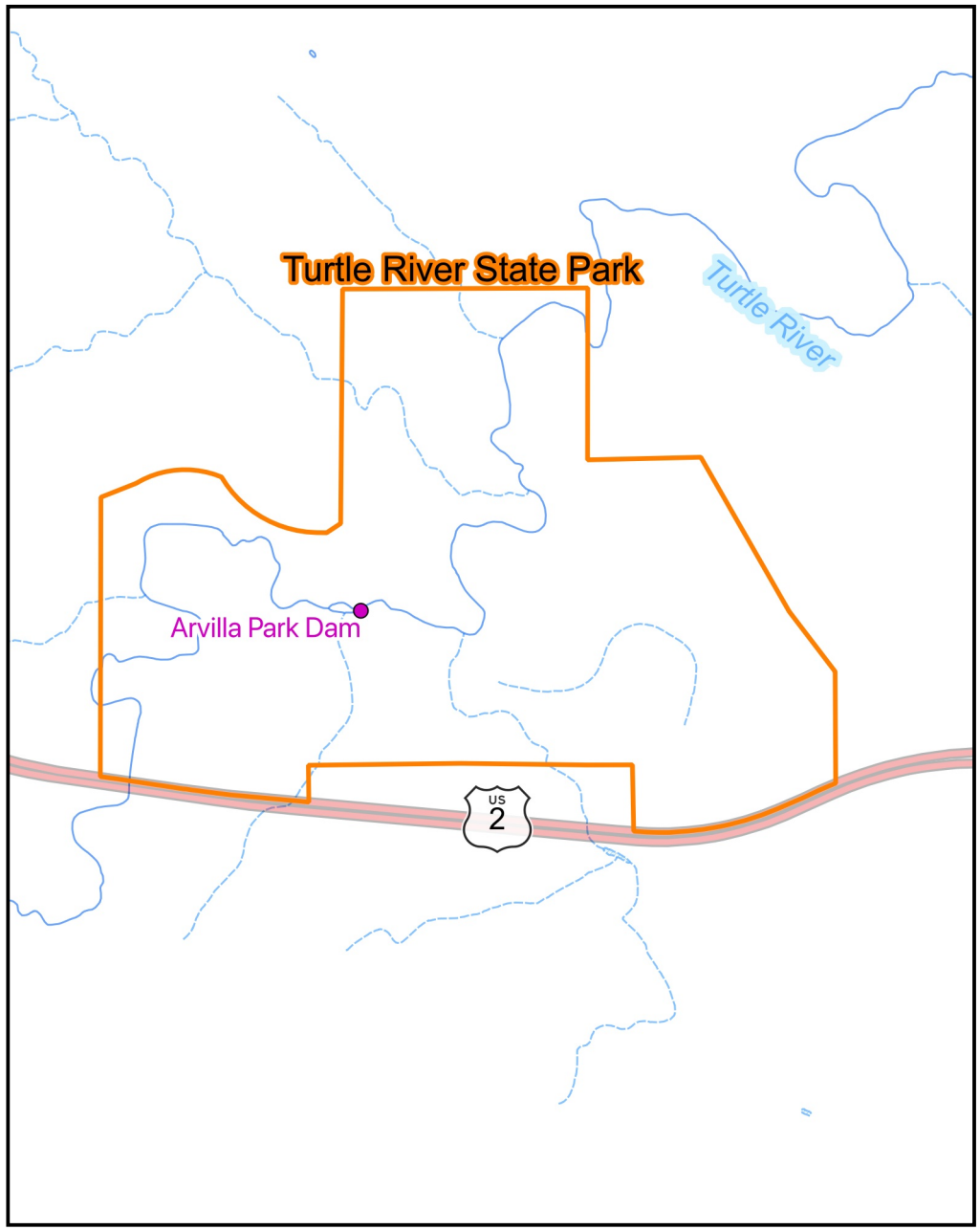


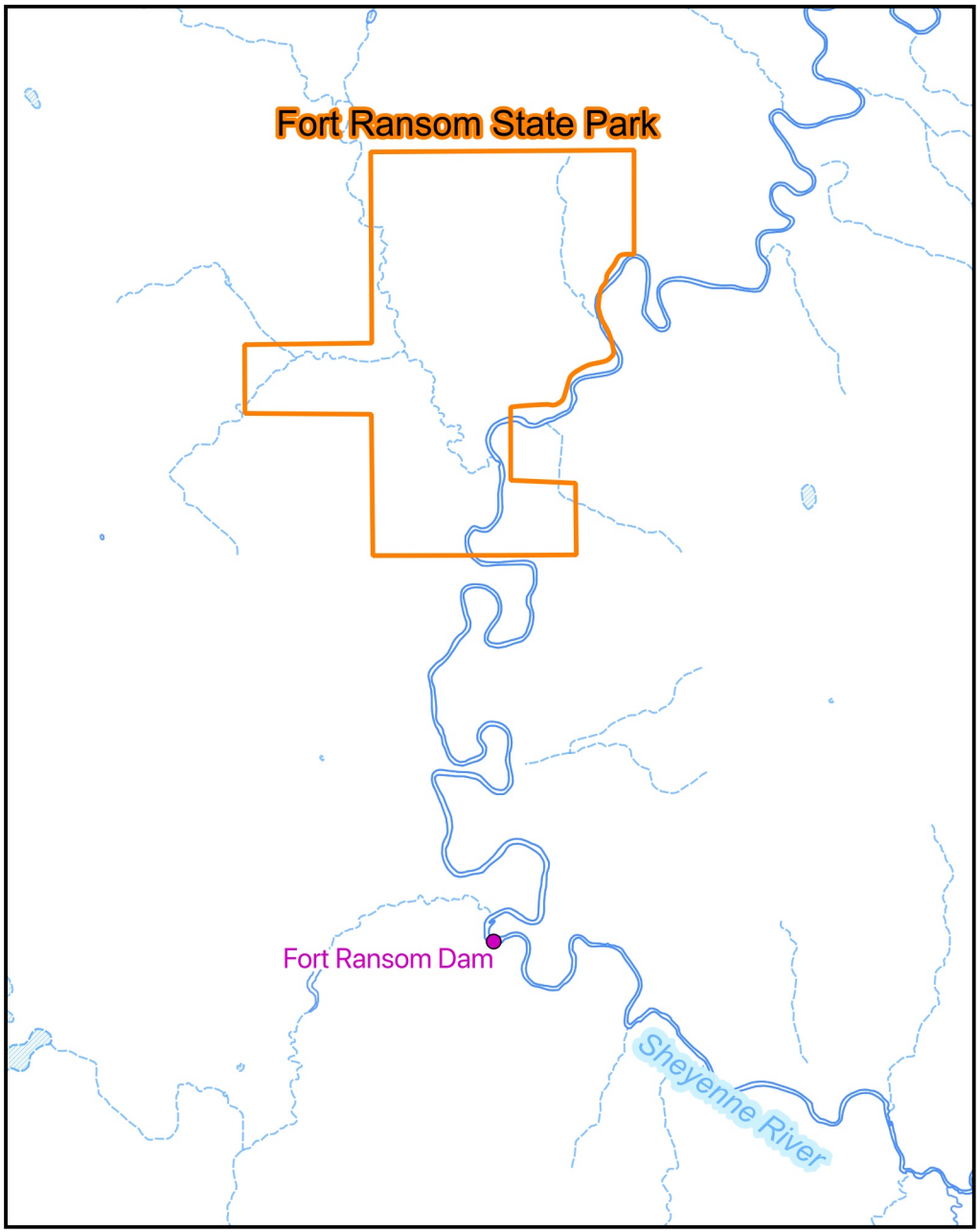
All known low head dams intact in North Dakota as of 8/6/2019

Map Prepared by:
CWN 8/6/2019

APPENDIX D

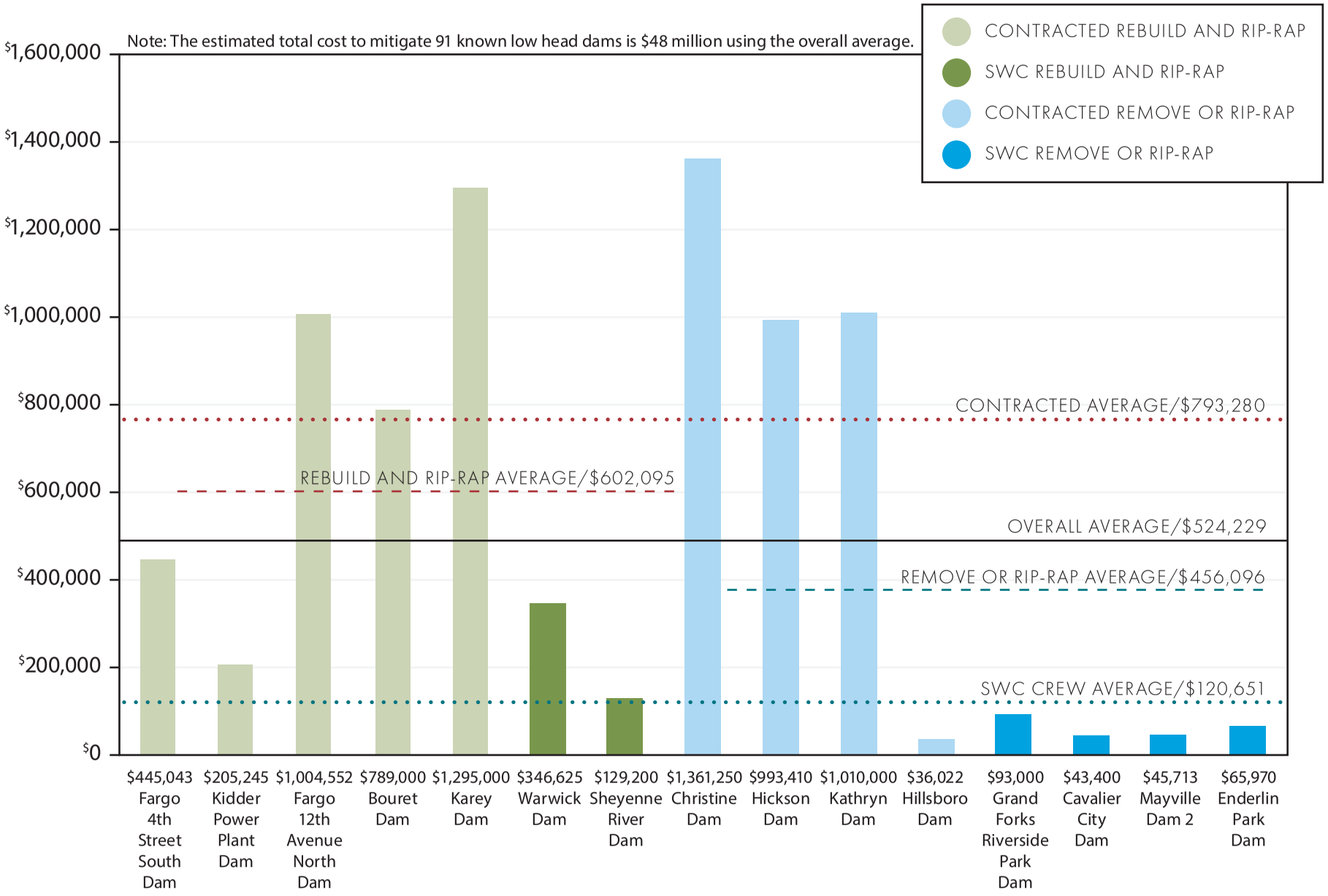
Low Head Dams At North Dakota State Parks





Map Prepared by:
CWN 8/6/2019

LOW HEAD DAM MITIGATION COSTS



Known Low Head Dam Mitigation Scenarios

	Dams	Average Cost*	Mitigation Costs*
All	91	$ 524,229	$ 47,704,806
SWC Crew	91	$ 120,651	$ 10,979,272
Contractor	91	$ 793,280	$ 72,188,495
SWC Crew	30	$ 120,651	$ 3,619,540
Contractor	61	$ 793,280	$ 48,390,090
			$ 52,009,630
SWC Crew	45	$ 120,651	$ 5,429,310
Contractor	46	$ 793,280	$ 36,490,888
			$ 41,920,198
SWC Crew	61	$ 120,651	$ 7,359,732
Contractor	30	$ 793,280	$ 23,798,405
			$ 31,158,137

** All values are 2019 US Dollars*

MODIFIED LOW HEAD DAMS

Hillsboro Dam - 2016

MODIFIED LOW HEAD DAMS

Sheyenne Dam - 2019

UNMODIFIED LOW HEAD DAMS

Valley City Park Dam - 2018

UNMODIFIED LOW HEAD DAMS

Fort Ransom Dam - 2014

Municipal Water Supply Projects

SYSTEM NAME	PROJECT NAME	PROJECT TYPE	SWC PRIORITY RANK	DEQ PRIORITY RANK	DEQ PRIORITY POINTS	SWC SUB RANK	ESTIMATED CUMULATIVE C-S REQUEST
Columbus	Water Main Improvements - Phase 1	WS Expansion	Moderate	16	19	1	$ 365,400
Columbus	Water Main Improvements - Phase 2	WS Expansion	Moderate	16	19	2	$ 712,110
Columbus	Water Main Improvements - Phase 3	WS Expansion	Moderate	16	19	3	$ 946,911
Garrison	Water Transmission & Supply Line	WS Expansion	Moderate	98	11	4	$ 1,666,911
Mapleton	Mapleton Water Storage Tank	WS Expansion	Moderate	111	10	5	$ 2,506,911
Garrison	Water Supply & Treatment Expansion	WS Expansion	Moderate	117	10	6	$ 5,206,911
West Fargo	9th St NW Water Main Looping	WS Expansion	Moderate	128	9	7	$ 5,356,911
Burlington and North Prairie RW	Burlington South Water Tower	WS Expansion	Moderate	226	5	8	$ 6,292,911
Watford City	12th St NE (Between HWY 23 and 17th Ave N)	WS Expansion	Moderate	239	4	9	$ 6,682,911
Watford City	14th St NW (Between 10th Ave NW and 17th Ave	WS Expansion	Moderate	239	4	10	$ 6,922,911
Watford City	17th Ave NE (Between Pheasant Ridge & 12 St	WS Expansion	Moderate	239	4	11	$ 7,204,911
Watford City	17th Ave NW (Between Main St & 14th St NW)	WS Expansion	Moderate	239	4	12	$ 7,714,911
Bismarck	Zone 4 Lockport Water Pump Station	WS Expansion	Moderate	-	-	-	$ 9,994,911
Dickinson	Water Supply Improvements (6th St, 7th St, Sims	WS Expansion	Moderate	-	-	-	$ 11,974,911
Dickinson	North Side Water Storage Tank	WS Expansion	Moderate	-	-	-	$ 12,034,911
Grand Forks	Regional WTP	WS Expansion	Moderate	-	-	-	$ 21,909,911
Killdeer	HWBL Water	WS Expansion	Moderate	-	-	-	$ 22,203,911
Killdeer	Southwest Utility Extension and Lift Station	WS Expansion	Moderate	-	-	-	$ 22,420,631
Larimore	Install New Water Main & Appurtenances	WS Expansion	Moderate	-	-	-	$ 22,652,381
Minot	SW Elevated Water Tank	WS Expansion	Moderate	-	-	-	**$ 25,412,381**
Benedict	Water Main Replacement	WS Repair or Replacement	Low	1	27	1	$ 921,043
Riverdale	Water Storage Improvements	WS Repair or Replacement	Low	2	24	2	$ 1,921,043
Cavalier	Water Tower and Ground Storage Reservoir	WS Repair or Replacement	Low	5	21	3	$ 3,541,043
Wing	Refurbishing Water Tower	WS Repair or Replacement	Low	7	20	4	$ 4,171,043
Harvey	Water Supply & Treatment Upgrades	WS Repair or Replacement	Low	8	20	5	$ 4,591,043
McVille	WTP Upgrades - Joint Project With Tri-County	WS Repair or Replacement	Low	14	19	6	$ 4,861,043
Oberon	Well Installation	WS Improvement	Low	19	19	7	$ 5,020,543
Streeter	Well Installation	WS Improvement	Low	21	19	8	$ 5,374,618
Davenport	Water Storage, Booster Station & Transmission	WS Improvement	Low	23	18	9	$ 5,804,218
Larimore	City-Wide Water System Replacement	WS Repair or Replacement	Low	30	17	10	$ 7,304,218
Elgin	ACP Replacement	WS Repair or Replacement	Low	31	17	11	$ 7,568,218
Lisbon	WTP Rehabilitation	WS Repair or Replacement	Low	46	15	12	$ 7,868,218
Horace	Water Treatment Plant Upgrades	WS Improvement	Low	54	14	13	$ 9,086,218
Makoti	New Wells & Transmission Line	WS Repair or Replacement	Low	63	14	14	$ 9,446,218
Mayville	New/Replacement Transmission Lines & Related	WS Improvement	Low	64	14	15	$ 9,536,218
Mayville	WTP Upgrades - Joint Project With Traill Rural	WS Improvement	Low	64	14	16	$ 9,716,218
Park River	Water Main Update	WS Repair or Replacement	Low	66	14	17	$ 10,640,623
Drayton	Water Treatment Plant Improvements	WS Improvement	Low	69	13	18	$ 12,803,623
Enderlin	Water Tower Replacement	WS Improvement	Low	70	13	19	$ 13,976,623
Lisbon	Water Main Looping	WS Improvement	Low	82	12	20	$ 14,222,623
Enderlin	New Lime Softening WTP	WS Improvement	Low	84	12	21	$ 19,061,623
Center	Street and Utility Improvements	WS Repair or Replacement	Low	92	11	22	$ 19,132,423

APPENDIX E

Lisbon	New Well Field & Raw Water Transmission Line	WS Improvement	Low	94	11	23	$ 19,468,423
Minto	Stoltman's Addition Water Main Replacement	WS Repair or Replacement	Low	95	11	24	$ 19,886,623
Enderlin	New Wells	WS Improvement	Low	97	11	25	$ 20,328,823
Sykeston	Water System Improvements	WS Improvement	Low	100	11	26	$ 20,970,823
Enderlin	Transmission Line	WS Improvement	Low	102	11	27	$ 21,300,823
Valley City	Water Improvements (NW and NE Quadrants)	WS Repair or Replacement	Low	112	10	28	$ 22,200,823
Drayton	Clearwell Replacement	WS Repair or Replacement	Low	116	10	29	$ 22,741,573
Wyndmere	Distribution System Replacement	WS Repair or Replacement	Low	126	10	30	$ 32,041,573
Mooreton	Replace Gate Valves	WS Repair or Replacement	Low	127	9	31	$ 32,161,573
West Fargo	2nd St. E. Water Main Replacement	WS Repair or Replacement	Low	128	9	32	$ 32,461,573
West Fargo	2nd St. W. Water Main Replacement	WS Repair or Replacement	Low	128	9	33	$ 32,761,573
Sherwood	Water Supply Improvements	WS Repair or Replacement	Low	142	9	34	$ 33,129,323
Westhope	Water Main Improvements	WS Repair or Replacement	Low	145	9	35	$ 33,489,323
Wilton	2019 Utility Improvements	WS Repair or Replacement	Low	158	8	36	$ 33,978,583
Fargo	New Downtown Elevated Storage	WS Improvement	Low	160	8	37	$ 35,703,583
Fargo	WTP Facility Plan - Phase 2 Existing Facility	WS Improvement	Low	161	8	38	$ 37,631,083
Beulah	Water & Waste Water Main Rehabilitation Project	WS Repair or Replacement	Low	169	7	39	$ 38,131,083
Parshall	Parshall Water Tower	WS Improvement	Low	192	7	40	$ 39,331,083
Lincoln	Water Tank Replacement	WS Improvement	Low	198	6	41	$ 40,599,063
Hebron	80,000 Gallon Water Tower	WS Improvement	Low	201	6	42	$ 41,079,063
Noonan	Water Main Replace	WS Repair or Replacement	Low	202	6	43	$ 41,396,919
Fargo	Water Treatment Plant Residuals Facility	WS Repair or Replacement	Low	208	6	44	$ 49,396,919
Oakes	New Well, Transmission Line, & WTP Expansion	WS Improvement	Low	219	6	45	$ 50,596,919
Colfax	Water supply Looping Project	WS Repair or Replacement	Low	235	4	46	$ 50,883,719
Hazen	New Water Tower/Storage System Expansion	WS Improvement	Low	236	4	47	$ 51,768,719
Michigan	Water Tower Replacement	WS Repair or Replacement	Low	241	4	48	$ 52,068,719
Harwood	Water Main Looping	WS Improvement	Low	243	3	49	$ 52,086,219
Horace	Elevated Tank Improvements	WS Repair or Replacement	Low	244	3	50	$ 52,201,419
Mohall	Water Main Looping	WS Improvement	Low	247	3	51	$ 52,417,419
Bowman	Water Tank Rehabilitation	WS Repair or Replacement	Low	251	3	52	$ 52,864,419
Williston	16th Avenue Water Main	WS Improvement	Low	254	2	53	$ 53,485,419
Williston	42nd Street Water Main	WS Improvement	Low	255	2	54	$ 54,276,819
Williston	47th Street Water Main	WS Repair or Replacement	Low	256	2	55	$ 54,690,819
Williston	Front Street & Reiger Drive Water Main	WS Improvement	Low	257	2	56	$ 55,560,219
Williston	Borsheim Addition	WS Improvement	Low	259	1	57	$ 56,880,219
Williston	Sunset - Kettler Subdivisions	WS Improvement	Low	260	1	58	**$ 57,930,219**
Bowbells	Water Main Improvements	WS Repair or Replacement	Low	-	8	-	$ 79,200
Dickinson	Water Utility Master Plan Update	Study	Low	-	1	-	$ 114,200
Fargo	Ozone AOP Improvements	WS Improvement	Low	-	8	-	$ 2,239,200
Flaxton	Water Quality Treatment	WS Improvement	Low	-	14	-	$ 2,389,200
Grenora	Water Tower Replacement	WS Improvement	Low	-	12	-	$ 4,609,200
Killdeer	South Water Storage Reservoir	WS Improvement	Low	-	3	-	$ 4,879,200
Kindred	Newport Ridge - Water Main Looping	WS Improvement	Low	-	5	-	$ 4,994,200
Rhame	Water Main Replacements	WS Improvement	Low	-	6	-	$ 5,261,100
Richardton	Water Main Replacements	WS Repair or Replacement	Low		6		$ 5,882,100
Souris	Transmission Line Replacement	WS Repair or Replacement	Low	-	17	-	**$ 5,987,100**

2019 INTENDED USE PLAN

for the

NORTH DAKOTA DRINKING WATER STATE REVOLVING FUND

prepared by the

DRINKING WATER STATE REVOLVING FUND PROGRAM

DIVISION OF MUNICIPAL FACILITIES

ENVIRONMENTAL HEALTH SECTION

NORTH DAKOTA
DEPARTMENT *of* HEALTH

November 19, 2018

Table of Contents

Introduction 1
Priority List of Projects 2
Development Process 3
Priority Ranking System 3
Comprehensive Project Priority List and Fundable List 4
Criteria and Methods for the Distribution of Funds 4
Ranking and Project Bypass Considerations 4
Capacity 5
Set-Aside and Fee Activities 6
Mandatory Small System Project Set-Aside 6
Mandatory Additional Subsidization Set-Aside 6
Mandatory Green Project Reserve (GPR) Set-Aside 7
Disadvantaged Community Set-Aside 8
Optional Non-Project Set-Asides 8
Non-Project Set-Aside and Fee Activity 9
Financial Status 10
Financial Structure 10
State 20 Percent Match Requirement 11
Anticipated Proportionality Ratio 11
Disbursement of Funds 11
Transfer of Funds Between DWSRF and CWSRF 12
Funding Process 12
Loan Assistance Terms 13
Sources and Uses of Funds 14
Short- and Long-Term Goals 14
Short-Term Goals 14
Long-Term Goals 14
Environmental Results 15
Public Participation 15
Process 15

Appendices

Appendix A: Eligible and Ineligible Projects and Project-Related Costs Under the Drinking Water State Revolving Loan Fund (DWSRF) Program

Appendix B: Comprehensive Project Priority List and Fundable List for 2018

Appendix C: Priority Ranking System for Financial Assistance Through the Drinking Water State Revolving Loan Fund (DWSRF) Program

Appendix D: Non-Project Set-Aside and Loan Fee Activity

Appendix E: Amounts Available to Transfer Between State Revolving Fund Programs

Appendix F: Sources and Uses Table

Appendix G: Abbreviations

Introduction

On August 6, 1996, President Clinton signed into law the Safe Drinking Water Act (SDWA) Amendments of 1996 (P.L. 104-182). Section 1452 of the SDWA authorizes a Drinking Water State Revolving Loan Fund (DWSRF) Program. It further requires the U.S. Environmental Protection Agency (EPA) to enter into agreements with and make capitalization grants to eligible states to assist public water systems (PWSs) in financing the costs of infrastructure needed to achieve or maintain compliance with the SDWA and to protect public health.

North Dakota's legislature, under North Dakota Century Code (NDCC) section 61-28.1-11, established a drinking water revolving loan fund that would be administered by the North Dakota Department of Health (NDDoH). The powers and duties of the department include applying for grants from the EPA to be used for purposes authorized under SDWA, administering the fund, disbursing funds, establishing assistance priorities, and adopting rules necessary for the administration of the fund.

North Dakota's DWSRF federal allotments for fiscal years (FY) 1997 through 2018 totaled $204,930,767, and the anticipated 2019 allotment is $11,107,000. Allotted funds are provided by the EPA through capitalization grants and matched 20 percent by North Dakota.

DWSRF funds may be used for:

- Loans.
- Loan guarantees.
- A source of reserve and security for leveraged loans (the proceeds of which must be placed in the DWSRF).
- Buying or refinancing existing local debt obligations (publicly-owned systems only) where the initial debt was incurred and construction started after July 1, 1993.
- Earning interest prior to disbursement of assistance.

To the extent that there are enough eligible projects, at least 15 percent of the funds available for construction must be used annually to provide loan assistance to PWSs that serve fewer than 10,000 persons. Up to 30 percent of the funds available for construction may also be used to provide subsidized loans to disadvantaged communities. A portion of the DWSRF allotments may also be used for non-project set-aside activities such as:

- DWSRF Program administration (the maximum of the following: $400,000, 1/5 percent of the current valuation of the fund, or 4 percent of all grant awards to the fund for the fiscal year).
- State program assistance (up to 10 percent).
- Small system technical assistance (up to 2 percent).
- Local assistance and state programs, including the delineation and assessment

of source water protection areas (up to 10 percent for any one activity with a maximum of 15 percent for all activities combined).

PWSs eligible for DWSRF assistance include community water systems (both publicly- and privately-owned) and nonprofit noncommunity water systems. Federally-owned PWSs are not eligible to receive DWSRF assistance. Appendix A depicts the types of projects and project-related costs that are eligible and ineligible for DWSRF assistance.

Section 1452(b) of the SDWA requires each state to annually prepare an Intended Use Plan (IUP). The IUP must describe how the state intends to use the DWSRF funds to meet the objectives of the SDWA and further the goal of protecting public health. The IUP must be made available to the public for review and comment prior to submitting it to the EPA as part of the capitalization grant application. Specifically, the IUP must include a:

- Priority list of projects, including a description of the projects and the present size of the PWSs served.
- Description of the criteria and methods to be used for the distribution of funds.
- Description of the financial status of the DWSRF Program, including the use of set-asides along with funds reserved, and the amount of funds that will be used to assist disadvantaged communities.
- Description of the short- and long-term goals of the DWSRF Program, including how the capitalization grant funds will be used to ensure compliance and protect public health.

This document is intended to serve as the state of North Dakota's IUP for 2019 and will stay in effect until superseded by a subsequent IUP. In accordance with the authority granted to the North Dakota Department of Health (NDDoH) under North Dakota Century Code (NDCC) Chapter 61-28.1, this document, based on comments received from the public, will be incorporated into a capitalization grant application and submitted to the EPA to further capitalize the state's DWSRF Program in the amount of $11,107,000 (anticipated amount). State match bonds were issued in 2015 and 2018 to provide the 20 percent match for the capitalization grant.

Priority List of Projects

States are required to develop and maintain a comprehensive priority list of eligible projects for funding and to identify projects that will receive funding in the first year after the capitalization grant award. In determining funding priority, states must ensure to the maximum extent practicable that priority for the use of funds be given to projects that: (1) address the most serious risks to human health; (2) are necessary to ensure compliance under the SDWA; and (3) assist systems most in need on a per household basis (i.e., affordability).

A DWSRF may provide assistance only for expenditures (excluding operation, maintenance, and monitoring) of a type or category which will facilitate compliance or otherwise significantly further health protection under the SDWA. Projects eligible for DWSRF financial assistance include investments to:

- Address present SDWA exceedances.
- Prevent future SDWA exceedances (of regulations presently in effect).
- Replace aging infrastructure.
- Restructure or consolidate water supplies.
- Buy or refinance existing debt obligations (publicly owned systems only) where the initial debt was incurred and construction started after July 1, 1993.

Appendix A provides additional information concerning the types of projects and project-related costs that are eligible for DWSRF financial assistance.

Development Process

As part of the IUP development process, all potential DWSRF loan recipients were requested to notify the NDDoH if they had a drinking water project not presently on the list and for which they were interested in pursuing DWSRF financial assistance. Systems with previously ranked and listed projects were requested to provide the NDDoH with a written update for each project either not yet under construction or under construction using funds other than DWSRF funds. The updates were to include a detailed project description and cost estimate, the amount of DWSRF funds needed, and the anticipated construction start date. In lieu of this information, systems were asked to inform the NDDoH if they no longer intended to complete a project or no longer intended to complete a project using DWSRF assistance. Systems requesting ranking of new projects were provided ranking questionnaires. Requests for project re-ranking or deletion were evaluated on a case-by-case basis, with ranking questionnaires provided as needed. Several projects were deleted due to completion (with or without DWSRF assistance) or the acquisition of other funding sources.

Finalized project priority lists may be amended to include new non-emergency projects. Amendments are subject to public review and comment and may require North Dakota State Water Commission approval.

Priority Ranking System

The priority ranking system was developed by the NDDoH, the state agency with primary enforcement authority for the SDWA. The priority ranking system is designed to ensure that DWSRF funds are focused on solutions to address the most serious risks to human health, rectify SDWA compliance problems, and assist those systems most in need based on affordability considerations. The priority ranking system has received both EPA Region VIII and Headquarter concurrence. The priority ranking system will be amended as needed to reflect the changing nature of the SDWA and the DWSRF

Program. Any significant amendments will be presented for public review and comment in an IUP.

Comprehensive Project Priority List and Fundable List

Appendix B contains the comprehensive project priority list. The fundable list represents those projects from the comprehensive project priority list anticipated to receive loan assistance this year. The list of projects is based on anticipated start dates, projected funding needs, and expected available loan funds (see Financial Status section of this document). The list will change if such information or assumptions vary, if higher ranked projects not on the list become ready to proceed, or if projects on the list are bypassed (see Criteria and Methods for the Distribution of Funds).

Criteria and Methods for the Distribution of Funds

To the maximum extent possible, states are required to prioritize projects needed for SDWA compliance, projects that provide the greatest public health protection, and those projects that assist systems most in need based on affordability. The information below describes the process used by the NDDoH to select projects for potential DWSRF assistance.

Ranking and Project Bypass Considerations

It is the intent of the NDDoH that DWSRF funds are directed toward North Dakota's most pressing SDWA compliance problems and public health protection needs. To this end, the NDDoH reserves the right to require the separation of project components into separate projects, if feasible and necessary, to focus on critical water supply problems. Project components which are separated will be ranked independently. Projects for existing PWSs, including refinancing projects, will be given preference over projects for the development of new water systems.

Under the SDWA, DWSRF funds may be used to buy or refinance existing local debt obligations (for publicly-owned systems only) where the initial debt was incurred and construction started after July 1, 1993. Cross-cutter requirements, including American Iron and Steel and Davis Bacon wage rate requirements, apply to these projects. American Iron and Steel requirements apply to projects with construction after December 16, 2014. Davis Bacon wage rate requirements apply to projects with construction after October 30, 2009. DWSRF assistance requests of this type, if eligible, will be ranked based on the original purpose and success of the constructed improvements. In the event of a tie in project rankings, new projects for existing systems will be given preference over refinancing projects.

The NDDoH reserves the right to fund lower-ranked projects ahead of higher-ranked projects based on the considerations below. To the maximum extent possible, the NDDoH will work with bypassed projects to ensure that they will be eligible for funding in the following fiscal year. Criteria reviewed in bypassing a project include:

- Readiness to proceed (i.e., applicant is prepared to begin construction and is immediately ready or poised to be ready to enter into assistance agreements).
- Willingness to proceed (e.g., applicant withdraws project from consideration, obtains other funding sources, or is nonresponsive).
- Emergency conditions (i.e., an unanticipated failure occurs requiring immediate attention to protect public health).
- Financial (includes inability to pay and loan repayment issues), technical, or managerial capability.
- Meets the 15 percent requirement (i.e., funding lower-ranked project would satisfy the requirement that at least 15 percent of the funds available for construction be used annually to provide loan assistance to PWSs that serve populations of fewer than 10,000 persons).
- Meets the Green Project Reserve (if required).
- Inability to verify initial ranking score.

The NDDoH reserves the right to fund unanticipated, non-ranked emergency projects requiring immediate attention to protect public health without going through a public review process. Such assistance will be limited to (1) eligible PWS types and project features and (2) situations involving acute contaminants, loss or potential loss of a water supply in the near future, or that otherwise represent an unreasonable risk to health.

Capacity

Section 1452 of the 1996 SDWA Amendments precludes states from providing DWSRF assistance to any eligible PWS that lacks the capacity to maintain SDWA compliance, unless the PWS owner or operator agrees to undertake feasible and appropriate changes to ensure compliance over the long term. States are also precluded from providing DWSRF assistance to any eligible PWS that is in significant noncompliance with any requirement of a National Primary Drinking Water Regulation (NPDWR) or variance, unless such assistance will ensure compliance. In the context of the SDWA, PWS capacity refers to the overall technical, managerial, and financial capability of a PWS to consistently produce and deliver drinking water meeting all NPDWRs. The NDDoH has the legal authority and responsibility under NDCC Chapter 61-28.1 to ensure PWS capacity.

The NDDoH will use the DWSRF loan application as the principal control point for capacity assessment. Information from the loan application and other available and relevant information (such as SDWA compliance data, sanitary survey reports, and operator certification status) will be evaluated to assess capacity at present and for the foreseeable future. The North Dakota Public Finance Authority (PFA), as financial agent for the DWSRF Program through formal agreement, will evaluate the financial information provided in the loan application. Based upon input provided by the NDDoH regarding technical and managerial capability, the PFA will make recommendations to the NDDoH concerning financial capability. The final decision regarding overall capacity will be made by the NDDoH.

As required by the SDWA, DWSRF assistance will be denied to applicants considered priority systems because they score 11 or higher in the Enforcement Tracking Tool, if it is determined that the project will not ensure compliance. Likewise, DWSRF assistance will be denied to applicants that lack capacity if they are unwilling or unable to undertake feasible and appropriate changes to ensure capacity over the long term. The lack of capacity at the time of loan application will not preclude DWSRF assistance if the project will ensure compliance, or the applicant agrees to implement changes that will rectify capacity problems. On a case-by-case basis, special conditions may be included in loan agreements to rectify compliance and/or capacity problems. As needed and appropriate, the NDDoH will utilize other specific legal authorities as control points to ensure capacity. This includes the review and approval of plans and specifications. Under NDCC Chapter 61-28.1 and North Dakota Administrative Code (NDAC) Chapters 33-03-08 and 33-18-01, the NDDoH is both empowered and required to review and approve plans and specifications for all new or modified drinking water facilities prior to construction.

Set-Aside and Fee Activities

Under the SDWA, states are required to set aside a certain percentage of their available DWSRF loan funds to provide financial assistance to small systems. States at their option may also set aside a portion of their federal DWSRF allotment for certain other project and non-project activities, and assess fees on loans to help support administration costs. A description of the different set-asides and past/proposed activities related to both set-asides and fees follows.

Mandatory Small System Project Set-Aside

To the extent that there are enough eligible projects to fund, states must annually use at least 15 percent of all funds credited to the DWSRF loan fund to provide loan assistance to PWSs that serve fewer than 10,000 people. States that exceed the 15 percent requirement in any one year are permitted to bank the excess toward future years.

A total of 237 loans totaling $561,452,470 have been approved to date. Of these, 199 loans (totaling $242,652,338 or 43.2 percent of loan total) represent PWSs that serve fewer than 10,000 people. The NDDoH envisions that additional loans will be made to small PWSs based on the comprehensive project list and fundable list (See Appendix B).

Mandatory Additional Subsidization Set-Aside

Congress has mandated in previous appropriations bills that 20 to 30 percent of assistance provided from DWSRF capitalization grants be in the form of additional subsidies. The DWSRF program provides these additional subsidies as loan

forgiveness. The NDDoH has the authority under state law (NDCC Chapter 61-28.1) to provide financial assistance through the DWSRF as authorized by federal law and EPA.

Criteria for determining the amount of loan forgiveness is on a project-specific basis. Loan forgiveness will be based on the relative future water cost index (RFWCI). The RFWCI is defined as the ratio of the expected average annual residential water user charge resulting from the project, including costs recovered through special assessments, to the local median household income (based on the most-recent American Communities Survey 5-Year Estimate).

For 2019, projects with a RFWCI of 2.0 percent or greater will qualify for 75 percent loan forgiveness. Projects with a RFWCI of 1.5 percent to 1.9 percent will qualify for 40 percent loan forgiveness. Projects with a RFWCI of less than 1.5 percent will not qualify for any loan forgiveness. Projects that do not qualify for loan forgiveness still qualify for a traditional DWSRF loan.

Loan forgiveness will only be used to finance new construction. DWSRF loan and loan forgiveness can be bundled together with funding from other sources to form funding packages for projects. The combined loan forgiveness and grant in a bundled funding package must be less than or equal to 90 percent of project costs.

To meet congressional and EPA capitalization grant spend-down intent for the DWSRF, the loan forgiveness cap for FY2016 and earlier capitalization grants is removed. The maximum percentage of loan forgiveness will also be raised from 60 percent to 75 percent and from 30 percent to 40 percent for these capitalization grants.

Timely progression of additional subsidization projects is required. To ensure this, there will be a binding commitment deadline, a construction contract notice of award deadline, and a loan forgiveness disbursement deadline. If projects identified as receiving additional subsidization do not meet these deadlines, the additional subsidization set-aside will be used to fund lower-ranked projects on the project priority list.

It is unknown at this time if mandatory additional subsidization will apply to the FY 2019 DWSRF allotment. To address this potential requirement, the fundable portion of the comprehensive project priority list depicts 20 percent (the minimum required) plus $100,000 additional subsidization through loan forgiveness. Adjustments will be made, as necessary, based on the actual required subsidization level and capitalization grant amount. The DWSRF will disburse the minimum required amount and up to an additional $100,000. If mandatory additional subsidization is available in FY 2019, up to half of the amount will be utilized for lead service line removal projects to the extent there are eligible projects ready to proceed.

Mandatory Green Project Reserve (GPR) Set-Aside

To the extent there are sufficient eligible applications, Congress has mandated in several previous appropriations bills that 10 to 20 percent of DWSRF capitalization grants be used for water efficiency, energy efficiency, green infrastructure, or other

environmentally innovative activities. Where it is not clear that a project or component qualifies to be included as counting toward the requirement, the files for such projects will contain documentation of the business case on which the project was judged to qualify, as described in the DWSRF capitalization grant requirements.

It is unknown at this time if mandatory GPR will apply. Adjustments will be made to the priority list based on the actual GPR requirement and capitalization grant amount. The DWSRF Program also participates voluntarily in GPR as projects allow.

Disadvantaged Community Set-Aside

States shall provide additional loan subsidies (i.e., reduced interest or negative interest rate loans, principal forgiveness) to benefit communities meeting the definition of disadvantaged or which the state expects to become disadvantaged as the result of the project. A disadvantaged community is one in which the entire service area of a PWS meets affordability criteria established by the state following public review and comment. The value of the subsidies may not be less than 6 percent or more than 35 percent of the amount of the federal capitalization grant for any fiscal year. For 2019, the DWSRF will distribute at least 6 percent but not more than 7 percent of the amount of the capitalization grant.

The EPA is required to provide guidance to assist states in developing affordability criteria. The NDDoH will use the same criteria established for additional subsidization to determine qualification for disadvantaged assistance. For 2019, projects with a RFWCI of 2.0 percent or greater will qualify for 75 percent loan forgiveness. Projects with a RFWCI of 1.5 percent to 1.9 percent will qualify for 40 percent loan forgiveness.

Optional Non-Project Set-Asides

States may use a portion of their federal DWSRF allotment (up to specified ceilings) for the following non-project set-aside activities:

- DWSRF Program administration - the maximum of $400,000, 1/5 percent of the current valuation of the fund, or 4 percent of all grant awards to the fund for the fiscal year.
- State program administration - up to 10 percent.
    - Public Water Supply Supervision (PWSS) Program
    - source water protection program(s)
    - capacity development program
    - operator certification program
- Small system technical assistance (serving 10,000 or fewer people) - up to 2 percent.
- Local assistance and other state programs - up to 10 percent for any one activity with a maximum of 15 percent for all activities combined.
    - Loans to PWSs to acquire land or conservation easements for source water protection programs.
    - Loans to community water systems to implement source water protection measures or to implement recommendations in source water petitions.

- Assist PWSs in capacity development.
- Assist states in developing/implementing EPA-approved wellhead protection programs.

States may transfer funds among the non-project set-aside categories or between the loan fund and such set-aside categories, provided that the statutory set-aside ceilings are not exceeded. Non-project set-aside funds may be transferred at any time to the loan fund. However, loan commitments must be made for the transferred funds within one year of the transfer of payments that have already been taken for the set-aside funds. Monies intended for the loan fund may be transferred to non-project set-asides only if no payments have yet been taken for the monies to be transferred. Otherwise, funds in or transferred to the loan fund must remain in the loan fund. Transfers may be done only if described in an IUP and approved by the EPA as part of a capitalization grant agreement or amendment.

Non-Project Set-Aside and Fee Activity

Appendix D depicts non-project set-aside and fee activity. The anticipated FY2019 federal DWSRF allotment for North Dakota is $11,107,000. The NDDoH intends to set aside $1,466,420 of the allotment for non-project activities. The NDDoH also intends to reserve $310,700 of set-aside funds of the FY2019 capitalization grant for use in future years, in addition to funds held in reserve from previous years. The state program administration (PWSS Program) set-aside is $800,000. The 2 percent set-aside for small system technical assistance is $222,140. The DWSRF administration set-aside method used is the 4% of the capitalization grant option. The 10 percent set-aside will also be held for ongoing and future PWSS administration. The 2 percent set-aside will be held for ongoing and future small system technical assistance. Should the capitalization grant be different than $11,107,000, the set-aside for DWSRF administration will be adjusted to use the method that provides the maximum set-aside.

The NDDoH has limited, and will continue to limit, the usage of set-asides to maximize funds available for construction. Set-aside usage has been restricted to that necessary to administer the DWSRF Program, provide technical assistance to small PWSs (2 percent set-aside), provide state program administration (10 percent set-aside), and complete source water assessments mandated under the SDWA (15 percent set-aside).

The DWSRF Program administration set-aside is inadequate to cover the cost of administering the DWSRF Program. Congress also will choose at some point to no longer capitalize the program, at which time no new funds will be available for program administration. Based on these considerations, the NDDoH considers it both prudent and necessary to set aside and hold the full DWSRF Program administration set-aside from each grant and accumulated loan administration fees to enable ongoing and future administration of the program.

Funds from the 2 percent set-aside have been used to assist small PWSs in capacity development, financial capacity, operator certification, managerial capacity, and source

water protection. Funds from this set-aside will continue to be used for these purposes and for new initiatives such as assisting these communities in complying with the new Revised Total Coliform Rule. The NDDoH closely monitors demand and need for this set-aside to avert over-accumulation of funds.

The 10 percent state program administration set-aside will be used to help fund administration of the PWSS Program in pursuit of its mission. This set-aside required a 1:1 match by the state for all capitalization grants through the 2016 capitalization grant. One of the sources of funds for this 1:1 match is the 0.5 percent loan administration fee. Another source of funding for the 1:1 match is credit for state match funds spent in 1993 on administration of the PWSS Program. This credit is good for up to half of the 1:1 match with a maximum credit of $236,359 per year. This match credit does not represent spendable funds. Beginning with the 2017 capitalization grant, the 1:1 match is no longer required.

Under the SDWA, states are permitted to assess fees on loans to support DWSRF administration costs. North Dakota DWSRF loan recipients are required to pay an annual loan administration fee presently set at 0.5 percent of the outstanding loan principal balance. This loan administration fee is payable semiannually on each loan payment date. The fees are held under the master trust indenture and are available to pay DWSRF administration costs allowable under the SDWA. To enable continued management of the DWSRF once the DWSRF is no longer annually capitalized through federal grants, loan administration fees will be held and used for loan-bond servicing and DWSRF administration as allowed under the SDWA. The loan administration fees were also used from 2008 to 2016 as a source of 1:1 match that is required when using the state program administration set-aside to administer the PWSS Program.

To meet congressional and EPA capitalization grant spend-down intent for the DWSRF Program, approximately $120,000 (or any remaining amount) from the FY2016 10 percent state program administration set-aside will be moved to the construction loan fund during 2019.

Financial Status

The information presented below describes the financial structure of the North Dakota DWSRF, the method used to generate the required state match, transfers between state revolving loan funds (SRFs), the basis for approving loans, loan assistance terms (including a discussion concerning market interest rates in North Dakota), sources and intended use of funds, and special considerations for State and Tribal Assistance Grants (STAG) grants.

Financial Structure

Bonds for the 20 percent state match are issued by the PFA under a master trust indenture adopted by the Industrial Commission of North Dakota. The PFA may also

issue leveraged bonds under the master trust indenture, the proceeds of which can be used to fund loans.

The current demand for DWSRF loan assistance in North Dakota exceeds authorized federal DWSRF allotments and the required state match for those allotments. Under the financial structure initially established for the DWSRF, excess leveraging and higher loan interest rates would be needed to satisfy this excess demand.

A modified financial structure within the existing master trust indenture has been implemented to better satisfy the continuing high demand for DWSRF financial assistance, yet avert excessive leveraging and higher loan interest rates. Under the modified structure, DWSRF allotments and state match bond proceeds will be used first to fund loans. Leveraged bonds will be issued only if (1) loan demand exceeds the amount of DWSRF allotments and state match available for loans or (2) deemed in the best interest of the program. If leveraged bonds are issued, they will be sized together with DWSRF allotments and state match to satisfy current cash flow needs as represented by the projected annual construction costs of eligible projects. This funding approach will expedite loan assistance to more projects that are ready to proceed to construction, avert premature or unnecessary bond issuances, and ensure a more reliable loan repayment stream to satisfy both bond debt service requirements and future loan demand.

In the event there are insufficient amounts available to make scheduled principal and interest payments on outstanding DWSRF bonds when payments are due, the master trust indenture for the DWSRF provides the trustee may transfer available excess revenues from the Clean Water State Revolving Fund (CWSRF) to the DWSRF bond fund to meet the deficiency. Following such a transfer, the DWSRF has an obligation to reimburse the CWSRF with future available DWSRF excess revenues.

State 20 Percent Match Requirement

Under the SDWA, states are required to match their DWSRF allotment at an amount at least equal to 20 percent. North Dakota has issued state match bonds to satisfy match requirements through FY2025.

Anticipated Proportionality Ratio

Leveraged and state match bonds were sold in 2018. The required 20 percent state match has been provided through approximately FY2025. Payments were made using 100 percent state match funds until all of the match funds were disbursed. The program is in an over-matched condition at this time.

Disbursement of Funds

Funds will be disbursed in the following order: federal capitalization grants, state match bond proceeds, leveraged bond proceeds, and FCLA. All state match funds have been disbursed and the DWSRF is currently over-matched. Set-asides are closely monitored

and disbursed quickly when requests are made to ensure timely expenditure and avoid over-accumulation. All federal funds are disbursed in a first-in, first-out manner.

Transfer of Funds Between DWSRF and CWSRF

At the governor's discretion, a state may transfer up to 33 percent of its DWSRF capitalization grant to the CWSRF or an equal amount from the CWSRF to the DWSRF. In addition to transferring grant funds, states can transfer state match, investment earnings, principal and interest repayments, unrestricted cumulative excess, restricted cumulative excess, or FCLA funds between SRF programs.

Transfers were authorized by the governor in 2002, 2004, 2007, 2009, and 2015. These funds are transferred between the programs on an as-needed basis. The governor's authorizations are as follows:

- 2002 - $10 million from CWSRF to DWSRF
- 2004 - $4 million from CWSRF to DWSRF
- 2007 - $20 million from CWSRF to DWSRF (with provision to return funds to CWSRF as needed)
- 2009 - $2.6 million of American Recovery and Reinvestment Act of 2009 funds from CWSRF to DWSRF
- 2015 - $60 million from DWSRF to CWSRF (with provision to return funds to DWSRF as needed)

The NDDoH is anticipating the transfer of funds from the CWSRF in 2019, as authorized in 2015. Approximately $1,000,000 of non-federal funds will be transferred.

The NDDoH transfers funds on a net basis, since prior transfers have occurred between the two SRFs. The current net transfer between programs is $22,455,491 from the CWSRF to the DWSRF. The $1 million transfer from the CWSRF in 2019 will change the net transfers between programs to $23,455,491. It is estimated the long-term impact to the DWSRF average revolving level is an increase of $121,667 per year over the next 20 years at this level of net transfer. With this transfer, the DWSRF will be able to fund additional water projects during 2019. Transferring funds will not impact DWSRF set-aside funding. Appendix E itemizes the amount of funds transferred to and from the DWSRF Program.

Funding Process

Projects may be submitted to the NDDoH each year for consideration and inclusion into an IUP. A new IUP is developed for public review and comment in the fall of each year. New and eligible projects for which ranking questionnaires are submitted are evaluated, ranked (if possible), and included on the comprehensive project priority list. Requests for re-ranking of previously listed and ranked projects are evaluated on a case-by-case basis, and may require the completion of an updated ranking questionnaire.

Loan approvals are based on project ranking, readiness to proceed, and availability of funds based on cash flow considerations, including projected disbursements under

already approved and potential new loans. The NDDoH is prepared to issue leveraged bonds if the loan demand exceeds the amount of available DWSRF allotments and state match or if it is in the best interest of the program.

Loan Assistance Terms

The base repayment period for DWSRF loans under the SDWA is 20 years following project completion. The NDDoH may utilize shorter repayment periods on a project-by-project basis. Candidate projects include low-cost projects for which minimal water rate increases will be required to retire the loan debt. The loan interest rate will be 1.5 percent for PWSs that qualify for tax-exempt financing and 2.5 percent for those that do not qualify for tax-exempt financing, except for projects that use leveraged bond proceeds. Leveraged bonds will be discussed later in this section. As discussed under Set-Aside and Fee Activities, an annual loan fee of 0.5 percent is assessed on all loans to support DWSRF administration.

The SDWA requires that the interest rate for a loan be less than or equal to the market interest rate. The NDDoH will establish as the market interest rate the average interest rate received by North Dakota political subdivisions on bond issues with a 20-year maturity and sold on a competitive or negotiated basis during the prior quarter. This rate will be calculated and updated quarterly based upon the prior quarter bond sales. If there are no qualified bond sales, the market rate for that quarter will be calculated using comparable regional bond issues. Based upon fourth quarter 2018 North Dakota 20-year competitive bond sales, the current market interest rate is 3.3 percent.

Leveraging the fund is appropriate where financing needs significantly exceed available funds; however, it impacts the DWSRF by reducing the interest rate subsidy provided or reducing future loan capacity. By continuing to leverage, the program will be able to assist more communities currently on the priority list and help those communities achieve or remain in compliance with the SDWA. Loans necessitating leveraging will be subject to a loan interest rate (including the 0.5 percent administration fee) of 75 percent of the current market interest rate, if needed, to maintain program viability. The interest rate on these loans will be more than the regular DWSRF interest rate which currently is 2.0 percent (including the 0.5 percent administration fee).

There is now an option for extended-term financing beyond the base 20-year loan repayment period. Extended-term financing allows for repayment periods to be 30 years or the useful life of the project, whichever is less. A 30-year repayment period will be granted if it is determined that the principal portion of the loan for project components that have a useful life of 20 years or less will be paid off within 20 years. Project components considered having a 20-year or less useful life are process equipment, pumps, electrical equipment, controls, and auxiliary equipment. Project components considered to have a 30-year or more useful life are buildings, concrete, other structures, conveyance structures (piping), and earthen structures.

The NDDoH and the PFA strive to ensure continued long-term viability of the program to provide loans for eligible drinking water projects. To achieve this goal, the refinancing of completed DWSRF projects will not be allowed using the extended-term financing option or the latest interest rate.

Sources and Uses of Funds

Appendix F depicts a detailed breakdown of sources and uses of funds from FY1997 through FY2019. An additional $10,640,580 of new funds is anticipated to become available in 2019, making $15,421,629 available for projects. All the funds are allocated to projects as shown in the Comprehensive Project Priority List and Fundable List (Appendix B).

Short- and Long-Term Goals

The 1996 SDWA Amendments authorize a DWSRF Program to assist PWSs in financing the costs of infrastructure needed to achieve or maintain compliance with SDWA requirements and to protect public health. The objectives of the NDDoH's DWSRF Program include addressing public problems and priorities, ensuring compliance with the SDWA, assisting systems to ensure affordable drinking water, and maintaining the long-term viability of the fund. To address these objectives, the DWSRF Program will help ensure that North Dakota's public water supplies remain safe and affordable through prioritized financial assistance, enhanced source water protection activities, and increased technical assistance to small systems. The short and long-term goals set forth below are established to accomplish these objectives.

Short-Term Goals

1. On December 7, 2018, obtain North Dakota State Water Commission approval of this IUP.
2. Continue to implement the DWSRF Program for the state of North Dakota by funding projects for systems that are having problems maintaining compliance with the revised total coliform rule, ground water rule, the arsenic rule, the disinfection byproduct rule series, and the surface water treatment rule series.

Long-Term Goals

1. Help North Dakota PWSs achieve and maintain compliance with the SDWA. This is accomplished by coordinating with the PWSS Program and targeting those rules with which systems in the state are having problems maintaining compliance. These include the lead and copper rule, revised total coliform rule, ground water treatment rule, arsenic, disinfection byproduct rule series, and the surface water treatment rule series.
2. Assist the PWSS Program in meeting goals. The DWSRF Program assistance includes providing technical support on infrastructure issues, capacity reviews, and small system technical assistance. Through the small system technical assistance set-aside, the DWSRF Program helps operators become certified and

systems return to compliance and maintain capacity.

3. Administer the DWSRF Program in a manner that will maximize the long-term availability of funds for eligible and needed drinking water infrastructure improvements.
4. Assist North Dakota PWSs in improving drinking water quality, quantity, and dependability by providing reduced interest rate and long-term financial assistance for eligible and needed drinking water infrastructure improvements. This infrastructure assistance helps with compliance of drinking water rules, regionalization/consolidation, and replacement of aging infrastructure.
5. To the greatest extent possible, continue to integrate DWSRF funding with other available funding to maximize the benefits to public water systems and needed drinking water projects statewide. The cooperating agencies include the U. S. Department of Agriculture, Community Development Block Grant Program, North Dakota Department of Land Trusts, the Bank of North Dakota, and the North Dakota State Water Commission.

Environmental Results

1. Loan Fund
    a. Through December 31, 2017, the fund utilization rate (as measured by the ratio of executed loans to funds available for projects) was 94 percent which is slightly below the national average of 96 percent. The 2019 goal is to maintain the fund utilization rate at 90 percent or above.
    b. Through December 31, 2017, the rate at which projects progressed (as measured by disbursements as a percentage of assistance provided) was 81 percent. This is below the national average of 87 percent. The 2019 goal is to maintain the construction pace above 80 percent.
    c. The DWSRF Program funded 13 projects in the first six months of 2018 totaling $12.6 million and serving a population of 97,697. The 2019 goal is to fund 20 loans totaling $30 million and serving a population of 30,000.
2. Set-Asides, Small System Technical Assistance
    a. The goal for the number of systems receiving training is 120.
    b. The goal for the number of systems receiving on-site technical assistance is 50.

Public Participation

A state is required to make its annual IUP available to the public for review and comment prior to submitting it to the EPA as part of its capitalization grant application. States are also required to describe the public review process used and how major comments and concerns received were addressed.

Process

The public was invited to comment on the draft 2019 IUP at a public hearing held in Bismarck on November 8, 2018. Written comments were also accepted until November 16, 2018. The following comments were received:

- Dan Jonasson, City of Minot, submitted a questionnaire for a project. The project was ranked and added to the priority list.
- Ken Nysether, SEH, Inc., submitted a questionnaire for a project on behalf of the City of Lincoln. The project was ranked and added to the priority list.
- Jeff Ebsch, Brosz Engineering, submitted a questionnaire for a project on behalf of the City of Stanley. The project was ranked and added to the priority list.
- AJ Tuck, Ulteig Engineers, spoke on behalf of the City of Benedict and their project for water main replacement. The city currently has 3" asbestos cement pipe water mains and approximately 50% of their service lines are lead. Alternatives that are being considered include a full replacement of the water mains or individually connecting residents to North Prairie Rural Water. The city has experienced four water main breaks in the past year, which has dwindled funds in the water account. Rates will be raised to accommodate current and anticipated system costs.
- AJ Tuck, Ulteig Engineers, spoke on behalf of the City of Riverdale and their project for a water tower, water treatment plant upgrades, and water main replacement. The city plans to raise water rates. An advisory board, which consists of Riverdale, Underwood, and North Prairie Rural Water, oversees the water tower and water treatment plant. Underwood and North Prairie Rural Water have not yet agreed to a cost share for the project but may reconsider if the project receives loan forgiveness. Funding from the State Water Commission is not expected to be available for this project. The project has applied for a Section 513 grant through the United States Army Corp of Engineers.

Appendix A

Eligible and Ineligible Projects and Project-Related Costs Under the Drinking Water State Revolving Loan Fund (DWSRF) Program

Examples of Eligible Projects and Project-Related Costs

- Projects that address present Safe Drinking Water Act (SDWA) exceedances.
- Projects that prevent future SDWA exceedances (applies only to regulations in effect).
- Projects to replace aging infrastructure.
- Rehabilitate or develop drinking water sources (excluding reservoirs, dams, dam rehabilitation, and water rights) to replace contaminated sources.
- Install or upgrade drinking water treatment facilities if the project would improve the quality of drinking water to comply with primary or secondary SDWA standards.
- Install or upgrade storage facilities, including finished water reservoirs, to prevent microbiological contaminants from entering the water system.
- Install or replace transmission and distribution piping to prevent contamination caused by leaks or breaks, or to improve water pressure to safe levels.
- Projects to restructure and consolidate water supplies to rectify a contamination problem, or to assist systems unable to maintain SDWA compliance for financial or managerial reasons (assistance must ensure compliance).
- Projects that purchase a portion of another system's capacity if such purchase will cost-effectively rectify an SDWA compliance problem.
- Land acquisition.
    - Land must be integral to the project (i.e., needed to meet or maintain compliance and further public health protection, such as land needed to locate eligible treatment or distribution facilities).
    - Acquisition must be from a willing seller.
- Planning (including required environmental assessment reports), design, and construction inspection costs associated with eligible projects.
- Service lines from the main to the house, including lead service lines.

Examples of Ineligible Projects and Project-Related Costs

- Dams or rehabilitation of dams.
- Water rights, except if the water rights are owned by a system that is being purchased through consolidation as part of a capacity development strategy.
- Reservoirs, except for finished water reservoirs and those reservoirs that are part of the treatment process and are located on the property where the treatment facility is located.
- Drinking water monitoring costs.
- Operation and maintenance costs.

- Projects needed mainly for fire protection.
- Projects for systems that lack adequate technical, managerial, and financial capability, unless assistance will ensure compliance.
- Projects for priority systems in the Enforcement Tracking Tool, unless funding will ensure compliance.
- Projects primarily intended to serve future growth.

Appendix B

Shaded projects are on the fundable list

Comprehensive Project Priority List and Fundable List for 2019[1]

Priority Ranking	Priority Points	Tracking No.	System Name	Present Population	Project Description	Project Cost ($1,000)	Construction Start Date	Est. Loan Term[4]	Engineering Firm
159	8	1801056-18-01	Agassiz WUD	4,044	Transmission main between reservoirs	3,000	2019		AE2S
132	9	1801056-19-01	Agassiz WUD	4,044	Water main replacement (Oldham Ave)	250	2019		AE2S
41	16	4001153-14-01	All Seasons WUD	764	Parallel and looped pipelines to correct low pressure issues	796	2019		Bartlett & West
80	13	4001153-14-02	All Seasons WUD	754	Service to Turtle Mountains/Lake Metigoshe area	27,920	2020		Bartlett & West
6	21	4001153-15-01	All Seasons WUD[2]	2,233	WTP & wellfield improvements, pipeline to connect systems	6,638	2019	20	Bartlett & West
96	11	0900035-11-01	Arthur	337	Water tower replacement	1,450	2019		Moore
28	18	1700059-14-01	Beach	1,300	Transmission main to connect north standpipe to south end of system	1,933	2020		AE2S
3	23	1700059-18-01	Beach	1,019	Transmission main & lead service line replacement	4,130	2020		Highlands
150	8	4500065-15-01	Belfield	910	Transmission main	1,302	2019		AE2S
199	6	4500065-18-01	Belfield	910	Water main replacement	2,529	2019		AE2S
156	8	4500065-18-02	Belfield	910	Water storage rehab or replacement	3,090	2019		AE2S
1	27	2800069-19-01	Benedict	75	Water main replacement & pump house upgrades	1,565	2020		Ulteig
195	6	5100072-18-01	Berthold	454	Gate valve, hydrant, & water main replacement	100	2019		Moore
205	6	5100072-18-02	Berthold	454	Water tower improvements	150	2019		Moore
169	7	2900074-14-01	Beulah	3,121	Water main, hydrant, gate valve, & lead service line replacement	1,000	2019		Moore
196	6	2900074-19-01	Beulah	3,121	Well, pump, & control repairs, well & transmission line installation	500	2020		Moore
109	10	0800080-19-01	Bismarck	135,000	Water main & lead service line replacement	3,700	2019		Bismarck
25	18	0500099-16-01	Bottineau	2,331	WTP RO system	12,000	2022		AE2S/Wold
233	4	0600119-09-01	Bowman	1,800	Water main replacement	1,000	2019		Brosz
240	4	0600119-14-01	Bowman	1,800	Water main replacement (4th Avenue W)	1,011	2020		Brosz
251	3	0600119-19-01	Bowman	1,800	Water tower rehabilitation	850	2020		Brosz
91	11	0900134-11-01	Buffalo	225	Water main, service line, gate valve, & hydrant replacement	1,900	2019		Moore
226	5	5100138-12-01	Burlington	1,191	Storage tank	1,650	2021		Ackerman-Estvold
149	8	5100138-18-01	Burlington	1,191	Water main & gate valve replacement	140	2019		Ackerman-Estvold
101	11	4800152-13-02	Cando	1,115	Water main replacement	1,800	2019		Moore
105	11	4800152-18-01	Cando	1,115	Refinance of WTP improvements project & connection to NRWD	2,200			Moore
175	7	1600159-19-01	Carrington	2,200	Refinance of WTP expansion	3,661			Interstate
15	19	1900162-19-01	Carson	263	Distribution system improvements	2,930	2019	30	Interstate
206	6	0901060-05-02	Cass Rural Water Users District	16,885	Storage improvements	3,575	2019		Bartlett & West
93	11	0901060-16-01	Cass Rural Water Users District	16,885	Transmission lines, distribution lines, & storage for correction of water quantity & pressure issues	2,750	2019		Bartlett & West
234	4	0900166-19-01	Casselton	2,513	Lead service line replacement	500	2021		Moore
42	16	3400170-18-01	Cavalier	1,540	Ground storage reservoir	800	2021		AE2S
5	21	3400170-09-01	Cavalier[2]	1,540	Water tower replacement	2,200	2019	30	AE2S
92	11	3300174-18-01	Center	580	Water main replacement	2,106	2019		Ulteig
55	14	3900183-09-01	Christine	150	Water main, gate valve, & hydrant replacement	600	2019		Moore
235	4	3900196-06-01	Colfax	147	Water main replacement	478	2019		Interstate
16	19	0700198-16-01	Columbus	133	Water main replacement	1,441	2019		Ackerman-Estvold
168	8	2001061-18-01	Dakota RWD	3,369	Extend services to residential user on private wells	9,100	2019		AE2S
23	18	0900217-11-01	Davenport	264	Upsize transmission line, storage improvements, control replacement, & booster station renovation/replacement	753	2019		Interstate
10	20	0200226-16-01	Dazey	104	Water main replacement & reservoir system upgrades	250	2019	30	Interstate

Priority Ranking	Priority Points	Tracking No.	System Name	Present Population	Project Description	Project Cost ($1,000)	Construction Start Date	Est. Loan Term[4]	Engineering Firm
116	10	3400269-11-01	Drayton	824	Clearwell replacement	2,215	2020		AE2S
69	13	3400269-16-01	Drayton	824	Intake & WTP updates	7,638	2020		AE2S
47	15	1801062-19-01	East Central RWD	12,147	Transmission lines, connections to other suppliers for redundancy, & well improvements	6,200	2019		AE2S
31	17	1900303-18-01	Elgin	642	Water main replacement	2,271	2019		Ulteig
102	11	3700314-02-01	Enderlin	1,082	Well field & transmission line	1,648	2019		Moore
97	11	3700314-02-02	Enderlin	1,082	Water main replacement	775	2019		Moore
84	12	3700314-02-03	Enderlin	1,082	WTP improvements	1,648	2019		Moore
70	13	3700314-08-01	Enderlin	1,082	Water tower replacement	1,957	2019		Moore
133	9	3900333-06-01	Fairmount	367	Water main replacement	675	2019		Moore
119	10	0900336-09-01	Fargo	155,620	Water tower rehabilitation 2019	1,030	2019		AE2S
207	6	0900336-11-01	Fargo	155,620	High service pump station modifications	8,807	2019		AE2S
208	6	0900336-11-02	Fargo	155,620	WTP residuals facility	36,050	2019		AE2S
160	8	0900336-12-02	Fargo	155,620	Downtown water tower improvements	6,750	2019		AE2S
209	6	0900336-12-03	Fargo	155,620	Water tower rehabilitation 2020	1,030	2020		AE2S
161	8	0900336-15-01	Fargo	155,620	WTP facility plan phase II	11,750	2019		AE2S
37	16	0900336-16-01	Fargo	155,620	Regionalization improvements- booster station, generator, & improvements to the distribution system, low lift transfer pump station, & WTP	5,200	2019		AE2S
162	8	0900336-18-01	Fargo	155,620	Drain 27 conveyance improvements	6,500	2019		AE2S
176	7	0900336-18-02	Fargo	155,620	Lead service line replacement	515	2019		AE2S
177	7	3000342-16-01	Flasher	230	Water main replacement	376	2019		Ulteig
32	17	0700344-13-02	Flaxton	74	Water main, hydrant, & gate valve replacement	340	2019		Ackerman-Estvold
57	14	1100346-15-01	Forbes	53	Water main, service, meter, gate valve, & hydrant replacement	1,150	2019		Moore
58	14	4100357-08-01	Forman	504	Water tower replacement	1,200	2019		Moore
60	14	4100357-14-01	Forman	504	Well upgrades, transmission line replacement	750	2019		Moore
71	13	4100357-15-01	Forman	504	Distribution system upgrades	900	2019		Moore
67	14	2400380-19-01	Gackle	310	Remote reading water meters & software	253	2019		Interstate
77	13	0900387-06-01	Gardner	80	Water main replacement	400	2019		Moore
117	10	2800389-13-01	Garrison	1,453	WTP expansion	5,000	2019		Moore
98	11	2800389-13-02	Garrison	1,453	Water main replacement	4,500	2019		Moore
163	8	2800389-15-01	Garrison	1,453	Intake structure replacement	2,000	2019		Moore
210	6	2801430-19-01	Garrison RWD	1,400	Water mains, gate valves, & appurtenances	500	2019		Ackerman-Estvold
45	15	4500396-18-01	Gladstone	300	Storage tank & water main replacement	1,300	2019		Bartlett & West
134	9	3000400-19-01	Glen Ullin	807	Refinance of distribution system improvements	1,000			Moore
61	14	3000400-19-02	Glen Ullin	807	Water main replacement & looping	2,000	2020		Moore
197	6	3800397-13-01	Glenburn	380	Water main, gate valve, & hydrant replacement	1,640	2019		Moore
90	12	5000408-02-01	Grafton	4,913	Pretreatment & advanced oxidation WTP improvements	10,441	2023		AE2S
120	10	5000408-03-01	Grafton	4,913	Park River water intake improvements	1,315	2021		AE2S
121	10	5000408-16-01	Grafton	4,913	Raw water transmission line replacement	2,096	2022		AE2S
122	10	5000408-16-02	Grafton	4,913	Red River intake improvements	4,854	2021		AE2S
106	11	1801062-15-01	Grand Forks-Traill RWD	8,900	Transmission lines	6,386	2019		AE2S
200	6	2500415-12-01	Granville	300	Water main replacement	364	2019		Ackerman-Estvold
135	9	5300425-18-01	Grenora	350	Water main replacement (Robinson St)	853	2019		Ackerman-Estvold
136	9	5300425-18-02	Grenora	350	Water main replacement (Railroad Ave)	876	2019		Ackerman-Estvold
137	9	5300425-19-01	Grenora	350	Water main replacement (Hanks St)	856	2019		Ackerman-Estvold

Priority Ranking	Priority Points	Tracking No.	System Name	Present Population	Project Description	Project Cost ($1,000)	Construction Start Date	Est. Loan Term[4]	Engineering Firm
178	7	1300432-19-01	Halliday	188	Water main replacement & rehab	1,200	2019		Interstate
72	13	2000446-09-01	Hannaford	150	Water tower replacement & pump house improvements	1,200	2019		Moore
8	20	5200458-16-01	Harvey	1,783	WTP improvements	800	2019	20	Moore
43	16	5200458-19-01	Harvey	1,783	Refinance of water main replacement	2,250			Moore
243	3	0900460-16-01	Harwood	718	Water main looping	280	2020		Moore
103	11	4900465-19-01	Hatton	777	Water main, hydrant, valve, and service line replacement	1,000	2019		Moore
236	4	2900470-16-01	Hazen	2,411	Storage tank	1,500	2019		Moore
201	6	3000473-16-01	Hebron	750	Water tower replacement	800	2020		AE2S
78	13	4900482-19-01	Hillsboro	1,603	Transmission main repair & replacement	700	2019		AE2S
107	11	4600487-08-01	Hope	258	Water main extension	190	2019		Moore
244	3	0900488-15-01	Horace	1,600	Water tower improvements	188	2019		Interstate
252	2	0900488-16-01	Horace	1,600	Water main, gate valve, & hydrant replacement	756	2019		Interstate
54	14	0900488-18-01	Horace	1,600	WTP improvements & elevated storage reservoir	5,915	2019		Interstate
38	16	0900492-15-01	Hunter	261	Pump house upgrades, water tower replacement	2,100	2020		Moore
79	13	0900492-15-02	Hunter	261	Water main replacement	3,100	2020		Moore
211	6	4700498-02-01	Jamestown	16,000	Treated water transmission line (WTP to Porter Brothers tank)	4,500	2020		Interstate
212	6	4700498-09-01	Jamestown	16,000	Remote reading water meters & software	2,835	2019		Interstate
213	6	4700498-13-01	Jamestown	16,000	WTP, storage, & distribution system SCADA improvements	455	2019		Interstate
153	8	4700498-13-02	Jamestown	16,000	WTP filter controls & media replacement	860	2019		Interstate
129	9	4700498-14-01	Jamestown	16,000	Transmission line replacement (WTP to state hospital)	2,760	2019		Interstate
179	7	4700498-14-02	Jamestown	16,000	Transmission line to improve flow to NE pressure zone	4,968	2020		Interstate
180	7	4700498-18-01	Jamestown	16,000	Pitless unit well improvements	200	2019		Interstate
181	7	4700498-18-02	Jamestown	16,000	Water main replacement	1,653	2019		Interstate
214	6	4700498-18-03	Jamestown	16,000	Lime slaker improvements	290	2019		Interstate
215	6	4700498-19-01	Jamestown	16,000	Backwash recycle system	400	2019		Interstate
216	6	4700498-19-02	Jamestown	16,000	Water tower improvements	350	2019		Interstate
11	20	2300508-15-01	Jud	72	Distribution system & pump house improvements	300	2019	30	Moore
173	7	5100515-15-01	Kenmare	1,200	Water main, gate valve, & hydrant replacement	575	2019		Ackerman-Estvold
182	7	2300535-09-01	Kulm	354	Water tower replacement	1,200	2019		Moore
183	7	3200536-18-01	Lakota	780	Water tower replacement	700	2019		AE2S
130	9	2300537-14-01	LaMoure	889	Water main replacement	500	2019		Moore
170	7	1000543-09-01	Langdon	1,878	Water main replacement	1,435	2020		Moore
245	3	1000543-09-02	Langdon	1,878	Water tower rehabilitation	450	2020		Moore
30	17	1800550-16-01	Larimore	1,350	Distribution system replacement	8,439	2019		AE2S
56	14	0300553-13-01	Leeds	427	Well & transmission line upgrades	375	2019		Moore
85	12	0300553-13-02	Leeds	427	WTP improvements	2,019	2019		Moore
81	12	0300553-13-03	Leeds	427	Pipe & lead service line replacement	600	2019		Moore
12	20	2600556-11-01	Lehr	80	Water main replacement	500	2019	30	Moore
62	14	3900567-16-01	Lidgerwood	652	Water main replacement	510	2019		Interstate
110	10	0800570-16-01	Lincoln	4,500	Transmission line from Bismarck	1,750	2019		SEH
198	6	0800570-19-01	Lincoln	4,350	Water storage tank replacement	3,300	2019		SEH
94	11	3700574-11-01	Lisbon	2,154	Water well	150	2019		Moore
82	12	3700574-11-02	Lisbon	2,154	Water main replacement	2,500	2019		Moore
46	15	3700574-14-01	Lisbon	2,154	WTP upgrades	1,000	2019		Moore
63	14	5100593-13-01	Makoti	154	Well improvements	400	2019		Moore
17	19	5100593-13-02	Makoti	154	Water main replacement	2,000	2020		Moore

Priority Ranking	Priority Points	Tracking No.	System Name	Present Population	Project Description	Project Cost ($1,000)	Construction Start Date	Est. Loan Term[4]	Engineering Firm
246	3	3000596-09-01	Mandan	24,227	30" transmission line replacement	5,172	2019		AE2S
190	7	3000596-13-03	Mandan	22,228	Distribution system improvements (Boundary Road PRV)	551	2019		AE2S
174	7	3000596-16-03	Mandan	22,228	Raw water intake	20,835	2019		AE2S
237	4	3000596-19-01	Mandan	22,228	Reservoir replacement	2,800	2021		AE2S
111	10	0900613-16-01	Mapleton	946	Storage tank replacement	1,400	2019		Moore
138	9	2800619-18-01	Max	334	Water main & service line replacement	447	2019		Ackerman-Estvold
18	19	0500620-16-02	Maxbass	80	Water main, gate valve, & hydrant replacement	500	2019		Moore
64	14	4900622-16-01	Mayville	1,858	WTP upgrades	500	2019		Moore
4	23	4200626-19-01	McClusky	380	Water tower, transmission lines, & booster station	2,500	2020		Moore
53	15	4200626-19-02	McClusky	380	Water main, hydrants, & appurtenances	325	2019		Moore
44	16	4200626-19-03	McClusky	380	Lead service line replacement	325	2019		Moore
29	17	2801400-19-01	McLean-Sheridan RWD	3,292	Correct low flow & pressure problems, WTP expansion	16,188	2020		AE2S
14	19	3200636-19-01	McVille	336	WTP improvements	600	2021		Moore
39	16	4700637-16-01	Medina	308	WTP & well improvements	800	2019		Moore
51	15	4700637-16-02	Medina	308	Water main & service line replacement	4,000	2019		Moore
65	14	4700637-16-03	Medina	308	Water tower replacement	1,000	2019		Moore
123	10	4700637-16-04	Medina	308	Refinance of WTP improvements	80			Moore
241	4	3200653-13-01	Michigan	345	Water tower improvements	75	2019		Moore
154	8	4101425-19-01	Milnor	638	Control replacement, booster station renovation, & backup generator	490	2019		Interstate
238	4	5100660-19-01	Minot	80,000	Water main relocation	1,076	2019		Houston
95	11	5000691-14-01	Minto	604	Water main replacement	780	2019		AE2S
225	6	5000691-14-02	Minto	604	Portion of new public works building that is directly related to the drinking water system	363	2019		AE2S
242	4	3001431-19-01	Missouri West Water System	7,618	Administrative office & shop	1,200	2019		
227	5	3001431-19-02	Missouri West Water System	7,438	Water storage improvements	482	2019		Bartlett & West
228	5	3001431-19-03	Missouri West Water System	7,438	Automatic meter reading system	374	2019		Bartlett & West
247	3	3800695-14-01	Mohall	808	Water main looping	426	2021		Ackerman-Estvold
171	7	3800695-18-01	Mohall	808	Water main replacement	272	2020		Ackerman-Estvold
127	9	3900703-11-01	Mooreton	197	Gate valve replacement, control upgrades, bladder tank storage	200	2019		Interstate
217	6	2400715-13-01	Napoleon	707	Service to residents on private wells	900	2020		Moore
73	13	1400732-12-01	New Rockford	1,391	Water main, gate valve, & hydrant replacements; WTP upgrades	5,800	2019		Interstate
218	6	1400732-12-02	New Rockford	1,391	Water storage improvements	290	2019		Interstate
89	12	3000736-16-01	New Salem	1,000	Water main replacement (Phase I)	2,260	2019		AE2S
124	10	3100744-18-01	New Town	2,524	Gate valve & hydrant replacement	285	2019		Ackerman-Estvold
104	11	3100744-18-02	New Town	2,524	Water main & service line replacement	406	2019		Ackerman-Estvold
202	6	1200748-18-01	Noonan	144	Water main replacement	641	2019		Ackerman-Estvold
113	10	5101065-18-02	North Prairie RWD	13,085	WTP improvements, well replacement	2,300	2019		Interstate
191	7	5101189-19-01	North Prairie RWD	10,208	Generators at reservoirs & booster stations	594	2019		Interstate
86	12	5101189-19-02	North Prairie RWD	10,208	Distribution system to serve Benedict as individual users	490	2020		Interstate
115	10	1001380-19-01	Northeast RWD	9,806	Water meters, automatic meter read system, & meter vaults	1,000	2019		AE2S
193	7	1001380-19-02	Northeast RWD	9,806	Extend services to residential users on private wells	3,000	2019		AE2S
99	11	1001380-19-03	Northeast RWD	9,806	Extend service to meet user demands	500	2020		AE2S
219	6	1100758-09-01	Oakes	1,856	Reservoir, pump station, & transmission line	720	2019		Moore
139	9	1100758-11-01	Oakes	1,856	WTP improvements	2,000	2019		Moore

Priority Ranking	Priority Points	Tracking No.	System Name	Present Population	Project Description	Project Cost ($1,000)	Construction Start Date	Est. Loan Term[4]	Engineering Firm
184	7	1100758-11-02	Oakes	1,856	Well & well house replacement	400	2019		Moore
13	20	0300762-15-01	Oberon	104	Distribution system replacement	3,100	2020		Moore
19	19	0300762-15-02	Oberon	104	Well & pump house replacement	550	2020		Moore
27	18	0200763-09-01	Oriska	128	Water reservoir & pump house replacement	550	2019		Moore
66	14	5000773-14-01	Park River	5,100	Water main replacement	1,600	2020		AE2S
192	7	3100775-19-01	Parshall	903	Water tower replacement	2,000	2020		AE2S
83	12	3100798-16-01	Plaza	171	Well & WTP rehab for emergency use	2,000	2020		AE2S
229	5	3100798-16-02	Plaza	171	Hydrant rehab or replacement	500	2020		AE2S
151	8	3100798-16-03	Plaza	171	Water tower replacement	750	2020		AE2S
248	3	0700800-19-01	Portal	150	Water main looping	150	2020		Ackerman-Estvold
249	3	0700800-19-02	Portal	150	Hydrant & gate valve replacement	235	2020		Ackerman-Estvold
140	9	4900803-08-01	Portland	606	Water tower replacement	1,350	2019		Moore
2	24	2800825-18-01	Riverdale	222	Water tower, WTP upgrades, & water main replacement	1,961	2019	20	Ulteig
26	18	2200827-16-01	Robinson	37	Pumping system improvements & water main, gate valve, hydrant, & curb stop replacement	250	2019		Moore
20	19	4000833-12-01	Rolette	594	Water main, gate valve, & hydrant replacement	4,000	2019		Moore
87	12	4000833-19-01	Rolette	594	Water meter replacement, service to residents on private wells	425	2019		Moore
164	8	4100848-16-01	Rutland	163	Water main looping	500	2019		Moore
74	13	4100848-18-01	Rutland	163	Water tower replacement; piping, valving, & controls replacement in city's building which meters water purchased from Southeast WUD	1,000	2019		Moore
141	9	0200858-13-01	Sanborn	194	Water main, service line, gate valve, & hydrant replacement	575	2019		Moore
114	10	5100868-14-01	Sawyer	367	Water main, hydrant, & gate valve replacement	600	2020		Moore
142	9	3800877-15-01	Sherwood	256	Water main replacement	414	2019		Ackerman-Estvold
52	15	1400879-15-01	Sheyenne	204	Water main replacement	3,100	2020		Moore
230	5	0801154-19-01	South Central RWD	19,945	Addition of pretreatment process	2,084	2020		Bartlett & West
157	8	4500891-19-01	South Heart	307	Water main & service line replacement	2,926	2019		Apex
220	6	3901068-14-01	Southeast WUD		Automated meter reading system	1,133	2019		AE2S
232	5	3901068-14-02	Southeast WUD		Connections to users on individual wells	21,700	2019		AE2S
221	6	3901068-18-01	Southeast WUD		Redundant raw water line	567	2019		AE2S
204	6	3100898-19-01	Stanley	2,400	Water main replacement	4,500	2019		Brosz
24	18	1501310-15-01	State Line Water Cooperative	386	Water tower replacement, system improvements	1,080	2019		
33	17	4700922-12-01	Streeter	170	Water main extension & looping	500	2019		Moore
34	17	4700922-13-01	Streeter	170	WTP improvements	500	2019		Moore
21	19	4700922-13-02	Streeter	170	Well & pump house improvements	860	2019		Moore
35	17	4700922-19-01	Streeter	170	Water tower replacement	1,000	2019		Moore
146	9	4701303-16-01	Stutsman RWD	5,000	Water supply line, distribution system for Pettibone, mainline pipelines between reservoirs (Phase VI)	2,900	2019		Bartlett & West
165	8	4701303-18-01	Stutsman RWD	6,200	Water meter replacement & automated meter reading system	800	2019		Bartlett & West
59	14	4701303-19-01	Stutsman RWD	6,200	Service to Streeter	504	2019		Bartlett & West
143	9	4701303-19-02	Stutsman RWD	6,200	Transmission lines to provide adequate pressure & flow	2,379	2019		Bartlett & West
194	7	4701303-19-03	Stutsman RWD	6,200	Refinance of Phase III of System Wide Expansion & Improvement project	3,150			Bartlett & West
147	9	4701303-19-04	Stutsman RWD	6,200	Well & WTP improvements, transmission lines	2,558	2019		Bartlett & West

Priority Ranking	Priority Points	Tracking No.	System Name	Present Population	Project Description	Project Cost ($1,000)	Construction Start Date	Est. Loan Term[4]	Engineering Firm
118	10	5200927-13-01	Sykeston	117	Water main, corporations, curb stops, & hydrant replacement	2,400	2019		Moore
100	11	5200927-18-01	Sykeston	117	Water tower replacement & pump house improvements	1,200	2019		Moore
185	7	5301152-16-01	Tioga	2,500	Water main replacement	8,602	2019		Ackerman-Estvold
222	6	0900945-09-01	Tower City	252	Water tower improvements	250	2019		Moore
48	15	0900945-12-01	Tower City	252	Water main & hydrant replacement	2,100	2019		Moore
166	8	0900945-19-01	Tower City	252	Refinance of gate valve & service line replacement project	430			Moore
49	15	2500946-16-01	Towner	533	Water main, gate valve, hydrant, service line, & curb stop replacement	1,500	2019		Moore
50	15	2500946-16-02	Towner	533	WTP improvements	750	2019		Moore
148	9	3201072-19-01	Tri-County WD	2,662	Service to residents on private wells	4,000	2020		Bartlett & West
172	7	2200951-18-01	Tuttle	79	Transmission main & well pump replacement	100	2019		
36	17	2500956-16-01	Upham	133	Water main, gate valve, hydrant, & service line replacement	516	2019		Ackerman-Estvold
112	10	0200958-19-01	Valley City	6,585	Water main & service line replacement	400	2019		KLJ
40	16	2500964-19-01	Velva	1,265	Water main & service line replacement	483	2019		Ackerman-Estvold
22	19	2300969-12-01	Verona	85	Distribution system improvements	515	2019		Moore
9	20	2300969-14-01	Verona	85	Reservoir & pump house replacement	300	2019	30	Moore
68	14	2300969-19-01	Verona	85	Water meter replacement	100	2019		Moore
131	9	3900973-04-01	Wahpeton	7,766	Water main replacement & looping	164	2022		
75	13	3900973-16-01	Wahpeton	7,766	WTP improvements (Phase II)	10,707	2024		Stantec
186	7	3900973-18-01	Wahpeton	7,766	Water main & service line improvements (Loy Avenue)	610	2019		
187	7	3900973-18-03	Wahpeton	7,766	Water main & service line improvements (15th Ave N & 14th St N)	947	2021		
188	7	3900973-18-04	Wahpeton	7,766	Water main & service improvements (8th Ave N)	2,112	2023		Interstate
144	9	3900973-19-01	Wahpeton	7,766	Well improvements	4,748	2021		
189	7	3900973-19-02	Wahpeton	7,766	Water main & service improvements (5th Ave to 8th Ave)	655	2020		
108	11	5001075-19-01	Walsh RWD	3,448	Service to residents on private wells, pipelines, interconnection with NRWD	800	2019		AE2S
76	13	2800989-18-01	Washburn	1,313	Intake, wet well, & pump house	3,700	2019		AE2S
231	5	2700990-14-01	Watford City	6,500	Distribution system looping & pressure deficiency corrections	7,132	2019		AE2S
250	3	2700990-14-03	Watford City	6,500	Water tower	3,060	2019		AE2S
239	4	2700990-16-01	Watford City	6,500	Water main replacement	2,204	2019		AE2S
128	9	0900999-19-01	West Fargo	35,000	Water main replacement	2,000	2019		Moore
203	6	5101447-16-01	West River WD	650	Service line replacement	453	2019		Ackerman-Estvold
155	8	5301686-18-01	Western Area Water Supply Authority	10,490	System expansion & regional storage expansion/improvements	13,484	2019		AE2S
125	10	5301686-18-02	Western Area Water Supply Authority	10,490	R&T Stanley, White Earth East, Tioga to Stanley transmission main, White Earth West	29,181	2019		AE2S
223	6	5301686-18-03	Western Area Water Supply Authority	10,490	North 200K service area, East Highway 1804 transmission improvements	5,642	2019		AE2S
152	8	5301686-18-04	Western Area Water Supply Authority	10,490	Williston WTP pretreatment & superstructure	3,831	2019		AE2S
224	6	5301686-19-01	Western Area Water Supply Authority	20,494	Phase VI system improvements	12,500	2020		AE2S
145	9	0501001-09-01	Westhope	429	Water main & service line replacement	462	2019		Ackerman-Estvold
258	1	5201012-14-01	Williston	30,000	Distribution system improvements (Hi-Land Heights)	5,253	2020		AE2S
253	2	5201012-19-01	Williston	30,000	Water main improvements (9th Ave E)	178	2019		AE2S
254	2	5201012-19-02	Williston	30,000	Water main improvements (16th Ave)	414	2021		AE2S

Priority Ranking	Priority Points	Tracking No.	System Name	Present Population	Project Description	Project Cost ($1,000)	Construction Start Date	Est. Loan Term[4]	Engineering Firm
255	2	5201012-19-03	Williston	30,000	Water main improvements (42nd St)	528	2021		AE2S
256	2	5201012-19-04	Williston	30,000	Water main improvements (47th St)	276	2020		AE2S
259	1	5201012-19-05	Williston	30,000	Water main improvements (Borsheim Addition)	880	2020		AE2S
257	2	5201012-19-06	Williston	30,000	Water main improvements (Front St & Reiger Dr)	580	2020		AE2S
260	1	5201012-19-07	Williston	30,000	Water main improvements (Sunset & Kettler Subdivisions)	700	2020		AE2S
158	8	0801031-18-01	Wilton	750	Water main replacement (7th St)	1,449	2019		Ulteig
7	20	0801036-19-01	Wing	152	Water tower, water main, hydrant, & gate valve replacement	1,400	2019	30	Moore
167	8	2601037-18-01	Wishek	1,002	Remote reading water meters & software	410	2019		Interstate
126	10	3901043-08-01	Wyndmere	429	Distribution system improvements	800	2019		Bolton & Menk
88	12	3901043-16-01	Wyndmere	429	Service line & water meter replacement, SCADA system	600	2019		Bolton & Menk

Total Project Cost: 639,314

[1] It is unknown at this time if mandatory additional subsidization will apply to the 2019 DWSRF allotment. To address this potential requirement, a funding level of $2,221,400 has been assumed for additional subsidization (as loan forgiveness). Adjustments will be made, as necessary, based on the actual requirements and capitalization grant amount.

[2] These projects appear eligible for 75% loan forgiveness. The actual loan forgiveness amount is dependent upon available funds. Loan forgiveness eligibility will be confirmed when the loan application is submitted.

[3] These projects appear eligible for 40% loan forgiveness. The actual loan forgiveness amount is dependent upon available funds. Loan forgiveness eligibility will be confirmed when the loan application is submitted.

Appendix C

STATE OF NORTH DAKOTA

PRIORITY RANKING SYSTEM FOR FINANCIAL ASSISTANCE THROUGH THE DRINKING WATER STATE REVOLVING LOAN FUND (DWSRF) PROGRAM

DWSRF PROGRAM
DIVISION OF MUNICIPAL FACILITIES
ENVIRONMENTAL HEALTH SECTION
NORTH DAKOTA DEPARTMENT OF HEALTH

October 2018

The following criteria and point system is utilized by the DWSRF Program to rank eligible projects for potential financial assistance through the DWSRF Program:

- Water Quality (35 points maximum)
- Water Quantity (20 points maximum)
- Affordability (15 points maximum)
- Infrastructure Adequacy (15 points maximum)
- Consolidation or Regionalization of Water Supplies (10 points maximum)
- Operator Safety (5 points maximum)

Maximum Total Points = 100

DWSRF funds may be used to buy or refinance existing local debt obligations (publicly owned systems only) where the initial debt was incurred and the construction started after July 1, 1993. DWSRF assistance requests of this type, if eligible, will be ranked based on the original purpose and success of the constructed improvements.

Creation of New Systems - eligible projects are those that, upon completion, will create a community water system (CWS) to address existing and serious public health problems caused by unsafe drinking water from individual wells or surface water sources. Eligible projects are also those that create a new regional CWS by consolidating existing systems with technical, financial, or managerial difficulties. Projects to address existing public health problems associated with individual wells or surface water sources must be limited in scope to the specific geographic area affected by contamination. Projects that create new regional CWSs by consolidating existing systems must be limited in scope to the service area of the systems being consolidated. A project must be a cost-effective solution to addressing the problem. Applicants must ensure that sufficient public notice has been given to potentially affected parties and consider alternative solutions to addressing the problem. Capacity to serve future population growth cannot be a substantial portion of the project.

Water Quality (select all that apply, 35 points maximum)[1,2]	
A. Documented waterborne disease outbreaks within last 2 years.	20
B. Unresolved nitrate or nitrite maximum contaminant level (MCL) exceedance(s), OR acute microbiological MCL exceedance(s) within last 12 months.	15
C. Exceedance(s) of EPA-established unreasonable risk to health (URTH) level(s) within last 4 years for regulated chemicals or radionuclides (excludes nitrate and nitrite).	10
D. Disinfection treatment inadequate to satisfy one of the following: • The Surface Water Treatment Rule (SWTR) • The Enhanced SWTR (ESWTR) • The Groundwater Disinfection Rule (GWDR) once finalized • Groundwater source(s) deemed by the PWSS to be under the direct influence of surface water • Multiple turbidity treatment technique requirement (TTR) violations within last 2 years (includes at least one event where the maximum allowed turbidity was exceeded)	8
E. Multiple turbidity TTR violations within last 2 years (no events where the maximum allowed turbidity was exceeded), OR 3 or more non-acute microbiological MCL violations within last 12 months.	7
F. MCL or TTR exceedance(s) (no URTH level exceedances) within last 4 years (excludes microbiological contaminants, nitrate, nitrite, and turbidity).	6
G. Potential MCL or TTR compliance problems based on most recent 4-year period (excludes microbiological contaminants and turbidity).	
75% to 100% of MCL or TTR	5
50% to 74% of MCL or TTR	4
H. General water quality problems (see table on page 5).	
Significant general water quality problem	4
Moderate general water quality problem	3
Minor general water quality problem	2

Water Quantity (select all that apply, 20 points maximum)[2,3]	
A. Correction of a critical water supply problem involving the loss or imminent loss of a water supply in the near future.	20
B. Correction of an extreme water supply problem. Maximum water available <150 gallons per capita per day (gpcd) (community water systems only), OR continuous water shortages during all periods of operation (non-profit non-community water systems only).	10
C. Correction of a serious water supply problem. Maximum water available <200 gpcd (community water systems only), OR daily water shortages, or inability to meet peak daily water demand at a frequency of at least once per week during all periods of operation (non-profit non-community water systems only).	7

D. Correction of a moderate water supply problem. Maximum water available <250 gpcd (community water systems only), OR occasional daily water shortages, or occasional inability to meet peak daily water demands on a seasonal basis (non-profit non-community water systems only).	4
E. Correction of a minor water supply problem. Maximum water available <300 gpcd (community water systems only), OR sporadic water shortages or occasional inability to meet peak water demands (non-profit non-community water systems only).	2

Affordability (for the applicable subcategory, select one for each item, 15 points maximum)	
A. Community Water Systems	
Relative income index- ratio of local or service area annual median household income (AMHI) to the state nonmetropolitan AMHI (based on 2011-2015 ACS 5-Year Estimates)	
≤60%	8
61% to 70%	7
71% to 80%	5
81% to 90%	3
91% to 100%	1
Relative future water cost index- ratio of expected average annual residential water user charge resulting from the project, including costs recovered through special assessments, to the local AMHI (based on 2011-2015 ACS 5-Year Estimates)	
>2.5%	7
2.0% to 2.5%	6
1.5% to 1.9%	5
1.0% to 1.4%	3
0.5% to 0.9%	1
B. Non-profit Non-community Water Systems	
Relative income index- ratio of local or service area AMHI to the state non-metropolitan AMHI (based on 2011-2015 ACS 5-Year Estimates)	
≤60%	8
61% to 70%	7
71% to 80%	5
81% to 90%	3
91% to 100%	1
Relative future water cost index- ratio of expected annual water service expenditures resulting from the project to total annual operating expenses	
>20%	7
15% to 20%	6
10% to 14%	5
5% to 9%	3
2% to 4%	1

Infrastructure Adequacy (select all that apply, 15 points maximum)	
A. Correction of general disinfection treatment deficiencies - excludes improvements necessary to directly comply with the SWTR, the ESWTR, or the GWDR (once finalized).	3
B. Correction of well construction or operating deficiencies.	3
C. Correction of distribution system pressure problems (dynamic pressure <20 psi).	3
D. Replacement of deteriorated water mains.	3
E. Replacement of deteriorated finished water storage structures.	3
F. Replacement of distribution system piping/materials shown via DWP-approved testing to contribute unacceptable levels of lead or asbestos.	3
G. Water treatment plant operating at or above design capacity.	3
H. Water treatment plant operating at or beyond useful or design life.	3
I. Correction of specific design or operating deficiencies associated with water treatment plant unit processes (excludes disinfection treatment).	2
J. Correction of specific design or operating deficiencies associated with surface water intake facilities.	2
K. Correction of specific design or operating deficiencies associated with finished water storage facilities.	2
L. Correction of specific design or operating deficiencies associated with raw or finished water pumping facilities.	2
M. Correction of specific design or operating deficiencies associated with raw or finished water distribution system piping.	2
N. Correction of specific design or operating deficiencies associated with chemical feed installations (excludes disinfection).	2
O. Provision of a second well where only one functional well exists for systems relying solely on their own groundwater supplies.	2
P. Replacement of inoperative, obsolete, or inadequate instrumentation or controls.	2

Consolidation or Regionalization of Water Supplies (select all that apply, 10 points maximum)	
A. Correction of Safe Drinking Water Act (SDWA) compliance problem(s) or extreme to critical water supply problem(s) for one or more PWSs through consolidation with another PWS or regionalized service provided by another PWS.	4
B. Correction of contamination problems (regulated contaminants) or extreme water quantity problems (no water, imminent loss of water supply, or continuous/frequent daily water shortages) for individual residences or businesses through consolidation with another PWS or regionalized service provided by a PWS.	3
C. Correction of potential MCL or TTR compliance problems, general water quality problems, or moderate to serious water quantity problems for one or more PWSs through consolidation with another PWS or regionalized service provided by another PWS.	2
D. Correction of general water quality problems or moderate water quantity problems (occasionally daily or seasonal water shortages) for individual residences or businesses through consolidation with another PWS or regionalized service provided by a PWS.	1

Operator Safety (select one if applicable, 5 points maximum)	
Correction of a problem that poses a critical and chronic safety hazard for operators.	5
Correction of a problem that poses an intermittent safety hazard for operators.	3
Correction of a potential significant safety hazard for operators.	1

General Water Quality (select all that apply)				
Total Dissolved Solids (TDS)		Manganese (Mn)		
500 - 999 mg/L	1	0.05 - 0.25 mg/L		1
1,000 - 1,499 mg/L	2	0.26 - 1.00 mg/L		2
≥ 1,500 mg/L	3	> 1.00 mg/L		3
Total Hardness as Calcium Carbonate (TH)		Sodium (Na)		
200 - 424 mg/L	1		200 - 424 mg/L	1
425 - 649 mg/L	2		425 - 649 mg/L	2
≥ 650 mg/L	3		≥ 650 mg/L	3
Iron (Fe)		Sulfate (SO_4)		
0.3 - 0.89 mg/L	1		250 - 499 mg/L	1
0.9 - 2.0 mg/L	2		500 - 750 mg/L	2
> 2.0 mg/L	3		> 750 mg/L	3

Total From Above	Category for Water Quality Item H
≥ 6	Significant general water quality problem
4 or 5	Moderate general water quality problem
≤ 3	Minor general water quality problem

[1] Applies to community and non-profit non-community public water systems only. Water quality problems must be ongoing and unresolved under the present system configuration. Analysis applies to finished water after all treatment (raw water if no treatment is provided).

[2] Projects intended to address multiple community and/or non-profit non-community public water system water quality and/or quantity problems will be ranked based on the highest-level problem to be solved.

[3] Applies to community and non-profit non-community public water systems only. Projects intended mainly to increase water availability for or to improve fire protection are not eligible for DWSRF assistance. To be eligible, fire protection features must represent an ancillary project benefit or secondary project purpose.

Appendix D

Non-Project Set-Aside and Fee Activity[1]

North Dakota Drinking Water State Revolving Loan Fund Program

Set-Aside	Set Aside Through 6/30/2018	Transferred to Loan Fund	Expended Through 6/30/2018	Balance Available as of 6/30/2018	Planned Set-Asides for 2019[4]	Total Set-Aside Funds Available 2019	Reserved Through 2019	Reserved from 2019 Allotment	Total Reserved Through 2019
DWSRF Administration	8,600,924	-	8,200,924	400,000	444,280	844,280	-	-	-
10% State Program Assistance									
PWSS Supervision	4,342,888	327,112	2,012,301	2,003,475	800,000	2,803,475	1,729,200	310,700	2,039,900
Source Water Protection									
Capacity Development									
Operator Certification									
2% Small System Technical Assistance	3,357,532	-	2,958,232	399,300	222,140	621,440	93,640	-	93,640
15% Local Assistance[2]									
Land Acquisition									
Capacity Development									
Wellhead Protection									
Source Water Petition Programs									
Source Water Protection	1,255,880	820,612	435,268	-	NA	-	-	NA	-
Totals	17,557,224	1,147,724	13,606,725	2,802,775	1,466,420	4,269,195	1,822,840	310,700	2,133,540

Fee Type	Collected Through 6/30/2018	Transferred to Loan Fund	Expended Through 6/30/2018	Balance Available 6/30/2018	Projected Funds 1/1/19 - 12/31/19	Total Funds Available Through 12/31/19	Total Funds Held Through 12/31/19
Loan Fee[3]	10,663,013	0	3,030,539	7,632,474	1,451,329	12,114,342	9,083,803

[1] The FY 1997 through 2018 allotments have been awarded. The anticipated allotment for FY 2019 is $11,107,000. The FY 2019 allotment will be applied for by July 1, 2018.

[2] No more than 10% may be used for any one activity with a maximum of 15% for all activities combined.

[3] The loan fee amounts reflect loans approved up to June 30, 2018. The amounts may increase based upon repayments due (if any) under loans approved after this date.

[4] DWSRF Administration is calculated as 4% of capitalization grant. The option that yields the highest amount will be chosen once final capitalization grant allotments are announced.

Appendix E

Amounts Available to Transfer Between State Revolving Fund Programs[1]
North Dakota Drinking Water State Revolving Loan Fund Program

Year	Transaction Description	Banked Transfer Ceiling	Transferred from DWSRF to CWSRF	Transferred from CWSRF to DWSRF	DWSRF Funds Available for Transfer	CWSRF Funds Available for Transfer
1998	DW Grant	4.1			4.1	4.1
1998	DW Grant	6.5			6.5	6.5
2000	DW Grant	9.0			9.0	9.0
2000	DW Grant	11.5			11.5	11.5
2001	DW Grant	14.1			14.1	14.1
2002	DW Grant	16.7			16.7	16.7
2002	Transfer	16.7	10.0	3.0	9.7	23.8
2003	DW Grant	19.4			12.4	26.4
2003	Transfer	19.4	0	5.9	18.3	20.5
2004	DW Grant	22.1			21.0	23.2
2004	Transfer	22.1	0	2.6	23.7	20.6
2005	DW Grant	24.9			26.4	23.3
2005	Transfer	24.9	0	0.1	26.5	23.2
2006	DW Grant	27.6			29.2	25.9
2006	Transfer	27.6	0	1.5	30.8	24.4
2007	DW Grant	30.3			33.5	27.1
2007	Transfer	30.3	0	4.9	38.3	22.2
2008	DW Grant	33.0			41.0	24.9
2008	Transfer	33.0	0	3.0	44.1	21.9
2009	DW Grant	35.7			46.8	24.6
ARRA	DW Grant	42.1			53.2	31.0
ARRA	Transfer	42.1	0	2.6	55.8	28.4
2009	Transfer	42.1	0	0.7	56.5	27.7
2010	DW Grant	46.6			61.0	32.2
2010	Transfer	46.6	0	0.8	61.8	31.4
2011	DW Grant	49.7			64.9	34.5
2012	DW Grant	52.7			67.8	37.5
2013	DW Grant	55.4			70.6	40.3
2014	DW Grant	58.3			73.5	43.2
2015	DW Grant	61.2			76.4	46.1
2015	Transfer	61.2	19.1	0	57.4	65.1
2016	DW Grant	64.0			60.1	67.9
2017	DW Grant	66.7			62.8	70.6
2017	Transfer	66.7	0	4.1	66.9	66.5
2018	DW Grant	70.4			70.6	70.2
2018	Transfer	70.4	0	22.2	92.8	47.9
2019	DW Grant	74.0			96.5	51.6
2019	Transfer	74.0	0	**1.0**	97.5	50.6

[1] All amounts are in millions of dollars

Appendix F

Sources and Uses Table
North Dakota Drinking Water State Revolving Loan Fund Program
Cumulative Amounts as of June 30, 2018

	SOURCES
Federal Capitalization Grants	204,930,767
State Match	51,432,137
Transfers from CWSRF	51,516,491
Net Leveraged Bonds	188,492,700
Investment Earnings	47,138,089
Interest Payments	52,932,384
Principal Repayments	158,678,198
TOTAL SOURCES OF FUNDS	755,120,766

	USES
Administration	8,600,924
2% SSTA	3,357,532
10% DW Program Set-Aside	4,342,888
15% Local Asst. Set-Aside	435,268
Transfers to CWSRF	29,061,000
Bond Principal Repayments	57,167,914
Bond Interest Expense	55,987,965
Arbitrage	763,211
Reserves	2,650,545
Closed Agreements	563,186,470
Loans Approved by Industrial Commissic	24,786,000
TOTAL USES OF FUNDS	750,339,717

DWSRF Funds Available for Projects in 2019	$4,781,049

ANNUAL SOURCES FOR 2019	
FY19 Capitalization Grant	11,107,000
Set-asides taken from FY19 Capitalization Grant	(1,466,420)
State Match (if applicable)	
Leveraged Bonds (if applicable)	
Transfers with CW +/- (if applicable)	1,000,000
Total New 2019 Funds	$10,640,580
TOTAL DWSRF FUNDS AVAILABLE FOR 2019	$15,421,629
TOTAL DWSRF PROJECTS ON FUNDABLE LIST	$15,421,629
AVAILABLE FUNDS	$0

NORTH DAKOTA
DEPARTMENT *of* HEALTH

Appendix G

Abbreviations

ASWUD	All Seasons Water User District
CRW	Cass Rural Water
DWSRF	Drinking Water State Revolving Loan Fund
EPA	Environmental Protection Agency
FY	Fiscal year
IUP	Intended Use Plan
NCRWD	North Central Rural Water District
NDCC	North Dakota Century Code
NDDoH	North Dakota Department of Health
NPRWD	North Prairie Rural Water District
NRWD	Northeast Regional Water District
PRV	Pressure-reducing valve
PWS	Public Water System
RWD	Rural Water District
SCADA	Supervisory control and data acquisition
SCRWD	South Central Regional Water District
SDWA	Safe Drinking Water Act
SEWUD	Southeast Water Users District
SRWD	Stutsman Rural Water District
TCWD	Tri-County Water District
WRD	Water Resource District
WRWD	Williams Rural Water District
WTP	Water treatment plant
WUD	Water Users District

APPENDIX F

RECEIVED
JUN 14 2019
STATE WATER COMMISSION

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
2019-2020 Wild Rice River Snagging & Clearing

Sponsor(s)
Southeast Cass Water Resource District (WRD)

County	City	Township/Range/Section
Cass		

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Snagging & Clearing

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☑ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
SE Cass WRD and local landowners

Description Of Problem Or Need And How Project Addresses That Problem Or Need
The Wild Rice River requires regular snagging and clearing to keep the river clear of obstructions. The purpose of the project is to remove and dispose of fallen trees and debris in the river, in accordance with the current ND SWC policy for snagging and clearing projects.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
The WRD determines the need for S&C on a regular basis. If work is needed, the WRD contacts the local landowners prior to work being completed in the river.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 120000	$	$ 120000	$
Other State	$	$	$	$
Local	$ 120000	$	$ 120000	$
Total	$ 240,000.00	$ 0.00	$ 240,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
None.

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
The project will begin when safe ice conditions allow and will terminate when the project is complete or unsafe ice conditions exist.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By: Carol Harbeke Lewis			Date:
Address: 1201 West Main Ave.	City: West Fargo	State: ND	ZIP Code: 58078
Telephone Number: 701-298-2381		Engineer Telephone Number: 701-499-5856	
Sponsor Email Address:		Engineer Email Address: KLysne@mooreengineeringinc.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature: Carol Harbeke Lewis Date: 6-12-19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

444 Sheyenne Street
Suite 301
West Fargo, ND 58078

P: 701.282.4692
F: 701.282.4530

moore engineering, inc.

2019-2020 WILD RICE RIVER
SNAGGING & CLEARING PROJECT
SOUTHEAST CASS WRD
CASS COUNTY, NORTH DAKOTA

Engineer's Report

The 2019-2020 Wild Rice River Snagging & Clearing Project will begin at the ND State Highway 46 crossing and will proceed downstream to the Red River of the North . Types of work anticipated for the Wild Rice River Snagging and Clearing Project include removal and disposal of fallen trees and debris along the Wild Rice River, removal and disposal of accummulated sediment in the vicinity of the fallen trees and debris, and removal and disposal of trees in imminent danger of falling in the Wild Rice River.

The project will be administered on a cost plus basis with a representative of Moore Engineering observing the construction and assisting with the notification of the adjoining landowners. The Southeast Cass WRD plans to hire a competent and experienced contractor to complete the 2019-2020 Wild Rice River Snagging and Clearing Project. Following is a summary of the estimated costs for this project.

Summary of Estimated Costs

Construction	$200,000.00
Construction Engineering	$20,000.00
Contingency	$20,000.00
Total Estimated Costs	$240,000.00
Less Estimated ND SWC Funds	$120,000.00
Total Local Cost	$120,000.00

Dated this 10th day of June, 2019

Kurt Lysne, P.E.
ND Reg # PE-6871
Engineer for the Southeast Cass WRD

SPECIFICATIONS FOR DEBRIS REMOVAL

SCOPE

The snagging and cleaning work to be performed under these specifications consists primarily of the removal and disposal of standing and fallen trees, snags, driftwood, stumps and debris occurring in the River Channel within the downstream and upstream limits for snagging work as established. The work will also include removal and disposal of fallen timber, driftwood and debris which is logged on the immediate bank slopes of the channel, and cutting down, removal and disposal of leaning trees overhanging the channel and in eminent danger of falling into the channel.

Contractor will remove all items as shown in these specifications regardless of the number or locations of set-ups and approaches to the river which are required.

All items which, in the opinion of the engineer in charge, are beneficial or helpful in reducing bank erosion and which do not interfere with streamflow will be allowed to remain. Contractor will not be required to move any earth in this project except that which is incidental to other operations.

RIGHT-OF-ENTRY

Access to the river will be provided by the local sponsoring agency as much as possible, however, it will be the contractor's responsibility to make agreements with landowners for access and to reimburse them for damages.

REQUIREMENTS FOR SNAGGING AND DISPOSAL

a) **Phase I - Snagging**

The snagging work shall include the removal of all fallen trees, standing trees in eminent danger of falling into the channel, driftwood, snags, loose stumps and trunks, standing stumps or objectionable material, which is encountered within the River Channel between upstream and downstream limits established under this contract. Bank clearing, as such, is not required but the snagging work shall also include the removal of fallen trees and driftwood which are lodged on the immediate bank slopes of the channel, and the removal of prominently leaning trees which overhang the channel and are in danger of falling into the channel area. Standing trees shall be cut one foot or less from the ground, measured on the uphill side, except that underwater cutting during normal stages of the river, will not be required. Material and debris resulting from the snagging operations shall be disposed of as stipulated in paragraph (b) below.

b) Phase II - Disposal

All snagged material shall be disposed of in one of the following ways:

1) With written consent of the landowner, the snagged material may be piled on property adjacent to the river channel for disposal by burning and burying, burying, or by removal. No burning or burying may begin without a written notice from the engineer authorizing the work.

2) Burning during snagging in a "Burning Sled" designed to allow minimum spillage of ashes while being operated on the ice. Ashes from this operation will not be allowed to be disposed of on the ice. Any ashes piled adjacent to the channel shall be disposed of as outlined in item b) 1) above.

In no case shall material be thrown into or left in the river. Care shall be exercised that timber or debris is disposed of in such a manner as to preclude it from being washed into the channel during periods of high water. The placing of stumps, timber, and debris upon private property without the prior written consent of the owner and approval of the engineer in charge, will not be considered satisfactory removal and the contractor will be required to move such materials as is directed by the engineer in charge. Upon completion of the disposal operation, all affected areas shall be cleaned up and left in a neat and clean condition.

SALVAGE OF TIMBER

Property owners shall be afforded an opportunity to acquire any or all timber to be snagged or cleared from their respective properties. When directed by the engineer in charge, all timber and pole wood encountered within the contract limits for snagging shall be neatly trimmed and arranged for removal by respective property owners. In the event that said property owners do not remove this timber, such materials shall become the property of the contractor and shall be disposed of as specified above.

REGULATIONS GOVERNING BURNING

The contractor shall be responsible for burning operations and shall be in compliance with all Federal, state and local laws and regulations relative to burning. The contractor may be required to suspend burning operations because of hazardous weather conditions. At no time shall any fires be left unattended. The proper Fire District shall be notified prior to beginning any burning operation. No burning will be allowed within city limits, in close proximity to buildings, or in areas where the smoke may cause dangerous traffic conditions.

CASS COUNTY GOVERNMENT

Southeast Cass Water Resource District

June 12, 2019

Beth Nangare
Cost Share Program Administrator
North Dakota State Water Commission
900 East Boulevard Avenue, Dept. 770
Bismarck, ND 58505-0850

Dear Beth:

RE: 2019-2020 Wild Rice River Snagging and Clearing
State Highway 46 downstream to the Red River of the North

The Southeast Cass Water Resource District requests cost-share assistance for the above referenced Wild Rice River Snagging and Clearing Project that we plan to complete this winter. Attached please find the State Water Commission Cost-Share Request form, Engineer's Report, project specifications and a map illustrating the extent of the project.

If you have any questions, please feel free to contact us or our project engineer, Kurt Lysne, Moore Engineering, Inc., at 701-499-5856.

Sincerely,

SOUTHEAST CASS WATER RESOURCE DISTRICT

Carol Harbeke Lewis
Secretary-Treasurer

Enclosures

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrd@casscountynd.gov
www.casscountynd.gov

Horace
Stanley TWP
Pleasant TWP
Oxbow
Walcott TWP
Eagle TWP
88TH AVE S
112TH AVE S
49TH ST SE
50TH ST SE
53RD ST SE
52ND ST SE
54TH ST SE
100TH AVE S
124TH AVE S
118TH AVE S
CHESTNUT DR
WALL AVE
1ST AVE N
PARK DR
SOUTHWOOD DR
LIBERTY LN
LIBERTY CR
BRINK DR
70TH ST S
4TH ST E
103RD AVE S
106TH AVE S
72ND ST S
57TH ST S
45TH ST S
190TH AVE S
190 1/2 AVE SE
191ST AVE SE
25TH ST S
21ST ST
MAIN ST
ROUNDHILL DR
RIVER VIEW RD
81ST AVE S
RIVER DR S
FOREST RIVER DR S
88TH AVE S
HILLSIDE DR S
HERITAGE DR
COSGROVE DR
COSGROVE TE
6TH ST S
36TH ST S
25TH ST S
5TH ST S
PFIFFER DR SE
KLITZKE DR
172ND AVE SE
174TH AVE SE
171ST AVE SE
173RD AVE SE
170TH AVE SE
171ST AVE SE
174 1/2 AVE SE
172 1/2 AVE SE
173RD AVE SE
PLUMTREE RD
ELM ST
7TH SE
51ST ST SE
MAIN AVE
SCHNELL DR
OXBOW DR
SUNSET DR
RIVERBEND RD
29
14
21
16
17S
81
25
18
46

Legend

2019 - 2020 Wild Rice S&C

2019-2020 Wild Rice River Snagging & Clearing Cass County, ND All Reaches

Drawn By: AKS Date: 6/10/2019 Parcel Date: 12/21/2011
Aerial Image: 2012 County SIDS
Horizontal Datum: NAD83_UTM_Zone_14N
T:\Numbered Projects\15590\15590-621\2013 Wild Rice Snagging and Clearing.mxd

N W E S

0 1,750 3,500 7,000 Feet

1 in = 3,500 feet

moore engineering, inc.

APPENDIX G

CASS COUNTY GOVERNMENT

Southeast Cass Water Resource District

June 12, 2019

RECEIVED
JUN 14 2019
STATE WATER COMMISSION

Beth Nangare
Cost Share Program Administrator
North Dakota State Water Commission
900 East Boulevard Avenue, Dept. 770
Bismarck, ND 58505-0850

Dear Beth:

RE: 2019-2020 Sheyenne River Snagging and Clearing – Reach I
State Highway 46 downstream to the Sheyenne-Maple Flood Control District #2 (Horace Diversion) inlet structure

The Southeast Cass Water Resource District requests cost-share assistance for the above referenced Sheyenne River Snagging and Clearing Project that we plan to complete this winter. Attached please find the State Water Commission Cost-Share Request form, Engineer's Report, project specifications and a map illustrating the extent of the project.

If you have any questions, please feel free to contact us or our project engineer, Kurt Lysne, Moore Engineering, Inc., at 701-499-5856.

Sincerely,

SOUTHEAST CASS WATER RESOURCE DISTRICT

Carol Harbeke Lewis
Secretary-Treasurer

Enclosures

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrd@casscountynd.gov
www.casscountynd.gov

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

RECEIVED
JUN 14 2019
STATE WATER COMMISSION

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
2019 Sheyenne River Snagging & Clearing - Reach I

Sponsor(s)
Southeast Cass Water Resource District (WRD)

County	City	Township/Range/Section
Cass		

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Snagging & Clearing

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☑ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
SE Cass WRD and local landowners

Description Of Problem Or Need And How Project Addresses That Problem Or Need
The Sheyenne River requires regular snagging and clearing to keep the river clear of obstructions. The purpose of the project is to remove and dispose of fallen trees and debris in the river, in accordance with the current ND SWC policy for snagging and clearing projects.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
The WRD determines the need for S&C on a regular basis. If work is needed, the WRD contacts the local landowners prior to work being completed in the river.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 99000	$	$ 99000	$
Other State	$	$	$	$
Local	$ 99000	$	$ 99000	$
Total	$ 198,000.00	$ 0.00	$ 198,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
None.

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
The project will begin when safe ice conditions allow and will terminate when the project is complete or unsafe ice conditions exist.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By: Carol Harbeke Lewis			Date:
Address: 1201 West Main Ave.	City: West Fargo	State: ND	ZIP Code: 58078
Telephone Number: 701-298-2381		Engineer Telephone Number: 701-499-5856	
Sponsor Email Address:		Engineer Email Address: KLysne@mooreengineeringinc.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature: Carol Harbeke Lewis Date: 6-12-19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

444 Sheyenne Street
Suite 301
West Fargo, ND 58078

P: 701.282.4692
F: 701.282.4530

moore engineering, inc.

2019-2020 SHEYENNE RIVER SNAGGING &
CLEARING PROJECT - REACH I
SOUTHEAST CASS WRD
CASS COUNTY, NORTH DAKOTA

Engineer's Report

The 2019-2020 Sheyenne River Snagging & Clearing - Reach I Project will begin at State Highway 46 along the Cass County-Richland County line and will proceed downstream to the Horace Diversion Inlet Structure in Section 19 of Stanley Township. Types of work anticipated for the Sheyenne River Snagging and Clearing Project include removal and disposal of fallen trees and debris along the Sheyenne River, removal and disposal of accummulated sediment in the vicinity of the fallen trees and debris, and removal and disposal of trees in imminent danger of falling in the Sheyenne River.

The project will be administered on a cost plus basis with a representative of Moore Engineering observing the construction and assisting with the notification of the adjoining landowners. The Southeast Cass WRD plans to hire a competent and experienced contractor to complete the 2019-2020 Sheyenne River Snagging and Clearing - Reach I Project. Following is a summary of the estimated costs for this project.

Summary of Estimated Costs

Construction	$165,000.00
Construction Engineering	$16,500.00
Contingency	$16,500.00
Total Estimated Costs	$198,000.00
Less Estimated ND SWC Funds	$99,000.00
Total Local Cost	$99,000.00

Dated this 10th day of June, 2019

Kurt Lysne, P.E.
ND Reg # PE-6871
Engineer for the Southeast Cass WRD

SPECIFICATIONS FOR
DEBRIS REMOVAL

SCOPE

The snagging and cleaning work to be performed under these specifications consists primarily of the removal and disposal of standing and fallen trees, snags, driftwood, stumps and debris occurring in the River Channel within the downstream and upstream limits for snagging work as established. The work will also include removal and disposal of fallen timber, driftwood and debris which is logged on the immediate bank slopes of the channel, and cutting down, removal and disposal of leaning trees overhanging the channel and in eminent danger of falling into the channel.

Contractor will remove all items as shown in these specifications regardless of the number or locations of set-ups and approaches to the river which are required.

All items which, in the opinion of the engineer in charge, are beneficial or helpful in reducing bank erosion and which do not interfere with streamflow will be allowed to remain. Contractor will not be required to move any earth in this project except that which is incidental to other operations.

RIGHT-OF-ENTRY

Access to the river will be provided by the local sponsoring agency as much as possible, however, it will be the contractor's responsibility to make agreements with landowners for access and to reimburse them for damages.

REQUIREMENTS FOR SNAGGING AND DISPOSAL

a) **Phase I - Snagging**

The snagging work shall include the removal of all fallen trees, standing trees in eminent danger of falling into the channel, driftwood, snags, loose stumps and trunks, standing stumps or objectionable material, which is encountered within the River Channel between upstream and downstream limits established under this contract. Bank clearing, as such, is not required but the snagging work shall also include the removal of fallen trees and driftwood which are lodged on the immediate bank slopes of the channel, and the removal of prominently leaning trees which overhang the channel and are in danger of falling into the channel area. Standing trees shall be cut one foot or less from the ground, measured on the uphill side, except that underwater cutting during normal stages of the river, will not be required. Material and debris resulting from the snagging operations shall be disposed of as stipulated in paragraph (b) below.

b) Phase II - Disposal

All snagged material shall be disposed of in one of the following ways:

1) With written consent of the landowner, the snagged material may be piled on property adjacent to the river channel for disposal by burning and burying, burying, or by removal. No burning or burying may begin without a written notice from the engineer authorizing the work.

2) Burning during snagging in a "Burning Sled" designed to allow minimum spillage of ashes while being operated on the ice. Ashes from this operation will not be allowed to be disposed of on the ice. Any ashes piled adjacent to the channel shall be disposed of as outlined in item b) 1) above.

In no case shall material be thrown into or left in the river. Care shall be exercised that timber or debris is disposed of in such a manner as to preclude it from being washed into the channel during periods of high water. The placing of stumps, timber, and debris upon private property without the prior written consent of the owner and approval of the engineer in charge, will not be considered satisfactory removal and the contractor will be required to move such materials as is directed by the engineer in charge. Upon completion of the disposal operation, all affected areas shall be cleaned up and left in a neat and clean condition.

SALVAGE OF TIMBER

Property owners shall be afforded an opportunity to acquire any or all timber to be snagged or cleared from their respective properties. When directed by the engineer in charge, all timber and pole wood encountered within the contract limits for snagging shall be neatly trimmed and arranged for removal by respective property owners. In the event that said property owners do not remove this timber, such materials shall become the property of the contractor and shall be disposed of as specified above.

REGULATIONS GOVERNING BURNING

The contractor shall be responsible for burning operations and shall be in compliance with all Federal, state and local laws and regulations relative to burning. The contractor may be required to suspend burning operations because of hazardous weather conditions. At no time shall any fires be left unattended. The proper Fire District shall be notified prior to beginning any burning operation. No burning will be allowed within city limits, in close proximity to buildings, or in areas where the smoke may cause dangerous traffic conditions.

WARREN

Horace

NORMANNA

Kindred

Highway 46

45TH ST SE
46TH ST SE
47TH ST SE
49TH ST SE
50TH ST SE
51ST ST SE
52ND ST SE
53RD ST SE
50 1/2 ST SE
112TH AVE S
WALL AVE
SUNSET DR
ELM ST
HWY 46

164TH AVE SE
166TH AVE SE
167TH AVE SE
168TH AVE SE
169TH AVE SE
183RD AVE SE
72ND ST S
81ST ST S
SHEYENNE DR
4TH ST E
ELM TREE RD
RIVER RD E

SHEYENNE DIVERSION
SHEYENNE RIVER
DRAIN 21C
DRAIN 50
DRAIN 36
DRAIN 35
DRAIN 47
DRAIN 60
DRAIN 1

15 16 17 14 36 46 3 26 18

Legend

Reach I - Hwy 46 to Horace Diversion

2019-2020 Sheyenne River - Reach I
Snagging & Clearing
Cass County, ND

Drawn By: AKS Date: 5/28/2019 Parcel Date: 12/21/2011
Aerial Image: 2010 County SIDS
Horizontal Datum: NAD83_UTM_Zone_14N
T:\Numbered Projects\15349\2012 Sheyenne Snagging and Clearing Access Points.mxd

N W E S

0 1,750 3,500 7,000 Feet

1 in = 3,500 feet

moore engineering, inc.

CASS COUNTY GOVERNMENT

Southeast Cass Water Resource District

Dan Jacobson
Chairman
West Fargo, North Dakota

Ken Pawluk
Manager
Fargo, North Dakota

Keith Weston
Manager
Fargo, North Dakota

June 12, 2019

Beth Nangare
Cost Share Program Administrator
North Dakota State Water Commission
900 East Boulevard Avenue, Dept. 770
Bismarck, ND 58505-0850

Dear Beth:

RE: 2019-2020 Sheyenne River Snagging and Clearing – Reach II
Sheyenne-Maple Flood Control District #2 (Horace Diversion) inlet structure downstream to the Sheyenne River closure structure north of Cass County Highway 10

The Southeast Cass Water Resource District requests cost-share assistance for the above referenced Sheyenne River Snagging and Clearing Project that we plan to complete this winter. Attached please find the State Water Commission Cost-Share Request form, Engineer's Report, project specifications and a map illustrating the extent of the project.

If you have any questions, please feel free to contact us or our project engineer, Kurt Lysne, Moore Engineering, Inc., at 701-499-5856.

Sincerely,

SOUTHEAST CASS WATER RESOURCE DISTRICT

Carol Harbeke Lewis
Secretary-Treasurer

Enclosures

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrd@casscountynd.gov
www.casscountynd.gov

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

RECEIVED
JUN 14 2019
STATE WATER COMMISSION

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
2019-2020 Sheyenne River Snagging & Clearing - Reach II

Sponsor(s)
Southeast Cass Water Resource District (WRD)

County	City	Township/Range/Section
Cass		

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Snagging & Clearing

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☑ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
SE Cass WRD and local landowners

Description Of Problem Or Need And How Project Addresses That Problem Or Need
The Sheyenne River requires regular snagging and clearing to keep the river clear of obstructions. The purpose of the project is to remove and dispose of fallen trees and debris in the river, in accordance with the current ND SWC policy for snagging and clearing projects.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
The WRD determines the need for S&C on a regular basis. If work is needed, the WRD contacts the local landowners prior to work being completed in the river.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 105000	$	$ 105000	$
Other State	$	$	$	$
Local	$ 105000	$	$ 105000	$
Total	$ 210,000.00	$ 0.00	$ 210,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
None.

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
The project will begin when safe ice conditions allow and will terminate when the project is complete or unsafe ice conditions exist.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By: Carol Harbeke Lewis			Date:
Address: 1201 West Main Ave.	City: West Fargo	State: ND	ZIP Code: 58078
Telephone Number: 701-298-2381		Engineer Telephone Number: 701-499-5856	
Sponsor Email Address:		Engineer Email Address: KLysne@mooreengineeringinc.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature: Carol Harbeke Lewis Date: 6-12-19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

444 Sheyenne Street
Suite 301
West Fargo, ND 58078

P: 701.282.4692
F: 701.282.4530

moore engineering, inc.

2019-2020 SHEYENNE RIVER SNAGGING &
CLEARING PROJECT - REACH II
SOUTHEAST CASS WRD
CASS COUNTY, NORTH DAKOTA

Engineer's Report

The 2019-2020 Sheyenne River Snagging & Clearing - Reach II Project will begin at the Horace Diversion Inlet Structure in Section 19 of Stanley Township and will proceed downstream to the Sheyenne River Closure Structure that is located just north of County Road 10. Types of work anticipated for the Sheyenne River Snagging and Clearing Project include removal and disposal of fallen trees and debris along the Sheyenne River, removal and disposal of accummulated sediment in the vicinity of the fallen trees and debris, and removal and disposal of trees in imminent danger of falling in the Sheyenne River.

The project will be administered on a cost plus basis with a representative of Moore Engineering observing the construction and assisting with the notification of the adjoining landowners. The Southeast Cass WRD plans to hire a competent and experienced contractor to complete the 2019-2020 Sheyenne River Snagging and Clearing - Reach II Project. Following is a summary of the estimated costs for this project.

Summary of Estimated Costs

Construction	$175,000.00
Construction Engineering	$17,500.00
Contingency	$17,500.00
Total Estimated Costs	$210,000.00
Less Estimated ND SWC Funds	$105,000.00
Total Local Cost	$105,000.00

Dated this 10th day of June, 2019

Kurt Lysne, P.E.
ND Reg # PE-6871
Engineer for the Southeast Cass WRD

SPECIFICATIONS FOR
DEBRIS REMOVAL

SCOPE

The snagging and cleaning work to be performed under these specifications consists primarily of the removal and disposal of standing and fallen trees, snags, driftwood, stumps and debris occurring in the River Channel within the downstream and upstream limits for snagging work as established. The work will also include removal and disposal of fallen timber, driftwood and debris which is logged on the immediate bank slopes of the channel, and cutting down, removal and disposal of leaning trees overhanging the channel and in eminent danger of falling into the channel.

Contractor will remove all items as shown in these specifications regardless of the number or locations of set-ups and approaches to the river which are required.

All items which, in the opinion of the engineer in charge, are beneficial or helpful in reducing bank erosion and which do not interfere with streamflow will be allowed to remain. Contractor will not be required to move any earth in this project except that which is incidental to other operations.

RIGHT-OF-ENTRY

Access to the river will be provided by the local sponsoring agency as much as possible, however, it will be the contractor's responsibility to make agreements with landowners for access and to reimburse them for damages.

REQUIREMENTS FOR SNAGGING AND DISPOSAL

a) **Phase I - Snagging**

The snagging work shall include the removal of all fallen trees, standing trees in eminent danger of falling into the channel, driftwood, snags, loose stumps and trunks, standing stumps or objectionable material, which is encountered within the River Channel between upstream and downstream limits established under this contract. Bank clearing, as such, is not required but the snagging work shall also include the removal of fallen trees and driftwood which are lodged on the immediate bank slopes of the channel, and the removal of prominently leaning trees which overhang the channel and are in danger of falling into the channel area. Standing trees shall be cut one foot or less from the ground, measured on the uphill side, except that underwater cutting during normal stages of the river, will not be required. Material and debris resulting from the snagging operations shall be disposed of as stipulated in paragraph (b) below.

b) Phase II - Disposal

All snagged material shall be disposed of in one of the following ways:

1) With written consent of the landowner, the snagged material may be piled on property adjacent to the river channel for disposal by burning and burying, burying, or by removal. No burning or burying may begin without a written notice from the engineer authorizing the work.

2) Burning during snagging in a "Burning Sled" designed to allow minimum spillage of ashes while being operated on the ice. Ashes from this operation will not be allowed to be disposed of on the ice. Any ashes piled adjacent to the channel shall be disposed of as outlined in item b) 1) above.

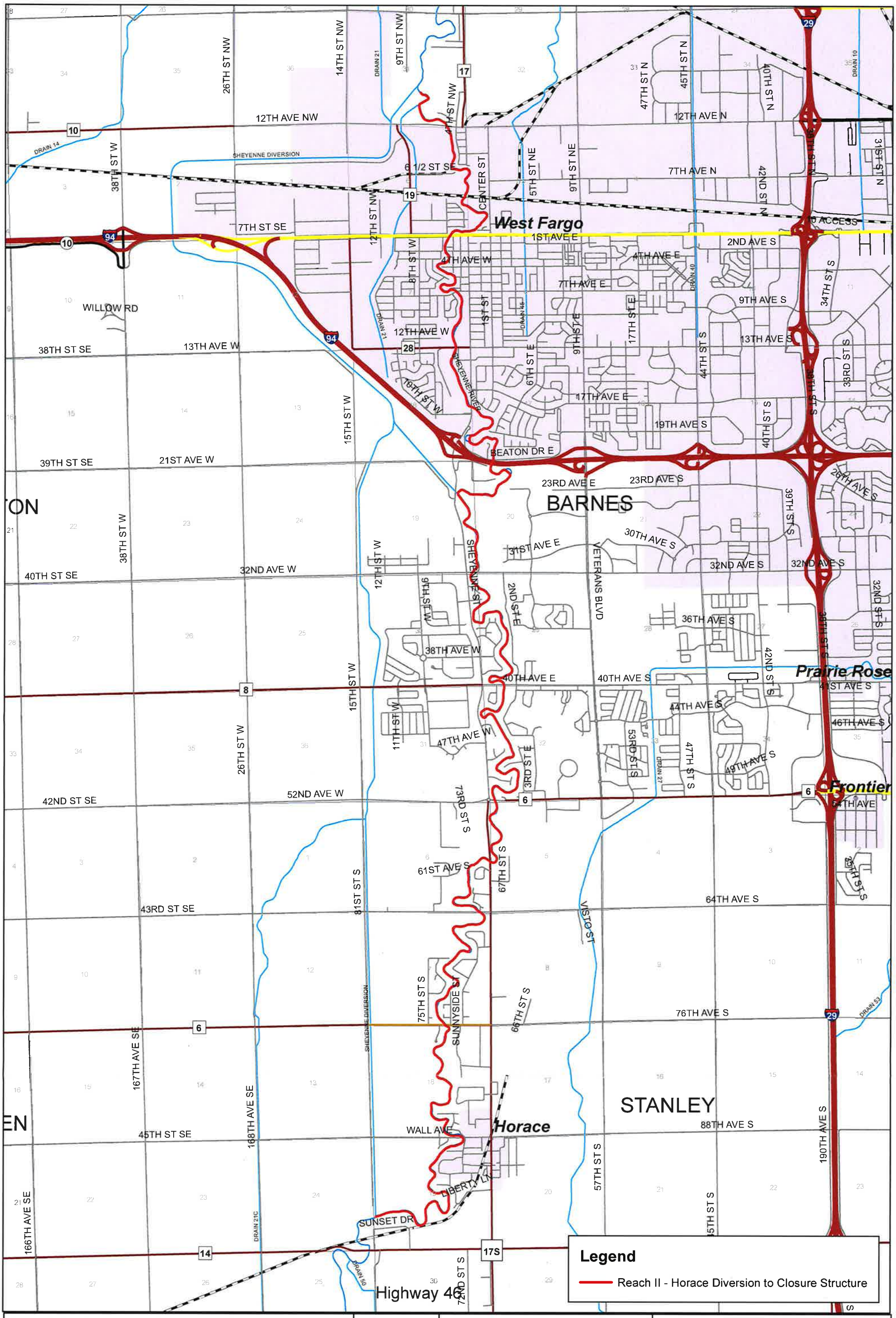
In no case shall material be thrown into or left in the river. Care shall be exercised that timber or debris is disposed of in such a manner as to preclude it from being washed into the channel during periods of high water. The placing of stumps, timber, and debris upon private property without the prior written consent of the owner and approval of the engineer in charge, will not be considered satisfactory removal and the contractor will be required to move such materials as is directed by the engineer in charge. Upon completion of the disposal operation, all affected areas shall be cleaned up and left in a neat and clean condition.

SALVAGE OF TIMBER

Property owners shall be afforded an opportunity to acquire any or all timber to be snagged or cleared from their respective properties. When directed by the engineer in charge, all timber and pole wood encountered within the contract limits for snagging shall be neatly trimmed and arranged for removal by respective property owners. In the event that said property owners do not remove this timber, such materials shall become the property of the contractor and shall be disposed of as specified above.

REGULATIONS GOVERNING BURNING

The contractor shall be responsible for burning operations and shall be in compliance with all Federal, state and local laws and regulations relative to burning. The contractor may be required to suspend burning operations because of hazardous weather conditions. At no time shall any fires be left unattended. The proper Fire District shall be notified prior to beginning any burning operation. No burning will be allowed within city limits, in close proximity to buildings, or in areas where the smoke may cause dangerous traffic conditions.


West Fargo
BARNES
Prairie Rose
Frontier
Horace
STANLEY
Highway 46
12TH AVE NW
7TH ST SE
1ST AVE E
2ND AVE S
12TH AVE N
7TH AVE N
WILLOW RD
38TH ST SE
13TH AVE W
12TH AVE W
7TH AVE E
4TH AVE W
4TH AVE E
9TH AVE S
13TH AVE S
39TH ST SE
21ST AVE W
BEATON DR E
17TH AVE E
19TH AVE S
23RD AVE E
23RD AVE S
30TH AVE S
40TH ST SE
32ND AVE W
31ST AVE E
32ND AVE S
36TH AVE S
38TH AVE W
40TH AVE E
40TH AVE S
41ST AVE S
44TH AVE S
46TH AVE S
47TH AVE W
49TH AVE S
42ND ST SE
52ND AVE W
54TH AVE
61ST AVE S
64TH AVE S
43RD ST SE
45TH ST SE
WALL AVE
88TH AVE S
76TH AVE S
SUNSET DR
LIBERTY LN
DRAIN 14
SHEYENNE DIVERSION
DRAIN 21
DRAIN 46
DRAIN 40
DRAIN 27
DRAIN 10
DRAIN 53
DRAIN 21C
DRAIN 50
SHEYENNE RIVER
26TH ST NW
14TH ST NW
9TH ST NW
47TH ST NW
45TH ST N
40TH ST N
31ST ST N
42ND ST N
38TH ST W
12TH ST NW
CENTER ST
5TH ST NE
9TH ST NE
8TH ST W
1ST ST
6TH ST E
9TH ST E
17TH ST E
44TH ST S
34TH ST S
33RD ST S
40TH ST S
39TH ST S
26TH AVE S
15TH ST W
12TH ST W
9TH ST W
SHEYENNE ST
2ND ST E
VETERANS BLVD
42ND ST S
11TH ST W
3RD ST E
53RD ST S
47TH ST S
73RD ST S
61ST ST S
67TH ST S
81ST ST S
26TH ST W
75TH ST S
SUNNYSIDE ST
66TH ST S
167TH AVE SE
168TH AVE SE
166TH AVE SE
190TH AVE S
57TH ST S
65TH ST S
72ND ST S
25TH ST S
32ND ST S
10 ACCESS
Legend
Reach II - Horace Diversion to Closure Structure
2019-2020 Sheyenne River - Reach II
Snagging & Clearing
Cass County, ND
Drawn By: AKS Date: 5/28/2019 Parcel Date: 12/21/2011
Aerial Image: 2010 County SIDS
Horizontal Datum: NAD83_UTM_Zone_14N
T:\Numbered Projects\15349\2012 Sheyenne Snagging and Clearing Access Points.mxd
N
W
E
S
0 2,000 4,000 8,000 Feet
1 in = 4,000 feet
moore engineering, inc.

CASS COUNTY GOVERNMENT

Southeast Cass Water Resource District

Dan Jacobson
Chairman
West Fargo, North Dakota

Ken Pawluk
Manager
Fargo, North Dakota

Keith Weston
Manager
Fargo, North Dakota

June 12, 2019

Beth Nangare
Cost Share Program Administrator
North Dakota State Water Commission
900 East Boulevard Avenue, Dept. 770
Bismarck, ND 58505-0850

Dear Beth:

RE: 2019-2020 Sheyenne River Snagging and Clearing – Reach III
Sheyenne River closure structure north of Cass County Highway 10 to the Red River

The Southeast Cass Water Resource District requests cost-share assistance for the above referenced Sheyenne River Snagging and Clearing Project that we plan to complete this winter. Attached please find the State Water Commission Cost-Share Request form, Engineer's Report, project specifications and a map illustrating the extent of the project.

If you have any questions, please feel free to contact us or our project engineer, Kurt Lysne, Moore Engineering, Inc., at 701-499-5856.

Sincerely,

SOUTHEAST CASS WATER RESOURCE DISTRICT

Carol Harbeke Lewis
Secretary-Treasurer

Carol Harbeke Lewis
Secretary-Treasurer

Enclosures

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrd@casscountynd.gov
www.casscountynd.gov

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

RECEIVED
JUN 14 2019
STATE WATER COMMISSION

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
2019-2020 Sheyenne River Snagging & Clearing - Reach III

Sponsor(s)
Southeast Cass Water Resource District (WRD)

County	City	Township/Range/Section
Cass		

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Snagging & Clearing

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☑ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
SE Cass WRD and local landowners

Description Of Problem Or Need And How Project Addresses That Problem Or Need
The Sheyenne River requires regular snagging and clearing to keep the river clear of obstructions. The purpose of the project is to remove and dispose of fallen trees and debris in the river, in accordance with the current ND SWC policy for snagging and clearing projects.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
The WRD determines the need for S&C on a regular basis. If work is needed, the WRD contacts the local landowners prior to work being completed in the river.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 90000	$	$ 90000	$
Other State	$	$	$	$
Local	$ 90000	$	$ 90000	$
Total	$ 180,000.00	$ 0.00	$ 180,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
The project will begin when safe ice conditions allow and will terminate when the project is complete or unsafe ice conditions exist.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By Carol Harbeke Lewis			Date
Address 1201 West Main Ave.	City West Fargo	State ND	ZIP Code 58078
Telephone Number 701-298-2381		Engineer Telephone Number 701-499-5856	
Sponsor Email Address		Engineer Email Address KLysne@mooreengineeringinc.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature Carol Harbeke Lewis	Date 6-12-19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

444 Sheyenne Street
Suite 301
West Fargo, ND 58078

P: 701.282.4692
F: 701.282.4530

moore engineering, inc.

2019-2020 SHEYENNE RIVER SNAGGING &
CLEARING PROJECT - REACH III
SOUTHEAST CASS WRD
CASS COUNTY, NORTH DAKOTA

Engineer's Report

The 2019-2020 Sheyenne River Snagging & Clearing - Reach III Project will begin at the Sheyenne River Closure Structure that is located just north of County Road 10 and will proceed downstream to the Red River of the North. Types of work anticipated for the Sheyenne River Snagging and Clearing Project include removal and disposal of fallen trees and debris along the Sheyenne River, removal and disposal of accummulated sediment in the vicinity of the fallen trees and debris, and removal and disposal of trees in imminent danger of falling in the Sheyenne River.

The project will be administered on a cost plus basis with a representative of Moore Engineering observing the construction and assisting with the notification of the adjoining landowners. The Southeast Cass WRD plans to hire a competent and experienced contractor to complete the 2019-2020 Sheyenne River Snagging and Clearing - Reach III Project. Following is a summary of the estimated costs for this project.

Summary of Estimated Costs

Construction	$150,000.00
Construction Engineering	$15,000.00
Contingency	$15,000.00
Total Estimated Costs	$180,000.00
Less Estimated ND SWC Funds	$90,000.00
Total Local Cost	$90,000.00

Dated this 10th day of June, 2019

Kurt Lysne, P.E.
ND Reg # PE-6871
Engineer for the Southeast Cass WRD

SPECIFICATIONS FOR
DEBRIS REMOVAL

SCOPE

The snagging and cleaning work to be performed under these specifications consists primarily of the removal and disposal of standing and fallen trees, snags, driftwood, stumps and debris occurring in the River Channel within the downstream and upstream limits for snagging work as established. The work will also include removal and disposal of fallen timber, driftwood and debris which is logged on the immediate bank slopes of the channel, and cutting down, removal and disposal of leaning trees overhanging the channel and in eminent danger of falling into the channel.

Contractor will remove all items as shown in these specifications regardless of the number or locations of set-ups and approaches to the river which are required.

All items which, in the opinion of the engineer in charge, are beneficial or helpful in reducing bank erosion and which do not interfere with streamflow will be allowed to remain. Contractor will not be required to move any earth in this project except that which is incidental to other operations.

RIGHT-OF-ENTRY

Access to the river will be provided by the local sponsoring agency as much as possible, however, it will be the contractor's responsibility to make agreements with landowners for access and to reimburse them for damages.

REQUIREMENTS FOR SNAGGING AND DISPOSAL

a) **Phase I - Snagging**

The snagging work shall include the removal of all fallen trees, standing trees in eminent danger of falling into the channel, driftwood, snags, loose stumps and trunks, standing stumps or objectionable material, which is encountered within the River Channel between upstream and downstream limits established under this contract. Bank clearing, as such, is not required but the snagging work shall also include the removal of fallen trees and driftwood which are lodged on the immediate bank slopes of the channel, and the removal of prominently leaning trees which overhang the channel and are in danger of falling into the channel area. Standing trees shall be cut one foot or less from the ground, measured on the uphill side, except that underwater cutting during normal stages of the river, will not be required. Material and debris resulting from the snagging operations shall be disposed of as stipulated in paragraph (b) below.

b) Phase II - Disposal

All snagged material shall be disposed of in one of the following ways:

1) With written consent of the landowner, the snagged material may be piled on property adjacent to the river channel for disposal by burning and burying, burying, or by removal. No burning or burying may begin without a written notice from the engineer authorizing the work.

2) Burning during snagging in a "Burning Sled" designed to allow minimum spillage of ashes while being operated on the ice. Ashes from this operation will not be allowed to be disposed of on the ice. Any ashes piled adjacent to the channel shall be disposed of as outlined in item b) 1) above.

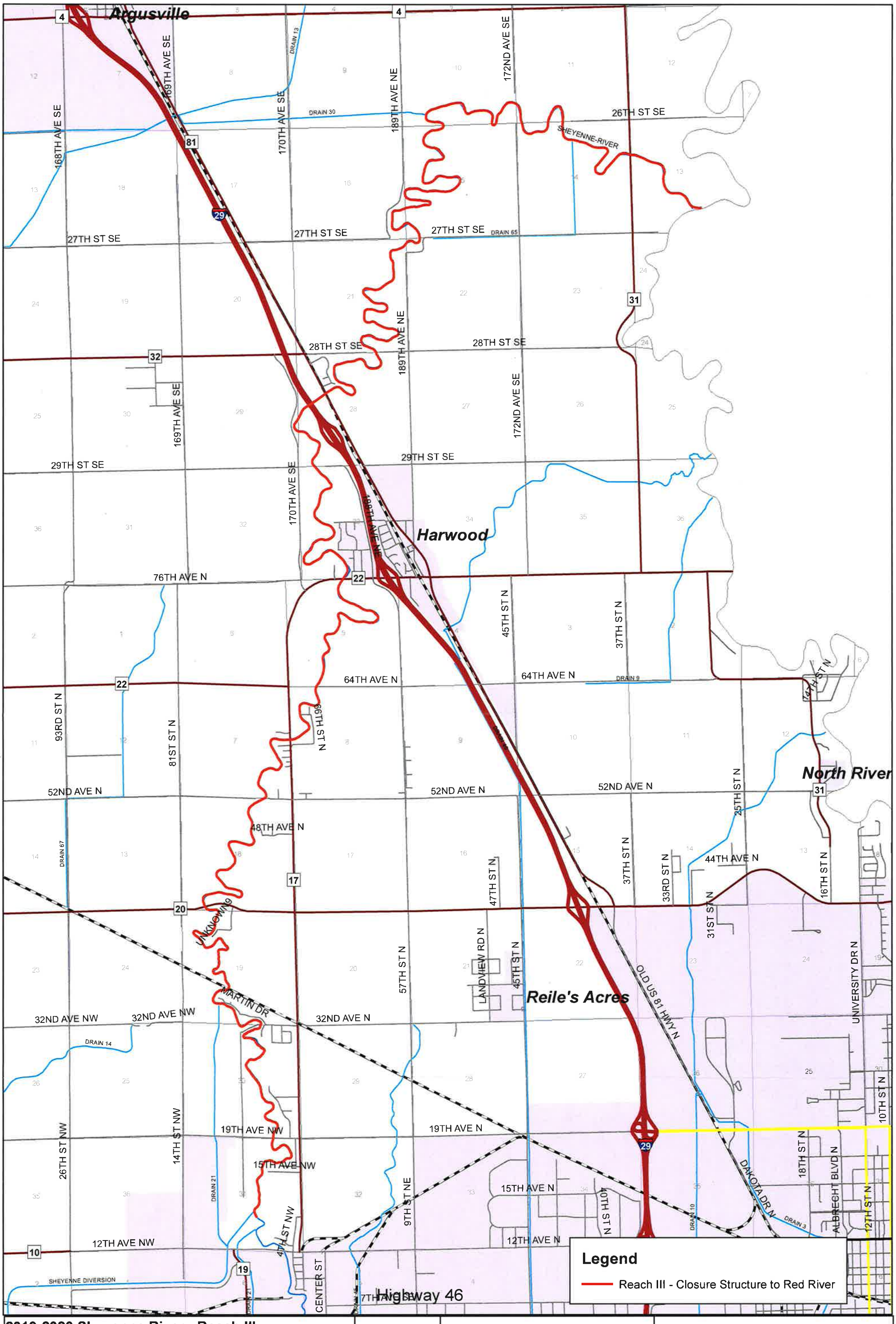
In no case shall material be thrown into or left in the river. Care shall be exercised that timber or debris is disposed of in such a manner as to preclude it from being washed into the channel during periods of high water. The placing of stumps, timber, and debris upon private property without the prior written consent of the owner and approval of the engineer in charge, will not be considered satisfactory removal and the contractor will be required to move such materials as is directed by the engineer in charge. Upon completion of the disposal operation, all affected areas shall be cleaned up and left in a neat and clean condition.

SALVAGE OF TIMBER

Property owners shall be afforded an opportunity to acquire any or all timber to be snagged or cleared from their respective properties. When directed by the engineer in charge, all timber and pole wood encountered within the contract limits for snagging shall be neatly trimmed and arranged for removal by respective property owners. In the event that said property owners do not remove this timber, such materials shall become the property of the contractor and shall be disposed of as specified above.

REGULATIONS GOVERNING BURNING

The contractor shall be responsible for burning operations and shall be in compliance with all Federal, state and local laws and regulations relative to burning. The contractor may be required to suspend burning operations because of hazardous weather conditions. At no time shall any fires be left unattended. The proper Fire District shall be notified prior to beginning any burning operation. No burning will be allowed within city limits, in close proximity to buildings, or in areas where the smoke may cause dangerous traffic conditions.



2019-2020 Sheyenne River - Reach III
Snagging & Clearing
Cass County, ND

Drawn By: AKS Date: 5/26/2019 Parcel Date: 12/21/2011
Aerial Image: 2010 County SIDS
Horizontal Datum: NAD83_UTM_Zone_14N
T:\Numbered Projects\15349\2012 Sheyenne Snagging and Clearing Access Points.mxd

N
W E
S

0 2,000 4,000 8,000 Feet

1 in = 4,000 feet

moore engineering, inc.

APPENDIX H

PEMBINA COUNTY
WATER RESOURCE DISTRICT

308 Courthouse Drive #5
Cavalier, North Dakota 58220
Phone: 701-265-4511
Fax: 701-265-4165

June 14, 2019

ND State Water Commission
900 E Boulevard Ave. Dept. 770
Bismarck, ND 58505-0850

Subject: Tongue River Snag and Clear
Proposal for ND State Water Commission Cost Share

Commissioners;

We are requesting cost-share participation for the Snagging and Clearing on the portion of the Tongue River that resides within Pembina County (Project). As you may be aware, Senate Bill No. 2139 has established that Snagging and Clearing of watercourses is not considered regular maintenance, therefore allowing such projects to again be cost-shared by the ND State Water Commission (NDSWC).

The Project includes removal of debris form the channel that impedes flow along the Tongue River. The estimated length and details of Snagging and Clearing proposed for the Project are attached. Snagging and Clearing will be completed along the proposed extents on the attached map to the maximum limit that funding will allow. During moderate flows, debris in the channel acts as small dams that hold back water and restrict drainage to adjacent agricultural land. During high flows timber within the channel is often carried downstream to bridge or culvert crossings, resulting in increased risk to damages and debris removal costs.

The local financing for the Project is established through ND Century Code 61-16.1-09.1, which allows for a Local Assessment District to be created to generate a maximum of $100,000 for Snagging and Clearing. The Assessment District for the Project will generate approximately $98,337. We are requesting NDSWC to match funds generated through Assessment District, or 50% of the total project costs. Attached you will find our completed cost share form.

If you have any questions or comments, please contact us at llkemp@nd.gov or by phone at (701) 265-4511.

Sincerely,

Pembina County Water Resource District

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Tongue River Snag and Clear (2019)

Sponsor(s)
Pembina County Water Resource District

County	City	Township/Range/Section
Pembina	Rural	See attached Map

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Improve conveyance along the Tongue River by removal of timber debris in the channel.

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☑ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
Pembina Co Water Resource Board, Pembina Co Commission, and area landowners

Description Of Problem Or Need And How Project Addresses That Problem Or Need

The Tongue River has significant timber buildup in locations. This results in reduced conveyance capacity that impacts agricultural drainage, damage at roads and bridges where timber builds up during high flows, and increased strain on local budgets to reactively remove timber and fix the associated damages.

The initial step in the project will be a Drone flight to identify the critical reaches were snagging and clearing would need to be completed. After the drone flight is completed, snagging and clearing will be performed as far as funding will allow. Local funding is generated through ND Century Code (NDCC) 61-16.1-09.1 to establish an assessment district for the purposes of snagging and clearing. The assessment district has a maximum allowable income generation of $100,000. The Project will build off the success of the Snagging and Clearing project completed in 2018/19 on other portions of the Tongue River, where approximately 7 miles were snagged and cleared using the assessment. NDSWC Cost share would allow us to complete additional river miles on an annual basis.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
The Snag and Clear program began last year on the lower reaches of the Tongue River. This generated significant landowner support. Establishment of the assessment district required a 2/3 majority support from the Commission and Water Board.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No.

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$	$	$ 98,337.00	$
Other State	$	$	$	$
Local	$	$	$ 98,337.00	$
Total	$ 0.00	$ 0.00	$ 196,674.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
Not applicable for the project category.

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
Field reconnaissance - July 2019; Bidding - September 2019; Construction - November 2019 through February 2020

Have Assessment Districts Been Formed? ☑ Yes ☐ No ☐ Ongoing ☐ Not Applicable

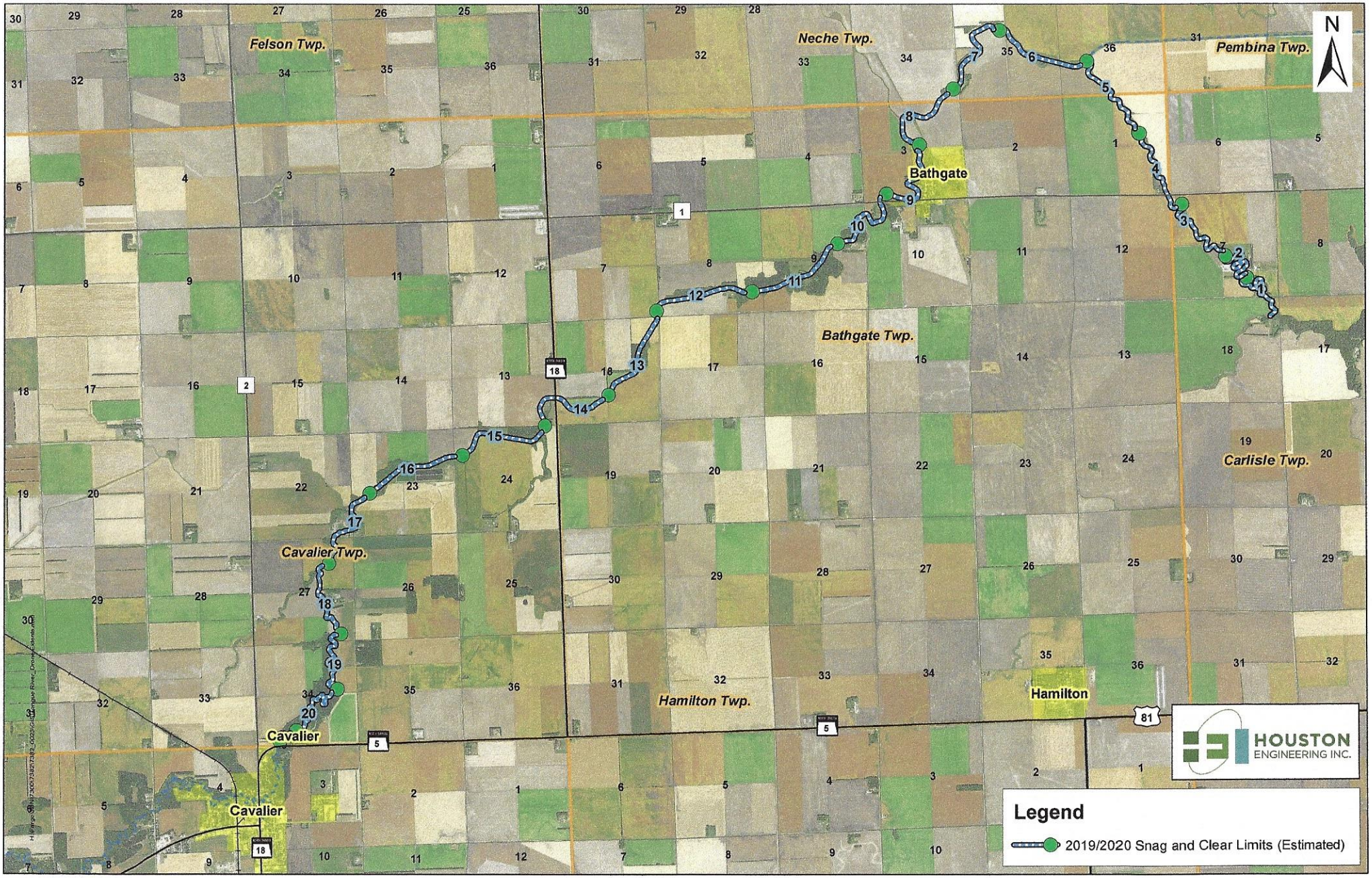
Submitted By Pembina County Water Resource District			Date June 11, 2019
Address 308 Courthouse Drive #5	City Cavalier	State ND	ZIP Code 58220
Telephone Number (701) 265-4511	Engineer Telephone Number (701)237-5065		
Sponsor Email Address llkemp@nd.gov	Engineer Email Address zherrmann@houstoneng.com		

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature	Date

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850


Felson Twp.
Neche Twp.
Pembina Twp.
Bathgate
Bathgate Twp.
Carlisle Twp.
Cavalier Twp.
Cavalier
Hamilton Twp.
Hamilton
N
Legend
2019/2020 Snag and Clear Limits (Estimated)
HOUSTON ENGINEERING INC.

APPENDIX I

SWC Date Received : 6/24/19

Burleigh County Water Resource District

1720 Burnt Boat Drive, Suite 205
Bismarck, North Dakota 58503
www.bcwrd.org

RECEIVED
JUN 25 2019
STATE WATER COMMISSION

June 24, 2019

Garland Erbele, PE
North Dakota State Engineer
900 East Boulevard Avenue, Dept 770
Bismarck, N58505-0850

RE: Sibley Island Flood Control – Pre-Construction Engineering Cost Share Request

Dear Mr. Erbele:

The Burleigh County Water Resource District (BCWRD) is preparing to proceed with the preliminary engineering design for the Sibley Island Flood Control Project. The project is located south of the City of Bismarck, east of Washington Street, north of the Missouri River, and west of Apple Creek. Because some of the flood control benefits will be achieved through highway grade raises, the project is being coordinated with the Burleigh County Highway Department (BCHD) who represents the interests of the unincorporated Lincoln Township.

This project represents the remaining southern segment of the *Burleigh County 20-Foot Flood Control Plan*. A SWC Project Planning Form was submitted in September 2018, and it is understood that this project was specifically considered during the budgeting efforts of the last legislative session. The project features and costs have continued to evolve since the filing of the project planning form, and the most current information is enclosed and included on the Cost-Share Request form. Completing the preliminary engineering report and design will allow us to take this to a vote of the benefitted landowners. This effort was initiated by a petition of interest received from the landowners themselves, with around 60% of those landowners signing the petition.

The total anticipated cost for the current phase is $160,700. As a flood control project without federal involvement, we are requesting stare cost share of 60% in accordance with state cost share policy for a total cost share of $96,420. Any technical questions you or your staff may have can be answered by Michael Gunsch of Houston Engineering. He can be reached by phone at (701) 323-0200 or by email at mgunsch@houstoneng.com.

Thank you for your consideration.

Greg Larson, Chairman
Burleigh County WRD

Enc.

C: Brian Bittner, Chairman Burleigh County Commission (Lincoln Twp)
Marcus Hall, Burleigh County Highway Department

RECEIVED
JUN 25 2019
STATE WATER COMMISSION

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Sibley Island Flood Control

Sponsor(s)
Burleigh County Water Resource District

County	City	Township/Range/Section
Burleigh	Bismarck	T138N, R80&81W

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Engineering for a flood control project to protect 1272 acres including rural residential parcels, a school and cropland.

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☑ Flood Control ☐ Multi-Purpose ☐ Bank Stabilization ☐ Dam Safety/EAP
☐ Recreation ☐ Water Supply ☐ Snagging & Clearing ☐ Property Acquisition
☐ Irrigation ☐ Water Retention ☐ Rural Flood Control ☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☐ No

Jurisdictions/Stakeholders Involved
Burleigh County (Lincoln Township) and City of Bismarck Extra Territorial Area

Description Of Problem Or Need And How Project Addresses That Problem Or Need

Project will provide flood protection to 1272 acres in South Bismarck and Burleigh County, including 103+ parcels of rural residential properties, an elementary school and agricultural lands. This project is the final southern segment of the overall flood protection measures envisioned and now being implemented by Burleigh County after the 2011 flood event. The landowners within the future assessment district have petitioned to support and requested the Burleigh County WRD to pursue project development. This cost-share request is for the pre-construction engineering required to complete the Preliminary Engineering Report pursuant to NDCC 61-16.1 to then take it to a vote of the residents for create the assessment district and provide for regulatory compliance efforts. A project memorandum describing the project, and resolutions signed by Lincoln Township and the BCWRD are attached to this submittal.

Has Feasibility Study Been Completed?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable

If Yes, Please Explain
Will file permit applications upon completion of design.

Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable

If Yes, Please Explain
Will file permit applications upon completion of design.

Have You Applied For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable

If Yes, Please Explain
Will file permit applications upon completion of design.

Have You Been Approved For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable

If Yes, Please Explain
Will file permit applications upon completion of design.

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
A feasibility study has been completed, see attached information.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? One item is to secure an easement from the USACE to complete the project on Sibely Island (their property)

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 2,741,403.00	$	$ 96,420.00	$
Other State	$	$	$	$
Local	$ 2,109,473.00	$	$ 64,280.00	$
Total	$ 4,850,876.00	$ 0.00	$ 160,700.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
None

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
Pre-Construction Engineering (Preliminary Engineering Report) 2019-2020; Final Design 2020-2021; Construction 2021-2022.

Have Assessment Districts Been Formed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable

Submitted By Burleigh County Water Resource District			Date 6/24/19
Address 1720 Burnt Boat Drive; Suite 205	City Bismarck	State ND	ZIP Code 58503
Telephone Number (701) 222-3499	Engineer Telephone Number (701) 323-0200 (O) (701) 527-2134 (C)		
Sponsor Email Address bcwrd@midco.net	Engineer Email Address mgunsch@houstoneng.com		

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature	Date

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

SIBLEY ISLAND FLOOD CONTROL ALIGNMENT REVISION AND OPC UPDATE

HoustonEngineering Inc.

To: Rodney Beck, Manager, Burleigh County Water Resource District
From: Michael H. Gunsch, PE, CFM, Senior Project Manager
Subject: Sibley Island Alternative Alignment and Township Roadway Costs
Date: **February 4, 2019**
Project: HEI No. 6025-0014

PUBLIC INFORMATIONAL MEETING

The Burleigh County Water Resource District (BCWRD) held a Public Informational Meeting on November 27, 2018 regarding the Sibley Island Flood Control Project. This project represents the completion of the southern segment of the *Burleigh County 20-foot Flood Protection Plan* (BCFPP).

Based on updated information developed during meeting preparation, stakeholder input and comments at the meeting, and after consultation with the Burleigh County Engineer the following determinations were documented, as illustrated on **Figure One** and **Figure Two**:

The Washington Street grade raise south of 48th Avenue, and Sibley Island levee system represent the western segment of this flood control project to be constructed by the BCWRD.

- The Sibley Park Levee Alignment was revised based on utilizing the higher ground through Sibley Park along the existing paved roadway system and includes the following:
  - Roadway grade raise and new pavement from Washington Street east to the high ground connection within Sibley Park. The public roadway portion on Washington Street is to be paid for via Lincoln Township (a.k.a. Burleigh County) but is included with the Sibley Island Levee Segment of the project.
  - Utilizing the high ground and existing park system roadway, from the west to the high ground on the east, then extending to the southeast using an earthen levee to the west side of the Missouri River oxbow. The extension beyond the existing roadway will be constructed as a roadway with a maintenance turnaround west of what is known as the Breise Dam located on the old Missouri River oxbow.
  - Raising of the eastern end of the park roadway will require modifications to the existing camper pads and may allow for several additional pads to be installed.
  - Removal and reconstruction of the Breise Dam to levee specifications, with a control structure and culvert system for flood control purposes, as well as to enhance natural flows for mitigation within and through the oxbow under normal runoff conditions.
  - Construct a new earthen levee east from Breise Dam to the southeast, and then east to connect to the township grade raise 12th Street SE.
  - The typical sections for these roadway/levee features are shown on **Figure One.** A geotechnical review will be completed along the levee design alignment. A twenty to thirty-foot easement will be secured along the park roadway, including the high ground segment, that will be available for future O&M and flood control purposes. This easement to allow for the placement of additional protection measures, should projected flood levels require.
  - Easements on all levee segments will be commensurate in width as required for construction and integrity of the levee system along with future O&M requirements.

- This levee and related facilities within the Sibley Island Park will require US Army Corps of Engineers (USACE) approval and easements as they are the property owner, and Bismarck Park District at they are the leaseholder.
- Easements on private properties will be secured either through donation or purchase based on individual circumstances. Use of eminent domain is a last resort measure.

Realignment of the Sibley Island levee through the park materially reduces project costs by avoiding significant new levee construction and new paving. Realignment of the levee segment east of Breise Dam to 12th Street SE is recommended, in part, to avoid landowners who expressed opposition to the levee being placed on their property. This opposition was generally associated with their belief regarding potential adverse impacts and lack of benefits to their property.

The Lincoln Township grade raises represent the eastern segment of this project, see **Figure Two**.

- Lincoln Township (a.k.a. Burleigh County) is positioned to design, fund and construct under a separate project the following roadway grade raises as part of the flood control plan:
  - 12th Street SE - From the Sibley Island levee south to Oahe Bend
  - Oahe Bend - East to Sibley Drive, then east to Apple Creek Drive then north

SIBLEY ISLAND SEGEMENT – BCWRD SPECIAL ASSESSMENT PROJECT

Table One presents updated Opinions of Probable Costs (OPC) based on the recommended realignments of the Sibley Island Flood Control Project with construction in 2020-2021. Landowners have gathered over fifty percent of the signatures on a petition from the 103 parcel owners within the preliminary special assessment district boundary, see **Figure Three**. The BCWRD's next step is to validate these signatures and establish the project under NDCC Section 61-16.1. They would then proceed with completing a preliminary engineering report, creating the special assessment district and conducting a vote of the benefited properties.

North Dakota State Water Commission (SWC) funding remains the primary funding option for the levee and roadway grade raises. The North Dakota State Engineer participated in the cost for the original project feasibility evaluation, and the project is eligible under the SWC criteria. **Table One** illustrates the projected total costs and assessment distribution based on the 103 parcels. As noted during the Public Information meeting most of the parcels are rural residential properties, however there are several larger agricultural parcels. The final assessment distribution would be determined as part of the preliminary engineering report and could be lower per residential lot depending on the benefits assigned to the agricultural properties.

Table One

Sibley Island Levee – BCWRD Construction Project – 103 Parcels

Reach	Total Construction Cost [1]	Cost Per Parcel	Cost Per Parcel w/SWC Participation [2]
Washington St Grade Raise	$198,563	[3]	[3]
Sibley Island Levee/Roadway	$1,474,606	$14,317	$6,474
Combined Costs	$1,673,169	$14,317	$6,474

[1] Costs include a two-year inflationary factor for anticipated construction in 2021
[2] SWC funding is based on their current 60% cost share policy as of July 2018
[3] Washington Street Grade Raise is funded by Lincoln Twp; therefore, these costs are included the next section.

Using the OPC in ***Table One*** the State Water Commission cost share would fund $807,839, while the Special Assessment District would fund approximately $666,676. The SWC cost share would fund $97,566 of the Washington Street grade raise with the remaining $75,887 being funded by Lincoln Township. Total SWC Cost share for the *Sibley Island Segment* is $883,726.

ROADWAY GRADE RAISE SEGMENT – LINCOLN TOWNSHIP

The second segment of the Sibley Island Flood Control Project consists of a grade raise along several township roadways. The grade raises would start on 12th Street SW at the point where the Sibley Island Segment earthen levee connects to the roadway. It then extends south to Oahe Bend; then east to Sibley Drive; then continues east to Apple Creek Drive; then north along Apple Creek Drive to high ground to close off the flood protection from the Missouri River. These grade raises provide the final closure of the BCFPP.

The township grade raise will be to an elevation that provides 0.7 feet of freeboard based on the actual 2011 Missouri River flood elevations. Based on the current DFIRM Base Flood Elevation (BFE) in this area (1633.6) the anticipated freeboard is approximately 0.9 feet. Compliance with FEMA standards is not practical due to the inability to provide three foot of freeboard. Therefore, this project will not eliminate the need for flood insurance behind the levee. It will however provide real and effective protection to the interior benefited properties. This includes rural residential properties and agricultural properties, as well as to southern portions of the City of Bismarck. The total protected area for the Sibley Island Flood Control Project, illustrated on **Figure Four**, contains approximately 1,272 acres. This is a considerable area with benefits provided beyond the proposed special assessment district. The costs benefits outside the assessment district are provided by Lincoln Township, as the County during the 2011 flood utilized 48th Avenue as the line of protection. Subsequently, it was determined areas north of 48th Avenue would not be included in the special assessment district, which will not include roadway costs.

Table Two provides the projected costs for the proposed grade raises and anticipated cost share from the North Dakota State Water Commission based on current policy for flood control projects.

Table Two

Sibley Island Flood Control – Township Roadway Construction Project

Reach	Total Construction Cost [1]	Cost w/SWC Participation [2]
12th St and Oahe Bend to Sibley Drive	$2,021,951	$1,168,238
Oahe Bend – Sibley Drive to Apple Creek Drive	$1,155,754	$ 667,770
Combined Construction Costs	$3,177,705	$1,836,008 [3]

[1] The OPC's for the roadway grade raise are based on projected costs provide by the Burleigh County Engineer and adjusted to be consistent with the BCWRD Levee cost criteria. Costs include a two-year inflationary factor for anticipated construction in 2020

[2] SWC funding is based on the current 60% cost share policy as of July 2018, based on a roadway constructed to act as a flood control feature and permitted as such.

[3] Lincoln Township Participation in the Washington St Grade raise is not included in the Special Assessment District. Therefore, these costs are not shown here.

Using the OPC in ***Table Two*** the State Water Commission cost share would fund $1,836,008 of the grade raises, while the Township would fund approximately $1,341,690. The SWC cost share for the Washington Street grade raise is noted in the Sibley Island Levee Segment.

There will be no vote or special assessment district for the township roadway grade raises. The local non-cost share portion will be funded through Lincoln Township funding sources.

CONCLUSIONS

The BCWRD authorized this additional evaluation and memorandum including consultation with the Burleigh County Engineer to determine the projected township roadway costs and funding needs as presented. The roadway grade raises on 12th Street SE and Oahe Bend by agreement will not be included in the BCWRD special assessment district process; therefore, the Burleigh County Highway Department intends to construct the township roadway segment independently under separate contract.

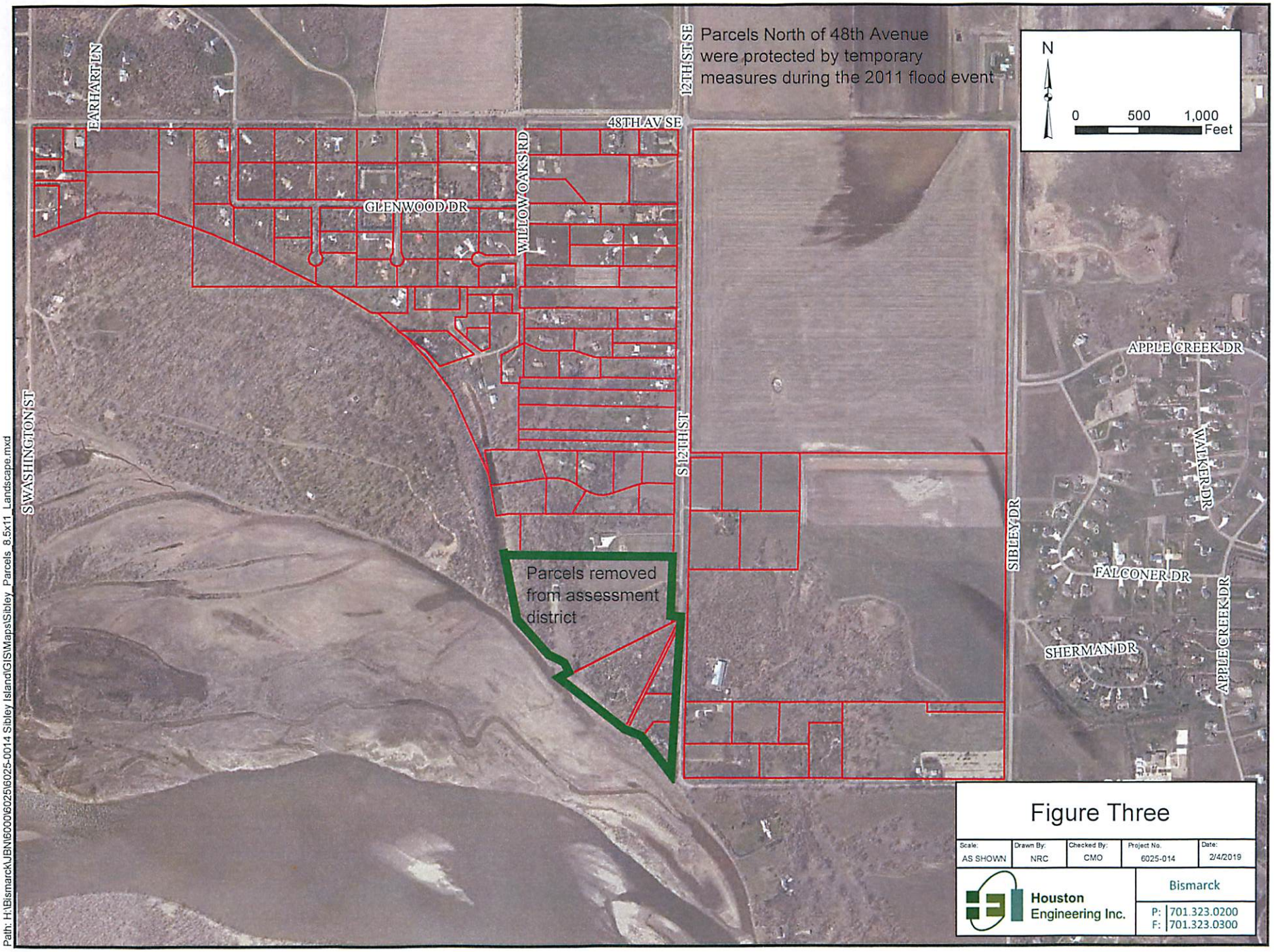
Subsequently, the OPC's for the levee and grade raises were updated with the understanding of potential state funding contributions, including the following:

- General inflationary increases from 2019 to 2021 when construction could occur.
  - This is based on a 5% annual increase in construction costs
- Easement acquisition or ROW on properties were the levee is to be constructed and there are no benefits provided to the landowner on whose land the project is located
- Expanded regulatory permit requirements (NDSWC, USACE, NFIP, etc.)
- SWC funding participation is based on current cost share policy. It is projected, if the projects were to proceed, preliminary engineering would occur in the next biennium (2019-2020) with construction to follow in the next (2021-2022).

The original planning form submitted to the NDSWC was based on the original feasibility study completed in 2012 and updated to 2018 costs. Attached to this memorandum is an updated SWC planning form based on the new project alignment, and the inclusion of the Lincoln Township Roadways. The following is a brief summary

Flood Map Figure FIS – Protection Area		*1,272+ Acres*	
Total Project Cost	=	*$4,850,876*	
Combined SWC Cost Share	=	*$2,741,403*	*(~56.5% considers ineligible items)*
Local Cost	=	*$2,109,474*	

There are several items elements to acknowledge that must be evaluated during preliminary and final design. They include potential influences of the Apple Creek floodplain on the eastern project boundary, an economic evaluation likely required by the NDSWC as part of their cost share funding process and the geotechnical review along the grade raise alignments.

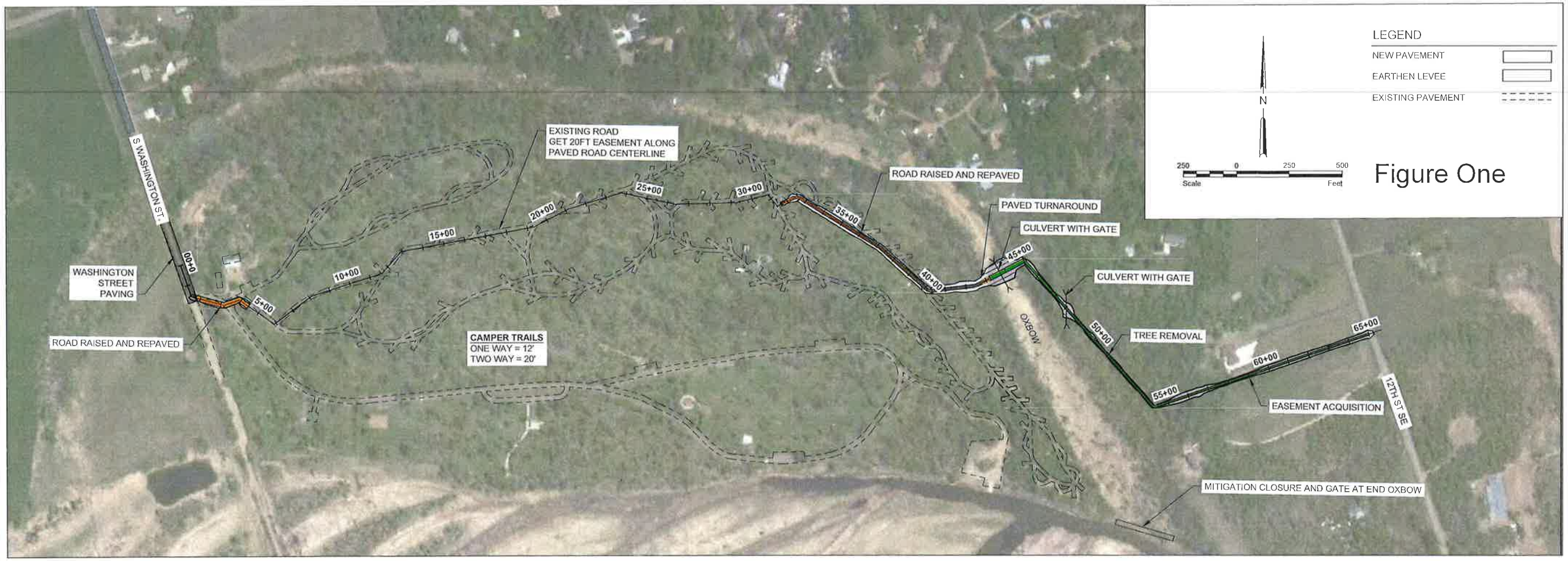


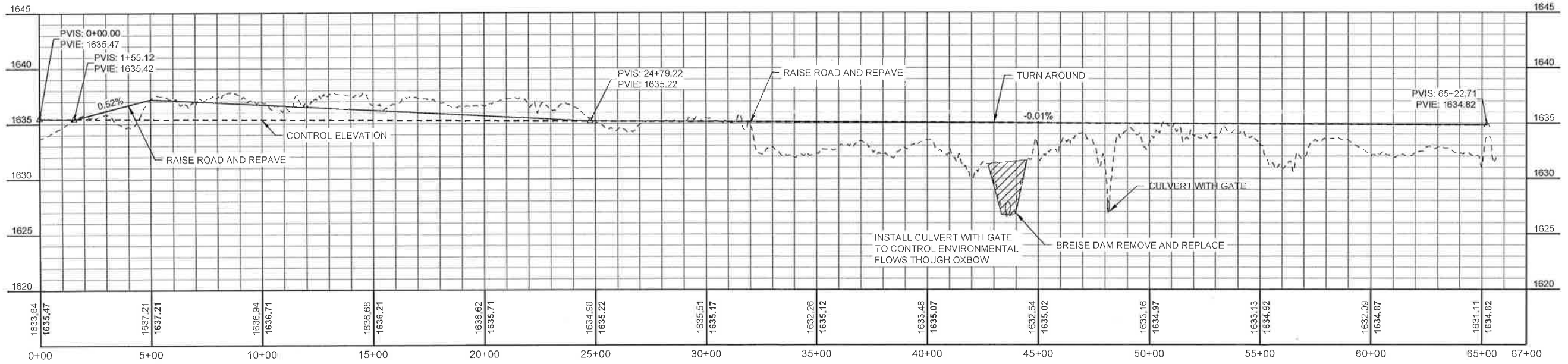
Path: H:\Bismarck\JBN\6000\6025\6025-0014 Sibley Island\GIS\Maps\Sibley_Parcels_8.5x11_Landscape.mxd

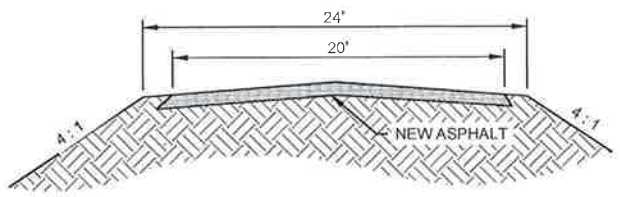
Figure Three

Scale:	Drawn By:	Checked By:	Project No.	Date:
AS SHOWN	NRC	CMO	6025-014	2/4/2019

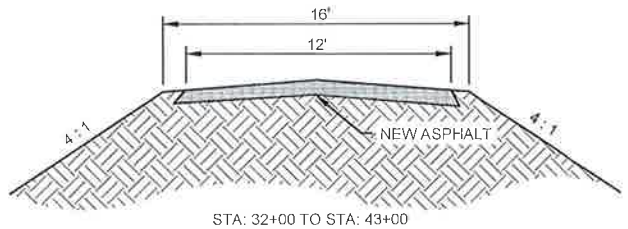
Houston Engineering Inc.
Bismarck
P: 701.323.0200
F: 701.323.0300



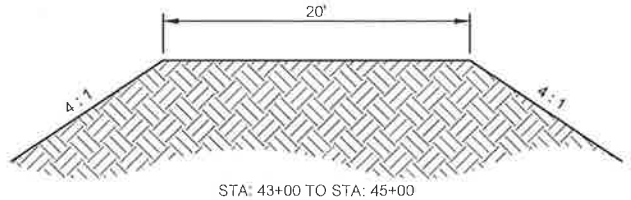




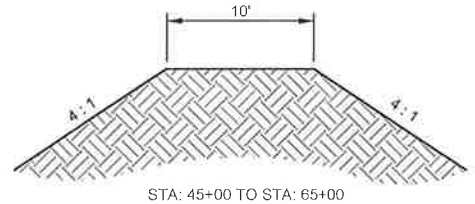
STA: 1+55 TO STA: 5+00



STA: 32+00 TO STA: 43+00



STA: 43+00 TO STA: 45+00



STA: 45+00 TO STA: 65+00

No. | Revision | Date | By

SIBLEY ISLAND FLOOD CONTROLL PROJECT
BURLEIGH COUNTY
BISMARCK NORTH DAKOTA

CONCEPT PLAN AND PROFILE

HoustonEngineering Inc.
Bismarck
P: 701.323.0200
F: 701.323.0300

DRAFTED BY: JP
REVIEWED BY: MG
DATE: 1/7/19
PROJECT NUMBER: 6025-0014

1

Sibley Island Flood Control Project

Lincoln Township Grade Raises

Figure Two

Figure Four

N

0 550 1,100 Feet

1% Chance Flood ≈ Area: 213.83 Acres

1% Chance Flood ≈ Area: 43.56 Acres

1% Chance Flood ≈ Area: 99.89 Acres

1% Chance Flood ≈ Area: 27.27 Acres

1% Chance Flood ≈ Area: 29.71 Acres

Total Protection Area ~ 1,272 acres

1% Chance Flood ≈ Area: 143.46 Acres

1% Chance Flood ≈ Area: 128.11 Acres

1% Chance Flood ≈ Area: 89.54 Acres

1% Chance Flood ≈ Area: 142.59 Acres

1% Chance Flood ≈ Area: 135.18 Acres

1% Chance Flood ≈ Area: 14.54 Acres

1% Chance Flood ≈ Area: 159.06 Acres

1% Chance Flood ≈ Area: 44.72 Acres

Burleigh Ave

48th Avenue

Washington Street

12th Street SE

Sibley Drive

Sibley Island Park

Oahe Bend

1804

Special Assessment District

Twp Roadway Grade Raises

SIBLEY FHMP - BCWRD
PROTECTED AREAS
BISMARCK, ND

Scale:	Drawn By:	Checked By:	Project No.	Date:
AS SHOWN	NRC	MHG	6025-0014	2/4/2019

Houston Engineering Inc.

Bismarck

P: 701.323.0200
F: 701.323.0300

Path: H:\Bismarck\JBN\6000\6025\6025-0014 Sibley Island\GIS\Maps\Floodplain.mxd

SIBLEY ISLAND FLOOD CONTROL
PROJECT RESOLUTION
LINCOLN TOWNSHIP

WHEREAS, on December 19, 2011 the Burleigh County Commission adopted the **Burleigh County 20-Foot Flood Protection Plan** (***20-Foot Plan***) and commenced its implementation. The Burleigh County Highway Department (BCHD), at the direction of the Burleigh County Commission (a.k.a. Lincoln Township), proceeded with the engineering selection process to complete the preliminary design of the Oahe Bend Roadway Grade Raise. The preliminary design was completed by Apex Engineering Group in February 2014. The final design, regulatory permitting and construction remains.

WHEREAS, the Burleigh County Water Resource District (BCWRD0, as part of the ***20-Foot Plan***, has evaluated and intends to establish the *Sibley Island Flood Control Project* at their June 12th regular meeting. A recent project memorandum dated February 4, 2019, was prepared by Houston Engineering, is included to this resolution by reference.

WHEREAS the *Sibley Island Flood Control Project* will be constructed outside the FEMA designated floodway, and without significant impacts to floodplain elevations. The project will not eliminate the need for flood insurance nor will it change the current floodplain mapping. The project is viable for credits under FEMA's Community Rating System (CRS) program should Burleigh County elect to participate in this program.

WHEREAS, the BCWRD has agreed to lead the Sibley *Island Flood Control Project,* pursuant to its creation under NDCC 61-16.1, with cost share funding provided through the North Dakota State Water Commission and the remaining funds obtained through a Special Assessment District, which is subject to vote by the benefited property owners. This work includes preparing a Preliminary Engineering Report, a hydraulic evaluation and permitting for project development, and will include the earthen levee through Sibley Island and the Lincoln Township Grade Raises.

WHEREAS, the Lincoln Township Grade Raise (Oahe Bend and 12th Street) will be constructed and permitted as part of the flood control project and is eligible for North Dakota State Water Commission cost share. The North Dakota State Legislature designated funds for this project with the BCWRD as the intended recipient; therefore, the BCWRD will facilitate the funding request, coordinate the receipt and reimbursement of these funds and collaborate in the preliminary engineering, final project design and implementation.

WHEREAS the Sibley Island *Flood Control Project* and the Oahe Bend Grade raise combined represent the last major segment of the **Burleigh County 20-Foot Flood Protection Plan.**

NOW THEREFORE BE IT RESOLVED by the Lincoln Township Board hereby authorizes the BCWRD to act as their agent/representative on the project for permitting and financing. Lincoln Township will retain authority over the design and construction of the roadway grade raise portion for the project on South 12th Street and Oahe Bend. The BCWRD will retain the authority over the design and construction of the Sibley Island Levee. The BCWRD will design and construct the Washington Street Grade Raise as part of the Sibley Island Levee Project, with the County Engineer's approval of the plans and specifications, as well as providing construction reviews.

DATED this 3rd day of June 2019

Brian Bittner, Chairman

Attest:

Kevin Glatt, County Auditor

Resolution No. 1

BURLEIGH COUNTY WATER RESOURCE DISTRICT
BURLEIGH COUNTY, NORTH DAKOTA

RESOLUTION OF NECESSITY FOR THE
SIBLEY ISLAND FLOOD CONTROL PROJECT

BE IT RESOLVED by the Water Resource Board of the Burleigh County Water Resource District, Burleigh County, North Dakota (the "Board"), as follows:

1. There having been proposed through action of this Board, pursuant to Chapter 61-16.1 of the North Dakota Century Code, the construction of a project, hereafter to be known and referred to as the *Sibley Island Flood Control Project* (the "Project"), which Project is proposed to be financed in whole or in part using State Water Commission cost share funding, with any remaining funds raised through the collection of special assessments levied against lands and premises benefited by the Project construction. Coordination with Lincoln Township (via the Burleigh County Highway Department) will occur regarding the completion of the required township roadway grade raises on portions of South Washington Street, South 12th Street, Oahe Drive and Apple Creek Drive pursuant to the Lincoln Township Resolution dated June 3, 2019, see is attached.

This Board having examined the proposed Project, it is hereby declared that further proceedings are warranted and that it is necessary to construct and maintain the Project, which has the following nature and purpose:

The proposed Sibley Island Flood Control Project would include the following:

A levee system and all required appurtenant features required to protect those properties located within the defined benefit area, as outlined in the *Sibley Island Flood Control Alignment Revision and OPC Update, February 4, 2019*, prepared by Houston Engineering, and located along a line from the intersection of Washington Street and 48th Avenue, thence south to the entrance of Sibley Island Park, thence east along the northern access roadway within the park to a point on its eastern side, thence east across an old Missouri River Oxbow near an existing earthen embankment to the east side, thence south and east to a point north of the intersection of South 12th Street and Oahe Bend, which is the tentative start location for the township roadway grade

raise portion of the project, thence south to the intersection of South 12th Street and Oahe Bend, thence east on Oahe Bend to Apple Creek Road; thence north on Apple Creek Road to the elevation tie point and end point for the grade raise.

The protected area consists of approximately 1,272 acres of land occupied by rural residential subdivisions, private residences, a grade school, limited urban development, a community park and cropland. The values of these properties and benefits thereto remain to be determined.

2. Michael H. Gunsch, PE, CFM, Houston Engineering, Inc., Bismarck, North Dakota, is hereby designated as the registered professional engineer to assist the Board with what is defined as the levee portion Project and is hereby directed to prepare a preliminary engineering report and preliminary plans for the proposed Project and estimates of the total cost thereof, which estimates shall include the acquisition of any properties or necessary rights-of-way and shall be in sufficient detail to allow the Board to determine the probable share of the total costs that will be assessed against each of the benefitted landowners within the proposed Project assessment district. Lincoln Township has agreed to provide the necessary information for this report through assistance from Jason Gullicks, PE, Apex Engineering.

Adopted by Board the 12th day of June 2019,

ATTEST:

BURLEIGH COUNTY WATER RESOURCE DISTRICT

Mona Sivdahl

Secretary

Chairman, Water Resource Board

The governing body of the political subdivision acted on the foregoing resolution on June 12, 2019, as follows:

Adoption moved by _____ Seconded by _____.

Roll Call Vote (List Last Names)

"Aye" _____

"Nay" _____

Absent _____

APPENDIX J

SWC Date Received : 6/26/19

City of Minot

Public Works Department

June 24, 2019

North Dakota State Water Commission
ATTN: Cost-Share Program
900 East Boulevard
Bismarck, ND 58505-0850

RE: Cost Share Request – City of Minot 2019 Bank Stabilization Project, SWIF Action E

The Mouse River flood control system provides flood protection for the City of Minot and has a significant risk to loss of life if a failure occurs. The USACE performs annual inspections on the Mouse River flood control system through Minot to assess the condition of the system. These inspections identified multiple deficiencies that pose a risk to the integrity of the flood control system. In order to address these deficiencies, the City of Minot developed a System Wide Improvement Framework (SWIF) that outlines the City's strategy for addressing the system's deficiencies. The work included in this cost share request is consistent with the System Wide Improvement Framework (SWIF).

The deficiencies proposed to be resolved by this project include several channel bank failures effecting system stability. This project will stabilize the existing bank erosion areas threatening the stability of a flood control levee. These areas are shown in detail on the included construction plans. The project is currently under design and is planned to bid later this summer. The project is scheduled to begin construction in 2019 and be completed in the 2020.

The bank stabilization areas are being designed with what's commonly referred to as a "launchable riprap" section. This consists of a thicker section of riprap placed below the normal water level of the river. In the event additional erosion occurs at the toe of the channel bank or in the channel bottom, this "launchable riprap" will mobilize to fill in and armor the eroded area. This type of design provides long term sustainability of the bank repair. Maintenance operations will be limited to periodic weed spraying to keep the riprap clear of unwanted vegetation.

With this letter and the attached supporting documentation, the City of Minot respectfully requests cost-share from the North Dakota State Water Commission for 50 percent of eligible construction for the Bank Stabilization activities and 50 percent of eligible construction engineering costs. The total estimated project cost at this time is $1,861,479.95 and the requested Cost Share amount is $823,179.38.

City of Minot

Public Works Department

If you have any questions, please feel free to contact me or our project engineer, Mike Love, Houston Engineering, Inc. at 701-237-5065.

Dan Jonasson
Public Works Director, City of Minot

CC: Mike Love, Houston Engineering, Inc., Fargo, ND

SWC Date Received : 6/26/19

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
City of Minot 2019 Bank Stabilization Project

Sponsor(s)
City of Minot

County	City	Township/Range/Section
Ward	Minot	(See Attached)

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Repair bank erosion to protect the Mouse River Flood Protection Levee System through Minot

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☑ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
City of Minot

Description Of Problem Or Need And How Project Addresses That Problem Or Need

The USACE performs annual inspections on the Mouse River flood control system through Minot. These inspections identified multiple deficiencies that pose a risk to the integrity of the flood control system. The deficiencies proposed to be resolved by this project include several channel bank failures effecting system stability. This project will stabilize the channel bank failures by reconstructing the channel bank back to the original constructed geometry and armoring the slope with rock riprap. The work included in this cost share request is consistent with the USACE System Wide Improvement Framework (SWIF) developed for the Mouse River Flood Control Systems in Minot.

Has Feasibility Study Been Completed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
The project components have been identified as being necessary by the SWIF which has gone through multiple levels of review by the USACE.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$ 0.00	$ 0.00	$ 0.00	$ 0.00
State Water Commission	$ 823,179.38	$ 0.00	$ 823,179.38	$ 0.00
Other State	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Local	$ 1,038,300.57	$ 0.00	$ 1,038,300.57	$ 0.00
Total	$ 1,861,479.95	$ 0.00	$ 1,861,479.95	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
None

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
Engineering design is currently in progress and will be completed in the summer of 2019. The project is planned to be bid late summer/fall 2019. Construction is planned to begin in fall 2019 with completion in 2020.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By Dan Jonasson, Public Works Director, City of Minot			Date 6/24/2019
Address PO Box 5006	City Minot	State ND	ZIP Code 58701
Telephone Number 701-857-4140		Engineer Telephone Number 701-237-5065	
Sponsor Email Address dan.jonasson@minotnd.org		Engineer Email Address mlove@houstoneng.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

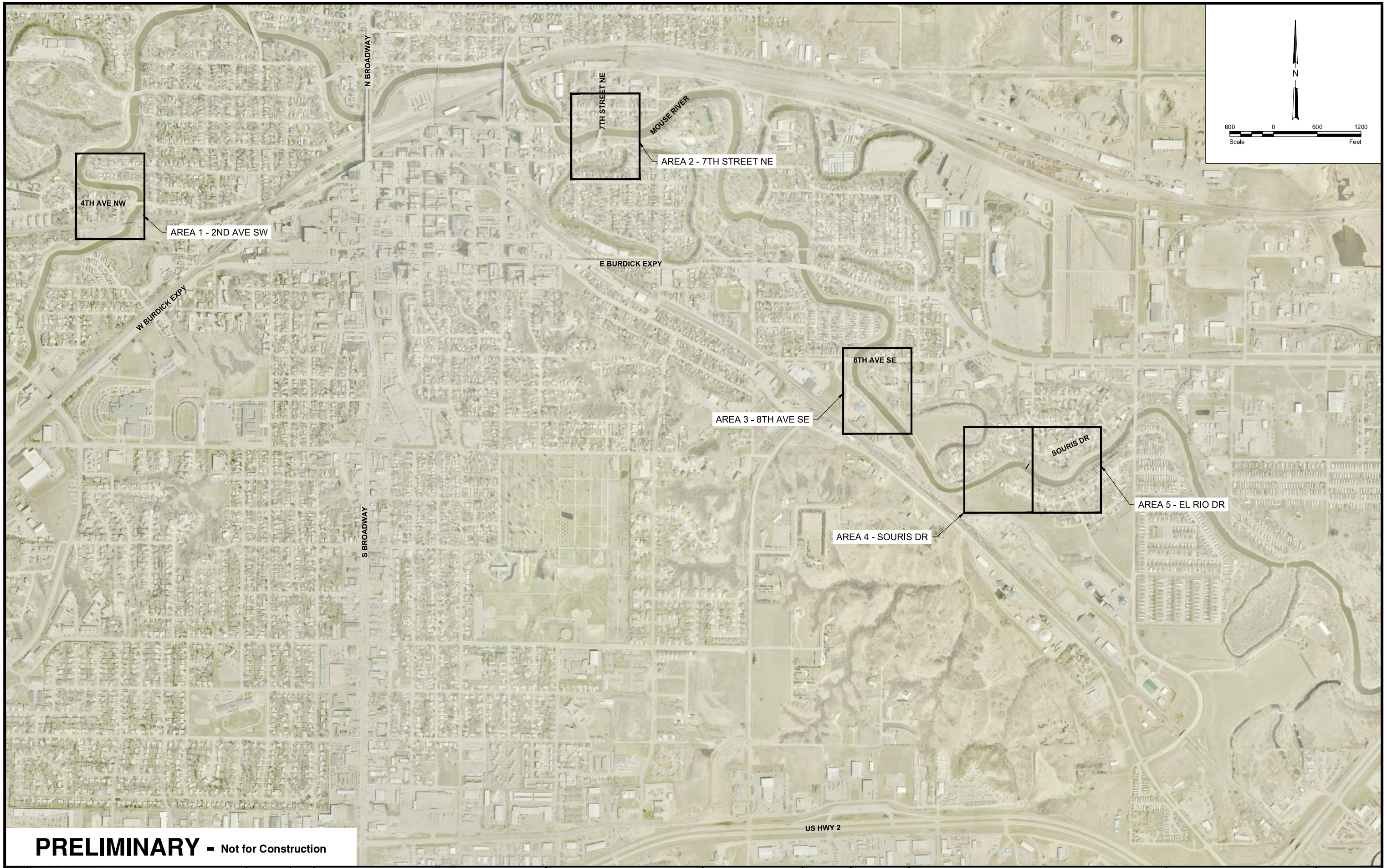
Signature	Date

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

SWC Date Received : 6/26/19

Cost-Share Request Form **North Dakota State Water Commision** **Development Division**
Township-Range-Section
155N-83W-23
155N-83W-24
155N-82W-19
155N-82W-30



PRELIMINARY - Not for Construction

No.	Revision	Date	By

City of Minot

Houston Engineering Inc.

Fargo
P: 701.237.5065
F: 701.237.5101

Drawn by	Date
KAL	06-21-19
Checked by	Scale
MPL	AS SHOWN

SYSTEM WIDE IMPROVEMENT FRAMEWORK (SWIF) E
CITY OF MINOT
MINOT, NORTH DAKOTA

OVERALL

PROJECT NO. 6027-064

SHEET 1 of 6

H:\Fargo\JBN\6000\6027\6027_0064\SWIF E\CAD\Concept\SWIF E Conceptual Plans 2019-06-21.dwg-OVERALL-6/24/2019 4:10 PM-(klotvedt)

Preliminary Opinion of Probable Costs
City of Minot 2019 Bank Stabilization and Dredging Project
Minot, North Dakota
June 24, 2019

Area 1 - 2nd Ave SW

No.	Item	Unit	Quantity	Unit Price	Total Price
	Bank Stabilization				
1	Mobilization	LS	1	$15,000.00	$15,000.00
2	Site Restoration (Seeding and Topsoiling)	LS	1	$5,000.00	$5,000.00
3	Excavation - Slope Grading	CY	200	$8.00	$1,600.00
4	B2 Riprap Bedding	TON	607	$50.00	$30,350.00
5	NDDOT Grade 1 Riprap	TON	1,285	$42.00	$53,970.00
6	Traffic Control	LS	1	$3,000.00	$3,000.00
7	Erosion Control	LS	1	$2,500.00	$2,500.00
	Bank Stabilization Estimated Construction Cost				***$111,420.00***

Area 2A - 7th St NE

No.	Item	Unit	Quantity	Unit Price	Total Price
	Bank Stabilization				
1	Mobilization	LS	1	$15,000.00	$15,000.00
2	Site Restoration (Seeding and Topsoiling)	LS	1	$2,000.00	$2,000.00
3	Excavation - Slope Grading	CY	542	$8.00	$4,336.00
4	B2 Riprap Bedding	TON	531	$50.00	$26,550.00
5	NDDOT Grade 1 Riprap	TON	1,128	$42.00	$47,376.00
6	Traffic Control	LS	1	$5,000.00	$5,000.00
7	Erosion Control	LS	1	$2,500.00	$2,500.00
	Bank Stabilization Estimated Construction Cost				***$102,762.00***

Area 2B - 7th St NE

No.	Item	Unit	Quantity	Unit Price	Total Price
	Bank Stabilization				
1	Mobilization	LS	1	$15,000.00	$15,000.00
2	Site Restoration (Seeding and Topsoiling)	LS	1	$2,000.00	$2,000.00
3	Excavation - Slope Grading	CY	459	$8.00	$3,670.24
4	B2 Riprap Bedding	TON	478	$50.00	$23,900.00
5	NDDOT Grade 1 Riprap	TON	900	$42.00	$37,800.00
6	Traffic Control	LS	1	$5,000.00	$5,000.00
7	Erosion Control	LS	1	$2,500.00	$2,500.00
	Bank Stabilization Estimated Construction Cost				***$89,870.24***

Area 3 - 8th Ave SE

No.	Item	Unit	Quantity	Unit Price	Total Price
	Bank Stabilization				
1	Mobilization	LS	1	$15,000.00	$15,000.00
2	Site Restoration (Seeding and Topsoiling)	LS	1	$6,000.00	$6,000.00
3	Excavation - Slope Grading	CY	672	$8.00	$5,376.00
4	B2 Riprap Bedding	TON	2,800	$50.00	$140,000.00
5	NDDOT Grade 1 Riprap	TON	0	$42.00	$0.00
6	Traffic Control	LS	1	$7,000.00	$7,000.00
7	Erosion Control	LS	1	$3,000.00	$3,000.00
	Bank Stabilization Estimated Construction Cost				***$176,376.00***

Area 4 - Souris Dr

No.	Item	Unit	Quantity	Unit Price	Total Price
	Bank Stabilization				
1	Mobilization	LS	1	$15,000.00	$15,000.00
2	Site Restoration (Seeding and Topsoiling)	LS	1	$5,750.00	$5,750.00
3	Excavation - Slope Grading	CY	341	$8.00	$2,728.00
4	B2 Riprap Bedding	TON	3,000	$50.00	$150,000.00

Preliminary Opinion of Probable Costs
City of Minot 2019 Bank Stabilization and Dredging Project
Minot, North Dakota
June 24, 2019

5	NDDOT Grade 1 Riprap	TON	2,000	$42.00	$84,000.00
6	Traffic Control	LS	1	$2,300.00	$2,300.00
7	Erosion Control	LS	1	$5,750.00	$5,750.00
	Bank Stabilization Estimated Construction Cost				***$265,528.00***
	Sediment Removal				
8	Sediment Removal	CY	1,024	$24.00	$24,576.00
	Sediment Removal Estimated Construction Cost				***$24,576.00***
	Area 5 - El Rio Dr				
No.	***Item***	***Unit***	***Quantity***	***Unit Price***	***Total Price***
	Bank Stabilization				
1	Mobilization	LS	1	$15,000.00	$15,000.00
2	Site Restoration (Seeding and Topsoiling)	LS	1	$5,750.00	$5,750.00
3	Excavation - Slope Grading	CY	1,800	$8.00	$14,400.00
4	B2 Riprap Bedding	TON	8,000	$50.00	$400,000.00
5	NDDOT Grade 1 Riprap	TON	6,000	$42.00	$252,000.00
6	Traffic Control	LS	1	$2,300.00	$2,300.00
7	Erosion Control	LS	1	$5,750.00	$5,750.00
	Bank Stabilization Estimated Construction Cost				***$695,200.00***
	Total Estimated Construction Cost				**$1,465,732.24**
	Engineering Services				
	Estimated Design Engineering (13%)				$190,545.19
	Estimated Construction Engineering (15%)				$205,202.51
	Total Estimated Engineering Services				**$395,747.70**
	Total Estimated Project Cost				**$1,861,479.94**

Cost Share Calculations

Item	Total Project Cost	SWC Cost Share	SWC Cost Share	Local Cost Share
Bank Stabilization	$1,441,156.24	50%	$720,578.12	$720,578.12
Sediment Removal	$24,576.00	0%	$0.00	$24,576.00
Design Engineering	$190,545.19	0%	$0.00	$190,545.19
Construction Engineering	$205,202.51	50%	$102,601.26	$102,601.26
Totals	**$1,861,479.94**		**$823,179.38**	**$1,038,300.57**

Economic Analysis Review

Project Title:	City of Minot 2019 Bank Stabilization Project	Date:	July 8, 2019
Description:	The USACE performs annual inspections on the Mouse River flood control system through Minot. These inspections identified multiple deficiencies that pose a risk to the integrity of the flood control system. The deficiencies proposed to be resolved by this project include several channel bank failures affecting system stability. This project will stabilize the channel bank failures by reconstructing the channel bank back to the original constructed geometry and armoring the slope with rock riprap. The work included in this cost-share request is consistent with the USACE System Wide Improvement Framework (SWIF) developed for the Mouse River flood control systems in Minot.		
Project Type:	Flood Control Funding Request - Stabilize Levee		

Project Overview

Project Area:	Souris River within Minot
County	Ward
City	Minot
Agricultural Acres Impacted	0
Urban	Yes
Population Served	47,822

Cost	Construction	O & M	Total
Nominal	$1,861,480	$750/yr	$4,462,000
PV (50 years)	$1,835,469	$19,068	$1,854,537
$ / Capita	$38.38	$0.40	$38.78
$ / Acre			

Inputs

Protection Level:	1:100
Consumptive and Non-Consumptive Benefits:	
NA	
Detours:	
NA	

Results

Project Performance Metrics	Present Value	Average Annual	Notes
Benefit-to-Cost Ratio	1.051		
Net Benefits	$93,997	$3,567	
Internal Rate of Return (IRR)	3%		
Payback Year	47		

Average Annual Damages

	Rural		
	Difference	Without	With
Cropland (ac)	#REF!	#REF!	#REF!
Pasture (ac)	#REF!	#REF!	#REF!
Farmsteads	0	0	0

	Urban		
	Difference	Without	With
Damage to structures at risk	$0	$0	$0
Value of other flood costs	$0	$0	

Model Function

The economic model appears to have functioned properly. The results are deemed to be reliable and repeatable with the inputs provided by the project sponsor. Benefits are reflected in linear feet of erosion and sediment removal as a result of erosion.

Explanation of Results

Minot SWIF is requesting cost-share from the Flood Control project budget independent of the Mouse River Enhanced Flood Control Project directed allocation. As a result, they are required to provide an economic analysis with their cost-share application. The consulting engineer identified the avoided damages as specifically bank erosion and avoided sediment removal. The B/C ratio is greater than 1. No structures were identified at risk. However, the bank errosion is considered a destabilizing risk to a segment of the Minot Levee system. A failure of the levee would have a risk to structures based upon the probability of an event sufficient to cause failure or as a function of "time to failure" if normal high flows continue to degrade the bank. This was not addressed in the information provided but should be considered.

Population and Trend

	Year		Annual Population Growth Rate	Average Annual Population Increase/Decrease
	2010	2018		
ND Census: Dept. of Commerce	40,888	47,370	2.0%	810

Other Comments

Glossary

PV - Present Value of all future costs or benefits adjusted to the current dollar value using an interest rate factor.

1:100 - The probability of an event. Commonly referred to as a one in one hundred year event, it is more accurately, a one in one hundred chance of an event of a specific magnitude happening each individual year.

Nominal - Refers to the dollars spent or benefitted without adjusting for time value of money or inflation.

Cell for User Input
Locked Cell for Calculations

Contact Information

Analysis Prepared by: Michael Love
Ph.: 701-237-5065
Email: mlove@houstoneng.com
Date 7/3/19

North Dakota State Water Commission - Economic Analysis Workbook

1 - Project Overview

This is the first data entry worksheet. Users provide information about the applicant, including a point of contact, a description of the project, project area, construction costs, and annual O&M costs.

Name of the Project City of Minot 2019 Bank Stabilization Project

Describe the Project **(Please describe the project, the problem, and the need being addressed in the space below.)**

The USACE performs annual inspections on the Mouse River flood control system through Minot. These inspections identified multiple deficiencies that pose a risk to the integrity of the flood control system. The deficiencies proposed to be resolved by this project include several channel bank failures affecting system stability. This project will stabilize the channel bank failures by reconstructing the channel bank back to the original constructed

Study Area:

Project Sponsor	City of Minot	
County:	Ward	Use drop down list to pick your county.
City:	Minot	
Population Served:	47,822	
Project Area:	Approx. 3.5 acres along the Souris River within Minot	

Project Construction Cost Estimate

Construction	$1,465,732	
Real Estate	$0	- No real estate costs are expected at this time
Planning, Engineering, and Design	$190,545	
Construction Management	$205,203	
Contingency	$0	- Contingency has already been built into the Construction Cost
Total Cost	$1,861,480	

Annual Operations and Maintenance

O&M Cost	$750	- O&M is limited to weed spraying riprapped areas

Study Area Data

Average Hourly Wage	$26
Hours Per Person	34.4
Persons Per household	2.35
Persons Per Business	37.67
Roadway Repair Costs Per Mile	$528,000

North Dakota State Water Commission - Economic Analysis Workbook

Sponsor: City of Minot
Project: City of Minot 2019 Bank Stabilization
Date: 7/3/19

2 - Inputs

This is the second data entry worksheet where users provide specific data necessary to estimate project benefits.

Locked Cell for Calculations

Cell for User Input

Category	Sub Category	Input	Units	Input Value	Definition of Term	Reference
Key Inputs	Base Year		Year	2019	Beginning year of analysis period	
	End Year		Year	2071	Ending year of analysis period	
	Project Life		Years	50	From construction start to end of analysis. Must be 55 years	
	Discount Factor		%	2.875%	Discount factor used for present value calculations	Discounting is the process of determining the present value of
	Years of Construction		Years	2		
Capital Investment	Project Costs		$	1,861,479.70		
	Annual Operations and Maintenance		$	750.00		
Flood Return Periods	Recurrence level	Interval 1	Years	50		
		Interval 2	Years	75		
		Interval 3	Years	100		
		Interval 4	Years	500		
		Level of Protection	Years	50		
Base Data	Residential Value Per SQFT		$/SQFT	93.62	Depreciated replacement value	Marshall and Swift, 2018, estimated for Bismarck ND
	Lodging Costs Per Day		$	0.00		
	Meal Costs Per Day		$	0.00		
Other and Recreation	Consumptive Use	Users	#			
		Days	#			
		Value	$	0.00	Applied to User-Days Justification-Source Required	Hunting waterfowl
	Non-Consumptive Use	Users	#			
		Days	#			
		Value	$	0.00	Appied to User-Days Justification-Source Required	Trust for Public Lands - 2009 Measuring the value of a City Park System
Travel Delays	Vehicles Per Day		#/Day			
	Normal Drive Time		Minutes			
	Detour Drive Time		Minutes			
	Duration of Roadway Closure		Interval	Without	With	
			50			Days
			75			Days
			100			Days
			500			Days
Structure Composition	Interval		50	75	100	500
	Pre Damaged Facilities		0	0	0	0
	Post Damaged Facilities		0	0	0	0
Rural Benefits	Cropland Damage Per Acre		$/Acre	$100.00	Justification and source required if changed.	
	Erosion Damage Per Foot		$/Foot	$40.00	Justification and source required if changed.	
	Clearing Cost Per Foot		$/Foot	$7.00	Justification and source required if changed.	
	Sediment Removal Cost Per Ton		$/Foot	$5.00	Justification and source required if changed.	
	Stored Water Cost Per Acre Feet		$/AF	$0.73	Justification and source required if changed.	
	Federal Mileage Rate		$/Mile	$0.545		
Additional Benefits	Rural Flooding Benefit		$	-		
	Bank Erosion Benefit		$	71,340.00		
	Cleanup Cost Benefit		$	-		
	Sediment Removal Benefit		$	5,300.00		
	Stored Water Benefit		$	-		
	Detour Benefit		$	-		
	Total Rural Mitigation Benefits		$	-		

5 - Results Summary

This worksheet serves as the summary for all outputs created in the model. For the given inputs, the Results Summary provides an overview of present value and average annual benefits and costs. The Results Summary also presents project performance metrics including: Benefit-to-Cost Ratios, Net Benefits, Internal Rate of Return, and Payback Year.

Scenario Analysis - Benefit Summary

Urban Flood Control Benefits	Present Value ($1K)	Average Annual ($1K)
Flood Mitigation Benefits	$0	$0
Flood Relocation	$0	$0
Travel Time Delays	$0	$0
Flood Fighting	$0	$0
Social Benefits	$0	$0
Subtotal	$0	$0

Other Benefits		
Other Benefits	$0	$0
Consumptive	$0	$0
Non-Consumptive	$0	$0

Rural Flood Conveyance and Other Benefits		
Rural Flooding Benefit	$0	$0
Bank Erosion Benefit	$1,814	$69
Cleanup Cost Benefit	$0	$0
Sediment Removal Benefit	$135	$5
Stored Water Benefit	$0	$0
Detour Benefit	$0	$0
Total Rural Mitigation Benefits	$0	$0
Subtotal	$1,949	$74
Grand Total	$1,949	$74

Project Costs	Present Value ($1K)	Average Annual ($1K)
Capital Costs	$1,835	$70
Annual O&M	$19	$1
Total	$1,855	$70

Project Performance Metrics	Present Value ($1K)	Average Annual ($1K)
Benefit-to-Cost Ratio	1.051	
Net Benefits	$94	$4
Internal Rate of Return	3%	
Payback Year	47	

APPENDIX K

Tri COUNTY WATER RESOURCE DISTRICT

Jim Haugen, Water Manager 640-3701
Korey Martinson, Water Manager 680-1918
Scott Olerud, Water Manager 308-0101
Heather Edison, Secretary 683-5920

P.O. Box 388
Lisbon, ND 58054
Phone (701) 683-5920; Fax (701) 683-3259

February 12, 2018

Ms. Beth Nangare
ND State Water Commission
900 E Boulevard Ave. Dept. 770
Bismarck, ND 58505-0850

Re: Tri-County Drain Reconstruction – Phase II
Ransom, Sargent, Richland Counties

Dear Ms. Nangare:

The Tri-County Drain was constructed in the early 1900's and continues to function as a rural flood control measure for the local farming community. During recent spring runoffs, the drain flowed at or near capacity, increasing the need for better flow characteristics and additional storage capacity. Tiling of adjacent farmland has also increased flows into the drain.

The project would flatten channel slopes, re-grade the drain flow line and increase opening sizes at roadway crossings. The project would reconstruct approximately 7 miles along the center section of the drain (see included project location map).

The preliminary and design phase of the project is nearly complete. The Tri-County Water Resource District respectfully requests cost share of $733,300 for construction and construction engineering costs associated with this project. Enclosed please find the completed cost share request application along with current engineered plans and opinion of cost detailing the project. The project is anticipated to be completed in early 2019.

The District has acquired needed permits for the project. A US Army Corps of Engineers Permit has been obtained along with a local drainage permit. Landowner discussions have been favorable for the project and acquisition of needed easements are nearly complete. Remaining easements are anticipated to be in place by the spring of 2018.

The Tri-County Water Resource District through assessment monies will continue to facilitate and maintain all aspects of the Tri-County Drain. The district has the highest regard for residents utilizing the drain and will address needed repairs and improvements as they arise.

If you should have any questions regarding this project or need additional information for this cost share request, please contact me at 701-308-0101. Thank you for your consideration.

Sincerely,

Scott Olerud

Scott Olerud, Chairman
Tri-County Water Resource District

Enclosures

cc. Shawn Mayfield, KLJ Valley City

COST-SHARE REQUEST FORM

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (3/2017)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 30 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Reconstruction of Tri-County Drain #6 - Phase II

Sponsor(s)
Tri-County Joint Water Resource District

County	City	Township/Range/Section
Ransom, Sargent, Richland	NE of Milnor	Multiple (see attached)

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Flooding relief for landowners along the drain.

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control ☐ Multi-Purpose ☐ Bank Stabilization ☐ Dam Safety/EAP
☐ Recreation ☐ Water Supply ☐ Snagging & Clearing ☐ Property Acquisition
☐ Irrigation ☐ Water Retention ☑ Rural Flood Control ☐ Other

Jurisdictions/Stakeholders Involved
Tri-County Resource District, Assessed Landowners

Description Of Problem Or Need And How Project Addresses That Problem Or Need
Surface water stands in adjacent fields as the drain attempts to move water into the Wild Rice River. Areas along the drain have actually shown signs of wetland vegetation due to increased soil moisture. Tiling projects are taking subsurface water off of fields away from the drain and feeding it into the system. The spring runoffs of 2009, 2011 and 2013 have also posed problems to the local farming community. Most recently, a 6.5" rain event occurred on June 20, 2013 along the drain and caused flooding in adjacent fields still recovering from the wet spring. With limited drain capacity, water sat on fields into August eventually killing planted crops.
Grading of the channel will allow for more efficient flow to the Wild Rice River. An increased storage capacity of up to 25% from flattened channel slopes will provide additional storage at times of large rain or spring runoff events. These two measures will reduce the time water ponds on adjacent fields ultimately reducing crop damage. The drain would be constructed to provide adequate capacity to convey the 10-year flow event. Structures would be designed according to the Stream Crossing Statutes and Rules provided by the ND State Water Commission and the ND Department of Transportation.

Has Feasibility Study Been Completed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☑ Yes	☐ No	☐ Not Applicable

If Yes, Please Explain
US Army Corps of Engineers 404 Permit

Have You Been Approved For Any State Permits?	☑ Yes	☐ No	☐ Not Applicable

If Yes, Please Explain
US Army Corps of Engineers 404 Permit

Have You Applied For Any Local Permits?	☑ Yes	☐ No	☐ Not Applicable

If Yes, Please Explain
Drain Permit

Have You Been Approved For Any Local Permits?	☑ Yes	☐ No	☐ Not Applicable

If Yes, Please Explain
Drain Permit

Briefly Explain The Level Of Review The Project Or Program Has Undergone
Environmental review and approval is complete. Design and plan preparation is complete.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? Land acquisition is ongoing. Landowner views toward the project are favorable.

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2015-2017 7/1/15-6/30/17	2017-2019 7/1/17-6/30/19	Beyond 7/1/19
Federal	$	$	$	$
State Water Commission	$	$	$ 733,300	$
Other State	$	$	$	$
Local	$	$	$ 908,700	$
Total	$	$	$ 1,642,000	$

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
None

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
The project is expected to be bid in the fall of 2018 with construction complete in mid-2019. Preliminary and design engineering began in 2016 and will conclude at the time of bidding. Right of way acquisition is ongoing and is anticipated to be complete in the spring of 2018.

Have Assessment Districts Been Formed?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable

Submitted By Scott Olerud, Chairman (Tri-County Joint Water Resource District)	Date 2-12-18

Address PO Box 388	City Lisbon	State ND	ZIP Code 58054

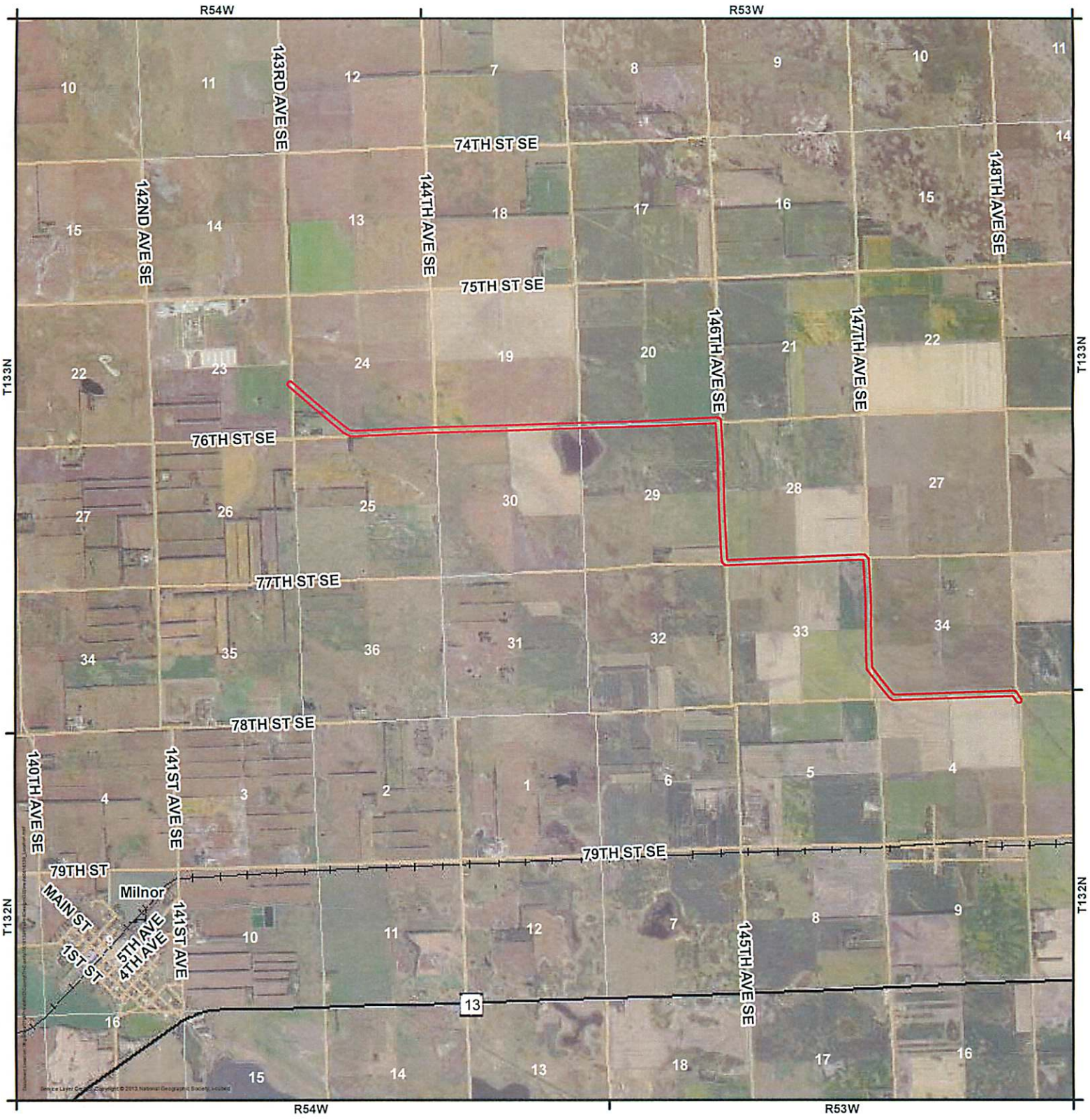
Telephone Number 701-308-0101	Sponsor Email rcwrd@drtel.net	Engineer Email shawn.mayfield@kljeng.com

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature Scott Olerud	Date 2-12-18

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850



Tri-County Drain No. 6
Reconstruction - Phase II
Ransom County, ND
Project Location Map

Study Area

0 0.5 1 2 Kilometers

0 0.3 0.6 1.2 1.8 Miles

N W E S

KLJ

KLJ Project Number: 5616139

Date Created: 12/8/2016 | Created By: DNP

TRI-COUNTY DRAIN NO. 6 RECONSTRUCTION

PRELIMINARY OPINION OF COST

South Branch Reconstruction ~ Phase II

Date: Februaury 9, 2018

ITEM	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	CONTRACT BOND	1	L SUM	$ 12,500.00	$ 12,500.00
2	COMMON EXCAVATION	157,270	CY	$ 2.25	$ 353,857.50
3	CLEARING & GRUBBING	1	L SUM	$ 17,500.00	$ 17,500.00
4	DEWATERING	1	L SUM	$ 25,000.00	$ 25,000.00
5	REMOVAL OF PIPE ALL TYPES AND SIZES	838	LF	$ 20.00	$ 16,760.00
6	TOPSOIL REMOVE & REPLACE	373.7	STA	$ 500.00	$ 186,850.00
7	LEVELING	373.7	STA	$ 100.00	$ 37,370.00
8	BOX CULVERT EXCAVATION	1	EA	$ 5,000.00	$ 5,000.00
9	FOUNDATION PREPARATION	1	EA	$ 7,500.00	$ 7,500.00
10	FOUNDATION FILL	237	CY	$ 35.00	$ 8,295.00
11	AGGREGATE SURFACE COURSE CL13	3,040	TON	$ 20.00	$ 60,800.00
12	PIPE CONC REINF ARCH 73IN X 45IN CL III	70	LF	$ 450.00	$ 31,500.00
13	PIPE CONC REINF ARCH 88IN X 54IN CL III	132	LF	$ 550.00	$ 72,600.00
14	PIPE CONC REINF ARCH 102IN X 62IN CL III	108	LF	$ 650.00	$ 70,200.00
15	10FT X 5FT PRECAST RCB CULVERT	92	LF	$ 900.00	$ 82,800.00
16	END SECT-CONC REINF ARCH 73IN X 45IN	2	EA	$ 3,500.00	$ 7,000.00
17	END SECT-CONC REINF ARCH 88IN X 54IN	6	EA	$ 4,500.00	$ 27,000.00
18	END SECT-CONC REINF ARCH 102IN X 62IN	4	EA	$ 5,500.00	$ 22,000.00
19	10FT X 5FT PRECAST RCB END SECTION	2	EA	$ 17,500.00	$ 35,000.00
20	MOBILIZATION	1	L SUM	$ 60,000.00	$ 60,000.00
21	TRAFFIC CONTROL	1	L SUM	$ 7,500.00	$ 7,500.00
22	RIPRAP GRADE II	408	CY	$ 75.00	$ 30,600.00
23	FIBER ROLLS 12IN	8,500	LF	$ 3.00	$ 25,500.00
24	SEEDING-TYPE B-CL II	75	ACRE	$ 400.00	$ 30,000.00
25	MULCHING	75	ACRE	$ 400.00	$ 30,000.00
26	GEOSYNTHETIC MATERIAL TYPE R1	1,832	SY	$ 3.50	$ 6,412.00
27	GEOSYNTHETIC MATERIAL TYPE RR	716	SY	$ 3.50	$ 2,506.00
28	PIPE CONDUIT 12IN	22	LF	$ 20.00	$ 440.00
29	PIPE CONDUIT 18IN	314	LF	$ 25.00	$ 7,850.00
30	PIPE CONDUIT 24IN	1,486	LF	$ 35.00	$ 52,010.00
31	PIPE CONDUIT 30IN	88	LF	$ 45.00	$ 3,960.00
32	FLAP GATE 18IN	8	EA	$ 500.00	$ 4,000.00
33	FLAP GATE 24IN	31	EA	$ 650.00	$ 20,150.00
34	FLAP GATE 30IN	1	EA	$ 800.00	$ 800.00
35	REMOVE EXISTING FENCE	11,145	LF	$ 0.75	$ 8,358.75
36	FENCE BARBED WIRE 4 STRAND-STEEL POST	12,363	LF	$ 3.00	$ 37,089.00
37	FENCE REMOVE & RESET	2,695	LF	$ 7.50	$ 20,212.50
38	OBJECT MARKERS	4	EA	$ 200.00	$ 800.00

Estimated Total Construction Cost = $ 1,427,720.75

Engineering & Contingency (15%) = $ 214,158.11

Total Project Cost = $ 1,641,878.86

TOTAL DRAIN COST ELIGIBLE FOR 45% SWC FUNDS = $ 1,629,378.86

(SWC Elegible Funds = Total Project Cost minus Contract Bond)

SWC Funding @ 45% = $ 733,220.49

Local Share = $ 908,658.37

Economic Analysis Review

Project Title:	Drain No. 6 Recon - Phase 2	Date:	July 8, 2019
Description:	Clean and reshape existing Drain 6 to reduce agricultural flood damages.		
Project Type:			

Project Overview

Project Area:			T133N R54W & T133N R53W
County			Ransom
City			NA
Agricultural Acres Impacted			715
Urban			
Population Served			NA
Cost	Construction	O & M	Total
Nominal	$1,590,389	$25,000/yr	$2,865,389
PV (50 years)	$1,590,389	$654,539	$2,244,927
$ / Capita	NA	NA	NA
$ / Acre	$2,223.77	$915.21	$3,138.99

Inputs

Protection Level:	1:15
Consumptive and Non-Consumptive Benefits:	
NA	
Detours:	
NA	

Results

Project Performance Metrics	Present Value	Average Annual	Notes
Benefit-to-Cost Ratio	0.406		
Net Benefits	-$1,333,038	-$50,586	
Internal Rate of Return (IRR)	-4%		
Payback Year	None		

Average Annual Damages

	Rural			Urban		
	Difference	Without	With	Difference	Without	With
Cropland	$ 34,329	$ 38,221	$ 3,892			
Pasture	$ -	$ -	$ -			
Total	$ 34,329	$ 38,221	$ 3,892			
Damage to structures at risk				$0	$0	$0
Value of other flood costs				$0	$0	

Model Function

The economic model appears to have functioned properly. The results are deemed to be reliable and repeatable with the inputs provided by the project sponsor. Benefits mostly reflect avoided crop damages from inundation of additional acres once channel flow is improved.

Explanation of Results

This project addresses a prolonged maintenance issue and minor shifting of the channel location, widening the bottom, reducing the grade of the side slopes and increasing culvert sizes where needed. This drain is currently functional but is not operating at peak efficiency. This project will decrease the innundated acres by as many as 715 in large scale (1:100) events. The cumulative benefits of the project over 50 years do not exceed the cost of the project resulting in a B/C ratio of 0.4, which is less than the break even value of 1. Average annual costs ~$85,000 less avoided flood damages ~$35,000, provides a net annual benefit of -$50,586, which is reflected in the -4% internal rate of return. The reason for the poor B/C ratio is that the drain is already functioning to protect the majority of the acres in the target area and new protected acres and shorter inundations are accumulated as benefits to the project. Previously protected acres cannot be counted as a benefit since they are functionally, though not efficiently, protected already. This project has safety benefits from the changes in the side slopes, which are not a part of this assessment.

Population and Trend

	Year		Annual Population Growth Rate	Average Annual Population Increase/Decrease
	2010	2018		
ND Census: Dept. of Commerce	11,451	11,481	0.0%	4

Other Comments

Population above is Ransom County from ND Department of Commerce 2018 update.

Glossary

PV - Present Value of all future costs or benefits adjusted to the current dollar value using an interest rate factor.

1:100 - The probability of an event. Commonly referred to as a one in one hundred year event, it is more accurately, a one in one hundred chance of an event of a specific magnitude happening each individual year.

Nominal - Refers to the dollars spent or benefitted without adjusting for time value of money or inflation.

APPENDIX L

Sargent County Water Resource District

355 Main Street S, Suite 1
Forman ND 58032
Phone: (701) 724-6241 Ext 115
FAX: (701) 724-6244

Lucas Siemieniewski, Geneseo
Bruce Speich, Milnor
Michael Wyum, Rutland
Todd Stein, Cogswell
Roger Zetocha, Stirum

May 23, 2019

Beth Nangare
Cost Share Administrator
North Dakota State Water Commission
900 East Boulevard Avenue, Dept. 770
Bismarck ND 58505-0850

Dear Beth:

Re: Sargent County Drain No. 12 Improvement Project - Cost Share Request

The Sargent County Drain No. 12 ("Drain 12") Channel Improvements Project consists of improving approximately 0.75 miles of an existing legal assessment drain located south of Cayuga, ND. The project begins where Drain 12 flows to the north though County Road 5. The project continues north, then turns east to cross under 145th Ave SE, the end of the proposed project. More specifically, this project is located in the Southeast ¼ of Section 6, Township 129N, Range 53W LTL. This facility is owned and operated by the Sargent County Water Resource District (the "District").

The improvements to Drain 12 are intended to improve channel stability and conveyance through roadway crossings. The existing channel slope is 0.19% and the cross section side slopes are steep at 1H:1V to 2H:1V. The proposed project includes sizing culverts, flattening the cross section side slopes to 4H:1V, reducing the channel slope to 0.15% and installing permanent rock checks to reduce channel velocities. The project includes the replacement of culverts through County Road 5.

With this letter and submission of supporting data, the District respectfully requests cost-share from the State Water Commission at 45% of the eligible costs for an amount of $150,733.24 under the Rural Flood Control section of the Cost-Share Policy. The District has funding available for the local share and anticipates that construction will be completed by the end of 2019 if funding assistance is provided.

Enclosed are the cost-share request form, an Engineer's Opinion of Probable Cost, and a set of preliminary construction plans. If you have any questions, please feel free to contact me or our project manager, Chris Gross, Moore Engineering, Inc., at 701-282-4692.

Sincerely,

SARGENT COUNTY WATER RESOURCE DISTRICT

Sherry Hosford

Sherry Hosford
Secretary

Enclosures:
Cost-share request form
Engineer's Opinion of Probable Cost
Preliminary Plans

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (10/2018)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Sargent County Drain No. 12

Sponsor(s)
Sargent County Water Resource District

County	City	Township/Range/Section
Sargent	Cayuga	T-129-N / R-53-W LTL/ S-6

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☑ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
Sargent County Water Resource District, Sargent County Highway Department, Local Landowners

Description Of Problem Or Need And How Project Addresses That Problem Or Need

Sargent County Drain No. 12 is an existing legal drain south of Cayuga that outlets into Lake Tewaukon, which outlets into the Wild Rice River. The project area includes deteriorating CSP culverts at the upstream end and a deficient bridge at the downstream end. The existing channel slope is 0.19% and the cross section side slopes are also steep at 1H:1V to 2H:1V. The proposed project includes sizing culverts, flattening the cross section side slopes to 4H:1V, reducing the channel slope to 0.15% and installing permanent rock checks to reduce channel velocities and improve channel stability.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☑ Yes	☐ No	☐ Not Applicable
If Yes, Please Explain NDSWC Application for Surface Drain			
Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone
The proposed improvement project has been discussed at Water Resource District meetings and with landowners.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? The WRD is unaware of any obstacles at this time.

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$	$	$ 150,733.24	$
Other State	$	$	$	$
Local	$	$	$ 207,266.76	$
Total	$ 0.00	$ 0.00	$ 358,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
None

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
Final Design - August 2019
Construction - Fall 2019

Have Assessment Districts Been Formed? ☑ Yes ☐ No ☐ Ongoing ☐ Not Applicable

Submitted By Sargent County Water Resource District			Date 5-17-19
Address 355 Main St Ste 1	City Forman	State ND	ZIP Code 58032
Telephone Number (701) 724-6241		Engineer Telephone Number (701) 282-4692	
Sponsor Email Address sherry.hosford@co.sargent.nd.us		Engineer Email Address cgross@mooreengineeringinc.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature Sherry Hosford, Secretary	Date 5-23-19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

moore engineering, inc.

Project: 20733
Date Created: May 17, 2019
Revised:

Sargent County Drain No. 12 Channel Improvements
Sargent County Water Resource District
Sargent County, ND

Engineer's Preliminary Opinion of Probable Cost

						FUNDING SOURCES		
	ITEM	*UNIT*	*QUANTITY*	*UNIT PRICE*	*TOTAL*	*NDSWC - 45%*	*County - 22%*	*Local - 33%*
	Crossings							
1.	Removal of Culverts-All Types & Sizes	LF	233	$ 15.00	$ 3,495.00	$ 1,572.75	$ 768.90	$ 1,153.35
2.	CSPA - 64" x 43"	LF	180	$ 100.00	$ 18,000.00	$ 8,100.00	$ 3,960.00	$ 5,940.00
3.	CSPA - 142" x 91"	LF	180	$ 250.00	$ 45,000.00	$ 20,250.00	$ 9,900.00	$ 14,850.00
4.	Select Backfill	CY	760	$ 20.00	$ 15,200.00	$ 6,840.00	$ 3,344.00	$ 5,016.00
5.	Riprap - Class IV	CY	305	$ 85.00	$ 25,925.00	$ 11,666.25	$ 5,703.50	$ 8,555.25
6.	Riprap Filter Blanket	SY	450	$ 3.00	$ 1,350.00	$ 607.50	$ 297.00	$ 445.50
						$ -		
	Remaining Construction					$ -		
7.	Mobilization	LS	1	$ 15,000.00	$ 15,000.00	$ 6,750.00	$ -	$ 8,250.00
8.	Excavation - Channel	CY	20,100	$ 1.50	$ 30,150.00	$ 13,567.50	$ -	$ 16,582.50
9.	Spoil Bank Leveling	MILE	1	$ 5,000.00	$ 6,625.00	$ 2,981.25	$ -	$ 3,643.75
10.	CSP - 18"	LF	180	$ 25.00	$ 4,500.00	$ 2,025.00	$ -	$ 2,475.00
11.	CSP - 24"	LF	90	$ 35.00	$ 3,150.00	$ 1,417.50	$ -	$ 1,732.50
12.	CSP - 30"	LF	45	$ 45.00	$ 2,025.00	$ 911.25	$ -	$ 1,113.75
13.	CSP - 36"	LF	45	$ 60.00	$ 2,700.00	$ 1,215.00	$ -	$ 1,485.00
14.	Adjustable Flap Gate - 18" Steel	EA	4	$ 450.00	$ 1,800.00	$ 810.00	$ -	$ 990.00
15.	Adjustable Flap Gate - 24" Steel	EA	2	$ 550.00	$ 1,100.00	$ 495.00	$ -	$ 605.00
16.	Adjustable Flap Gate - 30" Steel	EA	1	$ 700.00	$ 700.00	$ 315.00	$ -	$ 385.00
17.	Adjustable Flap Gate - 36" Steel	EA	1	$ 950.00	$ 950.00	$ 427.50	$ -	$ 522.50
18.	Flared End Section - 18" CSP	EA	4	$ 150.00	$ 600.00	$ 270.00	$ -	$ 330.00
19.	Flared End Section - 24" CSP	EA	2	$ 200.00	$ 400.00	$ 180.00	$ -	$ 220.00
20.	Flared End Section - 30" CSP	EA	1	$ 350.00	$ 350.00	$ 157.50	$ -	$ 192.50
21.	Flared End Section - 36" CSP	EA	1	$ 450.00	$ 450.00	$ 202.50	$ -	$ 247.50
22.	Riprap - Class III	CY	95	$ 85.00	$ 8,075.00	$ 3,633.75	$ -	$ 4,441.25
23.	Riprap Filter Blanket	SY	190	$ 3.00	$ 570.00	$ 256.50	$ -	$ 313.50
24.	Rock Check - Temporary	EA	1	$ 3,500.00	$ 3,500.00	$ 1,575.00	$ -	$ 1,925.00
25.	Rock Check - Permanent	EA	3	$ 4,000.00	$ 12,000.00	$ 5,400.00	$ -	$ 6,600.00
26.	Storm Water Management	LS	1	$ 5,000.00	$ 5,000.00	$ 2,250.00	$ -	$ 2,750.00
27.	Material Testing	Invoice	ALLOWANCE	$ 7,500.00	$ 7,500.00	$ 3,375.00	$ -	$ 4,125.00
28.	Seeding	AC	7.5	$ 1,000.00	$ 7,487.50	$ 3,369.38	$ -	$ 4,118.13
				Construction Subtotal	$ 223,602.50	$ 100,621.13	$ 23,973.40	$ 99,007.98
				Engineering - Preliminary	$ 8,000.00	$ 3,600.00	$ 857.71	$ 3,542.29
				Engineering - Design	$ 20,500.00	$ 9,225.00	$ 2,197.89	$ 9,077.11
				Engineering - Construction	$ 20,500.00	$ 9,225.00	$ 2,197.89	$ 9,077.11
				Permitting	$ 1,000.00	$ 450.00	$ 107.21	$ 442.79
				Legal	$ 7,500.00	$ 3,375.00	$ 804.11	$ 3,320.89
				Owner Administration Expenses	$ 2,500.00	$ 1,125.00	$ 268.04	$ 1,106.96
				Advertising & Publishing	$ 1,000.00	$ 450.00	$ 107.21	$ 442.79
				Land Surveying	$ 5,000.00	$ 2,250.00	$ 536.07	$ 2,213.93
				Utility Relocations	$ 20,000.00	$ 9,000.00	$ 2,144.29	$ 8,855.71
				Utility Relocation Coordination	$ 3,000.00	$ 1,350.00	$ 321.64	$ 1,328.36
				Project Contingencies	$ 45,397.50	$ 10,062.11	$ 4,867.26	$ 30,468.12
				TOTAL PROJECT COST	**$ 358,000.00**	**$ 150,733.24**	**$ 38,382.74**	**$ 168,884.02**

APPENDIX M

NORTH Dakota | Water Commission & State Engineer
Be Legendary.™

INTEROFFICE MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission

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

SUBJECT: Revision and Review of Identified North Dakota Navigable Waters

DATE: July 25, 2019

Due to the passage of House Bill 1202 (HB1202) by the 66th Legislative Assembly, the Office of the State Engineer (OSE) must collaborate with the North Dakota State Water Commission (SWC) to develop defensible review of all claimed navigable waterbodies in North Dakota during the 2019-20 interim. The review will then be opened to public input and appeal. This cost-share request will provide the research and information necessary upon which to build a defensible review for each referenced water body.

HISTORY OF NAVIGABILITY AND SOVEREIGN LAND

At the time of statehood, the State of North Dakota joined the Union on "equal footing" with existing states. This "equal footing" doctrine gave specific rights and responsibilities to the fledgling state. Specific to this topic, North Dakota received title, and all rights of title, to all navigable waters within the state at the time of statehood. These lands must now be administered under the Public Trust Doctrine for the benefit of all citizens. However, all areas where this right of title applied were not determined at the time of statehood. As a result, the State has answered the questions of navigability of subject waterbodies as the question was asked.

In 1989, the OSE received management responsibilities of all sovereign land. The North Dakota Land Department retained ownership and management responsibilities of oil, gas, and other hydrocarbon interests stemming from exercised surface rights of title, while the OSE retains ownership and management responsibilities for the surface and all other mineral rights. Navigability determinations, followed by delineation of the Ordinary High Water Mark (OHWM) and application of erosion, accretion, avulsion, and reliction law, dictate surface title, which then informs limits and extents of mineral ownership.

NAVIGABILITY DETERMINATION CHANGES

Prior to the 66th legislative assembly, the OSE's navigability determinations and OHWM delineations determined North Dakota's sovereign land interests through sovereign land administration policy. The SWC was not involved, as the sovereign land administration duties were specific only to the State Engineer and the Board of University and School Lands (N.D.C.C. § 61-33-02).

During the 66th legislative assembly, due to concerns of the lack of a public comment process in the identification of navigable water bodies and thus sovereign lands, the North Dakota Legislature passed HB1202. Not only did this bill require a specific public process be followed to identify a waterbody's navigability classification, but also mandated that the SWC and the OSE collaborate on the navigability determination process.

In order to prevent violation of the Public Trust Doctrine and the fiduciary responsibilities of the state engineer and state water commissioners as agents of all North Dakotans, the OSE must begin the academic review of all currently claimed and suspected navigable waterbodies immediately.

The first step in this academic review is the extensive research of the currently claimed navigable waterbodies (listed below) for their use, or susceptibility for use, for commerce at the time of statehood. This is an exercise carried out nationwide, coast to coast, and is a specific area of expertise for historians.

1. Missouri River
2. Knife River
3. James River
4. Red River of the North
5. Sheyenne River
6. Pembina River
7. Mouse River
8. Cannonball River
9. Heart River
10. Bios de Sioux River
11. Yellowstone River
12. Upper Des Lacs Lake
13. Lake Isabel – Kidder County
14. Painted Woods Lake
15. Lake Metigoshe
16. Long Lake – Bottineau County

REVIEW OF FINANCIAL RESOURCES

While the associated fiscal note for HB1202 outline substantial but unquantifiable costs associated with the legislation, HB1202 passed without any financial resources to implement the articulated collaboration and delineation process. The Office of the State Engineer does not currently have the necessary resources to implement the identified process and research necessary to adequately review the currently claimed and suspected navigable waterbodies during the 19-20 biennium.

The OSE staff reached out to other states and entities that have undertaken this type and level of research, most notably the State of Alaska and private sector consulting firms in Montana and Arizona, for cost implications. The approximate cost associated with the required level of research is anticipated at roughly $25,000 per waterbody.

If approved, the OSE would release a Request for Proposal for interested firms to submit their proposals, select firms, and initiate the start of the study as early as November 2019.

Given the collaborative nature of guiding legislation and the potential to engage the public in the navigability determination process I recommend the SWC approve up to $400,000 for the selection and hiring of multiple firms to conduct a navigability study of the identified 16 waterbodies. The study will be used to inform the public process outlined in HB1202, sections 2 and 4, which also added the commission as an active collaborator.

Sixty-sixth Legislative Assembly of North Dakota
In Regular Session Commencing Thursday, January 3, 2019

HOUSE BILL NO. 1202
(Representatives Delzer, Porter, Zubke)
(Senator Schaible)

AN ACT to create and enact a new section to chapter 61-33 of the North Dakota Century Code, relating to determinations of navigability; to amend and reenact section 61-33-01 and subdivision e of subsection 3 of section 61-33.1-03 of the North Dakota Century Code, relating to sovereign land management definitions; and to provide for a state engineer review of determinations of navigability.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. AMENDMENT. Section 61-33-01 of the North Dakota Century Code is amended and reenacted as follows:

61-33-01. Definitions.

As used in this chapter, unless the context otherwise requires:

1. "Board" means the sovereign lands advisory board.
2. "Board of university and school lands" means that entity created by section 15-01-01.
3. "Navigable waters" means waters that were in fact navigable at the time of statehood, and that are used, were used, or were susceptible of being used in their ordinary condition as highways for commerce over which trade and travel were or may have been conducted in the customary modes of trade on water.
4. "Sovereign lands" means those areas, including beds and islands, lying within the ordinary high water mark of navigable lakes and streams. Lands established to be riparian accretion or reliction lands pursuant to section 47-06-05 are considered to be above the ordinary high water mark and are not sovereign lands.
4.5. "State engineer" means the person appointed by the state water commission pursuant to section 61-03-01.

SECTION 2. A new section to chapter 61-33 of the North Dakota Century Code is created and enacted as follows:

Navigability determinations.

1. Before making a determination that a body of water or portion of a body of water is navigable, the state engineer shall:
   a. Develop and deliver to the state water commission a preliminary finding regarding the navigability of the body of water or portion of a body of water and the legal rationale for the preliminary finding; and
   b. Consult with the state water commission in an open meeting and demonstrate the public need and purpose for the determination to be made.
2. After completing the requirements of subsection 1, the state engineer may proceed with making a final determination of navigability by:

a. Providing reasonable public notice of the preliminary finding, legal rationale for the preliminary finding, and opportunity for the public to provide comments for no less than sixty days. The notice must:

(1) Include the address and electronic mail address to which public comments may be sent and the deadline by which public comments must be received;

(2) Clearly identify the specific body of water or portion of a body of water for which the finding of navigability is sought;

(3) State the state engineer will hold a public hearing regarding the preliminary finding before a final determination of navigability is made, and provide the date, time, and location of the public hearing;

(4) Be provided to the governing body of each soil conservation district, water resource district, and county adjacent to the body of water or portion of a body of water for which the preliminary finding was made;

(5) Be published in the official county newspaper for each county adjacent to the body of water or portion of a body of water for which the preliminary finding was made; and

(6) Briefly state the purpose of the hearing and describe the impact or effect a determination of navigability will have on the property rights of persons who own property adjacent to the body of water or portion of a body of water for which the determination of navigability may be made; and

b. Holding a public hearing regarding the preliminary finding.

3. After completing the requirements of subsection 2 and making a determination of navigability, the state engineer shall prepare a report regarding the determination, including summaries of the information provided to the state water commission, the public hearings held, and the public comments received. The state engineer shall provide the report to the state water commission, send the report by certified mail to any person that appeared at the public hearing required under subsection 2 or provided written comments by the deadline, make the report available to the public, including on the website for the office of the secretary of state, and provide public notice of the report's availability. The report is final on the date it is provided to the state water commission.

4. A determination of navigability may be appealed directly to a court of competent jurisdiction in accordance with sections 28-32-42 through 28-32-46 and sections 28-32-50 and 28-32-51.

SECTION 3. AMENDMENT. Subdivision e of subsection 3 of section 61-33.1-03 of the North Dakota Century Code is amended and reenacted as follows:

e. ~~Subsection 3 of section~~Section 61-33-01 and section 47-06-05, which provide all accretions are presumed to be above the ordinary high water mark and are not sovereign lands. Accreted lands may be determined to be within the ordinary high water mark of the historical Missouri riverbed channel based on clear and convincing evidence. Areas of low-lying and flat lands where the ordinary high water mark may be impracticable to determine due to inconclusive aerial photography or inconclusive vegetation analysis must be presumed to be above the ordinary high water mark and owned by the riparian landowner.

SECTION 4. REVIEWS OF NAVIGABILITY DETERMINATIONS DURING 2019-20 INTERIM. During the 2019-20 interim, the state engineer may review any determinations of navigability of a body of water or portion of a body of water made solely by the state engineer before the effective date of this Act. However, if a court of competent jurisdiction has determined a body of water or portion of a body of

water is navigable or non-navigable, the state engineer does not need to review any state agency determination regarding the body of water or portion of a body of water. If the state engineer elects not to begin review of any determination of navigability of a body of water or portion of a body of water made solely by the state engineer before the effective date of this Act during the 2019-20 interim, the determination must be vacated without prejudice to a subsequent determination of navigability under section 2 of this Act. In conducting the reviews under this section, the state engineer shall comply with the requirements in section 2 of this Act.

Speaker of the House

President of the Senate

Chief Clerk of the House

Secretary of the Senate

This certifies that the within bill originated in the House of Representatives of the Sixty-sixth Legislative Assembly of North Dakota and is known on the records of that body as House Bill No. 1202.

House Vote:	Yeas 79	Nays 13	Absent 2
Senate Vote:	Yeas 45	Nays 2	Absent 0

Chief Clerk of the House

Received by the Governor at 10:42 AM. on April 24, 2019.

Approved at 7:26 PM. on April 25, 2019.

Governor

Filed in this office this 26th day of April, 2019,

at 9:19 o'clock A. M.

Secretary of State

19.0176.04000

FISCAL NOTE
Requested by Legislative Council
04/22/2019

Amendment to: HB 1202

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

	2017-2019 Biennium		2019-2021 Biennium		2021-2023 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues						
Expenditures						
Appropriations						

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

	2017-2019 Biennium	2019-2021 Biennium	2021-2023 Biennium
Counties			
Cities			
School Districts			
Townships			

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

House Bill 1202 creates and enacts a new section to chapter 61-33 of the North Dakota Century Code, relating to determinations of navigability; relating to sovereign land management definitions; and to provide for a state engineer review of determinations of navigability.

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

Section 2 of House Bill 1202 relates to navigability determinations by the State Engineer. Costs of implementing the navigability determinations, include:
1. Water Commission employee salaries in researching and preparing the navigability determinations;
2. Water Commission's costs of public hearings regarding the preliminary findings, including publishing and advertising costs;
3. Cost of legal challenges to the navigability determinations, which costs would be incurred by both the North Dakota Board of University and School Lands and the State Water Commission. Legal costs could be estimated at $100,000+ per lawsuit per water body for each agency.
4. For determinations made by the State Engineer before the effective date and not revisited under Section 5 of the bill, those determinations would be vacated resulting in a loss of sovereign land management authority and sovereign land mineral assets by the State. This would include both surface and subsurface acreage, with resulting mineral losses to the State. The amount of these losses cannot be determined at this time.
5. The State of North Dakota may be required to repay bonus and royalties received if a water body previously determined to be navigable by the Water Commission is now found to no longer be navigable or if the Water Commission does not begin the review process within the proposed time frame. The value of this cannot be determined
at this time but could be significant.
6. Department of Trust Lands employee salaries to issue refunds and update department records. Potentially an additional FTE will be needed to carry out any asset adjustments.
7. Once a water body is determined navigable, the State would need to conduct ordinary high water mark surveys for leasing purposes.
8. The Water Commission could incur additional project costs. For example, if the Red River is determined to be non-navigable, the Sheyenne Water Supply Project could incur additional costs of $20 million dollars for increased easements, surveys, and title work.

These costs are unknown at this time but are anticipated to be significant.

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

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

   The Department cannot determine the impact on revenues at this time; however, the loss of future revenue from any reduction in ownership of sovereign land mineral assets, including hydrocarbons, may be significant.

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

   The Department cannot determine the impact on expenditures until the navigability determinations are made, but expenditures are anticipated to be significant. The expenditures resulting from the implementation of HB 1320 will likely include costs associated with technical and legal expenditures, additional staffing, and collaboration with the Water Commission to determine navigability and ordinary high water mark which could result in the need for additional FTE for the Water Commission.

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

   Continuing appropriation authority (N.D.C.C. sections 15-05-19 and 15-07-22) is used for pending authority to manage, preserve, and enhance the value of the SIIF; it is unknown if this same authority can be used for any expenditures used for this bill.

Name: Jodi Smith

Agency: Department of Trust Lands

Telephone: 701-328-2807

Date Prepared: 04/17/2019

APPENDIX N

COST-SHARE REQUEST
NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

SWC Date Received : 6/20/19

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
SW Minot Elevated Water Tower

Sponsor(s)
City of Minot

County	City	Township/Range/Section
Ward	Minot	155/83/33

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Water supply capacity and fire flow

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☑ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
City of Minot

Description Of Problem Or Need And How Project Addresses That Problem Or Need

Trinity Health is currently constructing a new hospital and clinic that is expected to be open by 2022. Water modeling shows that there is not enough water storage capacity in SW Minot to accommodate the large institutional fire demand that such a facility will require. This project would construct an elevated storage tank in SW Minot to ensure fire flows are available when Trinity is expected to open. This will also ensure adequate supply and pressure for further development in the fast developing SW Minot.

This project was listed in the legislative intent of the State Water Commission budget for municipal water supply for the 2019-2021 Biennium.

This tank will be constructed on existing property owned by the City of Minot.

Has Feasibility Study Been Completed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)

The Minot water system is modeled and kept up to date. Recently when the hospital expansion was discussed additional modeling was performed for this area to determine water supply availability.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? Funding is the major obstacle

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$	$	$ 2,760,000.00	$
Other State	$	$	$	$
Local	$	$	$ 1,840,000.00	$
Total	$ 0.00	$ 0.00	$ 4,600,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied

Please Explain Implementation Timelines, Considering All Phases And Their Current Status

Project would be designed in late 2019 with bidding to follow in early 2020. Construction would commence in spring of 2020 with final completion in 2021

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By Dan Jonasson, Director of Public Works			Date 6/20/19
Address PO Box 5006	City Minot	State ND	ZIP Code 58701
Telephone Number 701-857-4140	Engineer Telephone Number		
Sponsor Email Address dan.jonasson@minotnd.org	Engineer Email Address		

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature Dan Jonasson	Date 6-20-19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

City of Minot

Public Works Department

June 20, 2019

Mr. Garland Erbele, P.E., Chief Engineer
North Dakota State Water Commission
900 East Boulevard Avenue, Dept. 770
Bismarck, ND, 58505-0850

RE: Minot SW Water tower funding

Mr. Erbele:

The City of Minot has been addressing continued growth throughout the city. One example of this growth is the new Trinity Hospital under construction in South West Minot.

This area of Minot continues to see residential and commercial growth and with this growth comes demand for fire protection and water storage to meet fire demands.

The North Dakota State Water Commission has provided funding on prior water related projects and we appreciate the support.

In order to keep up with the fire flow demands in SW Minot, we are in need of additional storage facility

I am attaching the application, along with a general vicinity map showing the proposed tank location and the life cycle cost analysis sheet for the Minot SW water tower.

Sincerely,

Dan Jonasson

Dan Jonasson
Director of Public Works, City of MInot

7/1/19

MINOT SW Minot Elevated Water Storage Tank P4405

Item No.	Description	Unit	Quantity	Unit Cost	Total Cost
1	Mobilization	LS	1	$ 100,000.00	$ 100,000
2	Earthwork and Site Grading	LS	1	$ 60,000.00	$ 60,000
3	Circulator Pump and SCADA Control Room w/ Circulator Pump, Sump Pump, Piping, SCADA Control System, Instrumentation, Electrical and Mechanical Work, and Appertenances	EA	1	$ 50,000.00	$ 50,000
4	6 in C900 DR 18 PVC Tank Drain Line, 8.5' min. bury depth	LF	120	$ 100.00	$ 12,000
5	6 inch Gate Valve w/ Box	EA	2	$ 6,000.00	$ 12,000
6	Tank Overflow Concrete Splash pad	EA	1	$ 4,000.00	$ 4,000
7	Articular Concrete Block	SY	80	$ 80.00	$ 6,400
8	Landscape Crushed Rock, 3" thickness	SY	260	$ 30.00	$ 7,800
9	Class 5 Road Gravel, 6 inch compacted thickness	SY	1000	$ 25.00	$ 25,000
10	Rock Rip Rap (3"-6" size), minimum 6 inch placed thickness	SY	25	$ 120.00	$ 3,000
11	Reinforced Concrete Flatwork, 8" thickness	SY	80	$ 50.00	$ 4,000
12	Reinforced Concrete Flatwork, 6" thickness	SY	200	$ 45.00	$ 9,000
13	Single Phase, 240 Volt, 200 Amp Electrical Power Service and Outdoor Service Disconnect	LS	1	$ 20,000.00	$ 20,000
14	NDDOT Class III Hydro-Mulch Seeding	AC	1	$ 13,000.00	$ 13,000
15	Topsoil for Type C Seedbid, 6" thickness	CY	250	$ 30.00	$ 7,500
16	Silt Fence (Reinforced)	LF	500	$ 15.00	$ 7,500
17	Sediment Logs (Straw Wattles)	LF	75	$ 20.00	$ 1,500
18	1,500,000 Gallon Elevated Water Storage Tank w/ Foundation, Foundation Sump, Pedestal Inlet/Outlet and Overflow Piping,	LS	1	$ 3,550,000.00	$ 3,550,000
19	Painting of "City of Minot" Lettering on the Tank (one side only)	LS	1	$ 8,500.00	$ 8,500
	Total of All ELIGIBLE Bid Items 60% swc funded				**$ 3,901,200**
	Engineering (12%)				
	Design (5%) 35% SWC funded				**$ 195,060**
	Construction (7%) 60% swc funded				**$ 273,084**
	Contingency(10%)				**$ 388,990**
	Total Project Cost				**$ 4,758,334**

Life Cycle Cost Analysis Review

Project Title: City of Minot - SW Water Tower **Date:** July 3, 2019

Explanation of Alternatives:

The new Trinity Hospital construction is expected to be completed by 2022. Water modeling shows that there is not enough water storage capacity in SW Minot to accommodate the required institutional fire demand. This project would construct an elevated storage tank in SW Minot to accomodate fire department volume and pressure requirements when Trinity opens. Since Minot's design of pressure zones are all based on elevated water storage no ground or submerged alternatives were explored. Minot Planning has a site in SW Minot where an elevated tank was planned in conjunction with an extant pump station. The site can accomodate an elevated tank with minor modifications to the pump station and piping system. The "No Build" alternative wasn't considered as it doesn't provide any solutions to the capacity problem.

Inputs:

	Elevated Water Storage T			
Users Served	10000			
Construction Cost	$4,600,000			
Annual O & M	$2,500			

Details:

No unusual items or useful life entries were identified.

Model Function:

The economic model appears to have functioned properly. The results are deemed to be reliable and repeatable with the inputs provided by the project sponsor.

LCCA Model Results:

Scenario Analysis - Present Value Life Cycle Cost Summary

Present Value	SW Elevated Water Storage Tank			
Capital Costs	$4,536,000			
O&M	$65,000			
Repair, Rehab,	$144,000			
Salvage Value	$20,000			
Total PVC	**$4,725,000**			
PVC Per Capita (User)	$472.50			

Explanation of Results:

The present value (PV) cost of the sponsor's sole altenative (tower storage) over its entire useful life, in todays dollars (2019), is $4,725,000. This value includes the construction, maintenance, and operations of the project over the 50 year analysis of the storage tank. It does include salvage values but does not include decommissioning costs. The PV cost per user is $472.50 for the SW Tower.

	Year		Annual Population Growth Rate	Average Annual Population Increase/Decrease
	2010	2018		
Population & Trends	40,888	47,370	2.0%	810

Other Comments:

SWC Date Received : 6/20/19

Date: 6/10/2019

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Minot

Project: SW Water Tower

Poplulation Served by the Project: 50000

Number of Connections Served by Project: 15000

1- Inputs

This is the primary data entry worksheet where users provide brief descriptions of the alternative being considered (up to 4) as well as information on annual O&M and length of construction.

Orange cells are for entering project specific data

Yellow cells reference data from other worksheets

Input	Units	Input Value	Definition of Term	Reference
Base Year for LCCA Model Period of Analysis	Year	2020	Beginning of analysis period	
Analysis Duration	Years	50		
End Year for LCCA Model Period of Analysis	Year	2070	Ending year of analysis period	Assumes 50 years of operations
Discount Factor	%	2.875%	Discount factor used for present value calculations	Discounting is the process of determining the present value of a payment or a stream of payments that is to be received in the future. Given the time value of money, a dollar is worth more today than it would be worth tomorrow. - Source EGM 18-01- https://planning.erdc.dren.mil/toolbox/library/EGMs/EGM18-01.pdf

Name of Alternative	SW Elevated Water Storage Tank			
Description of Alternative	Trinity Hospital is currently constructing a new hospital and clinic that is expected to be open by 2022. Water modeling shows that there is not enough water storage capacity in SW Minot to accommodate the large institutional fire demand that such a facility will require. This project would construct an elevated storage tank in SW Minot to ensure fire flows are available when Trinity is expected to open. Since our pressure zones are all fed with elevated water storage no additional alternatives were explored. Additionally, we currently have a site in SW Minot where an elevated tank was planned many years ago during construction of a pump station. The site can accomodate an elevated tank with minor modifications to the existing pump station and piping system. The "No Build" alternative wasn't considered as it doesn't provide any solutions to the capacity problem.			
Capital Investment		Units	Alternative 1	Notes
Construction	Total Construction	$	$4,600,000	
	Years of Construction	Years	2	
Annual O&M	Annual O&M	$	$2,500	

Name of Alternative	Alternative 2			
Description of Alternative	Description of Alternative 2			
Capital Investment		Units	Alternative 2	Notes
Construction	Total Construction	$	$0	
	Years of Construction	Years		
Annual O&M	Annual O&M	$	$0	

Name of Alternative	Alternative 3			
Description of Alternative	Description of Alternative 3			
Capital Investment		Units	Alternative 3	Notes
Construction	Total Construction	$	$0	
	Years of Construction	Years	2	
Annual O&M	Annual O&M	$	$0	

Name of Alternative	Alternative 4			
Description of Alternative	Description of Alternative 4			
Capital Investment		Units	Alternative 4	Notes
Construction	Total Construction	$	$0	
	Years of Construction	Years		
Annual O&M	Annual O&M	$		

Date: 6/10/2019

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Minot
Project: V Water Tower

2 - Detailed Costs

This is the secondary data entry worksheet where users enter itemized costs by specific major categories. The worksheet will assign a standard useful life based on the category selected. Users may override this function and provide a useful life if professional judgement warrants doing so.

Orange cells are for entering project specific data
Yellow cells reference data from other worksheets

SW Elevated Water Storage Tank

Total Cost $4,600,000

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
mobilization	1	LS	$200,000	$200,000	Mobilization	N/A	
1.5 MG Elevated storage tank	1	LS	$3,700,000	$3,700,000	Reservoir and Storage - Concrete	50	
Control Room	1	LS	$60,000	$60,000	SCADA	15	
Watermain Improvements	1	LS	$180,000	$180,000	Distribution Lines	35	
Design Engineering	1	LS	$230,000	$230,000	Engineering - Design	N/A	
Construction Engineering	1	LS	$230,000	$230,000	Engineering - Construction	N/A	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	

Date: 6/10/2019

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor City of Minot
Project: SW Water Tower

3 - Results Summary

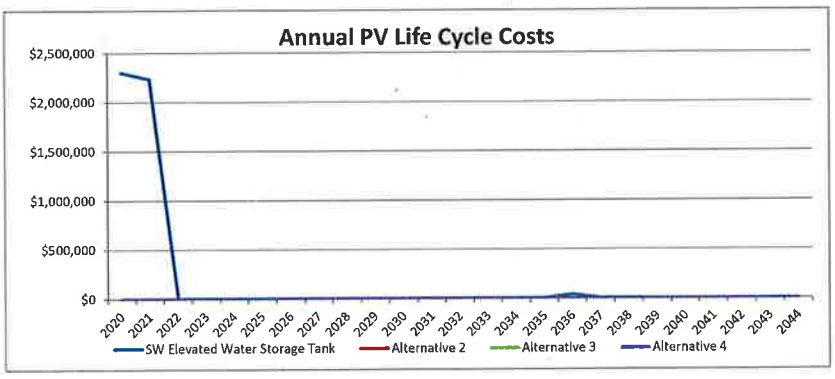
Life Cycle Cost Analysis

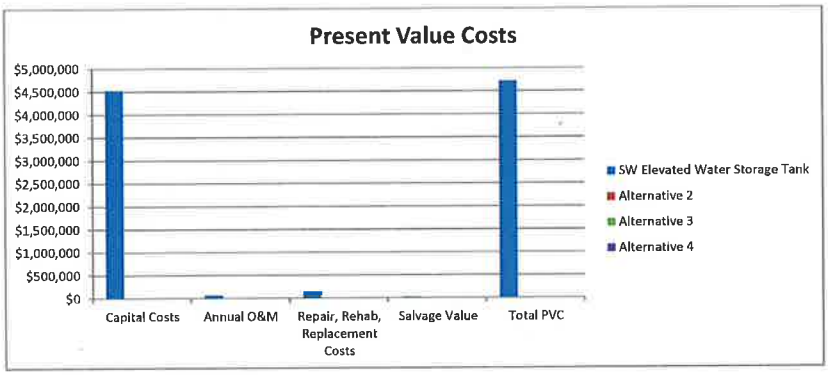
This worksheet serves as the summary for all outputs created in the model. For the given inputs, the Results Summary provides an overview of capital costs; annual O&M; repair, rehab, replacement costs; and salvage value. Under the Results Summary, the user will find a breakdown of the cost for each category and alternative.

Scenario Analysis - Present Value Life Cycle Cost Summary

Cost Summary

Present Value	SW Elevated Water Storage Tank	Alternative 2	Alternative 3	Alternative 4
Capital Costs	$4,536,000	$0	$0	$0
Annual O&M	$65,000	$0	$0	$0
Repair, Rehab, Replacement Costs	$144,000	$0	$0	$0
Salvage Value	$20,000	$0	$0	$0
Total PVC	**$4,725,000**	**$0**	**$0**	**$0**





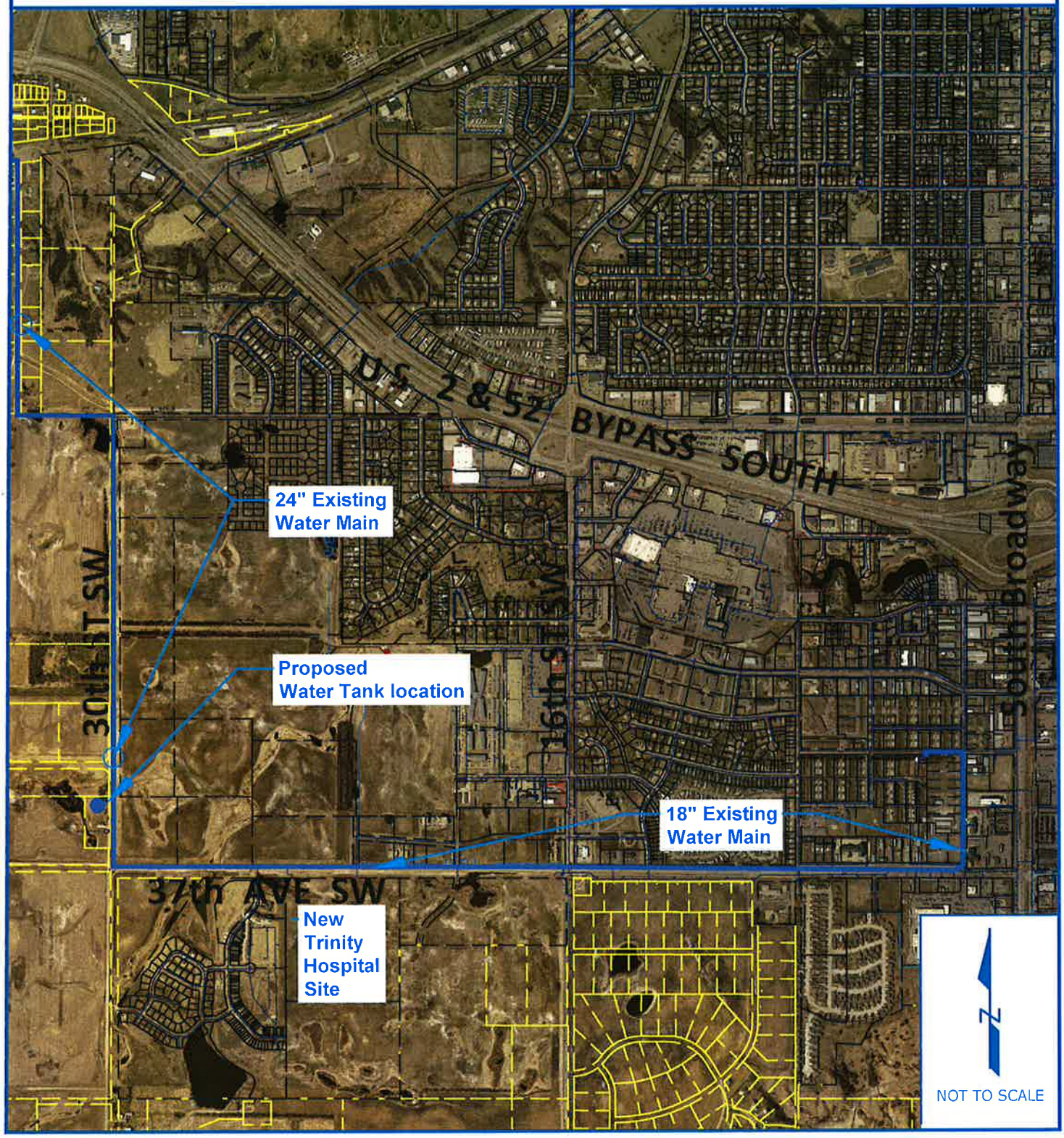
SWC Date Received : 6/20/19

EXHIBIT MAP

CITY OF MINOT, NORTH DAKOTA

Minot South West Water Tower

Project. # 4405



MAP CREATED JUNE 21, 2019

APPENDIX O

FEB 1 2 2019

SWC Date Received : 2/12/19

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (10/2018)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Water Tower Replacement

Sponsor(s)
City of Sykeston

County	City	Township/Range/Section
Wells	Sykeston	T146N R69W S13

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☑ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
City of Sykeston

Description Of Problem Or Need And How Project Addresses That Problem Or Need

(See attached Project Memorandum)

Has Feasibility Study Been Completed?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☐ Ongoing	☑ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable

If Yes, Please Explain
Plans will be approved by NDDOH prior to construction.

Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable

If Yes, Please Explain

Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable

If Yes, Please Explain

Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable

If Yes, Please Explain

Briefly Explain The Level Of Review The Project Or Program Has Undergone
The project has been identified as a critical need for the City of Sykeston. It is part of the City's Improvement plan and has been discussed at public meetings and several City Council Meetings.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? The City does not currently expect any implementation obstacles.

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 800,000.00	$	$ 800,000.00	$
Other State	$	$	$	$
Local	$ 270,000.00	$	$ 270,000.00	$
Total	$ 1,070,000.00	$ 0.00	$ 1,070,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
City is on the North Dakota Department of Health Drinking Water State Revolving Loan Fund (DWSRF) Priority list. City will fund local share with DWSRF.

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
The City is currently in the preliminary design phase. Once funding is approved, the City would move immediately into final design, with the hope to bid and begin construction in the fall of 2019.

Have Assessment Districts Been Formed?	☐ Yes	☑ No	☐ Ongoing ☐ Not Applicable

Submitted By Kim Speldrich			Date 1/24/19
Address PO Box 385	City Sykeston	State ND	ZIP Code 58486
Telephone Number 701-984-2380		Engineer Telephone Number 701-751-8381	
Sponsor Email Address kspeldri@dakotagrowers.com		Engineer Email Address tklabunde@mooreengineeringinc.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature Kimberly Speldrich	Date 1-25-19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

Project #: 19485
Date Created:1/9/19

Water System Improvements #2018-1
Water Supply Improvements
Sykeston, ND

Preliminary Engineer's Opinion of Cost

BID ITEM NO. & DESCRIPTION	*UNIT*	*QUANTITY*	*UNIT PRICE*	*TOTAL*
New Elevated Tank				
1. Bonding, Insurance, 8%	LS	1	$59,000.00	$59,000.00
2. Water Tower - 50,000 Gallon	LS	1	$630,000.00	$630,000.00
3. Remove Existing Tank	LS	1	$30,000.00	$30,000.00
4. Site Piping	LS	1	$25,000.00	$25,000.00
5. Electrical and Controls	LS	1	$50,000.00	$50,000.00
			Construction	$794,000.00
			Engineering/Legal/Bonding/Contingencies	$276,000.00
			TOTAL PROJECT COST	**$1,070,000.00**

moore engineering, inc.

Life Cycle Cost Analysis Review

Project Title: City of Sykeston Water Tower **Date:** July 2, 2019

Explanation of Alternatives:

Alternative 1 is a water tower replacement. Alternative 2 is a water tower rehabilitation.

Inputs:

	Replacement	Rehabilitation of Existing		
GAL(1,000s)/Day	Not Provided	Not Provided		
Population Served	110	110		
Construction Cost	$1,070,000	$1,023,300		
Annual O & M	$3,500	$3,500		

Details:

No unusual items or useful life entries were identified. O&M only includes a major rehabilitation fund for each 20 years and no annual maintenance.

Model Function:

The economic model appears to have functioned properly. The results are deemed to be reliable and repeatable with the inputs provided by the project sponsor.

LCCA Model Results:

Scenario Analysis - Present Value Life Cycle Cost Summary

Present Value	Replacement	Rehabilitation of Existing		
Capital Costs	$1,070,000	$1,023,000		
O&M	$89,000	$89,000		
Repair, Rehab, Replacement Costs	$372,000	$371,000		
Salvage Value	$115,000	$115,000		
Total PVC	**$1,416,000**	**$1,368,000**		
PV Cost Per Capita	$12,873	$12,436		

Explanation of Results:

The present value (PV) cost of the sponsor's preferred altenative (replacement) over 50 years, in todays dollars (2019), is $1,416,000. This alternative costs the community an additional $48,000 over the 50 year analysis life versus the rehabilitation alternative. This value includes the provided construction, maintenance, and operations of the project over the 50 year period. It does include salvage value. The two options are for the same size tanks (50,000 gallons). The sponsor does not provide flow information, so we are assuming the same level as historic service. The PV cost per capita is $12,873 for the replacement alternative.

	Year		Annual Population Growth Rate	Average Annual Population Increase/Decrease
	2010	2018		
Population & Trends	117	108	-1.0%	-1

Other Comments:

Date: 5/17/19

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Sykeston
Project: Water Tower

Users Served by Project: 110

Maximum Users at Full Capacity with Preferred Alternative: 110

1- Inputs

This is the primary data entry worksheet where users provide brief descriptions of the alternative being considered (up to 4) as well as information on annual O&M and length of construction.

Orange cells are for entering project specific data
Yellow cells reference data from other worksheets

Input	Units	Input Value	Definition of Term	Reference
Base Year for LCCA Model Period of Analysis	Year	2019	Beginning of analysis period	
Analysis Duration	Years	50		
End Year for LCCA Model Period of Analysis	Year	2069	Ending year of analysis period	Assumes 50 years of operations
Discount Factor	%	2.875%	Discount factor used for present value calculations	Discounting is the process of determining the present value of a payment or a stream of payments that is to be received in the future. Given the time value of money, a dollar is worth more today than it would be worth tomorrow. - Source EGM 18-01- https://planning.erdc.dren.mil/toolbox/library/EGMs/EGM18-01.pdf
Total Volume of Water Provided by the Project	TGAL/Day		Thousands of Gallons Per Day	

Name of Alternative	Replacement			
Description of Alternative	Water Tower Replacement			
Capital Investment		**Units**	**Alternative 1**	**Notes**
Construction	Total Construction	$	$1,070,000	
	Years of Construction	Years	1	
Annual O&M	Annual O&M	$	$3,500	Tank rehab $400,000 every 20 years.

Name of Alternative	Rehabilitation of Existing			
Description of Alternative	Water Tower Rehabilitation			
Capital Investment		**Units**	**Alternative 2**	**Notes**
Construction	Total Construction	$	$1,023,300	
	Years of Construction	Years	1	
Annual O&M	Annual O&M	$	$3,500	Rehab $400,000 Every 20 Years

Name of Alternative	Alternative 3			
Description of Alternative	Description of Alternative 3			
Capital Investment		**Units**	**Alternative 3**	**Notes**
Construction	Total Construction	$	$0	
	Years of Construction	Years		
Annual O&M	Annual O&M	$	$0	

Name of Alternative	Alternative 4			
Description of Alternative	Description of Alternative 4			
Capital Investment		**Units**	**Alternative 4**	**Notes**
Construction	Total Construction	$	$0	
	Years of Construction	Years		
Annual O&M	Annual O&M	$		

Date: 5/17/19

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Sykeston
Project: Water Tower

2 - Detailed Costs

This is the secondary data entry worksheet where users enter itemized costs by specific major categories. The worksheet will assign a standard useful life based on the category selected. Users may override this function and provide a useful life if professional judgement warrants doing so.

Orange cells are for entering project specific data
Yellow cells reference data from other worksheets

Replacement

Total Cost $1,070,000

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
50,000 gallon spheroid tank	1	LS	$689,000	$689,000	Reservoir and Storage - Metal	30	
Remove existing tank	1	LS	$30,000	$30,000	Demo / Abandonment	N/A	
Site Piping	1	LS	$25,000	$25,000	Distribution Lines	35	
Electrical and Controls	1	LS	$50,000	$50,000	SCADA	15	
Engineering/Legal/Bonding/Contingencies	1	LS	$276,000	$276,000	Other	N/A	
				$0	Contingency	N/A	
				$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	

Rehabilitation of Existing

Total Cost $1,023,300

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
Water Tower Rehabilitation	1	LS	$708,000	$708,000	Reservoir and Storage - Metal	30	
Electrical and Controls	1	LS	$50,000	$50,000	SCADA	15	
Engineering/Legal/Bonding/Contingencies	1	LS	$265,300	$265,300	Engineering - Design	N/A	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	

Alternative 3

Total Cost $0

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
				$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	

Alternative 4

Total Cost $0

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
				$0	Category	Useful Life	
		-		$0	Category	Useful Life	
		-		$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	
				$0	Category	Useful Life	

Date: 5/17/19

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Sykeston
Project: Water Tower

3 - Results Summary

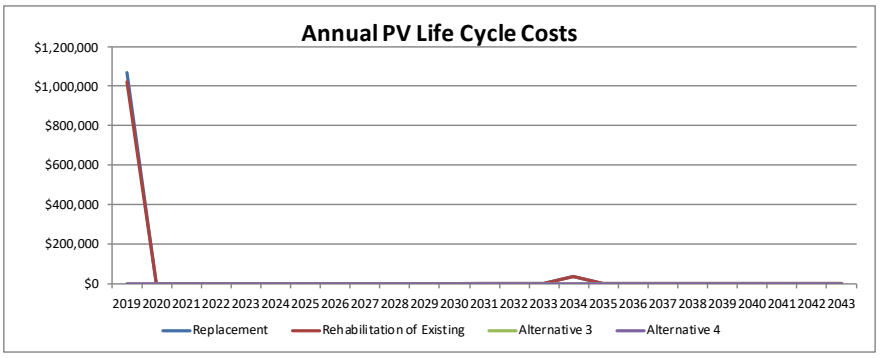
Life Cycle Cost Analysis

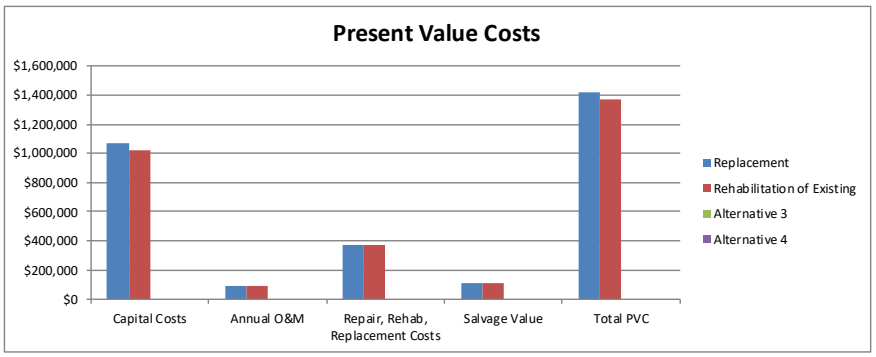
This worksheet serves as the summary for all outputs created in the model. For the given inputs, the Results Summary provides an overview of capital costs; annual O&M; repair, rehab, replacement costs; and salvage value. Under the Results Summary, the user will find a breakdown of the cost for each category and alternative.

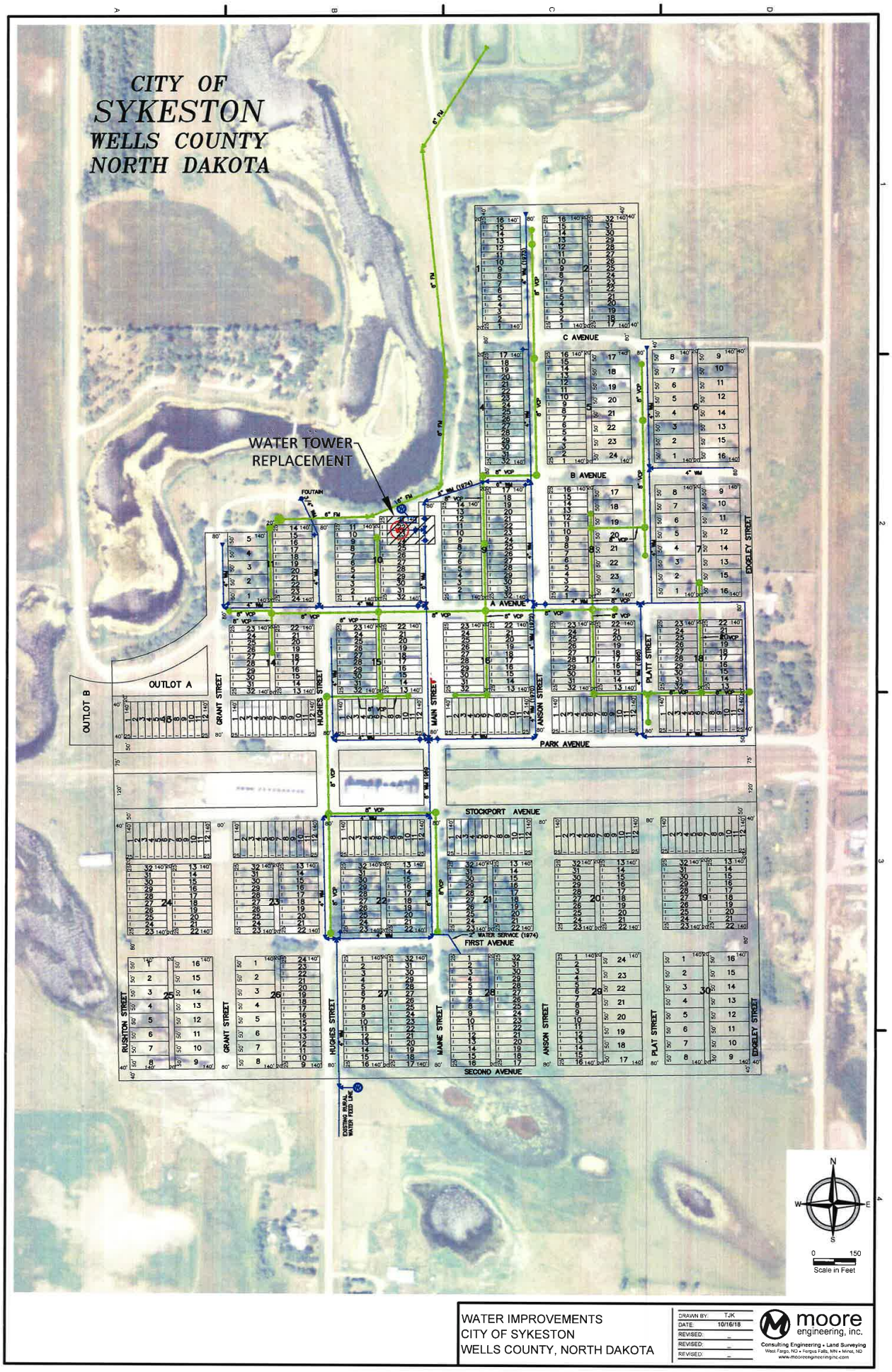
Scenario Analysis - Present Value Life Cycle Cost Summary

Cost Summary

Present Value	Replacement	Rehabilitation of Existing	Alternative 3	Alternative 4
Capital Costs	$1,070,000	$1,023,000	$0	$0
Annual O&M	$89,000	$89,000	$0	$0
Repair, Rehab, Replacement Costs	$372,000	$371,000	$0	$0
Salvage Value	$115,000	$115,000	$0	$0
Total PVC	**$1,416,000**	**$1,368,000**	**$0**	**$0**
PV Cost Per 1000 Gallons Per Day				
Present Value	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!







WATER IMPROVEMENTS
CITY OF SYKESTON
WELLS COUNTY, NORTH DAKOTA

DRAWN BY:	TJK
DATE:	10/16/18
REVISED:	_
REVISED:	_
REVISED:	_

moore engineering, inc.
Consulting Engineering + Land Surveying
West Fargo, ND + Fergus Falls, MN + Minot, ND
www.mooreengineeringinc.com

APPENDIX P

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (10/2018)

SWC Date Received : 5/8/19

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Water Storage Upgrades

Sponsor(s)
City of Lincoln

County	City	Township/Range/Section
Burleigh	Lincoln	138 N, 79 W, Section 20

Description Of Request ☐ New ☑ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Additional capacity for fire flow supply, replacement of inadequate existing structure

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☐ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☑ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☒ Yes ☐ No

Jurisdictions/Stakeholders Involved
City of Lincoln

Description Of Problem Or Need And How Project Addresses That Problem Or Need

Lincolns existing 549,000 gallon water storage tank No. 1 was installed in 1985 and has had settlement issues and ice damage over the last 9 years that has caused the condition of the tank to degrade. An inspection was performed in April of 2018 identifying issues. Improper emergency work in 2013 caused delamination of the glass coating of the steel during installation of a new floor. Extensive corrosion has been identified on the base ring of the tank. The City of Lincoln is also currently below federal guidelines for storage to meet fire flow requirements for the current population due to the extensive growth of the population over the last decade.
The proposed project would install new 16" water main to connect the tanks to the city increasing available flow for fire flow demand, remove the existing 549,000 gallon water tank and replace it with a new 1,000,000 gallon tank to meet storage requirements, prevent potential catastrophic failure of the existing tank, and add needed capacity to the cities water infrastructure.

Has Feasibility Study Been Completed?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone

A Preliminary Engineering Report has been completed for the water supply system with hydraulic modeling for existing and planned up-size. Preliminary design of water main pipe has been completed for cost estimates.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 1,240,000.00	$ 39,000.00	$ 1,201,000.00	$ 0.00
Other State	$ 773,300.00	$ 73,000.00	$ 700,300.00	$ 0.00
Local	$ 100,000.00	$ 0.00	$ 100,000.00	$ 0.00
Total	$ 2,113,300.00	$ 112,000.00	$ 2,001,300.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied

Plan to apply for ND DWSRF (other State)

Please Explain Implementation Timelines, Considering All Phases And Their Current Status

Design and permitting to be complete in fall/ winter of 2019. Bidding to be complete in 2020 and project construction in 2020. Final paperwork and as-builts complete in 2021.

Have Assessment Districts Been Formed? ☐ Yes ☑ No ☐ Ongoing ☐ Not Applicable

Submitted By: Shawn Surface			Date: 6/7/19
Address: 74 Santee Road	City: Lincoln	State: ND	ZIP Code: 58504
Telephone Number: 701-258-7969		Engineer Telephone Number: 701-354-7121	
Sponsor Email Address: cityoflincoln@midconetwork.com		Engineer Email Address: knysether@sehinc.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature: Shawn Surface Date: 5-7-2019

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

PRELIMINARY ESTIMATE

PROJECT NO.: **144551**
NAME: **Storage Option 2A - 1.0 mg Concrete Ground Storage Tank w/Water Main upgrades**
OWNER: **City of Lincoln**
DATE: **5/6/19**

ITE	QUANTITY	UNIT	DESCRIPTION	PRELIMINARY ESTIMATE UNIT COST	TOTAL
			BASE CONSTRUCTION		
GENERAL					
1	1.00	LS	MOBILIZATION	65,000.00	$65,000.00
2	1.00	LS	BOND	15,000.00	$15,000.00
			Subtotal		$80,000.00
SITE ITEMS					
1	420.00	CY	TOPSOIL	$4.00	$1,680.00
2	1.00	LS	EROSION CONTROL	$1,200.00	$1,200.00
3	890.00	TON	AGGREGATE BASE COURES CL 5	$40.00	$35,600.00
4	208.33	TON	DRIVEWAY GRAVEL	$45.00	$9,375.00
5	4.00	EA	GEOTECH BORING - 50' DEPTH	$2,000.00	$8,000.00
6	30.00	CY	CONCRETE PAVEMENT - 4IN	$170.00	$5,100.00
WATER MAIN UPGRADES					
6	160	LF	HORIZONTAL DIRECTIONAL DRILL (16" FUSIBLE PVC OR 18" HDPE)	$135.00	$21,600.00
	10	LF	6" PVC WATERMAIN	$60.00	$600.00
7	4585.00	LF	16" PVC WATERMAIN	$70.00	$320,950.00
	2.00	EA	6" GATE VALVE	$1,800.00	$3,600.00
8	4.00	EA	16" GATE VALVE	$8,300.00	$33,200.00
9	1.00	EA	COMBINATION AIR VALVE (CAV) ASSEMBLIES	$2,400.00	$2,400.00
10	1.00	EA	AIR RELEASE MANHOLE	$6,500.00	$6,500.00
11	1.00	EA	BLOWOFF ASSEMBLIES	$3,000.00	$3,000.00
12	2057.00	TON	GRANULAR BEDDING	$40.00	$82,280.00
13	2.00	EA	6" HYDRANT	$5,000.00	$10,000.00
WATER TANK					
1	1.00	LS	1.0 M GALLON CONCRETE GROUND STORAGE TANK	$1,000,000.00	$1,000,000.00
2	1.00	LS	TANK MIXING SYSTEM	$25,000.00	$25,000.00
3	1.00	LS	REMOVE AND SALVAGE EXISTING TANK	$50,000.00	$50,000.00
			Subtotal		$1,700,085.00
			Contingencies (10%)		**$170,122.50**
			Preliminary Construction Cost		**$1,870,207.50**
			Pre Construction Engineering Design (6%)		$112,212.45
			Construction Engineering (7%)		$130,914.53
			Preliminary Total Construction Cost		**$2,113,335.00**

Life Cycle Cost Analysis Review

Project Title: City of Lincoln - Water Storage Upgrades **Date:** July 3, 2019

Explanation of Alternatives:

The sponsors have provided costs for three one-million gallon storage alternatives. The first of which is a steel tank, the second is a concrete tank and the third is a glass-lined steel tank. Construction time is essentially the same at 1 year. While the steel tanks costs are less for initial construction, they have higher O&Ms than the concrete alternative because they will need replacement after 30 years. The LCCA PV analysis put these differences in a format for equivilent comparison. "Repair Existing" was considered during preliminary solution discussions, however the tank already exceeds its useful life and previously attempted repairs were not sufficiently durable to maintain the integrity of the tank. Because of the high chance additional repairs to the existing tank will not singnificantly add to the life of the tank or solve delamination issues, repairing the existing tank was not considered among the alternatives presented. A significant portion of the new tank alternatives is an

Inputs:

	Steel Tank 50 year	**Concrete Tank 50 year**	Steel/Glass Tank 50 year	
Users Served	4132	4132	4132	
Construction Cost	$1,865,200	$2,118,800	$2,019,700	
Annual O & M	$19,440	$2,670	$6,800	

Details:

Useful life entries varied between concrete and steel tanks. Part of the additional O&M is the cost of replacing steel tanks at year 30 in a 50 year analysis window.

Model Function:

The economic model appears to have functioned properly. The results are deemed to be reliable and repeatable with the inputs provided by the project sponsor.

LCCA Model Results:

Scenario Analysis - Present Value Life Cycle Cost Summary

Present Value	Steel Tank 50 year	Concrete Tank 50 year	Steel/Glass Tank 50 year	
Capital Costs	$1,865,000	$2,119,000	$2,020,000	
O&M	$506,000	$71,000	$178,000	
Repair, Rehab,	$447,000	$63,000	$447,000	
Salvage Value	$153,000	$11,000	$153,000	
Total PVC	**$2,665,000**	**$2,242,000**	**$2,492,000**	
PVC Per Capita (User)	$645	$543	$603	

Explanation of Results:

The present value (PV) cost of the sponsor's preferred altenative (concrete tank) over its entire useful life, in todays dollars (2019), is $2,242,000. This alternative saves the community $250,000 over the 50 year analysis life. This value includes the construction, maintenance, and operations of the project over the projected 50 year life of the storage tank. It does include salvage values but does not include decommissioning costs. The PV cost per capita is $543 for the concrete alternative.

	Year		Annual Population Growth Rate	Average Annual Population Increase/Decrease
	2010	2017		
Population & Trends	2,475	3,730	7.2%	179

Other Comments:

SWC staff engineers also preference concrete alternatives when viable for a variety of reasons including the ability to get even more than a 50 year useful life from the tank.

Date: 5/7/19

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Lincoln
Project: Water Storage Upgrades

Users Served by Project: 4132

Maximum Users at Full Capacity with Preferred Alternative: 11930

1- Inputs

This is the primary data entry worksheet where users provide brief descriptions of the alternative being considered (up to 4) as well as information on annual O&M and length of construction.

Orange cells are for entering project specific data
Yellow cells reference data from other worksheets

Input	Units	Input Value	Definition of Term	Reference
Base Year for LCCA Model Period of Analysis	Year	2020	Beginning of analysis period	
Analysis Duration	Years	50		
End Year for LCCA Model Period of Analysis	Year	2070	Ending year of analysis period	Assumes 50 years of operations
Discount Factor	%	2.875%	Discount factor used for present value calculations	Discounting is the process of determining the present value of a payment or a stream of payments that is to be received in the future. Given the time value of money, a dollar is worth more today than it would be worth tomorrow. - Source EGM 18-01- https://planning.erdc.dren.mil/toolbox/library/EGMs/EGM18-01.pdf
Total Volume of Water Provided by the Project	TGAL/Day	4,000.00	Thousands of Gallons Per Day	

Name of Alternative	New Steel			
Description of Alternative	New Steel 1.0 MG Storage Tank, Site Work, andFeeder Main Upgrades			
Capital Investment		**Units**	**Alternative 1**	**Notes**
Construction	Total Construction	$	$1,865,200	
	Years of Construction	Years	1	Full construction build-out in 2020
Annual O&M	Annual O&M	$	$19,440	Inspection, Cleaning, Interior Maint., Painting Exterior, Painting Interior

Name of Alternative	Concrete Tank			
Description of Alternative	New Concrete 1.0 MG Storage Tank, Site Work, and Feeder Main Upgrades			
Capital Investment		**Units**	**Alternative 2**	**Notes**
Construction	Total Construction	$	$2,118,800	
	Years of Construction	Years	1	
Annual O&M	Annual O&M	$	$2,670	

Name of Alternative	New Steel and Glass			
Description of Alternative	Description of Alternative 3			
Capital Investment		**Units**	**Alternative 3**	**Notes**
Construction	Total Construction	$	$2,019,700	
	Years of Construction	Years	1	
Annual O&M	Annual O&M	$	$6,800	

Name of Alternative	Alternative 4			
Description of Alternative	Description of Alternative 4			
Capital Investment		**Units**	**Alternative 4**	**Notes**
Construction	Total Construction	$	$0	
	Years of Construction	Years		
Annual O&M	Annual O&M	$		

Date: 5/7/19

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Lincoln
Project: rage Upgrades

2 - Detailed Costs

This is the secondary data entry worksheet where users enter itemized costs by specific major categories. The worksheet will assign a standard useful life based on the category selected. Users may override this function and provide a useful life if professional judgement warrants doing so.

Orange cells are for entering project specific data
Yellow cells reference data from other worksheets

New Steel

Total Cost $1,995,700

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
General Items (Mob. & Bond)	1	LS	$90,000	$90,000	Mobilization	N/A	
Erosion Control	1	LS	$1,200	$1,200	Other	N/A	
Site Work	1	LS	$47,335	$47,300	Other	N/A	
Geotech Borings	4	EA	$2,000	$8,000	Other	N/A	
Feeder Main Upgrades	1	LS	$343,150	$343,200	Mainlines	50	
Water Main Appurtenances	1	LS	$58,700	$58,700	Pipeline Appurtenances	20	
Bedding Material	2056	TON	$40	$82,200	Other	N/A	
1.0 MG Steel Tank	1	LS	$900,000	$900,000	Reservoir and Storage - Metal	30	
Tank Mixing System	1	LS	$25,000	$25,000	Reservoir and Storage - Metal	30	
Contingencies	1	LS	$160,562	$160,600	Contingency	N/A	
Engineering Design	1	LS	$106,000	$106,000	Engineering - Design	N/A	
Engineering Inspection	1	LS	$123,500	$123,500	Engineering - Construction	N/A	
Existing Tank Removal	1	LS	$50,000	$50,000	N/A	0	
		-		$0	Category	Useful Life	

Concrete Tank

Total Cost $2,118,800

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
General Items (Mob. & Bond)	1	LS	$90,000	$90,000	Mobilization	N/A	
Erosion Control	1	LS	$1,200	$1,200	Other	N/A	
Site Work	1	LS	$47,335	$47,300	Other	N/A	
Geotech Borings	4	EA	$2,000	$8,000	Other	N/A	
Feeder Main Upgrades	1	LS	$343,150	$343,200	Mainlines	50	
Water Main Appurtenances	1	LS	$58,700	$58,700	Pipeline Appurtenances	20	
Bedding Material	2056	TON	$40	$82,200	Other	N/A	
1.0 MG Concrete Tank	1	LS	$1,000,000	$1,000,000	Reservoir and Storage - Concrete	50	
Tank Mixing System	1	LS	$25,000	$25,000	Reservoir and Storage - Metal	30	
Contingencies	1	LS	$170,000	$170,000	Contingency	N/A	
Engineering Design	1	LS	$112,200	$112,200	Engineering - Design	N/A	
Engineering Inspection	1	LS	$131,000	$131,000	Engineering - Construction	N/A	
Existing Tank Removal	1	LS	$50,000	$50,000	N/A	0	
				$0	Category	Useful Life	

New Steel and Glass

Total Cost $2,019,700

Description	Quantity	Units	Unit Cost	Cost	Cost Category	Useful Life	Notes
General Items (Mob. & Bond)	1	LS	$90,000	$90,000	Mobilization	N/A	
Erosion Control	1	LS	$1,200	$1,200	Other	N/A	
Site Work	1	LS	$47,300	$47,300	Other	N/A	
Geotech Borings	4	EA	$8,000	$32,000	Other	N/A	
Feeder Main Upgrades	1	LS	$343,150	$343,200	Mainlines	50	
Water Main Appurtenances	1	LS	$58,700	$58,700	Pipeline Appurtenances	20	
Bedding Material	2056	TON	$40	$82,200	Other	N/A	
1.0 MG Steel Tank	1	LS	$900,000	$900,000	Reservoir and Storage - Metal	30	
Tank Mixing System	1	LS	$25,000	$25,000	Reservoir and Storage - Metal	30	
Contingencies	1	LS	$160,562	$160,600	Contingency	N/A	
Engineering Design	1	LS	$106,000	$106,000	Engineering - Design	N/A	
Engineering Inspection	1	LS	$123,500	$123,500	Engineering - Construction	N/A	
Existing Tank Removal	1	LS	$50,000	$50,000	N/A	0	
				$0	Category	Useful Life	

Date: 5/7/19

North Dakota State Water Commission - Life Cycle Cost Analysis

Sponsor: City of Lincoln
Project: Water Storage Upgrades

3 - Results Summary

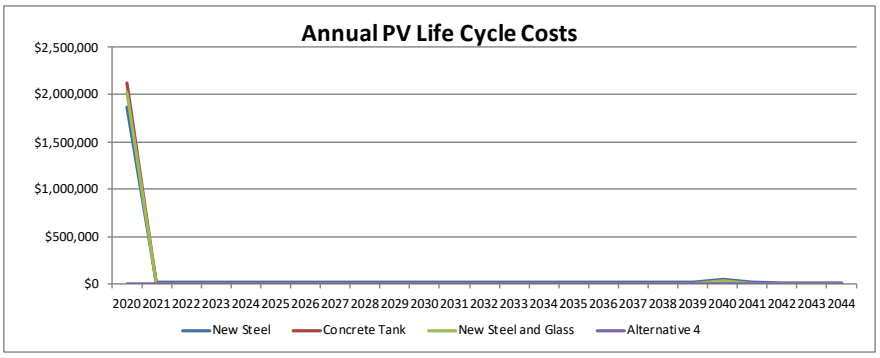
Life Cycle Cost Analysis

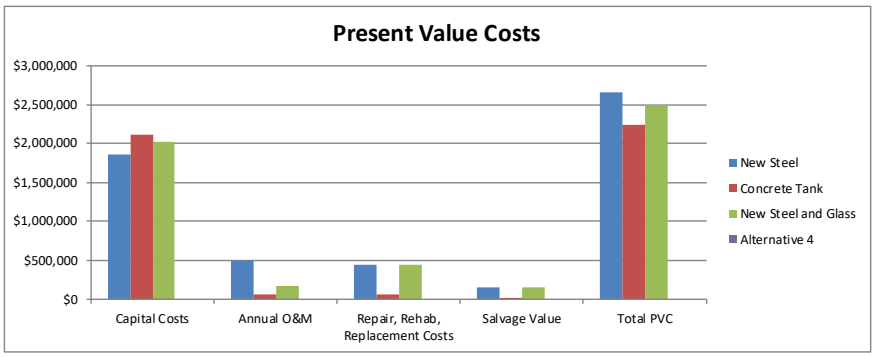
This worksheet serves as the summary for all outputs created in the model. For the given inputs, the Results Summary provides an overview of capital costs; annual O&M; repair, rehab, replacement costs; and salvage value. Under the Results Summary, the user will find a breakdown of the cost for each category and alternative.

Scenario Analysis - Present Value Life Cycle Cost Summary

Cost Summary

Present Value	New Steel	Concrete Tank	New Steel and Glass	Alternative 4
Capital Costs	$1,865,000	$2,119,000	$2,020,000	$0
Annual O&M	$506,000	$71,000	$178,000	$0
Repair, Rehab, Replacement Costs	$447,000	$63,000	$447,000	$0
Salvage Value	$153,000	$11,000	$153,000	$0
Total PVC	**$2,665,000**	**$2,242,000**	**$2,492,000**	**$0**
PV Cost Per 1000 Gallons Per Day				
Present Value	**$666**	**$561**	**$623**	**$0**





WATER TOWER LOCATION EXHIBIT

AUDITIOR'S LOT B of LOT A and SE 125'x125'
OF THE NORTHWEST QUARTER
SECTION 20, TOWNSHIP 138 NORTH, RANGE 79
WEST OF THE FIFTH PRINCIPAL MERIDIAN,
CITY OF LINCOLN ETA, BURLEIGH COUNTY, NORTH DAKOTA

JMT SUBDIVISION
LOT 5
LOT 4
BLOCK 2
AUDITOR'S LOT A OF NW 1/4
80.00
AQUASTORE 549,000 GALLON
STORAGE TANK (EXISTING)
TANK #1 TO BE REPLACED
AQUASTORE 570,000 GALLON
STORAGE TANK (EXISTING)
TANK #2
PROPOSED ACCESS & WATERMAIN EASEMENT
PROPERTY BOUNDARY
AUDITOR'S LOT B
OF LOT A
125'x125'
WATERLINE EASEMENT
DOC. 360315
30.00
LOT 1
BLOCK 1
GRABINGER
SUBDIVISION
AUDITOR'S
LOT C OF
SW 1/4
AUDITOR'S LOT D
OF SW 1/4
N
100 0 100 200
scale 50 feet

SEH
PHONE: 701.354.7121
4719 SHELBURNE STREET,
SUITE 6
BISMARCK, ND 58503-5677
www.sehinc.com
Date: 05/21/2018

Save: 5/21/2018 3:10 PM rllg Plot: 5/21/2018 3:11 PM P:\KOLL\LINND\142678\9-survey\92-CAD\15-dwg\WT Easement\TOWER LOCATION EXHIBIT.dwg

APPENDIX Q

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (10/2018)

SWC Date Received : 5/9/19

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Grand Forks Regional WTP

Sponsor(s)
City of Grand Forks

County	City	Township/Range/Section
Grand Forks	Grand Forks	

Description Of Request ☐ New ☑ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Water Treatment Capacity, Advanced Water Treatment Processes

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control ☐ Multi-Purpose ☐ Bank Stabilization ☐ Dam Safety/EAP
☐ Recreation ☐ Water Supply ☐ Snagging & Clearing ☐ Property Acquisition
☐ Irrigation ☐ Water Retention ☐ Rural Flood Control ☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☒ Yes ☐ No

Jurisdictions/Stakeholders Involved
The City of Grand Forks, Grand Forks Air Force Base, and the Grand Forks Airport Authority

Description Of Problem Or Need And How Project Addresses That Problem Or Need

The City has been closely monitoring and studying the need for a new regional Water Treatment Plant (WTP) since 1995. Over this time, the City has committed resources to determining the most cost-effective time and manner in which to expand water treatment capacity to meet expanding needs while also addressing treatment challenges. The need for the Grand Forks Regional WTP is rooted in three core issues: 1) an increasingly strict regulatory environment and experienced water quality issues requiring advanced treatment processes; 2) increasing demand from regional growth; and, 3) limitations of the current WTP infrastructure and site. The City is planning to construct a new WTP designed around the most prudent treatment technology alternatives currently available for Grand Forks' source water. The new WTP will have an initial buildout capacity to treat up to 20 million gallons of water per day. The initial capacity is designed to serve the City, regional industry, and regional partners, such as the Grand Forks Air Force Base, with clean, potable water through 2050 population and demand projections. While initial buildout capacity is projected to last through 2050, the new WTP and WTP site will be designed with expandability provisions to continue serving the region for the next 100 years.

Has Feasibility Study Been Completed?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☑ Yes	☐ No	☐ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☐ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☑ Yes	☐ No	☐ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone

This project has gone under extensive review from City leaders, the State Legislature, the SWC, and other entities including the NDDH, US Army Corps of Engineers, ND Game and Fish, ND Historical Society, and the US Soil Conservation Service. The SWC has approved 50 percent cost-share for this project at multiple meetings

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)?

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$ 74,875,000.00	$ 30,000,000.00	$ 9,875,000.00	$
Other State	$	$	$	$
Local	$ 74,875,000.00	$ 30,000,000.00	$ 9,875,000.00	$
Total	$ 149,750,000.00	$ 60,000,000.00	$ 19,750,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied

DWSRF

Please Explain Implementation Timelines, Considering All Phases And Their Current Status

Construction started Dec 2016, 100% completion anticipated June 2020.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By: Todd Feland, City Administrator			Date: 5/7/19
Address: 255 N 4th St	City: Grand Forks	State: ND	ZIP Code: 58203
Telephone Number: 701-787-3750		Engineer Telephone Number: 701-746-8087	
Sponsor Email Address: tfeland@grandforksgov.com		Engineer Email Address: wayne.gerzewski@ae2s.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature: [signature] Date: 5/7/19

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

SWC Date Received: 05/07/19

CITY OF GRAND FORKS

REGIONAL WATER TREATMENT PLANT UPDATE

May 6, 2019

Project Summary

The new Regional Water Treatment Plant (WTP) is the final piece of a multi-decade master planning effort that saw us install over $50 million in storage and distribution infrastructure to position the City for a new, 20 million gallon per day, WTP on the western edge of our town. The plant itself is designed with a 50-year life on a site well suited for the next 100-years. Within this multi-generational design framework, the WTP will provide the flexibility to adapt to the impacts of changing water quality and provide for the ability to meet potential new regulatory challenges all while meeting the growing need for both domestic and industrial water within our ever evolving and expanding community.

Status

Construction is progressing with an updated substantial completion date of February 28th, 2020 and April 30th, 2020 with the final completion date still on schedule for June 30, 2020. Construction of the new GFRWTP is now approximately 70 percent completed. To date, construction progress includes the following:

- All mass concrete has been complete. Only minor placements for stairs/landings and equipment pads remain.
- Over 100 tradespeople are onsite on any given day. Recently the 300,000 person hour milestone was reached.
- The primary building envelope is complete, including precast walls and roofing. Only the administrative wing (pictured) exterior walls and lime silo enclosure remain before a fully enclosed building is achieved.

State Grant Funding & Costs Incurred to Date

Over $100 million in eligible project costs have been incurred since authorization through April 2019 with the NDSWC reimbursing $50,394,876 in eligible project costs to date. Current grant balance stands at approximately $14.6 million.

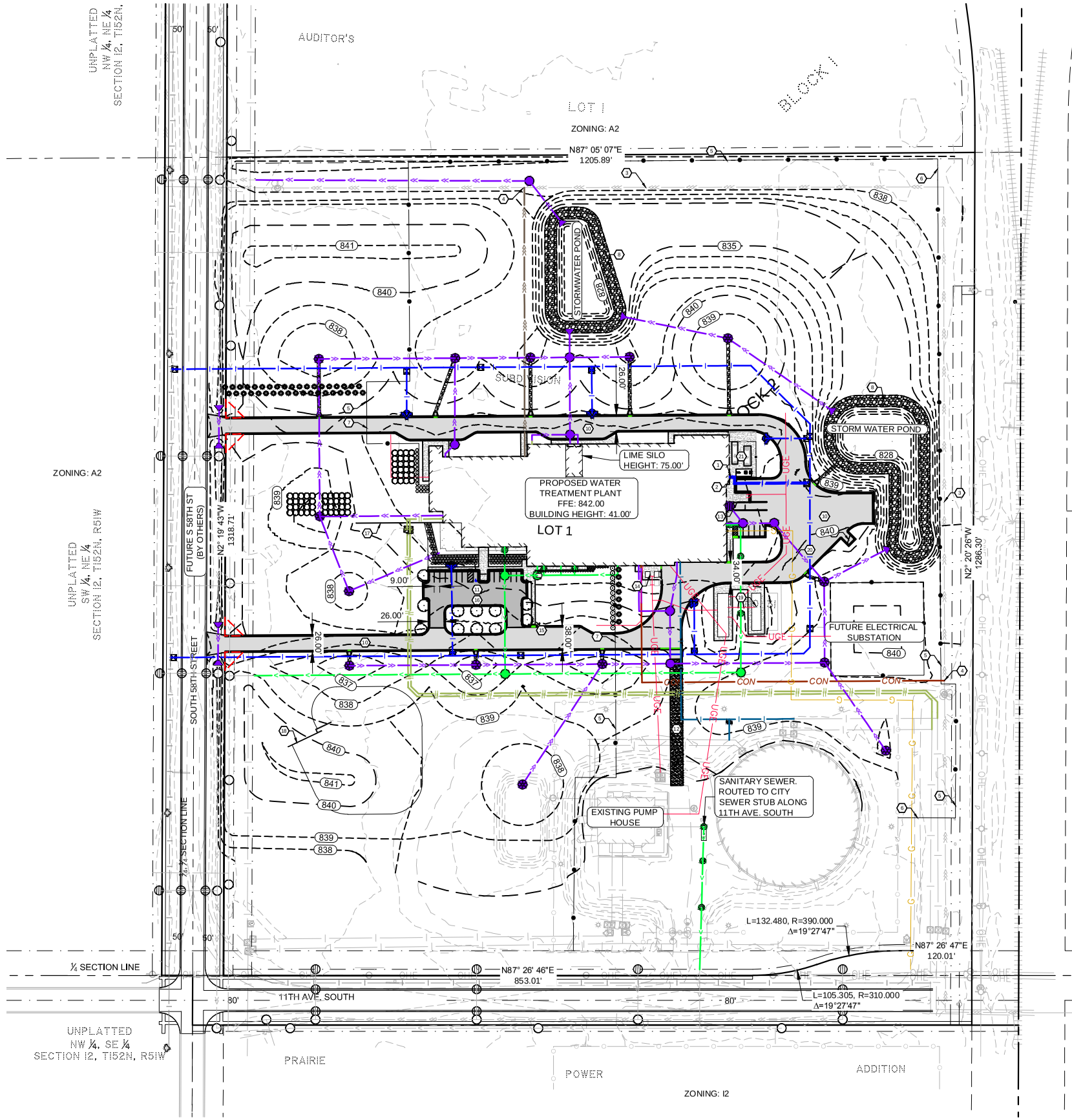
Amount	NDSWC Approved	Funds Expended
$4,990,000	October 7, 2013	November 2016
$30,000,000	October 12, 2016	October 2018
$30,000,000	August 23, 2017	Anticipated September 2019
$9,875,000	Anticipated June 2019	Upon Final Completion

Project Cost Outlook

The Construction Manager At Risk (CMAR) is currently preparing a new estimate of monthly project costs through project completion. Overall project costs are estimated to remain in the $3 million to $4 million per-month. We are anticipating requesting the next State cost-share of $9,875,000 at the June meeting of the State Water Commission. Recent estimates from the CMAR have shown project costs coming in under budget at approximately $149.7 million total (with a potential $1.3 million set aside for possible contingencies above the current estimate).

Upcoming Project Milestones

- Start of Site Paving: June 2020
- Substantial Completion Phase A: February 28, 2020
- Substantial Completion Phase B: April 30, 2020
- Final Completion: June 30, 2020



GRAND FORKS REGIONAL WATER TREATMENT PLANT	
LEGAL DESCRIPTION	**ADDRESS**
LOT 1, BLOCK 2, AUDITOR'S SUBDIVISION TO THE CITY OF GRAND FORKS NORTH DAKOTA.	955 S 58TH STREET, GRAND FORKS, ND 58201
ZONING: I-2: HEAVY INDUSTRIAL.	

PARKING DATA	REQUIRED	PROVIDED
MAIN PARKING LOT (WEST LOT)	14	14
SECONDARY PARKING LOT (EAST LOT)	N/A	5
ADA PARKING	1	1
PARKING REQUIREMENT: ONE (1) SPACE REQUIRED PER EMPLOYEE. GFRWTP OFFICIALS HAVE STATED THAT A MAXIMUM OF 14 EMPLOYEES ARE ON STAFF DURING THE LARGEST SHIFT.		

SITE DATA	PROPOSED SQ.FT.	%
TOTAL LOT AREA	1585252.59	N/A
BUILDING AREA	134339.64	8.47%
OTHER IMPERVIOUS AREA (SIDEWALKS, DRIVES & PARKING)	227545.99	14.35%
TOTAL IMPERVIOUS SURFACE AREA	361885.63	22.83%
TOTAL PERVIOUS AREA	1223366.96	77.17%
MAX. IMPERVIOUS SURFACE AREA ALLOWED (85%)	1347464.70	85%

GENERAL NOTES

1. CITY REQUIRED BUFFER YARDS WILL BE A MODIFIED BUFFERYARD D. OWNER WILL PROVIDE ALL PLANTINGS TO BE INSTALLED IN BERM. SEE BUFFERYARD PLAN
2. FRONT YARD REQUIREMENTS: FRONT YARD SHALL BE NOT LESS THAN TWENTY-FIVE (25) FEET WITH ONE (1) ADDITIONAL FOOT FOR EACH FOOT IN HEIGHT THE BUILDING EXCEEDS TWENTY-FIVE (25) FEET. THE FRONT YARD DEPTH ON CORNER LOTS SHALL BE IN ACCORDANCE WITH THE PREVAILING YARD PATTERN AND A SECOND FRONT YARD OF HALF THE DEPTH REQUIRED GENERALLY FOR FRONT YARDS SHALL BE PROVIDED ON THE OTHER FRONTAGE.
3. SIDE YARD REQUIREMENTS: THERE SHALL BE A SIDE YARD OF FIFTEEN (15) FEET, PROVIDED THERE SHALL BE NO PAVING, PARKING, LOADING, OR STORAGE WITHIN FIVE (5) FEET OF THE LOT LINE. ALL LOTS LOCATED ADJACENT TO OR ADJOINING ANY OTHER DISTRICT SHALL CONFORM TO THE BUFFERYARD REQUIREMENTS IN SECTION 18-0309 OF THE ZONING CODE.
4. REAR YARD REQUIREMENTS: THERE SHALL BE A REAR YARD HAVING A MINIMUM DEPTH OF NOT LESS THAN TWENTY (20) FEET.
5. ALL WORK PERFORMED WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE CITY OF GRAND FORKS STANDARD CONSTRUCTION SPECIFICATIONS. PRIOR TO DOING ANY WORK IN THE CITY RIGHT-OF-WAY THE CONTRACTOR SHALL CALL THE ENGINEERING DEPARTMENT AT 746-2640.
6. ALL LANDSCAPING SHALL BE PROTECTED FROM VEHICULAR TRAFFIC BY STANDARD CONCRETE CURB AND GUTTER.
7. ALL SIGNS TO BE APPROVED BY THE GRAND FORKS INSPECTIONS DEPARTMENT (CONVENTIONAL ZONING) OR PLANNING DEPARTMENT (PLANNED UNIT DEVELOPMENT).
8. ALL DRIVEWAYS LEADING TO REFUSE CONTAINERS SHALL BE CONSTRUCTED OF 6" CONCRETE WITH A MINIMUM 6" COMPACTED BASE, OR EQUIVALENT.
9. WATER SERVICE TO THE PROPERTY SHALL BE CONSTRUCTED OF AWWA C900 DR-18 PVC.
10. SANITARY SEWER PIPE WILL BE ASTM D3034 SDR-35 PVC.
11. ALL STORM SEWER PIPE SHALL BE RCP.
12. COORDINATE NATURAL GAS INSTALLATION WITH NATURAL GAS PROVIDER. COORDINATE BUILDING CONNECTION WITH MECHANICAL.
13. CONTACT CITY ENGINEERING DEPARTMENT FOR STORMWATER RUNOFF PERMIT REQUIREMENT. (701-746-2640) A STORM WATER POLLUTION PREVENTION PLAN MUST BE APPROVED PRIOR TO FINAL SITE PLAN APPROVAL.

APPROVED FOR CONSTRUCTION

APPROVED DATE: _____

_____
ALLEN GRASSER, PE
City Engineer, City of Grand Forks, ND

Accepted & Approved
By City of Grand Forks, ND
Planning & Community
Development Department
Name: _____
Title: PLANNER
Date: February 12, 2017

NORTH

0 100
Scale in Feet

CONSTRUCTION NOTES

1. 8" WATER SERVICE
2. 8" FIRE SERVICE
3. EXISTING RESIDUALS FORCEMAIN (TO BE ABANDONED)
4. CONNECT TO EXISTING RESIDUALS FORCEMAIN
5. CHAIN LINK FENCE
6. CHAIN LINK GATE
7. AUTOMATED GATE
8. RIPRAP
9. SOLID WASTE CONTAINER LOCATION
10. HEAVY DUTY (8") CONCRETE PAVEMENT
11. LIGHT DUTY (6") CONCRETE PAVEMENT
12. GRAVEL SERVICE ROAD
13. DEPRESSED LOADING DOCK
14. ELECTRICAL TRANSFORMERS
15. TRUCK PARKING
16. BUS PARKING
17. SIGNAGE WALL
18. FUTURE CAMPUS SIGNAGE
19. GENERATOR AND PAD
20. NATURAL GAS SERVICE. ROUTING TO BE COORDINATED ON SITE.

LEGEND

- BEEHIVE INLET
- STORM SEWER MANHOLE
- FLARED END SECTION
- STORM SEWER
- GATE VALVE
- FIRE HYDRANT
- DOMESTIC WATER MAIN
- TRANSFER WATER
- RAW WATER
- CLEAN OUT
- SANITARY SEWER MANHOLE
- SANITARY SEWER
- NATURAL GAS LINE
- UNDERGROUND ELECTRIC
- RO CONCENTRATE EFFLUENT
- HIGH SOLIDS EFFLUENT
- PROPOSED TREE
- PROPOSED EVERGREEN SHRUB
- PROPERTY LINE
- EASEMENT LINE
- VISIBILITY TRIANGLE
- EXISTING WATER MAIN
- EXISTING GATE VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER

SYM	DATE	DESCRIPTION	APPR

AE2S

REGIONAL WATER TREATMENT PLANT

CITY OF GRAND FORKS, NORTH DAKOTA

SITE OVERVIEW

CLIENT PROJECT NO.	7293
DRAWING TYPE	CONST
PREPARED BY	JB JB
CHECKED / APPROVED	ML / BG
DATE	NOV. 2016
PROJECT NUMBER	P00105-2007-006 040
SHEET	5 of 65
DRAWING	C1.002

APPENDIX R

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

SWC Date Received : 6/24/19

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
North Mandan/Highway 25 Project

Sponsor(s)
Missouri West Water System

County	City	Township/Range/Section
Morton	City	

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Increase flows for current users and additional capacity for future growth

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☑ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
Morton County, ND

Description Of Problem Or Need And How Project Addresses That Problem Or Need
The area north of Mandan along Highway 25 has experienced rapid growth over the past few years with the addition of several subdivisions. The proposed project would provide increased flows to users north of Mandan along Highway 25 and allow for further growth in the area by providing additional capacity for growth.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
A system wide hydraulic analysis is currently being completed. This area was previously identified as having limited capacity and development in the area has been limited.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? NO

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$	$	$ 531,110.00	$
Other State	$	$	$	$
Local	$	$	$ 531,110.00	$
Total	$ 0.00	$ 0.00	$ 1,062,220.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
USDA & ND Drinking Water State Revolving Fund

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
Upon confirmation of funding, final design would commence in accordance with the performed study. Project would be bid over the winter with construction commencing in Spring/Summer 2020.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By Karin Garvie			Date 6/24/2019
Address PO Box 176	City Mandan	State ND	ZIP Code 58554
Telephone Number 701-663-8549	Engineer Telephone Number 701-258-1110		
Sponsor Email Address kgarvie@missouriwest.com	Engineer Email Address bryan.ziegler@bartwest.com		

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature Karin Garvie	Date 6/24/2019

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

SWC Date Received : 6/24/19

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Harmon Lake Area Project

Sponsor(s)
Missouri West Water System

County	City	Township/Range/Section
Morton	Mandan	

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Increase flows for current users and additional capacity for future growth

If Study, What Type ☐ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☑ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
Morton County, ND

Description Of Problem Or Need And How Project Addresses That Problem Or Need
The area north of Mandan in the Harmon Lake Area has experienced rapid growth over the past few years with the addition of several rural subdivisions around Harmon Lake. The proposed project would provide for increased flows to users around Harmon Lake and allow for further growth in the area by providing additonal capacity for growth.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)
A system wide hyraulic analysis is currently being completed. This area was previously identified as having limited capacity and development in the area has been limited.

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$	$	$ 564,300.00	$
Other State	$	$	$	$
Local	$	$	$ 188,110.00	$
Total	$ 0.00	$ 0.00	$ 752,410.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied
USDA & ND Drinking Water State Revolving Fund

Please Explain Implementation Timelines, Considering All Phases And Their Current Status
Upon confirmation of funding, final design would commence in accordance with the perfermed study. Project would be bid over the winter with construction commencing in Spring/Summer 2020.

Have Assessment Districts Been Formed? ☐ Yes ☐ No ☐ Ongoing ☑ Not Applicable

Submitted By Karin Garvie			Date 6/24/2019
Address PO Box 176	City Mandan	State ND	ZIP Code 58554
Telephone Number 701-663-8549	Engineer Telephone Number 701-258-1110		
Sponsor Email Address kgarvie@missouriwest.com	Engineer Email Address bryan.ziegler@bartwest.com		

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature Karin Garvie	Date 6/24/2019

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

Construction Cost Estimate
Missouri West Water System

7/29/30

North Mandan / Highway 25 Improvements

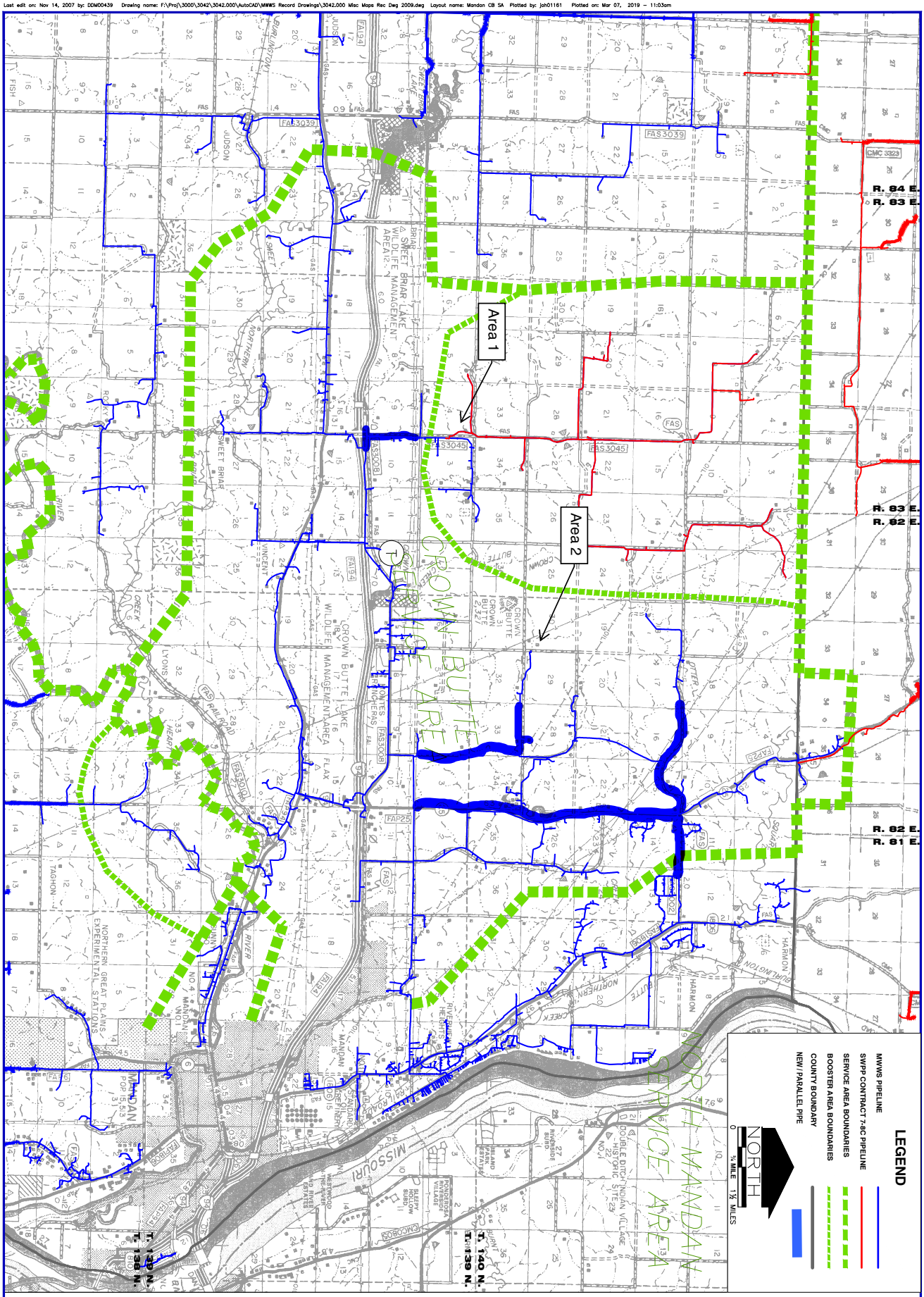
Description	Quantity	Unit Price	Extension
MOBILIZATION	1	$ 25,000.00	$25,000
6” Cl. 200 PVC PIPE,G.J.	12,900 '	$ 11.50	$148,350
6” Cl. 160 PVC PIPE,G.J.	15,400 '	$ 10.25	$157,850
4” Cl. 160 PVC PIPE,G.J.	24,800 '	$ 6.50	$161,200
3” Cl. 160 PVC PIPE,G.J.	9,800 '	$ 5.00	$49,000
Subtotal Pipeline Construction Cost			**$541,400**
Appurenance @ 40%			$216,600
Subtotal Rural Distribution System Construction Cost			**$758,000**
Contingencies at 10%			$73,580
Legal & Administrative (Crop Damage, Easements, Etc at 5%)			$37,900
Engineering - Design/Bidding @ 10%			$75,800
Engineering - Constuction Admin/Constuction Observation @15%			$114,720
Total Rural Distribution System Construction Cost			**$1,060,000**

Harmon Lake Area

Description	Quantity	Unit Price	Extension
MOBILIZATION	1	$ 25,000.00	$25,000
6” Cl. 200 PVC PIPE,G.J.	6,700 '	$ 11.50	$77,050
6” Cl. 160 PVC PIPE,G.J.	12,500 '	$ 10.25	$128,125
6" RESTRAINED JOINT AREA	600 '	$ 45.00	$27,000
4” Cl. 160 PVC PIPE,G.J.	11,000 '	$ 6.50	$71,500
3” Cl. 160 PVC PIPE,G.J.	11,000 '	$ 5.00	$55,000
Subtotal Pipeline Construction Cost			**$383,700**
Appurenance @ 40%			$153,480
Subtotal Rural Distribution System Construction Cost			**$537,000**
Contingencies at 10%			$54,623
Legal & Administrative (Crop Damage, Easements, Etc at 5%)			$26,850
Engineering - Design/Bidding @ 10%			$53,700
Engineering - Constuction Admin/Constuction Observation @15%			$81,160
Total Rural Distribution System Construction Cost			**$753,333**

	Cost-Share %	Cost-Share $
North Mandan / Highway 25 Improvements	50%	$530,000
Harmon Lake Area	75%	$565,000
Total Cost-Share		**$1,095,000**

Last edit on: Nov 14, 2007 by: DDM00439 Drawing name: F:\Proj\3000\3042\3042.000\AutoCAD\MWWS Record Drawings\3042.000 Misc Maps Rec Dwg 2009.dwg Layout name: Mandan CB SA Plotted by: joh01161 Plotted on: Mar 07, 2019 - 11:03am



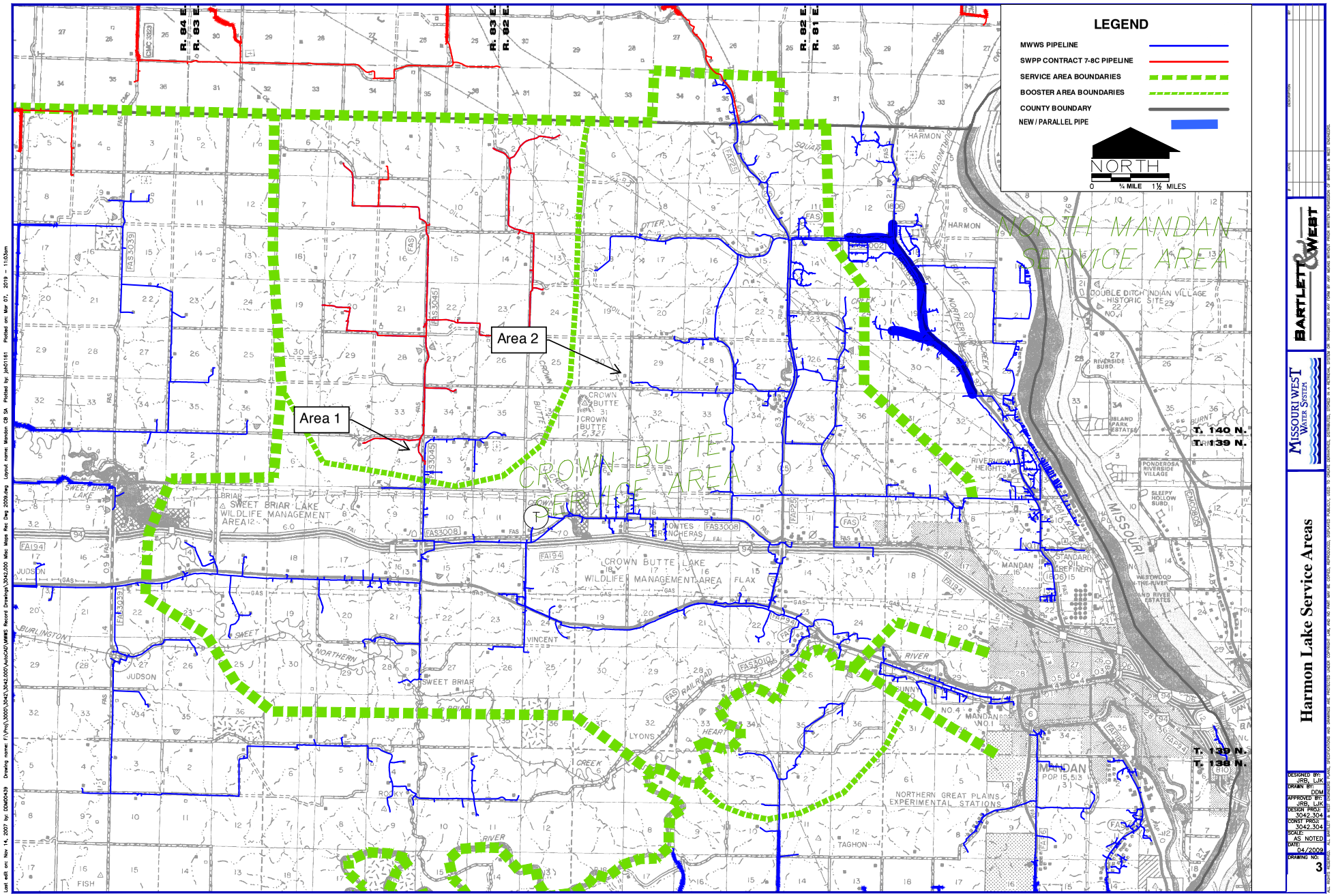
NORTH MANDAN AND CROWN BUTTE SERVICE AREAS

MISSOURI WEST WATER SYSTEM

BARTLETT & WEST

3

SWC Date Received : 6/24/19



Missouri West Water System

BARTLETT & WEST

Harmon Lake Service Areas

DESIGNED BY: JRB, LJK
DRAWN BY: DDM
APPROVED BY: JRB, LJK
DESIGN PROJ: 3042.304
CONST PROJ: 3042.304
SCALE: AS NOTED
DATE: 04/2009
DRAWING NO: 3

COST-SHARE REQUEST

NORTH DAKOTA STATE WATER COMMISSION
DEVELOPMENT DIVISION
SFN 60439 (5/2019)

APPENDIX S

SWC Date Received : 6/24/19

This form is to be filled out by the project or program sponsor with State Water Commission staff assistance as needed. Applications for cost-share are accepted at any time. However, applications received less than 45 days before a State Water Commission meeting will be held for consideration at the next scheduled meeting.

Please answer the following questions as completely as possible. Supporting documents such as maps, detailed cost estimates, and engineering reports should be attached to this form. If additional space is required, please use extra sheets as necessary.

For information regarding cost-share program eligibility see the *State Water Commission Cost-Share Policy, Procedure, and General Requirements* – available upon request or at www.swc.nd.gov.

Project, Program, Or Study Name
Tri-County Water District - Phase 5 Rural Distribution Pipeline Expansion

Sponsor(s)
Tri-County Water District

County	City	Township/Range/Section
Grand Forks, Nelson, Ramsey, Walsh	N/A	Numerous

Description Of Request ☑ New ☐ Updated (previously submitted)

Specific Needs Addressed By The Project, Program, Or Study
Providing an alternate, higher quality water source to residents not currently served by TCWD

If Study, What Type ☑ Water Supply ☐ Hydrologic ☐ Floodplain Mgmt. ☐ Feasibility ☐ Other

If Project/Program

☐ Flood Control	☐ Multi-Purpose	☐ Bank Stabilization	☐ Dam Safety/EAP
☐ Recreation	☑ Water Supply	☐ Snagging & Clearing	☐ Property Acquisition
☐ Irrigation	☐ Water Retention	☐ Rural Flood Control	☐ Other

Are Connections Of New Rural Customers Located Within The Extra-Territorial Jurisdiction Of Municipality? ☐ Yes ☒ No

Jurisdictions/Stakeholders Involved
Rural Grand Forks, Nelson, Ramsey, & Walsh Counties

Description Of Problem Or Need And How Project Addresses That Problem Or Need

There are additional potential users in areas throughout the Tri-County Water District (TCWD) which have shown interest in connecting to the TCWD system but are currently using lower-quality well water. Previously there was not enough capacity in certain areas of the system to serve these potential users; however, a recently executed water purchase agreement with the City of McVille has provided TCWD with additional capacity. This additional capacity will allow Tri-County to serve these additional users, providing them with higher quality drinking water. Additionally, an elevated storage tank would provide a back-up water supply for TCWD should issues arise with the additional capacity being provided by McVille.

Has Feasibility Study Been Completed?	☐ Yes	☐ No	☑ Ongoing	☐ Not Applicable
Has Engineering Design Been Completed?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable
Have Land Or Easements Been Acquired?	☐ Yes	☑ No	☐ Ongoing	☐ Not Applicable

Have You Applied For Any State Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any State Permits?	☐ Yes	☑ No	☑ Not Applicable
If Yes, Please Explain			
Have You Applied For Any Local Permits?	☐ Yes	☑ No	☐ Not Applicable
If Yes, Please Explain			
Have You Been Approved For Any Local Permits?	☐ Yes	☐ No	☑ Not Applicable
If Yes, Please Explain			

Briefly Explain The Level Of Review The Project Or Program Has Undergone (attach additional documents as needed)

A user sign-up process has been preformed identifying potential users to be included. Project information and questionnaires have been submitted so project is eligible for funding (NDSWC Cost-Share, DWSRF Loan).

Do You Expect Any Obstacles To Implementation (i.e., problems with land acquisition, permits, funding, local, opposition, environmental concerns, etc.)? No

Funding Timeline (carefully consider when SWC cost-share will be needed)

Source	Total Cost	2017-2019 7/1/17-6/30/19	2019-2021 7/1/19-6/30/21	Beyond 7/1/21
Federal	$	$	$	$
State Water Commission	$	$	$ 1,992,000.00	$
Other State	$	$	$	$
Local	$	$	$ 1,533,000.00	$
Total	$ 0.00	$ 0.00	$ 3,525,000.00	$ 0.00

List All Other State Of North Dakota Funding Sources (Grant or Loan), For Which You Have Applied

TCWD will acquire the local share via a DWSRF loan (project on 2019 IUP). The local share may consist of more than 25% of the total project cost due to the overall budget but the intent is to maximize the $1,992,000 available for TCWD [Rural Water].

Please Explain Implementation Timelines, Considering All Phases And Their Current Status

Design - Fall/Winter 2019; Bid - Spring 2020; Construction 2020-2021

Have Assessment Districts Been Formed? ☐ Yes ☑ No ☐ Ongoing ☐ Not Applicable

Submitted By: Mike Blessum, Manager			Date: 6/20/2019
Address: 207 5th St.	City: Petersburg	State: ND	ZIP Code: 58272
Telephone Number: 701-345-8595		Engineer Telephone Number: 701-221-8346	
Sponsor Email Address: waterboy@polarcomm.com		Engineer Email Address: philip.markwed@bartwest.com	

I Certify That, To The Best Of My Knowledge, The Provided Information Is True And Accurate.

Signature: Mike Blessum Date: 6/20/2019

MAIL TO:

ND State Water Commission • ATTN: Cost-Share Program
900 E Boulevard Ave. • Bismarck, ND 58505-0850

Construction Cost Estimate
Tri-County Water District
Phase 5 Rural Distribution
Pipeline Expansion

Description	Quantity	Unit Price	Extension
200,000 Gallon Elevated Tank	1 ea	$ 1,300,000.00	$1,300,000
3" Cl. 200 PVC	5,600 '	$ 7.00	$39,200
3" Cl. 160 PVC	26,000 '	$ 6.40	$166,400
2" Cl. 250 PVC	570 '	$ 5.50	$3,135
2" Cl. 200 PVC	19,790 '	$ 5.30	$104,887
2" Cl. 160 PVC	169,910 '	$ 5.10	$866,541
Appurtenances at 25% of Pipe			$295,000
Meterpits	50 ea	$ 2,200.00	$110,000
SCADA	1 ea	$ 40,000.00	$40,000
Subtotal Construction Cost			**$2,925,000**
Design Engineering			$210,000
Project Inspection			$325,000
Archeology/Cultural/Environmental			$25,000
Crop Damages			$30,000
Land Lease/Purchase			$10,000
Total Project Cost			**$3,525,000**

SWC Date Received : 6/24/19

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

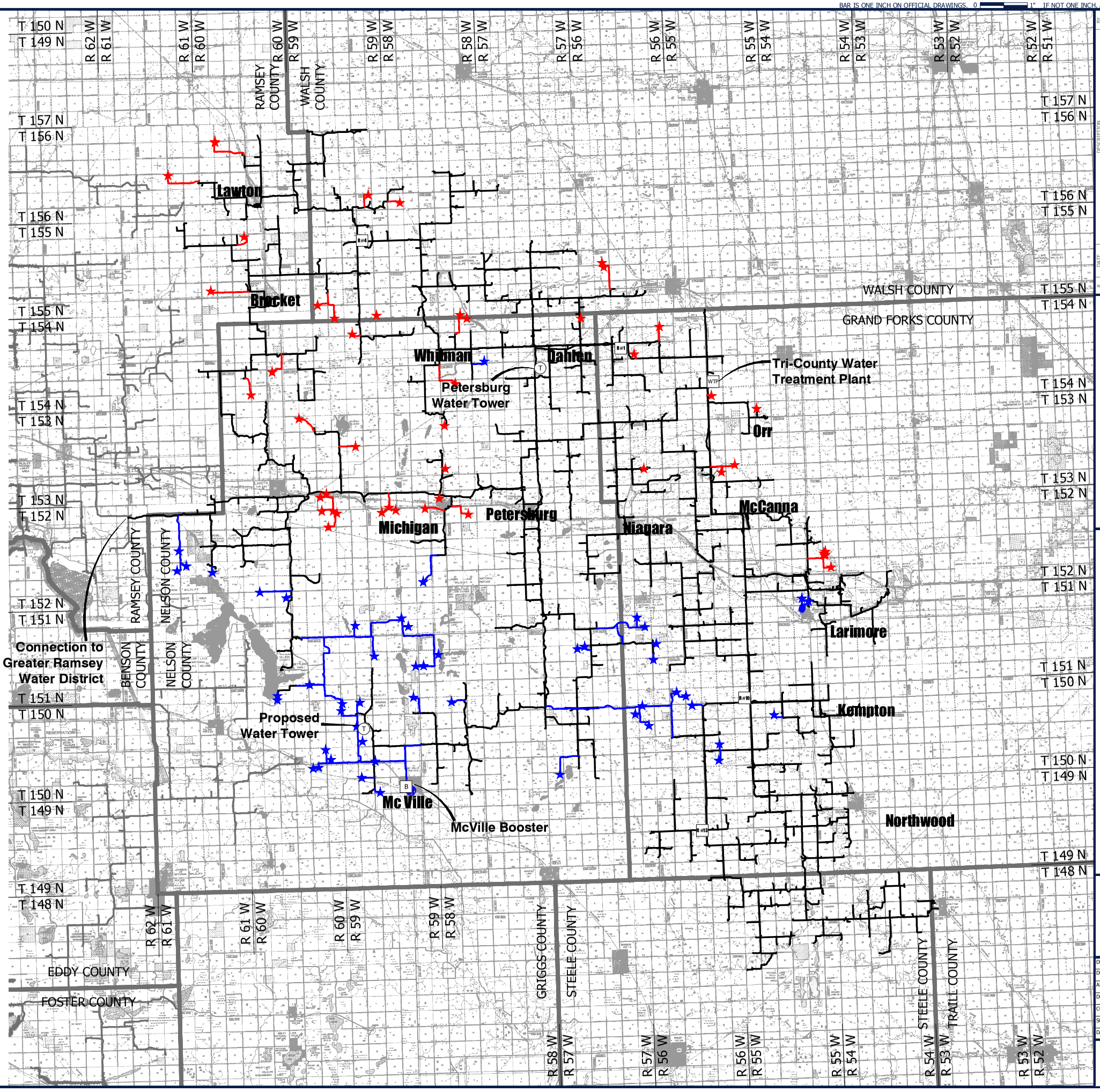
NORTH

0 3 MILES 6 MILES

LEGEND

- PHASE 5 PIPELINE
- PHASE 4 PIPELINE (CONTRACT 2018-1)
- EXISTING TCWD PIPELINE
- EXISTING GRWD PIPELINE
- COUNTY BOUNDARY

- PH. 5 EXPANSION SIGNUP METER PIT
- PH. 4 EXPANSION SIGNUP METER PIT
- PH. 4 EXPANSION SIGNUP MODIFIED METER PIT
- PH. 4 EXPANSION SIGNUP CURBSTOP
- B McVILLE BOOSTER STATION
- T PETERSBURG WATER TOWER
- WTP WATER TREATMENT PLANT
- B+T BOOSTER/RESERVOIR IN SERVICE



Bartlett & West

BISMARCK, ND
701.258.1110
www.bartlettwest.com

CERTIFICATE OF AUTHORITY NO. C-000

GENERAL SYSTEM LOCATION AND PHASE 4 & 5 EXPANSION AREAS TRI-COUNTY WATER DISTRICT

DESIGNED BY:	TAV
DRAWN BY:	DDM
APPROVED BY:	POH
DESIGN PROJ:	3056.024
CONST PROJ:	---
SCALE:	AS NOTED
DATE:	JUNE 2019

GENERAL PROJECT AREA

Last edit on: 6/6/2019 8:41 AM by: DDM00439 Drawing Name: F:\Proj\3000\3056\3056.024\AutoCad\Plan Set\Permits Exhibits\3056.024 Tri-County 2018-1 Permits.dwg Layout Name: PH5 Area Plotted By: DDM00439 Plotted on: 6/6/2019 8:41:57 AM

APPENDIX T

NORTH Dakota | Water Commission
Be Legendary.™

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele, P.E., Chief Engineer - Secretary
SUBJECT: SWPP – Project Update
DATE: July 22, 2019

Contract 3-2D Six (6) MGD Water Treatment Plant (WTP) at Dickinson:
The water treatment plant started producing finished water on February 7, 2018. The contract was considered substantially complete on March 7, 2018.

An issue with delamination of concrete floors was identified, and a solution was provided to the General Contractor. The General Contractor filed a claim disputing the decision by the Engineer on potential change order for the concrete floor repair work. The contractor was directed to complete the repair work, with responsibility for the cost to be resolved thereafter. The floor repair work is complete. After review of the documentation provided by the contractor and the engineer, all parties agreed to changed order for 50 percent of the claim amount. A separate agreement with BW/AECOM for 50 percent of the change order amount is in the works.

Administrative items remain before the General, Mechanical and Electrical contracts can be closed out. All three contracts are expected to be closed out soon.

Contract 3-2E Residual Handling Building at Dickinson WTP:
The preconstruction conference for this contract was held on October 5, 2017 with all three contractors; Rice Lake Construction Group, Central Mechanical Inc., and Edling Electric. The General Contractor, Rice Lake Construction Group, mobilized to site on October 16, 2017. The contract had a milestone completion date of September 1, 2018 for having the building enclosed and a Substantial Completion date of February 28, 2019. The Milestone Completion was considered achieved on October 19, 2018. General Contractor requested a time extension request for 81 days on the Milestone, Substantial and Final completion dates. Their request was based on submittal review delays and a trucker strike in India. Their request was reviewed, and 31 days of extension was determined to be justified. With the Change Orders executed, the Milestone and Substantial Completion dates were extended to October 10, 2018 and April 10, 2019. Time extension for abnormal weather conditions is under discussions with the Contractor.

Start up for the two filter presses included in the contract as held on April 26, 2019 and May 1, 2019. Paving was completed and the occupancy permit from the City of Dickinson

was received on July 2, 2019. During the week of July 8th, Southwest Water Authority staff started operating the facility.

To date, on the General contract, two change orders totaling $83,864.05 (1 percent of the contract amount), Electrical contract, one change order, extending the completion dates and in the Mechanical contract, two change orders totaling $36,934.95 (6 percent of the Contract amount) has been signed by all parties.

Contract 5-1A and 5-2A 2nd Richardton Reservoir and 2nd Dickinson Reservoir:
The State Water Commission (SWC), at its October 12, 2016 meeting, awarded Contract 5-2A, 2nd Dickinson Reservoir, to John T. Jones Construction Company. A preconstruction conference for this contract was held on March 30, 2017. The new reservoir came online on September 7, 2018. The contract was considered substantially complete on December 5, 2018. The contract completion date on this contract was November 1, 2017. Extension due to weather delays and work change directives would have extended the completion date to January 18, 2018. After multiple discussions with the Contractor the completion date was extended to December 5, 2018 after the Contractor agreed to reimburse the SWC the actual field observer's costs. A Change order incorporating the reimbursement of field observer's cost has been signed by all parties. A few work change directive items, administrative items and punch list items remain before the contract can be closed out.

The SWC at its December 9, 2016 meeting awarded Contract 5-1A, 2nd Richardton Reservoir, to Engineering America, Inc. A preconstruction conference was held on June 7, 2017. The contract was approximately 88 percent complete when Engineering America, Inc., went out of business as of the end of July 2018. The bonding company took over the responsibility for the remaining work on the contract. The bonding company directed us to get quotes for completing the remaining work with them being responsible for any costs above the remaining funds on the contract. The remaining work on the contract required five different contractors; a bolted tank contractor, cathodic protection contractor, earthwork contractor, welded tank contractor and fencing contractor. We executed contracts with a bolted tank contractor, welded tank contractor and cathodic protection contractor. All work is complete. We are in the process of closing out the contract with the bonding company.

Contract 2-1B Raw Water Line Capacity Upgrade from intake to OMND WTP:
The scope of work for Contract 2-1B generally consists of furnishing and installing 19,026 lineal feet of 30" diameter steel pipeline. The contract was substantially complete on November 15, 2018. A few punch list items, administrative items and landowner releases remain before the contract can be closed out. Two change orders totaling $227,269.68 (4 percent of the contract amount) have been signed by all parties.

Contract 1-2A Supplemental Raw Water Intake:

The contractor, J.W. Fowler Company (JWF), launched the Microtunneling Boring Machine (MTBM) along the 2nd alignment in August 2017. On October 5, 2017, JWF had installed approximately 1000 feet of intake pipe when employees observed some cracks on pipe no. 58 located approximately 500 feet from the caisson. After pushing a few additional pipes, the cracks worsened. On October 18, 2017, JWF informed the SWC that the best course of action to remediate the incident was to leave the installed pipe string in place and pursue other options to complete the intake pipe to the screen location.

The contractor's plan for completing the project using Horizontal Directional Drilling (HDD) method has been reviewed a few times with more clarifications and details sought to complete the application to the federal agencies (Bureau of Reclamation and US Army Corps of Engineers) for the construction license and easement. A meeting was held on April 24, 2019 with the US Army Corps of Engineers to explain the new plan from the contractor and the timeline for obtaining the construction license and easement. We were informed that the most optimistic timeline for receiving the construction license and the easement is November 2019, if the application is submitted without delay. The insurance information from the contractor is under review. After the insurance issues are resolved we expect a change order to be signed with the new insurance package. We expect the contractor to seek an extension to the contract completion date in that change order. The current completion date on the contract is December 31, 2018. Meeting with the contractor, their insurance broker, SWC, Office of Risk Management and BW/AECOM to discuss the insurance package and the path forward is scheduled for August 20, 2019. SWC is in the process of negotiating an easement for the HDD drill rig staging area.

We received an open records request in response to the lawsuit between JWF and their MTBM equipment insurance provider QBE Insurance Corporation in June 2019. Response to the request will be provided by early August.

Contract 4-1E/4-2B Upgrades at the Dodge and Richardton pump stations:

The Southwest Pipeline Project's (SWPP) Contract 4-1E/4-2B, Dodge and Richardton Pump Station Upgrades, mainly includes replacement of three existing 700 horsepower (HP) with 1000 HP vertical turbine pumps and installation of one new 1000 HP vertical turbine pump at Dodge pump station along with associated valves, piping and electrical work, replacement of three 900 HP vertical turbine pumps with 1250 HP pumps at the Richardton pump station along with associated valves, piping and electrical work. The scope of work also includes construction of two new surge control systems, a 6,079 cubic foot (CF) air chamber at Richardton pump station, a 1,507 CF air chamber downstream of the Dodge pump station, replacement of surge air chamber probe wells at two existing air chambers, replacement of concrete pump pedestals, new mechanical systems including exhaust fans and inlet louvers. Bid Alternates were included for many replacement items which are eligible for reimbursement from the Replacement and Extraordinary Maintenance (REM) fund.

Contracts were awarded at the October 11, 2018 SWC meeting. A preconstruction conference was held on April 3, 2019. A change order to include upgrading the chloramination equipment at the Dodge pump station to accommodate higher flows will be included in this contract.

Majority of the work included in the Mechanical Contract are items eligible for reimbursement from the REM fund. Mechanical contract is around 40 percent complete.

General and Electrical Contract work is dependent on delivery of equipment which have long lead time. Major work on the General and Electrical contract is expected to happen in the Fall of 2019 at the earliest.

Contract 5-9A 2nd Belfield Tank:
The scope of this contract generally consists of furnishing and installing approximately 750,000-gallon welded steel or glass fused bolted ground storage reservoir. Submittal set of plans and specifications were received on June 7, 2019 and currently under review. We expect bidding this contract in early August. This contract will be brought before the Commission for award at the October meeting.

Contract 5-13A 2nd Davis Buttes Tank:
The scope of this contract generally consists of furnishing and installing approximately 1,000,000 gallon welded steel or glass fused bolted ground storage reservoir. Submittal set of plans and specifications were received on June 7, 2019 and currently under review. We expect bidding this contract in early August. This contract will be brought before the Commission for award at the October meeting.

Contract 2019-1:
The scope of this contract includes removing and replacing five existing blowoff manholes along with associated piping, furnishing and installing one butterfly valve in an existing blowoff manhole, complete with piping, valves, site work, cathodic protection and other appurtenant items. The estimated construction cost of this contract is $225,000. This contract is currently advertised for bids with a bid opening of August 13, 2019.

Future Contracts:
The SWA sent a letter requesting the SWC to study, design and build distribution capacity for the future. Waiting list users on the Project are updated monthly and at the time of the letter, SWA had 692 waiting list locations. Analysis of the 911 address information indicated that there are over 4,000 potential locations on the SWPP service area that are not currently served by the Project.

SWA is requesting a three-prong approach to meeting the distribution capacity need. The three prongs include: 1. Improvements to the transmission facilities from the Ray Christenson Pump Station to the first tanks in the distribution system 2. Addressing the waiting list users by implementing hydraulic improvements like booster pump station,

parallel piping and water reservoirs at strategic locations and 3. Canvassing targeted service areas for users interested in signing up for rural water and design a rural distribution system for that area.

SWC staff supports that approach and in response have directed BW/AECOM to provide Specific Authorizations for the design of Main Transmission Line (MTL) upgrades from the Ray Christensen Pump to Davis Buttes, Belfield and New England Reservoirs and for the preliminary design of distribution system expansion. Design of the MTL is expected to be completed in Spring 2020 followed by construction in Summer 2020. The preliminary design report for distribution system expansion is expected to be completed by Spring 2020, followed by selection of projects for construction. Design of the projects selected for construction will be completed by Spring 2021, followed by construction.

Ownership Transfer Study:
Progress meetings with Apex Engineering Group were held on June 17th and July 15th. First update to the Commission is expected at the October, 2019 SWC meeting.

GE:SSP:pdh1736-99

APPENDIX U

NORTH Dakota | Water Commission
Be Legendary.™

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele P.E., Chief Engineer – Secretary
SUBJECT: Devils Lake Update
DATE: July 26, 2019

Hydrologic Update

The July 26th Devils Lake water surface elevation is 1448.85 feet*. This is 0.65 feet below the lake level one year ago. The lake rose approximately one foot from spring runoff and peaked at 1449.2 feet. The lake has level has remained fairly steady in recent months but will begin to drop as lake evaporation rates peak. The most recent National Weather Service forecast was released on July 23rd and predicts a 50 percent chance of the lake dropping to 1447.5 feet by December.

Outlet Update

Both Devils Lake Outlets have performed reliably in 2019 and no complaints regarding outlet impacts have been received. The West and East Outlets began discharging on June 5th and June 11th respectively. The outlets discharged 16,328 acre-feet in June and have been operating at a combined rate of approximately 320 cubic feet per second (cfs). The full combined outlet operating capacity is 600 cfs. The West Outlet has generally been operated at full capacity and the East Outlet has been limited to one or two pumps to prevent exceedances of the downstream water quantity and quality conditions in the Sheyenne and Red Rivers.

Jerusalem Channel Survey Results

In May 2019, the Devils Lake Outlet Management Advisory Committee requested a survey of the Jerusalem Channel which connects Devils and Stump Lakes to determine if the connection elevation has changed over the past twenty years that the lakes have been connected. This information is important because of the desire to keep the lakes connected as long as possible for the recreational and water quality benefits to Stump Lake.

The State Water Commission survey crew performed the survey in early June and found that the elevation of the divide has not changed significantly. It appears that there will be some flow between the lakes at an elevation of 1447 feet and very little flow at 1446.5 feet.

* All elevations noted in this document refer to NGVD29

GE:JK:TD:ph/416-10

NORTH Dakota | Water Commission & State Engineer

Be Legendary.™

INTEROFFICE MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission

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

SUBJECT: Missouri River Update

DATE: July 23, 2019

System/Reservoir Status

Reservoir elevations and system volume as of July 23rd are presented in the schematics below and identified by the red lines. System storage is presented in million acre-feet (MAF). Historical data for the system is provided in a table on the following page.

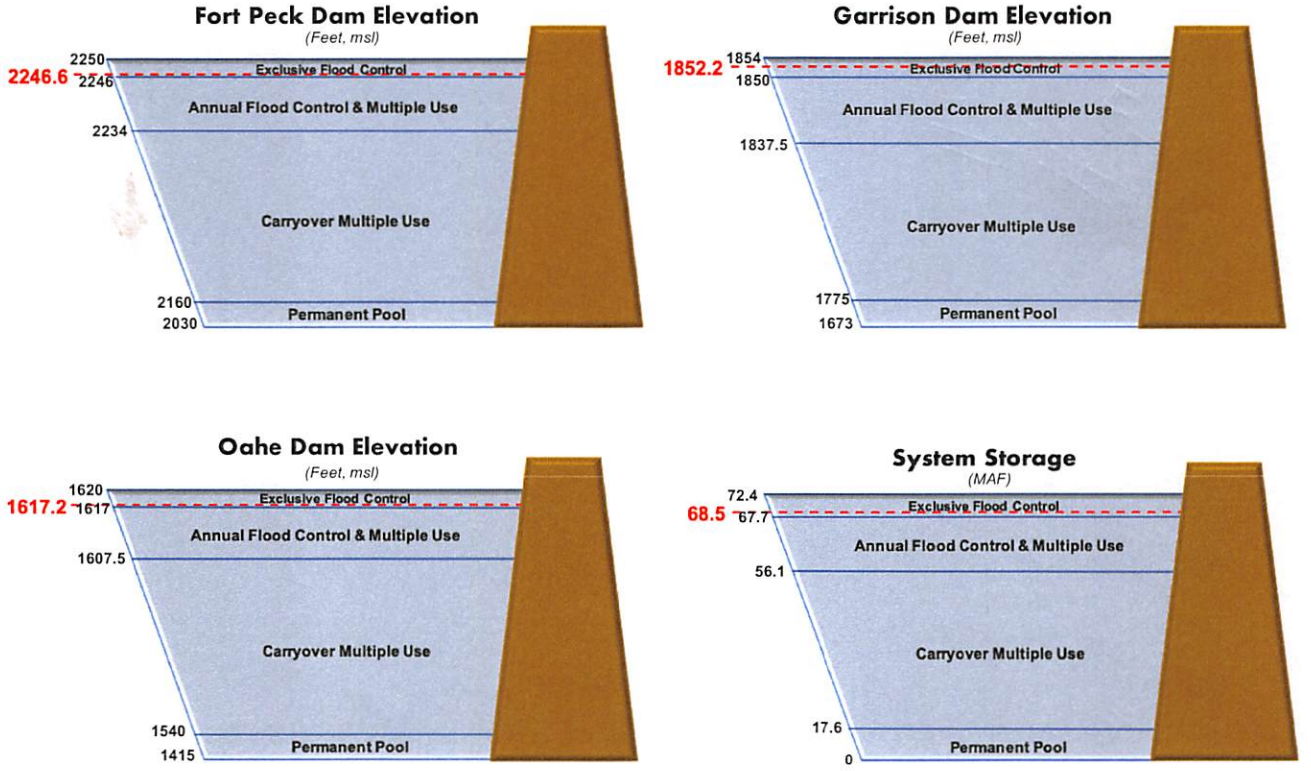


Table 1: Reservoir System Historical Data

	Reservoir Elevation (feet msl)			Total System Storage (MAF)
	Fort Peck	Garrison	Oahe	
July 23rd, 2019	2,246.6	1,852.2	1,617.2	68.5
One-Year Ago	2,246.7	1,851.9	1,616.9	67.9
End of July Average	2,233.2	1,840.3	1,605.1	58.9
Record High (elevation [year])	2,250.2 [1975]	1,854.8 [1975]	1,618.3 [1997]	71.8 [1975]
Record Low (elevation [year])	2,202.3 [2007]	1,815.5 [2006]	1,573.4 [2006]	37.7 [2006]

Runoff and Reservoir Forecasts

Lake Sakakwea appears to have crested on July 18th at elevation 1852.3 feet or about 2.3 feet into the Exclusive Flood Control Zone. Releases from Garrison Dam reached this year's peak discharge of about 46,000 cfs on June 26th and have remained there since that time. Releases are expected to remain around 46,000 cfs through at least the end of August. These releases have resulted in a river stage at Bismarck of about 11.5 feet, or about one foot below Action Stage. The July runoff forecast predicts runoff above Sioux City for this year to be 49.9 MAF or 197 percent of average. If this comes to fruition, the 2019 runoff above Sioux City would be the second highest on record.

Mountain Snowpack

The snowpack in the "Above Fort Peck Reach" peaked on April 18th at 105% of average and melted completely by July 8th. The "Fort Peck to Garrison Reach" (including the Yellowstone River Basin) peaked on April 17th at 104% of average and melted completely by July 8th.

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 Jesse Kist (alternate).

A plenary meeting was held in Sioux Falls on May 21-23, during which the group reached tentative consensus on recommendations to the U.S. Army Corps of Engineers (Corps) and the U.S. Fish and Wildlife Service regarding the Missouri River Recovery Program Strategic Plan and the Science and Adaptive Management Plan. Subsequently, a plenary webinar was held on Wednesday, June 26th in order for the group to reach final consensus on the recommendations.

Bird Habitat - Emergent Sandbar Habitat Construction

Emergent Sandbar Habitat in the Missouri River remains a primary habitat metric for the Corps to achieve compliance with the Endangered Species Act regarding the threatened piping plover and the endangered least tern. There are no near-term plans for an emergent sandbar habitat (ESH) construction project in the Garrison Reach, as habitat is currently well above the target acreage.

The Plover Habitat Ad Hoc Group (sub-group of the MRRIC) hosted a tour of piping plover habitat in North Dakota on July 1st and 2nd. Tour stops included Lake Audubon National Wildlife Refuge, the John E. Williams Preserve, and the Missouri River. The tour was attended by the Corps, U.S. Fish and Wildlife Service, ND Game and Fish, The Nature Conservancy, Natural Resources Conservation Service, U.S. Geological Survey, State Water Commission staff, and MRRIC members.

Water Supply Rule

This proposed rule attempts to define how the Corps would require users to enter into storage contracts and be charged for the use of water from Corps' reservoirs for domestic, municipal, and industrial purposes. In October 2018, SWC staff became aware that the Corps decided to delay finalizing the Water Supply Rule until August 2019 to allow time to consult with states and tribes. This year, we were informed that the Corps intends to consult with the tribes, but not the states because they don't believe the rule implicates any federalism principles. The Corps also informed us that the release of the final rule would be delayed to an unknown date beyond August 2019.

The state has previously submitted comments to the Corps that emphasize that the proposed rule is fundamentally flawed due to the Corps' differing interpretation 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 it interferes with states' sovereign rights. Language within the proposed rule is also cause for concern relative to the proposed use of Lake Ashtabula as a re-regulation reservoir for the Red River Valley Water Supply Project.

GE:JGK:pdh/1392

NORTH Dakota | Water Commission & State Engineer

Be Legendary.™

INTEROFFICE MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission

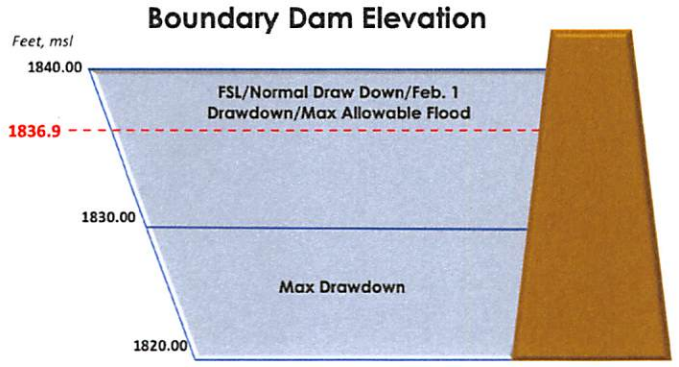
FROM: Garland Erbele, P.E., Chief Engineer-Secretary

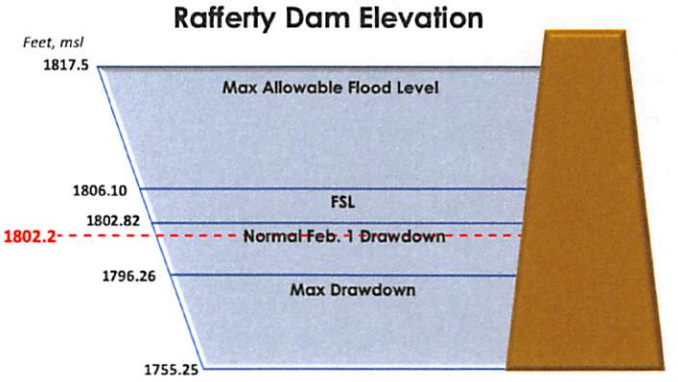
SUBJECT: Mouse River Update

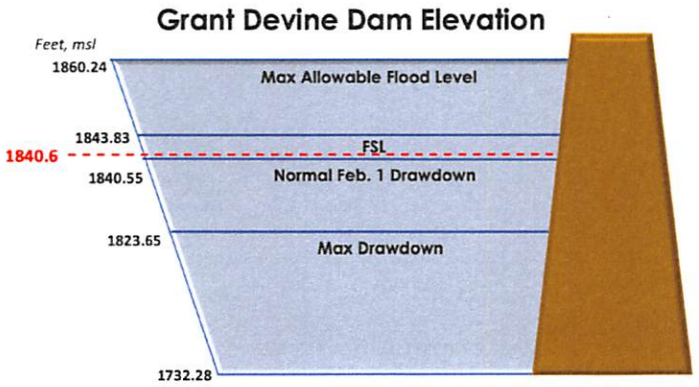
DATE: July 23, 2019

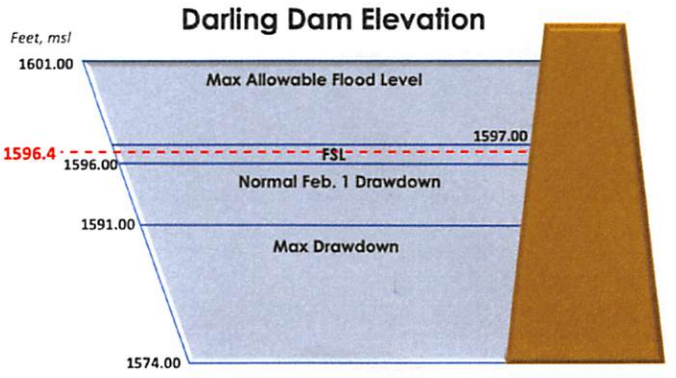
System/Reservoir Status Above Minot

Reservoir elevations as of July 23, 2019 are presented in the schematics below and identified by the red lines. System volume on July 23, 2019 in the four reservoirs above Minot was approximately 536,000 acre-feet, with an available flood storage volume of nearly 510,000 acre-feet.









Mouse River Enhanced Flood Protection Project (MREFPP)

The Souris River Joint Board (SRJB) sponsored Mouse River Enhanced Flood Protection Project (MREFPP) is a basin wide project looking to reduce flood risk in the Mouse River Basin within North Dakota.

In Minot, work has significantly advanced on Phase MI-1 of the project. The first vertical portions of the floodwall between Fourth Avenue and the Souris River have been poured. In total, nearly 10,000 cubic yards of concrete will be needed for this section of floodwall and work will continue into fall. Progress has also been made on the project's Broadway Pump Station, which is another key component of Phase MI-1. The roof of the main structure has been placed and will double as the floor of the visible, above ground, primary building for the pump station.

Work on Phases MI-2 and MI-3 in Minot have also been progressing. Topsoil has been placed on the levees near the Bark Park Gatewell and the Perkett Ditch Pump Station. The focus will now turn to the Phase MI-3 levee section on the east side of 16th Street. Earthwork related to levee construction within these phases is expected to be completed in July, with only small sections remaining near the flood protection structures.

Outside of Minot, demolition of the Colton Avenue Bridge, part of Phase BU-1A, began on June 17 and is nearly completed. After the demolition is completed, crews will begin working on the pilings, foundation, and abutments.

International Souris River Study

The International Joint Commission's (IJC) International Souris River Study (Study) will review and update the operating agreements for Rafferty, Grant Devine (formerly known as Alameda), Boundary, and Darling Dams. An appointed Study Board, which oversees the Study, has begun work on some of the tasks detailed in their work plan. Currently, the Study has shifted into its scenario modeling and stakeholder engagement phase.

The Study Board submitted a request to the IJC to extend the Study deadline by one year, which was approved by the U.S. and Canadian Governments. The request for additional time and funding provided the Study with:

- Additional time for collaboration with stakeholders
- Time and budget for balanced and well vetted technical work
- Increased report writing time and review for the study's final report and recommendations

The extension was a crucial step for the Study which allows the technical team to provide clear and concise recommendations based on grounded technical work. With the extension, the Study's final report is due to the IJC in January of 2021.

The Study Board and its technical team have recently completed Phase 2 of its scenario modeling. Phase 2 included twelve modeled scenarios which were presented to the Study Board's Resource and Agency Advisory Group (RAAG) and the IJC's Public Advisory Group (PAG). Phase 2 is the second of five modeling phases that will eventually lead to the Study Board's recommendation to the U.S. and Canadian Governments. Phase 2 scenarios were meant to test certain parameters of the system so that the technical team could learn crucial information about the system's constraints.

The Study Board and its technical team have recently begun developing Phase 3 modeling scenarios and will meet in St. Paul, Minnesota on the week of July 22nd to discuss preliminary outputs. Following the St. Paul meeting, the Study Board's Plan Formulation Committee will meet at the North Dakota State Water Commission on August 6-8. Changes made to the Phase 3 scenarios and paths forward for modeling Phase 4 alternatives will be discussed at this meeting.

The Study Board continues to engage with members of the First Nations, Metis, and Tribes. The Study Board is planning a joint workshop this fall for First Nations, Metis, and Tribes in Canada and the United States. This workshop will most likely take place the first week of November at the International Peace Gardens.

GE:CK:ph/1974/2122

NORTH Dakota | Water Commission
Be Legendary.™

MEMORANDUM

TO: Governor Doug Burgum
Members of the State Water Commission
FROM: Garland Erbele, P.E., Chief Engineer - Secretary
SUBJECT: SWPP – Award of Contract 2019-1 Blowoff Upgrades Contract
DATE: July 22, 2019

Southwest Pipeline Project (SWPP) Contract 2019-1, includes removing and replacing five existing blowoff manholes along with associated piping, furnishing and installing one butterfly valve in an existing blowoff manhole, complete with piping, valves, site work, cathodic protection and other appurtenant items. This project is necessary because of the raw water pump station upgrades. The substantial completion date of the pump station upgrades contract is March 30, 2020. The substantial completion date of the Contract 2019-1, Blowoff upgrades contract is May 31, 2020.

The estimated construction cost of this contract is $225,000. The estimated project cost is $300,000 which includes design, construction and contingency each at 10 percent. This contract will be funded from the 2017-2019 biennium allocation to the SWPP.

It was our intention to open bids before the August 9th Commission meeting, but the deadline for advertisement was missed. This contract is currently advertised for bids with a bid opening of August 13, 2019.

I recommend the State Water Commission authorize the Chief Engineer-Secretary to award Contract 2019-1 to the lowest responsible bidder contingent upon the consultant engineer's recommendation and legal review of the Contract Documents by our legal counsel.

GE:SSP:pdh/1736-99

APPENDIX V

M E M O R A N D U M

TO: Governor Doug Burgum
State Water Commission
CC: State Engineer Garland Erbele
FROM: Jennifer Verleger, Assistant Attorney General
SUBJECT: State Water Commission Litigation Update
DATE: July 31, 2019

STATE WATER COMMISSION LITIGATION

Case: **Manitoba v. Norton**
Date Filed: **October 21, 2002**
Court: **U.S. District Court for the District of Columbia**
Attorney: **Jen Verleger/Nessa Horewitch, SAAG (Beveridge and Diamond)**

Consolidated With

Case: **Missouri v. Salazar**
Date Filed: **February 2009**
Court: **U.S. District Court for the District of Columbia, Case #1:02-cv-02057**
D.C. Circuit Court of Appeals, Govt. of the Province Manitoba, et al. v. Sally Jewell, et al - Case #16-5203
D.C. Circuit Court of Appeals, Govt. of the Province Manitoba, et al. v. Ryan Zinke, et al - Case #17-5241 (Consolidation with #17-5242)

Judge: **Rosemary Collyer (U.S. District Court for the District of Columbia)**
Henderson, Rogers, and Srinivasan (D.C. Circuit Court of Appeals)
Opposing Counsel: **Missouri Attorney General's Office**

Issues: Manitoba asserts that the U.S. Bureau of Reclamation violated NEPA by failing to prepare an environmental impact statement for the Northwest Area Waters Supply Project ("NAWS"), a project designed to bring Missouri River water to North Central North Dakota. Manitoba is concerned that the project will bring Missouri River Basin biota to and harm the environment of the Hudson Bay Basin. Missouri intervened in the case alleging harm from depletions to the Missouri River.

Current Status: WE WON! Missouri has until August 1, 2019, to appeal to the U.S. Supreme Court. I'll update you at the meeting. If no appeal, the case will be removed from the next report.

Case: **Olander Contracting Co. v. North Dakota State Water Commission and Tank Connection, LLC**
Date Filed: **October 7, 2016**
Court: **Burleigh County District Court (08-2018-CV-02679)**

Attorneys:	**Jennifer Verleger**
Opposing Counsel:	**Matthew Collins (Olander)** **Randy Bakke and Brad Wiederholt (Tank Connection)**
Issues:	The State Water Commission entered into a contract with Olander for the Southwest Pipeline Project, New Hradec tank project. The project was not completed within the contract time. Claims are over payments and liquidated damages.
Current Status:	All parties reached settlement during mediation. State retained liquidated damages in an amount to cover additional hard costs incurred by the delays.
Next Steps:	Final dismissal submitted to court and case is dismissed. Will be removed from next report.

M E M O R A N D U M

TO: Governor Doug Burgum
State Water Commission
CC: State Engineer Garland Erbele
FROM: Jennifer Verleger, Assistant Attorney General
SUBJECT: Office of the State Engineer Litigation Update
DATE: July 31, 2019

OFFICE OF THE STATE ENGINEER LITIGATION

Case: **Whiting Oil and Gas Corporation v. Arlen A. Dean, et. al. (27-2016-CV-00040)**
Date Filed: **January 25, 2016**
Court: **McKenzie County District Court**
Judge: **Robin Schmidt**
Attorney: **Jennifer Verleger (OSE)**
Dave Garner (Land Board)
Opposing Counsel: **Paul Forster, Shane Hanson**
Kevin Chapman
Bruce Selinger
Peter Morowski
Lawrence Bender
Shane Hanson
Numerous pro se defendants

Issues: Whiting filed an interpleader for the lands underlying a spacing unit located near the Montana border for which the Yellowstone River runs through. Whiting is requesting the Court determine the property interests for the spacing unit so that Whiting can correctly distribute the proceeds from the well located in the unit. There are islands contained within the river for which Whiting is unable to determine ownership.

Current Status: The State Engineer is currently conducting work with a geomorphologist. The State Engineer has initiated a separate suit (see *Leland, et al.*) regarding the surface estate for these lands, with the intention of consolidating the two lawsuits once everyone has been served and answered.

Next Step: State Engineer needs to file a motion with the court to amend its original answer to provide more specificity about its claims. Need to consolidate with *Leland* case.

Case: **State of N.D. ex. rel. N.D. State Engineer v. Leland, et al. (27-2019-CV-00312)**
Date Filed: **July 10, 2019**
Court: **McKenzie County District Court**
Judge: **Robin Schmidt**
Attorney: **Jennifer Verleger (OSE)**
Opposing Counsel: **Kevin Chapman**
Unknown at this time

Issues: **See Whiting Oil case.**

Current Status: **The Summons and Complaint have been served on most of the parties. Still trying to find a couple parties. Publication in newspaper almost complete. Waiting for answers to be filed. Extension to answer granted until August 30 for some parties.**

Next Step: **State Engineer needs to file a motion for consolidation with Whiting case once all parties have entered an appearance and answered. State also received a counterclaim that it will need to answer.**

Case: **William S. Wilkinson, et. al. v. Board of University & School Lands, Brigham Oil & Gas, LLP; EOG Resources, Inc. (53-2012-CV-00038)**
Date Filed: **January 2012**
Court: **Williams County District Court**
Judge: **Paul Jacobson**
Attorney: **Jennifer Verleger (OSE)**
Dave Garner (Land Board)
Opposing Counsel: **Josh Swanson/Rob Stock (Wilkinson)**
Lawrence Bender (EOG)
Lyle Kirmis/John Ward (Statoil)
Michael Mazzone (XTO)

Issues: Plaintiffs claim interests in a tract of land in Williams County that borders the Missouri River. The Plaintiffs filed this as a quiet title action to determine the ownership of the minerals underlying the shorezones in the tract. Both the Land Board and the Plaintiffs have issued oil and gas leases for the shorezone acreage to three separate oil companies, two of which were named as defendants.

The State Engineer claims an interest in the surface ownership (and regulatory authority) and all minerals except oil, gas, and other hydrocarbons below the ordinary high water mark.

Current

Status: This case is pending before the district court after a remand from the N.D. Supreme Court. The Supreme Court remanded based on two issues: 1) "for the district court to determine whether N.D.C.C. ch. 61-33.1 applies and governs ownership of the minerals at issue in this case," and 2) if the district court decides the State owns the Disputed Minerals, it must reconsider whether there has been a taking.

The Plaintiffs have filed a Summary Judgment motion. A hearing on the motion was held July 30, 2019.

Next Steps: Waiting for a decision.

The below cases have had no status change since the previous update.

Case: **Whitetail Wave LLC v. XTO Energy, Inc.; the Board of University and School Lands; and the State of North Dakota (27-2015-CV-00164)**
Date Filed: **June 4, 2015**
Court: **McKenzie County District Court**
Judge: **Robin Schmidt**
Attorney: **Jennifer Verleger (OSE)**
Dave Garner (Land Board)
Opposing Counsel: **Christopher Sweeney (Whitetail Wave)**
Lawrence Bender (XTO Energy)

Issues: This case is challenging the State's determination of the OHWM, but the tract is located on the east side of the Highway 85 Bridge where the Department has currently leased only the historic channel of the Missouri River. The Plaintiffs are requesting that title to the minerals be quieted and have alleged claims of Unconstitutional takings, trespass, slander of title and constructive trust/unjust enrichment against the State. The complaint also makes a number of claims against XTO individually.

The State Engineer claims an interest in the surface ownership (and regulatory authority) and all minerals except oil, gas, and other hydrocarbons below the ordinary high water mark. The State Engineer has never delineated the ordinary high water mark in this location.

Current Status: This case is before the district court, but stayed pending a final determination in the *Sorum v. State* litigation.

Next Steps: Provide a status update to the court upon final resolution of *Sorum v. State*.

Case: **Mary K. Starin, as Personal Representative of the Estate of Bruno Herman Weyrauch v. Kelly Schmidt, et. al. (53-2015-CV-00986)**
Date Filed: **August 17, 2015**
Court: **Williams County District Court**
Judge: **David Nelson**
Attorney: **Jennifer Verleger (OSE)**
Dave Garner (Land Board)
Opposing Counsel: **Dennis Johnson (Weyrauch)**

Issues: The Plaintiffs filed this quiet title action to clear title to the minerals on a tract of land located east of the Highway 85 Bridge that is currently inundated by Lake Sakakawea.

The State Engineer claims an interest in the surface ownership (and regulatory authority) and all minerals except oil, gas, and other hydrocarbons below the ordinary high water mark. The State Engineer has never delineated the ordinary high water mark in this location.

Current Status: This case is before the district court, but stayed pending a final determination in the *Sorum v. State* litigation.

Next Steps: Provide a status update to the court upon final resolution of *Sorum v. State.*

Case: **North Dakota Office of the State Engineer and North Dakota Board of University and School Lands v. Bureau of Land Management**
Date Filed: **April 25, 2016**
Court: **US DOI Board of Land Appeals (IBLA)**
Attorney: **Charles Carvell, Jennifer Verleger, Dave Garner**
Opposing Counsel: **Unknown**

Current Status: In 2014, the Bureau of Land Management resurveyed land along the Missouri River to locate the boundary between public domain land owned by the United States and the riverbed owned by the State of North Dakota. The boundary between riparian land and the riverbed is the ordinary high watermark. The Office of State Engineer and Board of University and School Lands appealed the decision of the Bureau of Land Management to officially file the Supplemental Plats of Survey posted and described in the Federal Register on July 8, 2014. The land is located in Fifth Principal Meridian, Township 154 North, Range 98 West. A Statement of Reasons was filed in June 2016. In July 2018, the IBLA indicated that a panel has not yet been assigned to the case and that we are at least a year away from any work on the case.

Next Steps: Waiting to hear from IBLA. We were contacted by opposing counsel asking if we would be interested in staying the case in light of other on-going similar disputes. We declined and asked that the case move forward.