State Water Commission (SWC) Meeting
SWC Building (SWC staff only)
900 E. Boulevard Ave.
Bismarck, North Dakota
February 11, 2021 – 1:00 p.m. CT

Please join meeting from your computer, tablet or smartphone.
https://global.gotomeeting.com/join/113829749
You can also dial in using your phone.
(Toll Free): 1-877-309-2073; Access Code: 113-829-749

AGENDA

A. Roll Call (**no attachment**)

B. Consideration of Agenda (**no attachment**)

C. **Consideration of Minutes** **
   1. **Draft Minutes for November 30, 2020, Finance, Planning, and Budget Meeting**
   2. **Draft Minutes for December 11, 2020, State Water Commission Meeting**

D. SWC Financial Reports
   1. Purpose Funding Summary
   2. Line of Credit–Northwest Area Water Supply (NAWS) Biota Water Treatment Plant (**no attachment**)
   3. Legislative Intent - $82.1M (**no attachment**)
   4. **Ag PACE** **

E. **Cost-Share Policy Revisions** **

F. Cost-Share Requests

Flood Control and General Water

   1. **Lower Heart River Water Resource District: Mandan Lower Heart Flood Risk Reduction - $0** **
   2. **Walsh County Water Resource District: Walsh County Drain 31 Improvements - $0** **
   3. **Southeast Cass Water Resource District: Drain 40 Channel Improvements - $0** **

Water Supply

   4. **Southeast Water Users District: West System Water Supply Feasibility Study - $150,000** **
   5. **Walsh Rural Water District: Service to Drayton Phase 2 - $3,256,100** **
   6. **East Central Regional Water District: Service to Grandin and Cass RWD - $90,000** **
   7. **Western Area Water Supply: Phase 6 - $6,989,500** **
   8. **Killdeer: HWBL Water Expansion - $75,000** **
   9. **Bowbells: Watermain Improvements 2020 - $22,800** **
   10. **Horace: District 2020-06 Water System Improvements - $150,000** **
   11. **Horace: District 2020-07 Connection to Cass RWD - $75,750** **
   12. **Williston: Williston Square Watermain - $280,100** **
   13. **Cavalier: Water Tower Replacement Change of Scope - $878,500** **
   14. **Red River Valley Water Supply - $2,750,000** **

G. **Four-Year Progress Reports** **

H. Federal MR&I Water Supply Program - Five-Year Plan FY2021-2025 (updated)

I. **NAWS Contract 7-2A/4-1A Award** **

J. Southwest Pipeline Project (SWPP)
   1. Strategic Hydraulic Improvement Projects – Design and Construction
   2. **Contract 1-2A – Supplementary Raw Water Intake – Change Order No. 8** **

K. Strategic Governance and Finance Study Update

L. Legislative/Session Update

M. Legal Updates (**Informational Only – no presentations**)

N. Project Updates (**Informational Only – no presentations**)
   1. Devils Lake
   2. Missouri River
   3. Mouse River
   4. NAWS
   5. SWPP

O. Adjourn

**** BOLD ITEMS REQUIRE SWC ACTION**

MINUTES

North Dakota State Water Commission
Bismarck, North Dakota

February 11, 2021

The North Dakota State Water Commission (SWC or Commission) held a meeting via telephone conference on February 11, 2021. Governor Burgum called the meeting to order at 1:01 p.m. A quorum was present.

STATE WATER COMMISSION MEMBERS PRESENT:
Governor Burgum, Chairman
Tom Bodine, Deputy Commissioner, ND Department of Agriculture, Bismarck (left call at 2:40 p.m., returned at 5:15 p.m.)
Michael Anderson, Hillsboro
Katie Hemmer, Jamestown (left call at 4:50 p.m.)
Richard Johnson, Devils Lake
Mark Owan, Williston
Matthew Pedersen, Valley City
Jay Volk, Bismarck
Steven Schneider, Dickinson
Jason Zimmerman, Minot

OTHERS PRESENT:
John Paczkowski, Interim State Engineer, and Chief Engineer-Secretary
SWC Staff
Jennifer Verleger, General Counsel, Attorney General's Office
Approximately 125 people interested in agenda items.

CONSIDERATION OF AGENDA

The agenda for the February 11, 2021, SWC meeting was approved as presented.

CONSIDERATION OF DRAFT MEETING MINUTES

The draft minutes for the November 30, 2020, subcommittee meeting were reviewed. The minutes were approved with no modifications.

> **It was moved by Commissioner Owan, seconded by Commissioner Johnson, and unanimously carried, that the minutes for the November 30, 2020, subcommittee meeting be approved as presented. Governor Burgum abstained from vote for non-attendance.**

The draft minutes for the December 11, 2020, meeting were reviewed. The minutes were approved with no modifications.

> **It was moved by Commissioner Hemmer, seconded by Commissioner Anderson, and unanimously carried, that the minutes for the December 11, 2020, meeting be approved as presented.**

SWC FINANCIAL REPORTS

The allocated program expenditures, financial reports, and supplemental financial spreadsheets were presented by Heide Delorme, Administrative Services Director (**APPENDIX A**). The oil extraction tax deposits into the Resources Trust Fund (RTF) total $237.6M through February 2021. The revised revenue for the 2019-21 biennium is $288.3M, which is $145M below the original projected revenue for the biennium.

Heide stated that House Bill 1431 (bonding bill) was introduced. If the bonding bill is passed through the Senate, current SWC Legislative intent funds for the Fargo Metro Flood Diversion and Mouse River Enhanced Flood Protection in the amount of $55.5M could be removed from SWC's Legislative intent balance.

PURPOSE FUNDING SUMMARY

Jeffrey Mattern, SWC Engineer Manager, presented the Purpose Funding Summary, provided in Appendix A, for discussion regarding remaining appropriations available along with capital assets for Northwest Area Water Supply (NAWS) and Southwest Pipeline Project (SWPP).

Governor Burgum asked Jeffrey to clarify the totals in the remaining appropriation and Legislative intent funds. Jeffrey stated that the remaining appropriation is the balance of authority, which contains the projects with intent included in the Commission appropriations bill, Senate Bill 2020. After the Commission approves project funds from each funding category, the totals are reduced. There were no further questions.

LINE OF CREDIT – NORTHWEST AREA WATER SUPPLY BIOTA TREATMENT PLANT

John Paczkowski, Interim State Engineer, and Tim Freije, Northwest Area Water Supply (NAWS) Project Manager, provided clarification on the $75M line of credit issued to the SWC for the NAWS Biota Treatment Plant (NAWS BTP). Senate Bill 2020 included a $75M line of credit from the Bank of North Dakota (BND). John specifically wanted to clarify what the $75M line of credit could be used for. A letter of clarity was requested and received from Legislative Management stating the line of credit was to be used for the NAWS project. The 2021-23 House Appropriation – Education and Environment Division (Division) hearings further clarified that concept, and if utilized, the line of credit will be paid back with funds received from the federal Municipal, Rural, and Industrial (MR&I) program. If federal MR&I funds are not received, there may be future funding obligations of the Commission to pay back the line of credit.

Governor Burgum stated that the line of credit was issued in order to be utilized as a type of construction loan for flexibility and cash management purposes, and to provide funding prior to the actual federal MR&I funds becoming available. John concurred.

At the request of Commissioner Hemmer, John clarified that as of the end of 2020, approximately $82M of federal MR&I funds were available. Full build out of NAWS federal cost was approximately $145M. If the NAWS BTP Phase 3 is not needed, the NAWS costs would be approximately $123M. Currently, the balance of the federal MR&I funds is not enough to cover all eligible costs for completion of the NAWS project.

John also clarified that current NAWS project expenses are paid with carryover funds. If line of credit funds are needed for the NAWS BTP, it will be dependent upon whether or not a) the Commission awards a contract, and b) how quickly construction begins. John also stated that it would be beneficial to utilize the approved MR&I funds to the full extent possible and as funds

are reimbursed to the SWC, this will alleviate the need to utilize the line of credit and avoid paying interest on a loan. Any balance due would be funded through the RTF.

Commissioner Owan stated that in the proposed federal MR&I Five-Year Plan, the federal MR&I funds were not utilized for NAWS Phase 1, indicating it is non-federal, and the state would need to fund this portion. John stated this was due to direction given by the Commissioners to staff at the January 2021 subcommittee meeting. At that time, Commissioners indicated they would prefer not to spend any federal MR&I funds for expenses related to the NAWS BTP, but rather spend on other expenses related to the NAWS project. Ultimately, the Commission needs to decide whether state RTF or federal MR&I funds are utilized first for funding.

Commissioner Hemmer stated that there were more expenses this biennium for the NAWS project than federal MR&I funds available. In order for the Commission to continue to fund the project, the line of credit needs to be utilized in order to move forward with non-NAWS BTP projects, and to receive reimbursement for those projects. The Commission needs to submit those under the MR&I program. Commissioner Hemmer asked for confirmation that when the contract was awarded for the NAWS BTP, that it was clear that the line of credit would be utilized, or the MR&I funds would not be available for other NAWS project components. John agreed that yes, the line of credit needed to be used to award the contract, but until such time as project costs are reimbursed, the line of credit would not need to be used.

Tim Freije clarified that the two current pipeline contracts are funded at 65 percent from federal MR&I funds. The Lansford Reservoir and Pump Station is funded at 65 percent from the RTF carryover. At the January 2021 subcommittee meeting, the Commission provided direction to only use the line of credit for the NAWS BTP expenses. Tim stated that it is quite possible to fund the NAWS project this biennium and next biennium with cash flow from the construction of the NAWS BTP with MR&I funding, however, unless we have $64M, we have to have the line of credit available to award the contract to avoid committing unappropriated funds. Tim also stated that there was approximately $40M of federal MR&I funds allocated for eligible NAWS expenses.

Commissioner Hemmer stated that since further clarification has been received regarding federal MR&I funds available, the current federal MR&I spreadsheet needs to be changed accordingly, showing that federal MR&I funding could be used for any NAWS components to minimize loan-related costs incurred through the line of credit. John stated this would be completed.

Governor Burgum requested the final projection of the NAWS project costs being reimbursed by the state RTF versus federal MR&I funds. Tim indicated he would prepare and send the information. Governor Burgum also stated that the Commission has approximately $200M cash available in appropriations given from prior biennia that has not been utilized. With dropping interest rates, the Commission is only making 0.25 percent on loaned funds. Interest due on the line of credit would be 1.753 percent which is higher than what the Commission is making on loaned funds. Governor Burgum noted that the state, as a whole, is reviewing current cash management opportunities to better utilize tax dollars and fund future state projects.

John clarified that the line of credit is $75M and will expire June 30, 2021, and the line of credit will need to be authorized for the 2021-2023 biennium. House Bill 1020 does include the line of credit.

LEGISLATIVE INTENT FUNDING

John Paczkowski reiterated that of the remaining $83M of Legislative intent funding, $79.3 is allocated to the RRVWSP, Fargo Metro Flood Diversion, and Mouse River Enhanced Flood Protection.

If the bonding bill is passed through the Senate, current SWC Legislative intent funds for the amount of $55.5M could be removed from SWC's Legislative intent balance for the Fargo Metro Flood Diversion and Mouse River Enhanced Flood Protection projects. There were no further questions.

John also clarified that the Garrison Diversion Conservancy District (GDCD) recently submitted a revised request for cost-share in the amount of $2.75M which reduced the overall Legislative intent balance for the Red River Valley Water Supply Project (RRVWSP).

AG PACE

Heide Delorme submitted a request for an additional $200,000 to 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 North Dakota 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 that wish 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 2013-15 biennium, when the balance of the fund was at $21,312 and an additional $150,000 was authorized in August 2019 when the balance was $30,000. The SWC has approved $162,467 to-date in the 2019-21 biennium. The balance is now $18,000, and additional funds are needed to continue the program.

There were no questions, and the following motion was made:

> **It was moved by Commissioner Owan and seconded by Commissioner Johnson the Commission approve $200,000 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, Volk, Zimmerman, Bodine, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

COST-SHARE POLICY REVISIONS

Pat Fridgen, Planning and Education Division Director, presented proposed language to revise the current *Project Funding Policy, Procedure, and General Requirements* related to modification of the timeframe for project progress reports, and implementation of a two-tiered process for project approvals (**APPENDIX B**). The revisions were discussed at the January 2021 joint subcommittee meeting. Both concepts were proposed in part to address the agency's ongoing challenges with project funding carryover from year-to-year, and biennium-to-biennium.

Currently, project sponsors are required to provide a progress report to the Commission at least every four years if the term of the project exceeds four years. Commissioners suggested that a two-year requirement, instead of the current four-year requirement, would make sponsors more accountable to the schedules they present as part of their applications for cost-share. The two-year review timeframe would also allow for more frequent consideration of reasons for project delays, and if agreement extensions are warranted.

The concept of a two-tiered process for cost-share approvals was also discussed. Under this scenario, project sponsors would first come to the Commission for consideration of pre-construction costs, followed by consideration of construction-related cost-share after completion of pre-construction activities – including plans and specifications for bidding project construction. This would help address situations where funding for pre-construction and construction are approved together, but are subsequently not spent because projects run into obstacles prior to the bidding process.

Commissioners discussed the possibility of decreasing needed time to complete projects during construction season, the need to begin a process to alleviate carryover funds, and concerns of added work for the SWC staff to complete the additional review of cost-share requests. Pat stated the additional work would be completed by amending agreements and staff supported the revisions.

There was no further discussion, and the following motion was made:

> **It was moved by Commissioner Hemmer and seconded by Commissioner Owan the Commission approve the attached modifications (APPENDIX B) to the *Project Funding Policy, Procedure, and General Requirements* related to two-year progress reports and a two-tiered approval process and become effective immediately.**
>
> **Commissioners Anderson, Hemmer, Owan, Pedersen, Schneider, Volk, Zimmerman, Bodine, and Governor Burgum voted aye. Commissioner Johnson voted nay. The motion carried.**

STATE COST-SHARE REQUESTS

FLOOD CONTROL AND GENERAL WATER PROJECTS

Julie Prescott, Cost-Share Program Manager, presented project sponsors' Flood Control and General Water Projects.

LOWER HEART RIVER WATER RESOURCES DISTRICT: MANDAN LOWER HEART FLOOD RISK REDUCTION - $9,317,174 (SWC Project No. 2131)

The Lower Heart River Water Resource District requested cost-share for construction of their Mandan Lower Heart Flood Risk Reduction project. The purpose of the project is to bring the Mandan and Lower Unit levee system segments into FEMA compliant status, providing economic relief from required flood insurance, improving the long-term resiliency of the system, and providing flood protection to Mandan.

Cost-share funding in the amount of $1,200,000 was approved by the Commission in October 2020 for preliminary engineering of the levee system, to include design and work toward

obtaining a Conditional Letter of Map Revision (CLOMR) for the project. The current request is for the levee system construction phase and will include a levee raise, interior drainage improvements, and flood wall replacement.

Two economic analyses were performed for the project, based on differing assumptions concerning the number of protected properties, and returned benefit-to-cost ratios of 0.0 and 13.1. In the future, when the Commission considers results of an Economic Analysis (EA) in cases when non-compliant flood control works are in place, there are two ways that EA could be considered: 1) the existing works are considered to offer their current level of protection, and new benefits are only attributed to improvements; and 2) the improvements are considered a continuation of the original flood control works, and current levels of protection offer no benefits. This is the reason for two benefit-to-cost ratios being presented.

The construction phase includes engineering and construction costs. The total cost of the construction phase is $17,922,373, of which $15,528,623 is eligible for cost-share as a flood control project. The sponsor is requesting a cost-share of $9,317,174, which is 60 percent of eligible costs. The recommendation was to defer funding until the CLOMR associated with this project has been issued by FEMA.

Governor Burgum inquired as to how not having the required CLOMR impacted the recommendation to defer until received. John Paczkowski stated that project funds may be held until federal requirements are met by project sponsors, and the SWC requires communities to receive the CLOMR prior to a request for cost-share.

Commissioner Volk suggested the SWC continue to monitor the benefit-to-cost ratio to evaluate how additional federal regulations and change of scopes may change the actual cost of the project. Governor Burgum agreed and requested that SWC staff monitor as needed with all projects.

The following motion was made:

> **It was moved by Commissioner Zimmerman and seconded by Commissioner Owan the Commission approve the request from the Lower Heart River Water Resource District concerning the Mandan Lower Heart Flood Risk Reduction project be deferred until the CLOMR associated with the project has been issued.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, Bodine, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

WALSH COUNTY WATER RESOURCE DISTRICT: WALSH COUNTY DRAIN 31 IMPROVEMENTS - $340,773
(SWC Project No. 1975)

The Walsh County Water Resource District (Walsh County) requested cost-share for the Drain 31 Improvements project. The purpose of the project is to deepen the drain and provide a uniform grade line. The improvements will enhance drainage benefits along the drain and address erosion and sedimentation issues.

An economic analysis completed for the project has returned a benefit-to-cost ratio of 1.8. The total cost of the project is $858,808, of which $757,274 is eligible for cost-share at 45 percent of

eligible costs as a water conveyance rural flood control project. The cost-share amount would be $340,773.

Based on Attorney General Letter Opinion 2020-L-04 (Opinion), the activities to be performed under this project are considered to be maintenance and are ineligible for cost-share under the current statute. The recommendation was to defer the request.

Zach Herrmann, Houston Engineering, stated Walsh County considers the project an improvement project, not a maintenance project. Governor Burgum asked how SWC staff determined this as a maintenance project, and stated the SWC recommendation was at odds with the project sponsor. Pat Fridgen stated that similar projects were discussed at the October Commission meeting in the context of how they relate to the Opinion. At that time, it was determined the Commission would consider improvement projects involving deepening and widening as maintenance projects. Also, as mandated in NDCC 61-02-01.4, the Commission should not be paying for regular maintenance.

Commissioner Hemmer asked Jennifer Verleger, Assistant Attorney General, to clarify if the maintenance referenced in the Opinion is intended to be used in a very broad interpretation to include extraordinary maintenance and improvements, or if there is a narrower definition to allow improvement projects. Jennifer stated maintenance is referenced in the Opinion as a very broad term that applies to the general maintenance of projects. Further, Century Code does not specify extraordinary maintenance as opposed to regular maintenance, or any specific category of maintenance. Currently, regular maintenance is not allowed under the statute.

Commissioner Hemmer inquired if the Commission should consider requesting an opinion from the Attorney General to clearly determine if the Commission was allowed to fund extraordinary maintenance projects defined in SWC policy, but not defined in Century Code. Jennifer stated that because of the previous Attorney General's opinion on this topic, and the core wording in other statutes, it is very difficult to separate the issues and resolve in one cohesive area. Jennifer stated this would need to be corrected in Century Code.

Commissioner Hemmer also asked for an update on Senate Bill 2208 introduced to address this issue. Jennifer stated that it is her understanding the bill is now considered a study and no changes will be implemented this Legislative session. This may make it difficult for the Commission to fund drainage deepening and widenting projects for the next two years.

Commissioner Anderson stated these legal drains are very important for farm drainage and the farmland in eastern North Dakota, and he would like to obtain clarity regarding the issue to help the Commission determine this project and similar projects in the future. If this particular project was proposed through petition, voted on as an improvement/reconstruction project, and passed, Commissioner Anderson stated that it should supersede any maintenance aspect, and allow it to be considered. Commissioner Anderson feels it is important to clarify as it relates to all water districts with this issue related to future cost-share requests. A determination and consistency is needed.

Deputy Commissioner Bodine inquired 1) if, based on the current Opinion, there was any kind of project involving any improvements that would qualify under the current statute and policy as it relates to the Opinion on maintenance, and 2) is there any cost-share policy that would cover these types of projects in the future, and if there are additional projects to consider. Jennifer stated she does not know if there will be other projects impacted by the Opinion. Part of the issue is the result of the previous Attorney General's opinion from 1997, which stated deepening and widening is included in the broad use of the term "maintenance." To the regulatory aspect,

deepening and widening is not considered maintenance, and a regulatory drainage permit would be needed to complete the project. If the Commission wanted to consider these projects from this perspective, then it would not be considered a maintenance project, but a permit would be needed. Jennifer stated the issue is two-fold. Sponsors tend to not want to get permits and indicate projects are maintenance to obtain cost-share funds when in fact they are not maintenance, which then conflicts with outcomes that sponsors want on projects.

Commissioner Anderson asked if Walsh County was utilizing a maintenance levy on the existing drain or if there was a special assessment vote to proceed with the project as reconstruction. Zach Herrmann stated the project was funded through special assessment and the vote passed 56 to 44 in favor.

Kurt Lysne, Moore Engineering, asked to provide information related to the Southeast Cass Water Resource District project, which had similar issues. Governor Burgum asked that the project be presented in order to address the maintenance issues related to both projects.

SOUTHEAST CASS WATER RESOURCE DISTRICT: DRAIN 40 CHANNEL IMPROVEMENTS - $258,906
(SWC Project No. 1090)

The Southeast Cass Water Resource District (Southeast) requested cost-share for the Drain 40 Channel Improvements project. The purpose of the project is to address slope failures and channel bottom erosion that have occurred to Drain 40. Side slopes will also be flattened to provide additional capacity.

An economic analysis completed for the project returned a benefit-to-cost ratio of 4.132. The total cost of this project is $972,185, of which $961,685 is eligible for cost-share at 45 percent of eligible costs as a water conveyance rural flood control project. The watershed drained by this project is 64.3 percent rural, and cost-share would be reduced accordingly to 29 percent for an amount of $278,264. The sponsor requested cost-share of $258,906. The local share will come from the maintenance fund of the existing assessment district, formed in 1971.

Based on the Opinion, the activities to be performed under this project are considered to be maintenance and are ineligible for cost-share under the current statute. The recommendation was to defer the cost-share request.

Kurt Lysne stated that Southeast considers this an extraordinary maintenance project. According to their interpretation of SWC policy and NDCC 61-02-14(j), the Commission is to fund construction establishment and extraordinary maintenance of public works. The project was designed to enhance and extend the life of an existing drain and drainage permits were issued. For all cost-share requests related to extraordinary maintenance or improvement projects, a sediment analysis is also required. The definition of regular maintenance is defined in cost-share policy to include “normal repairs, general upkeep of facilities to allow them to continue proper function.” Also, regular maintenance continues on a regular or annual basis. Southeast feels that re-grading and re-shaping the channel is not a regular occurrence. This work is designed to extend the life of the facility which aligns with the definition of extraordinary maintenance. Southeast also interprets that the Opinion determines how local water resource districts can use their maintenance levy, not necessarily SWC cost-share policy. Southeast feels very strongly that this project is eligible for Commission funding.

Dan Jacobson, Southeast Chairman, stated Southeast feels that if funding is not supported for the Walsh County and Southeast projects, the Commission, in turn, does not support ag drainage in North Dakota which is very important for the state.

Pat Fridgen reiterated the Opinion and similar projects were discussed at the October Commission meeting. At that time, it was determined the Commission would consider improvement projects involving deepening and widening as maintenance projects, and regular maintenance is not eligible for cost-share reimbursement under NDCC 61-02-01.4. This specific question was asked of the Water Commission's attorney in October, and at that time, the Commission was advised that the funding of drainage channel deepening and widening projects could be in conflict with Century Code. Therefore, those types of projects should be deferred until there is clarity provided in state statute.

Deputy Commissioner Bodine asked if these projects can be labeled as extraordinary maintenance projects, and what prohibits this categorization. Pat Fridgen reiterated that the Opinion refers to "maintenance" which is a broad term, and during the October meeting discussions, SWC staff asked for guidance on how to fund the projects. At that time, it was determined the projects would be considered maintenance. Pat also stated this was a legal question and he was not able to further answer. Jennifer Verleger stated that the Attorney General Letter Opinion 97-F-09 specifically states that deepening and widening is included within the term of maintenance, and this definition ties to the recent Attorney General Letter Opinion 2020-L-04.

Governor Burgum asked if there was any discussion to work on a policy bill with current legislation and legislators to clarify the SWC cost-share policy and introduce a bill to add this clarification in Century Code. The definitions for regular maintenance, extraordinary maintenance, and improvements would no longer be ambiguous. Jennifer Verleger stated Senate Bill 2208 was introduced which was an overall drainage bill, but there was not a specific bill introduced to address the definitions. Senate Bill 2208 has passed as a study to review various issues related to this topic.

Governor Burgum suggested that in order to remedy the current issues related to definitions and the current Opinion, changes to Century Code would be needed, and correlated with the current Legislative session. Deputy Commissioner Bodine agreed that if there was an opportunity to add clarity during this Legislative session, and there may be other avenues to introduce the language not related to Senate Bill 2208. This would allow clarity for staff and those that depend on cost-share for drainage projects.

Governor Burgum stated the Governor's office, along with Deputy Commissioner Bodine and Commissioner Goehring, would coordinate efforts to work with the Commission and SWC staff to alleviate ambiguity and bring forth clarity through possible legislation.

There was discussion regarding why the recommendations were made to deny these particular cost-share requests based on the recent Opinion. Recently, state agencies and personnel have had to seek legal counsel in order to defend and perform routine work duties and scope of work when determining legislation and legislative intent. There was legislation introduced to alleviate this risk to state agencies and personnel.

Dan Jacobson stated that extraordinary maintenance projects have been funded since 1997. SWC staff were asked to pull cost-share project requests for drain projects from 1997-present, to determine extraordinary maintenance and regular maintenance projects funded in the past.

John Paczkowski clarified that the Commission had not disallowed funding for these projects prior to the recent Opinion, and that these types of projects were covered under SWC policy.

Walsh County and Southeast were encouraged to provide appropriate information in support of the proposed request for Legislation to resolve the issue and for the water districts to work with SWC staff and others to determine adequate language.

The following motion was made:

> **It was moved by Commissioner Hemmer and seconded by Commissioner Anderson the Commission table the Walsh County and Southeast cost-share requests.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

WATER SUPPLY PROJECTS:
Jeffrey Mattern, SWC Engineer Manager, presented Water Supply Projects.

SOUTHEAST WATER USERS DISTRICT: WEST SYSTEM WATER SUPPLY FEASIBILITY STUDY - $150,000
(SWC Project No. 2050SOE)

The Southeast Cass Water Resource District (District) requested cost-share for a feasibility study to explore the options to improve water quality at the District's West Water Treatment Plant which serves members in Dickey, LaMoure, and Logan counties. Currently, there is diminished source water quality, decreased water volume, and additional analysis of the hydraulic capacity is needed.

Several preliminary options have been identified including finding a new location for source water, implementing a pre-treatment process, and partnering with a local water service provider. The study will explore these options to determine which will be the best course for improving the finished water quality while maintaining adequate water output.

The total cost of the study is $200,000 with 75 percent cost-share of $150,000. The District expects to complete the study in May 2021. Once a solution has been identified, the District will request cost-share for the engineering and construction costs of the preferred project.

The project was in the 2019 Water Development Plan and meets requirements of the Commission's cost-share policy for rural water supply projects. The recommendation was to approve the cost-share request.

The following motion was made:

> **It was moved by Commissioner Hemmer and seconded by Commissioner Schneider the Commission approve the request from the Southeast Water Users District for state cost-share participation at 75 percent of eligible costs with the total not to exceed $150,000. The approval is contingent on available funding for the 2019-2021 biennium.**

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.

WALSH RURAL WATER DISTRICT: SERVICE TO DRAYTON PHASE 2 - $3,256,100 (SWC Project No. 2050WAL)

Walsh Rural Water District (District) submitted a cost-share request for construction of the Drayton Water Supply Phase 2 expansion project, which includes providing a replacement water supply to Drayton.

In October 2020, the District was approved for cost-share of $4,713,600 for the construction of Phase 1 and the design of Phase 2. Phase 2 of the project will complete the connection from the District to Northeast Regional Water District, demo the existing storage at Drayton, and add a new water tower for Drayton.

The project's total estimated eligible cost is $10,626,300 with 75 percent cost-share of $7,969,700. The District was previously approved for cost-share of $4,713,600 for Phase 1 construction and Phase 2 design, and is now requesting the additional cost-share of $3,256,100 for Phase 2 construction.

The project was in the 2019 Water Development Plan and meets requirements of the Commission's cost-share policy for rural water supply projects. The recommendation was to approve the cost-share request.

The following motion was made:

It was moved by Commissioner Owan and seconded by Commissioner Pedersen the Commission approve the request from the Walsh Rural Water District for state cost-share participation at 75 percent of eligible costs for the System Service to Drayton Phase 2 for an additional $3,256,100, with the total amount not to exceed $7,969,700. The approval is contingent on available funding for the 2019-2021 biennium.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.

EAST CENTRAL REGIONAL WATER DISTRICT: SERVICE TO GRANDIN AND CASS RURAL WATER DISTRICT - $90,000
(SWC Project No. 2050EAS)

East Central Regional Water District (District) submitted a cost-share request for engineering and construction of a rural water pipeline from the water treatment plant at Hillsboro to Grandin. This project would allow Grandin to regionalize with the District, allow an emergency water supply for Hillsboro, and allow more capacity to rural users.

Several alternatives were presented to address the long-term water supply needs for Grandin. The project's total estimated eligible cost is $1,702,556 with 75 percent cost-share of $1,276,900. Pre-construction costs total $120,000 with 75 percent cost-share of $90,000.

The project was not in the 2019 Water Development Plan but meets requirements of the Commission's cost-share policy for rural water supply projects. The recommendation was to approve the cost-share request.
The following motion was made:

> **It was moved by Commission Pedersen and seconded by Commissioner Schneider the Commission approve the request from East Central Regional Water District for 75 percent state cost-share participation of $90,000. The approval is contingent on available funding for the 2019-2021 biennium.**
>
> **Commissioners Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. Commissioner Anderson abstained. There were no nay votes. The motion carried.**

WESTERN AREA WATER SUPPLY AUTHORITY: PHASE 6 - $6,989,500
(SWC Project No. 1973)

The Western Area Water Supply Authority (WAWSA) requested cost-share on construction costs for the Phase 6 – 29 Mile Rural Distribution project. In June 2019, WAWSA was approved for pre-construction cost-share in the amount of $5,476,000 for several projects. In response to the reduction in expected funding, WAWSA reprioritized their proposed projects, and in October 2020 was approved for construction cost-share in the amount of $9,003,400 for their highest priority projects. The projects completed in Phase 6 will add transmission and distribution pipeline within the region, including rural water systems.

Northwest Rural Water District 29 Mile Rural Distribution
This project is an expansion to serve areas where water resources are limited and generally poor quality. The estimated total cost is $10,026,600. The total eligible cost is $9,901,600 with 75 percent cost-share of $7,426,000. Previous cost-share approval of $436,500 provides an additional cost-share balance of $6,989,500. WAWSA is requested cost-share for the engineering and construction costs of this Phase 6 project for the additional $6,989,500, with total cost-share not to exceed $21,468,900.

The project meets requirements of the Commission's cost-share policy for regional water supply projects. The recommendation was to approve the cost-share request.

After discussion, the following motion was made:

> **It was moved by Commission Zimmerman and seconded by Commissioner Schneider the Commission approve the request from WAWSA for state cost-share participation at 75 percent of eligible costs for the Phase 6 - 29 Mile Rural Distribution Project for an additional amount of $6,989,500, with total cost-share at an amount not to exceed $21,468,900. The approval is contingent on available funding for the 2019-2021 biennium.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

KILLDEER: HWBL WATER EXPANSION - $75,000
(SWC Project No. 325)

Killdeer requested cost-share for the construction of a watermain to meet the water needs of the HBWL industrial subdivision located south of Killdeer. The subdivision is currently served through wells, and the new pipeline would provide a secondary watermain for additional fire flow to a currently served area directly south of the subdivision.

The life cycle cost analysis considered two alternatives. The preferred alternative of extending the pipeline into the HBWL subdivision has a capital cost of $1,228,000 and provides additional fire flows for the existing service area to the south.

The estimated total project cost is $1,228,000, with 60 percent eligible cost-share of $710,000. The local share would be from the City's cash reserves. Pre-construction costs total $124,900, with 60 percent cost-share at $75,000.

The project is not due to be bid for construction until spring 2022, was in the 2019 Water Development Plan, is a moderate priority, and meets requirements of the Commission's cost-share policy for municipal water supply projects. The recommendation was to approve cost-share for pre-construction costs only.

The following motion was made:

> **It was moved by Commissioner Zimmerman and seconded by Commissioner Volk the Commission approve the request from Killdeer for state cost-share participation at 60 percent of eligible pre-construction costs, not to exceed $75,000. The approval is contingent on available funding for the 2019-2021 biennium.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

BOWBELLS: WATERMAIN IMPROVEMENTS 2020 - $22,800
(SWC Project No. 2050BOW)

Bowbells requested cost-share for the addition of a watermain to loop the distribution system, replacement of cast iron piping, and replacement of the water tower riser and riser frost jacket. The distribution system currently has a terminal water line that results in water stagnation and poor water quality.

The life cycle cost analysis considered two alternatives and the preferred alternative was to proceed with the installation of the watermain, replace the piping, and replace the water tower riser and frost jacket. The project has a capital cost of $436,000.

The estimated total eligible cost is $435,565 with 60 percent cost-share of $261,300. Pre-construction costs total $38,000 with 60 percent cost-share of $22,800. The local share would be from the Drinking Water State Revolving Loan Fund.

The project is not due to be bid for construction until spring 2022, was in the 2019 Water Development Plan, is a low priority, and meets requirements of the Commission's cost-share

policy for municipal water supply projects. The recommendation was to approve cost-share for pre-construction costs only.

The following motion was made:

> **It was moved by Commissioner Johnson and seconded by Commissioner Zimmerman the Commission approve the request from Bowbells for state cost-share participation at 60 percent of eligible pre-construction costs, not to exceed $22,800. The approval is contingent on available funding for the 2019-2021 biennium.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

HORACE: DISTRICT 2020-06 WATER SYSTEM IMPROVEMENTS - $150,000 (SWC Project No. 2050HOR)

Horace requested cost-share for a variety of improvements to their distribution system, including complete and partial replacement of gate valves, curb stops, meters, hydrants, and watermain and service lines.

The life cycle cost analysis considered one alternative for the replacement and installation of watermain and appurtenances in the areas that present deficiencies, with partial replacement in areas where a full replacement is not needed. Horace has a separate pending cost-share request for the additional improvements toward regionalization with Cass Rural Water Users District, which supplies water to Horace. The project has a capital cost of $4,696,000.

The total eligible project cost is $4,465,560 with 60 percent cost-share of $2,679,300. Pre-construction costs total $250,000 with 60 percent cost-share of $150,000. The local share would be from the Drinking Water State Revolving Loan Fund.

The project is due to bid for construction in May 2021, was not in the 2019 Water Development Plan, but meets requirements of the Commission's cost-share policy for municipal water supply projects. The recommendation was to approve cost-share for pre-construction costs only.

Commissioner Owan asked if it was common to fund gate valves, curb stops, meters, and hydrants. Jeffrey Mattern stated that the more recent water system improvement requests from municipalities do include several of these components along with pipe.

Jim Dahlman, Interstate Engineering, clarified the use of 6-inch pipe as opposed to 8-inch pipe and that the improvements were being made because the infrastructure is considered end of life for this particular area of the watermain.

Governor Burgum asked if the funding of gate valves, curb stops, meters, and hydrants, etc., should be spelled out in cost-share policy for municipal projects. Jeffrey stated this may apply to overall discussion of aging infrastructure projects in general for municipalities, however, these expenses are funded under rural water projects as well. Jeffrey stated the policy discussion would help define what is considered improvement or replacement for municipal and rural water systems. Currently, only generic descriptions are used for improvements to water systems.

Governor Burgum requested SWC staff to provide more granularity in what is currently funded for these projects to avoid ambiguity related to funding recommendations. Commissioner Owan added that funding these types of items could significantly add to the 10 and 20 year needs to replace aging infrastructure in the state. Governor Burgum agreed and that is another reason to review the definitions and ensure they correlate with funding needs.

After discussion, the following motion was made:

> **It was moved by Commissioner Anderson and seconded by Commissioner Hemmer the Commission approve the request from Horace for state cost-share participation at 60 percent of eligible pre-construction costs, not to exceed $150,000. The approval is contingent on available funding for the 2019-2021 biennium.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

HORACE: DISTRICT 2020-07 CONNECTION TO CASS RURAL WATER USERS DISTRICT - $75,750
(SWC Project No. 2050HOR)

Horace requested cost-share for the installation of a transmission line to connect with Cass Rural Water Users District (CRWUD). The central area of Horace is currently serviced by its own treated water, while the surrounding areas are serviced by CRWUD. The existing water supply is not sufficient to meet the water needs of the projected increased population size and the project will connect the central area with CRWUD for regionalization.

The life cycle cost analysis considered three alternatives and the preferred alternative would connect to CRWUD and includes installation of a meter vault and transmission line connecting current distribution lines.

The total eligible project cost is $1,585,700 with 75 percent cost-share of $1,189,300. Pre-construction costs total $101,000 with 75 percent cost-share of $75,750. The local share would be from the Drinking Water State Revolving Loan Fund.

The project is due to bid for construction in May 2021, was not in the 2019 Water Development Plan but meets requirements of the Commission's cost-share policy for municipal water supply projects. The recommendation was to approve cost-share for pre-construction costs only.

Governor Burgum asked why this project was being considered for cost-share when it was not included in the 2019 Water Development Plan (Plan). Pat Fridgen stated that it was possible the project was not submitted because it was not fully developed or not needed at that time. Also, high priority projects included in the Plan would be funded first, with all projects no matter the priority ranking, allowed to submit projects after the first six-months of biennium.

After discussion, the following motion was made:

> **It was moved by Commissioner Owan and seconded by Commissioner Hemmer the Commission approve the request from Horace for state cost-share participation at 75 percent of eligible pre-construction costs, not to**

exceed $75,750. The approval is contingent on available funding for the 2019-2021 biennium.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.

WILLISTON: WILLISTON SQUARE WATERMAIN - $280,100
(SWC Project No. 2050WLL)

Williston requested cost-share for the extension of watermains to further expand services in the area of the former Sloulin Field Airport. The project is another component of development for which Williston previously received funding for watermains in the area.

The estimated total eligible cost for three additional watermain projects (3rd Avenue, 33rd Street, and 9th Avenue) is $2,185,000 with 60 percent cost-share of $1,311,000. The 3rd Avenue watermain estimated pre-construction and construction total cost is $355,000 with 60 percent cost-share of $213,000. Bids will be opened in March 2021. The 33rd Street and 9th Avenue West watermains will be bid and constructed in 2022, with pre-construction costs of $111,833, and 60 percent cost-share of $67,100. The local share would be from the Drinking Water State Revolving Loan Fund.

The project was not in the 2019 Water Development Plan but meets requirements of the Water Commission's cost-share policy for municipal water supply projects. The recommendation was to approve the cost-share request.

There was discussion regarding the timing of the bid openings and actual funding needed to complete the project. It was determined that Williston completed a general mock-up of anticipated project costs. Engineering has not been completed.

After discussion, the following motion was made:

It was moved by Commissioner Pedersen and seconded by Commissioner Anderson the Commission approve the request from Williston for 60 percent state cost-share participation of $280,100. The approval is contingent on available funding for the 2019-2021 biennium.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.

CAVALIER: WATER TOWER REPLACEMENT/CHANGE OF SCOPE - $878,500
(SWC Project No. 2050CAV)

Cavalier submitted a request to expand the current scope of work related to its water tower replacement project. The water tower is currently under construction and a ground storage reservoir and pump station is needed. The additional cost-share request is $878,500.

The revised life cycle cost analysis considered three alternatives to account for the inclusion of the ground storage reservoir into the original project analysis and the preferred alternative uses

the existing reservoir storage site and is less than the present value cost of using a new location.

In October 2019, 60 percent cost-share of $1,022,500 for the water tower replacement was approved. The ground storage total eligible cost is $1,464,167 with 60 percent cost-share of $878,500.

The project was in the 2019 Water Development Plan, is a higher low priority, and meets requirements of the Commission's cost-share policy for municipal water supply projects. The recommendation was to approve the additional cost-share request.

After discussion, the following motion was made:

> **It was moved by Commissioner Anderson and seconded by Commissioner Schneider the Commission approve the request from Cavalier for additional state cost-share participation of $878,500 at 60 percent of eligible costs, with total cost-share not to exceed $1,901,000. The approval is contingent on available funding for the 2019-2021 biennium.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

RED RIVER VALLEY WATER SUPPLY - $2,750,000

The Garrison Diversion Conservancy District(GDCD) requested additional cost-share for Red River Valley Water Supply Project (RRVWSP) construction contracts. The request was based on receiving bids higher than originally estimated for the Transmission Pipeline East (Contract 5A) project. Also requested was additional cost-share for the Missouri River intake wet well and Sheyenne River outfall.

The 2019 Legislative Senate Bill 2020 had intent that the Commission provide up to $13M to initiate construction of Phase 1 prioritized project features. Also included was intent to provide no more than $30M during the 2019-2021 and 2021-2023 biennia, and that state funding be provided at 75 percent cost-share. The total legislative intent was $43,000,000. The Commission approved the RRVWSP for $6,880,000 in October 2020 and $9,520,000 in December 2020. This total of $16,400,000 leaves an intent balance of $26,600,000.

On January 2021, the GDCD received Contract 5A construction bids which were higher than the engineer's estimate. The new estimated cost is $10,155,978. This request is for an additional 75 percent cost-share of $2,384,900, which would be a total cost-share of $8,501,900 for the pipeline work (Contract 5A).

The GDCD reviewed the Missouri River intake pumping station and wet well project and determined there are additional costs for work related to environmental commitments and reporting in the amount of $6,186,111. The current request is for an additional 90 percent cost-share of $250,000 bringing the total cost-share for the intake pumping station and wet well to $1,827,600.

The GDCD also received an updated engineer's estimate for the Sheyenne River outfall discharge structure of $2,436,800 and requested an additional 75 percent cost-share of

$365,100 bringing the total cost-share for the Sheyenne River outfall discharge structure to $3,253,000.

The additional requested total is $2,750,000 with an overall total of $19,150,000, which leaves an intent balance of $23,850,000. The recommendation is to approve the additional cost-share request.

After discussion, the following motion was made:

> **It was moved by Commissioner Hemmer and seconded by Commissioner Zimmerman the Commission approve the request for additional cost-share of $2,750,000 at 75 percent of eligible costs. The overall cost-share is not to exceed $19,150,000, for the RRVWSP. The approval is contingent on available funding for the 2019-2021 biennium.**
>
> **Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.**

FOUR-YEAR PROGRESS REPORTS

Julie Prescott and Jeffrey Mattern provided a summary of projects requesting funding extensions, projects completed with pending final reimbursement requests, and projects with turnback funds (**APPENDIX C**). Some of the project sponsors previously presented updates to the Commission and were asked to provide additional updates per Commission request and as required by statute.

Barnes County Water Resource District: Ten-Mile Lake Flood Risk Feasibility Study
There was no discussion.

Grafton Flood Control Project
Jon Markusen, KLJ Engineering, clarified the request was to retain $1.6M of the remaining balance of $3.4M to cover outstanding construction costs, including payments to Burlington Northern Santa Fe Railroad. The project will be completed by the end of December 2021. John Paczkowski clarified that any unused funds would be turned back and utilized for other flood control projects. It was agreed that Grafton would provide additional information regarding closeout costs and turn back funds at the April Commission meeting.

Cass County Joint Water Resource District: Rush River and Upper Maple River Studies
Pat Downs, Moore Engineering, clarified that both projects would be completed by December 2021.

Sargent County Water Resource District: Shortfoot Creek Watershed Planning Program
Pat Downs clarified that the project would be completed by December 2021.

Dickinson: State Avenue South Watermain
Loretta Marshik, Assistant City Engineer, clarified the project would be completed by December 2021.

Fargo: Water System Regionalization Improvements
Troy Hall, City Water Utility Director, clarified the project would be completed by June 2021.

Williston: 2015 System Improvements
David Juma, City Engineer, clarified the project would be completed by December 2021.

All Seasons Water Users District: System 4 Connection
Rep. Jon Nelson stated the completed Memorandum of Understanding (MOU) is needed from the Turtle Mountain Band of Chippewa in order to complete easement acquisition. If the MOU is obtained, construction could begin in 2021.

Pembina County Water Resource District: Pembina County Drain 80
There was no discussion.

Sargent County Water Resource District (SCWRD): Drain 11 Channel Improvements
Luke Siemieniewski, Chairman, SCWRD, stated the SWCRD is acquiring additional right-of-way and expects the project will be bid early 2021.
Sean Fredricks, General Counsel for SCWRD, stated the requested clarification related to the Drain 11 channel improvements project which was tabled at the December Commission had been fulfilled, and that all legal matters have been resolved through the legal system.

There was discussion regarding additional easement acquisition and whether or not eminent domain would be utilized by the SCWRD. Sean Fredricks stated eminent domain could be utilized in order to obtain additional easements, as well as the authority to utilize quick take. Sean stated the SCWRD would not utilize quick take. If quick take eminent domain were utilized, the SCWRD would need to receive approval from the Sargent County Commission. Regular eminent domain authority does not need approval from other entities.

Commissioner Anderson provided an update of discussions between all parties related to downstream concerns, easement acquisition, land assessments, maintenance versus improvements categorization, and further litigation.

After lengthy discussion, it was determined that this was simply a request for an extension to use appropriated funds to complete the project, and if approved, the Commission was not implying legal opinions or requirements, nor did the Commission have any governance related to ongoing discussions with the SCWRD, counties in opposition, and landowners.

John Paczkowski stated that project sponsors have not been denied extensions because of additional time needed to complete the projects for various supported reasons. Also, the Commission can hold release of funds for project completion until legal issues, if any, are resolved. Historically, as long as cost-share policy requirements are met, the Commission has approved funding, and extensions to use those funds.

Walsh County Water Resource District: Drain 87/McLeod Drain
Zach Herrmann clarified the project would be completed by December 2021.

Julie Prescott clarified that the completed projects listed on **APPENDIX C** would utilize remaining funds to pay all final project costs and the projects would be closed out. The turnback projects listed on **APPENDIX C**, have turned back unused funds to fund additional eligible cost-share requests.

There was no discussion related to the completed or turnback projects, and after further discussion related to the extension requests, the following motions were made:

It was moved by Commissioner Zimmerman and seconded by Commissioner Johnson the Commission approve:

(1) the summary tables listed on APPENDIX C for completed and turnback projects, and

(2) all requests for extensions on APPENDIX C to utilize remaining project funding with the following exceptions:

a. the approval for Grafton's request for extension is contingent and inclusive upon receipt of final projected costs needed in the amount of $1.6M and the potential amount of remaining funds ($1.8M) Grafton will turn back to the Commission for use in funding other flood control projects, and

b. the approval for SCWRD's request for extension is approved with the understanding that all relevant and local parties are encouraged to resolve outstanding issues involving Drain 11 related to, but not limited to, assessments and funding mechanisms of the project.

Commissioners Anderson, Hemmer, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.

NORTHWEST AREA WATER SUPPLY (NAWS)

Tim Freije, NAWS Project Manager, presented a request to approve NAWS Contract 7-2A/4-1A Biota Water Treatment Plant (Biota WTP) Phase I (Phase I). Bids were opened in December 2020 in accordance with the NDCC Chapter 48. There were four contracts related to the bid.

The total estimated costs for Phase I of the Biota WTP is approximately $64M. Federal Municipal, Rural, and Industrial (MR&I) funding in the amount of $15,912,164 was approved at the April 2020 Commission meeting for the Biota WTP. All costs are considered federal responsibility per the 2000 Dakota Water Resource Act despite NAWS being a state-owned facility. Approximately $5.4M was expended from the fund with an additional $2.6M committed through various procurement contracts and design engineering. The remaining $7.5-$8M of remaining MR&I funds approved for the Biota WTP are available to cover the expenditures through the end of the biennium. The line of credit in Senate Bill 2020 is available for expenditures exceeding the available MR&I funding. A similar line of credit was recommended for inclusion in 2021 biennium House Bill 1020 by the Education and Environment Division of the House Appropriations Committee.

After discussion, the following motion was made:

It was moved by Commissioner Zimmerman and seconded by Commissioner Volk the Commission award NAWS Contract 7-A/4-1A Contract No. 1 – General Construction to Stanek Constructors in the amount of $37,827,200; NAWS Contract 7-A/4-1A Contract No. 2 – Mechanical Construction to

Mowbray & Sons, Inc. in the amount of $4,914,207; and, NAWS Contract 7-A/4-1A Contract No. 3 – Electrical Construction to Main Electric Construction, Inc. in the amount of $6,588,361 pending concurrence from the GDCD and US Bureau of Reclamation.

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

SOUTHWEST PIPELINE PROJECT (SWPP)

Sindhuja S.Pillai-Grinolds, Project Manager, SWPP, presented a request to approve Contract 1-2A – Supplementary Raw Water Intake, Change Order No. 8, **APPENDIX D**. Two previous microtunneling attempts failed during construction of the intake pipe on Contract 1-2A. The contractor, James W. Fowler Company (Fowler) elected to pursue horizontal directional drilling (HDD) for the intake pipe construction. Fowler has obtained a signed sub-contract agreement with ECI Drilling International for completing HDD.

Fowler's plan to complete the project was submitted to the Bureau of Reclamation (Bureau). A temporary construction license and permanent easement amendment are needed from the US Army Corps of Engineers (Corps) to proceed with construction. The NEPA review by the Bureau is nearing completion. The Bureau is expected to forward the construction license and easement amendment application and NEPA documents to the Corps in March. The amount of time required to receive necessary regulatory and real estate approvals from the Corps may delay the start of project work in 2021 causing further delay in completion of the project.

The current substantial completion date in the contract is December 31, 2018, which was included in Change Order No. 7, and approved at the December 2017 Commission meeting.

Sindhuja stated Change Order No. 8 extends the substantial completion date to February 28, 2022. Fowler stated if construction does not begin prior to May 1, 2021, the completion of the contract will be delayed into 2023 because in-water work needs to be completed before winter weather. Also, because of uncertainties related to the receipt of federal permitting, it is very likely the contract completion will be delayed into 2023, and the substantial completion date will have to be changed to February 28, 2023, with final completion date to April 30, 2023.

Change Order No. 8 is for the acceptance of the new HDD alignment, intake structure changes, and also extends the substantial completion date of the contract to February 28, 2023, and final completion date to April 30, 2023. The change order also includes a stipulation that holds Fowler responsible for SWC's damages from the first microtunneling failure through substantial completion in lieu of the liquidated damages stipulated in the agreement.

There were no questions, and the following motion was made:

It was moved by Commissioner Johnson and seconded by Commissioner Anderson the Commission authorize the Chief Engineer-Secretary to execute Change Order No. 8 on SWPP Contract 1-2A – Supplementary Raw Water Intake.

Commissioners Anderson, Johnson, Owan, Pedersen, Schneider, Volk, Zimmerman, and Governor Burgum voted aye. There were no nay votes. The motion carried.

STRATEGIC GOVERNANCE AND FINANCE STUDY (STUDY)

Brent Bogar, Consultant, AE2S, presented a draft primer for discussion (**APPENDIX E**). The primer outlines, in detail, the delivery models and funding and finance models being reviewed as part of the Study. Brent encouraged the Commission to provide input related to additional evaluation criteria for delivery models.

There was discussion that the Study also include governance models and how to address operations and maintenance of large projects throughout the state. There are multiple sets of governance models based on economic conditions of the state and varying Legislative sessions. The SWC should be considered a strategic planning organization rather than a grant organization. Brent stated those items are currently being reviewed under a different task and will be discussed at a later date.

The Commission requested that future presentations provide a full scope of the project and subset of items be placed on the opening slide, and that the Study be placed earlier on the Commission meeting agenda to allow more time for discussion.

The Commission discussed a separate meeting to discuss the Study apart from the April Commission meeting to discuss strategic planning, overall Study recommendations, expectations, and discuss funding and finance from a high-level perspective to set up North Dakota for success. SWC staff will coordinate the scheduling of a two-hour meeting.

SWPP STRATEGIC HYDRAULIC IMPROVEMENTS

There was a brief discussion regarding the SWPP strategic hydraulic improvement projects. Sindhuja informed the Commission about several strategic improvement projects moving forward with design, the funding needs for those projects, and the information staff used for selecting the projects to move forward with design.

There being no further business to come before the Commission, Governor Burgum adjourned the February 11, 2021, meeting at 5:32 p.m.

Doug Burgum, Governor
Chairman, State Water Commission

John Paczkowski, P.E.
Interim North Dakota State Engineer,
and Chief Engineer-Secretary
to the State Water Commission

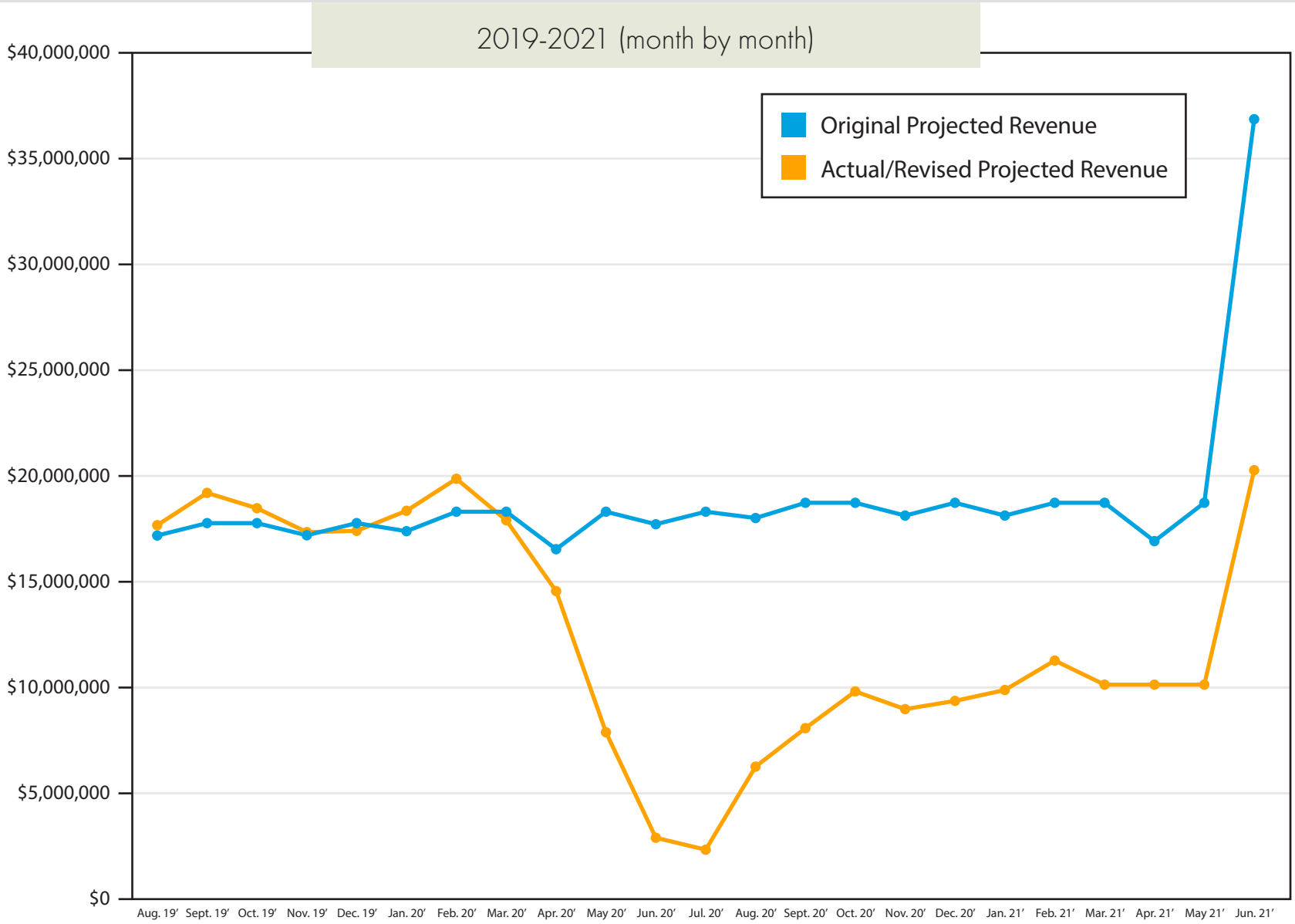
APPENDIX A

NORTH DAKOTA STATE WATER COMMISSION
OIL EXTRACTION REVENUE
FOR THE 2019 - 2021 BIENNIUM

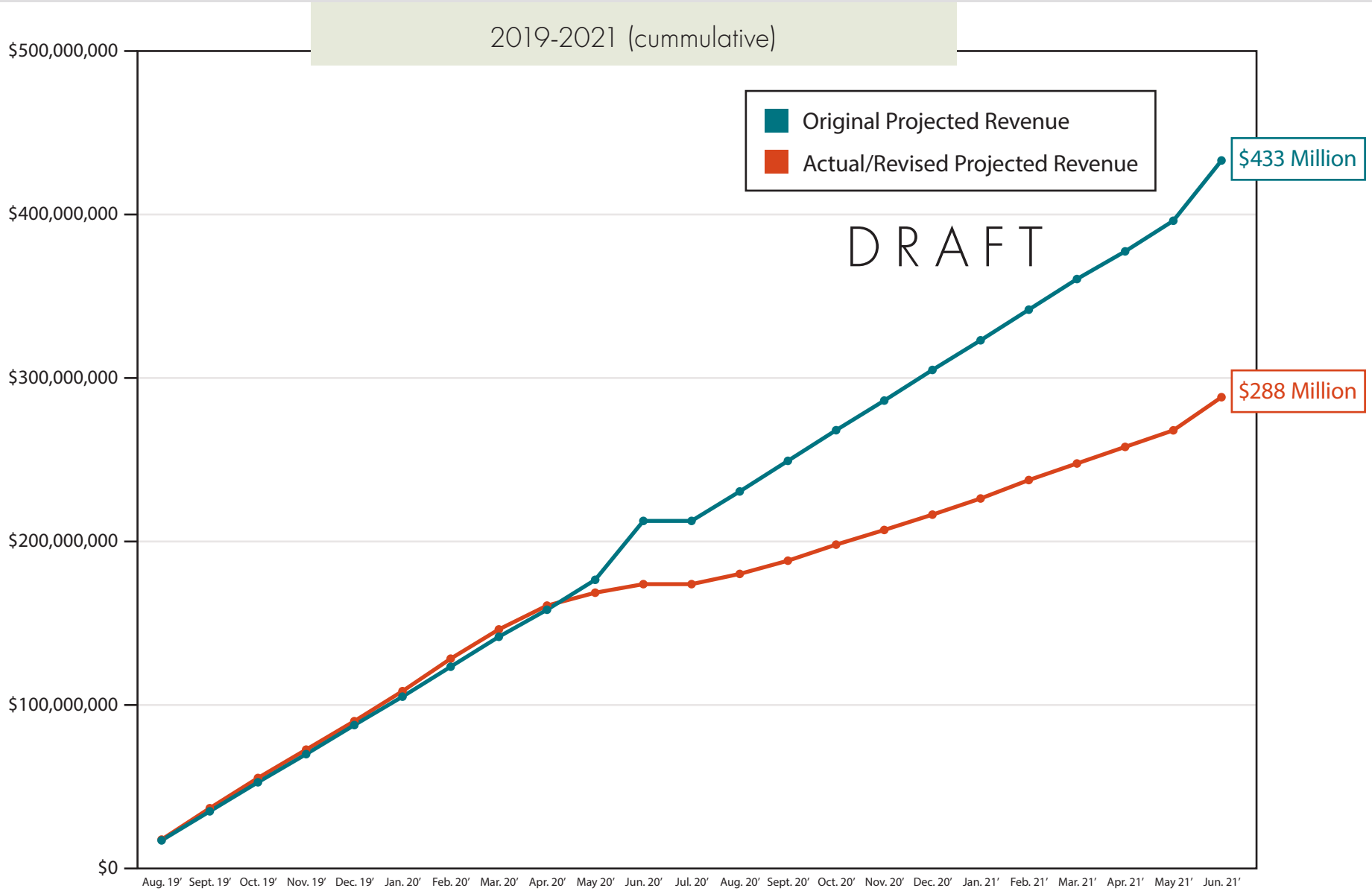
MONTH / YEAR	ORIGINAL PROJECTED REVENUE	**ACTUAL/ PROJECTED REVISED**	OVER/(UNDER)
JULY, 2019	$0.00	$0.00	
AUGUST, 2019	17,185,501	**17,672,977**	487,476
SEPTEMBER, 2019	17,771,816	**19,201,153**	1,429,337
OCTOBER, 2019	17,771,816	**18,476,625**	704,809
NOVEMBER, 2019	17,198,532	**17,345,806**	147,274
DECEMBER, 2019	17,771,816	**17,405,340**	(366,476)
JANUARY, 2020	17,391,086	**18,355,681**	964,595
FEBRUARY, 2020	18,310,424	**19,867,894**	1,557,470
MARCH, 2020	18,310,424	**17,906,515**	(403,909)
APRIL, 2020	16,538,448	**14,558,705**	(1,979,743)
MAY, 2020	18,310,424	**7,885,721**	(10,424,703)
JUNE, 2020 (INC A/B)	17,719,765	**2,900,581**	(14,819,184)
JULY, 2020	18,310,424	**2,336,430**	(15,973,994)
AUGUST, 2020	18,012,160	**6,261,579**	(11,750,581)
SEPTEMBER, 2020	18,733,084	**8,081,761**	(10,651,323)
OCTOBER, 2020	18,733,084	**9,817,421**	(8,915,663)
NOVEMBER, 2020	18,128,791	**8,980,059**	(9,148,732)
DECEMBER, 2020	18,733,084	**9,368,874**	(9,364,210)
JANUARY, 2021	18,128,791	**9,883,280**	(8,245,511)
FEBRUARY, 2021	18,733,084	**11,275,529**	(7,457,555)
MARCH, 2021	18,733,084	10,136,683	(8,596,401)
APRIL, 2021	16,920,205	10,136,683	(6,783,522)
MAY, 2021	18,733,084	10,136,683	(8,596,401)
JUNE, 2021 (INCLUDES JULY)	36,861,876	20,273,366	(16,588,510)
TOTALS	433,040,803	288,265,347	(144,775,456)

February 8, 2021

RESOURCES TRUST FUND REVENUE



RESOURCES TRUST FUND REVENUE



STATE WATER COMMISSION
PROJECT SUMMARY
2019-2021 BIENNIUM

LEGISLATIVE INTENT

December 31, 2020

		2017-2019 CARRYOVER	2019-2021 FUNDING	2019-2021 TOTAL	SWC/SE APPROVED	REMAINING APPROPRIATION
MUNICIPAL & REGIONAL WATER SUPPLY:						
MUNICIPAL WATER SUPPLY		31,126,234	59,931,207	91,057,441	91,057,441	(0)
RED RIVER VALLEY		8,728,394	38,271,606	47,000,000	20,400,000	26,600,000
OTHER REGIONAL WATER SUPPLY		9,228,607	14,479,400	23,708,007	23,708,007	(0)
UNOBLIGATED MUNICIPAL/REG WATER SUPPLY		0	15,317,787	15,317,787		15,317,787
	Total	49,083,236	128,000,000	177,083,235	135,165,449	41,917,786
% OBLIGATED			67.25%			
RURAL WATER SUPPLY:						
RURAL WATER SUPPLY		24,134,571	33,303,929	57,438,500	57,438,500	(0)
UNOBLIGATED RURAL WATER SUPPLY		100,272	3,896,072	3,996,344		3,996,344
	Total	24,234,844	37,200,000	61,434,844	57,438,500	3,996,344
% OBLIGATED			89.26%			
FLOOD CONTROL:						
FARGO		105,735,612	66,500,000	172,235,612	149,735,612	22,500,000
MOUSE RIVER		42,969,758	67,400,000	110,369,758	77,369,758	33,000,000
VALLEY CITY		4,582,048	11,610,554	16,192,602	16,192,602	0
LISBON		1,411,117	0	1,411,117	1,411,117	0
OTHER FLOOD CONTROL		14,246,385	3,039,800	17,286,185	17,286,185	(0)
PROPERTY ACQUISITIONS		820,117	15,175,000	15,995,117	15,995,117	(0)
WATER CONVEYANCE		8,655,128	9,448,745	18,103,873	18,103,873	(0)
UNOBLIGATED FLOOD CONTROL		2,013,362	23,825,900	25,839,262		25,839,262
	Total	180,433,527	197,000,000	377,433,526	296,094,264	81,339,261
% OBLIGATED			58.71%			
GENERAL WATER:						
GENERAL WATER		14,685,535	5,839,945	20,525,481	20,525,481	0
UNOBLIGATED GENERAL WATER		439,852	21,253,831	21,693,683		21,693,683
	Total	15,125,387	27,093,776	42,219,164	20,525,481	21,693,683
% OBLIGATED			19.93%			
CAPITAL ASSETS:						
SWPP CAPITAL ASSETS		15,792,359	2,320,000	18,112,359	18,112,359	(0)
NAWS CAPITAL ASSETS		22,248,857	0	22,248,857	22,248,857	0
UNOBLIGATED CAPITAL ASSETS		0	0	0		0
	Total	38,041,216	2,320,000	40,361,216	40,361,216	0
% OBLIGATED			100.00%			
REVOLVING LOAN FUND:						
GENERAL WATER PROJECTS		0	4,026,600	4,026,600	4,026,600	0
UNOBLIGATED REVOLVING LOAN FUND		0	1,267,491	1,267,491		1,267,491
	Total	0	5,294,091	5,294,091	4,026,600	1,267,491
% OBLIGATED			76.06%			
TOTALS		306,918,209	396,907,867	703,826,076	553,611,510	150,214,565

STATE WATER COMMISSION
BUDGET SUMMARY
2019-2021 BIENNIUM

December 31, 2020

Projected Funding

RTF Balance (December 31, 2020)	$332,414,674
Future Revenue (7 months at $10.3 Million / Month)	$72,100,000
Other Revenue (SWPP, Interest, etc.)	$4,732,500
TOTAL	**$409,247,174**

Projected Expenditures

Unpaid Approvals	$328,960,000
SWC Operations	$7,500,000
TOTAL	**$336,460,000**

Projected Funding Balance	**$72,787,174**

PENDING REQUESTS (February SWC Meeting)	$14,718,000

PROJECTED BALANCE	$58,069,000

Remaining Legislative Intent

Red River Valley Water Supply	$23,850,000
Fargo Metro Flood Diversion	$22,500,000
Mouse River Enhanced Flood Protection	$33,000,000
BALANCE	$79,350,000

PROJECTED BALANCE AFTER INTENT	($21,281,000)

Federal Funding (Capital Assets)

Federal Funds Authority	$30,000,000
Federal Funds Expenditures	($16,325,084)
Unpaid Federal Approvals	($12,684,134)
Remaining Federal Funds Authority	$990,782

February 8, 2021

PUROSE FUNDING SUMMARY
State Water Cost-Share
for February 11, 2021
February 8, 2021

	12/31/20
	REMAINING 19-21
	APPROPRIATION
	LEGISLATIVE INTENT

	Flood Control		**Cost-Share**		
1	Lower Heart WRD: Mandan Lower Heart River Flood Risk Reduction - Construction	$	-		
2	Walsh County WRD: Drain 31 Improvements*	$	-		
3	Southeast Cass WRD: Drain 40 Improvements*	$	-		
4					
5					
	Sub Total	$	-	$	79,325,900
				$	55,500,000

* Conveyance

	General Water		**Cost-Share**		
1					
2					
3					
4					
5					
	Sub Total	$	-	$	21,253,831
				$	-

	Water Supply		**Cost-Share**		
1	Western Area Water Supply Authority: Phase 6 - 29 mile Project	$	6,989,500		
2	Killdeer: HWBL Water Expansion	$	75,000		
3	Bowbells: Watermain Improvements 2020	$	22,800		
4	Horace: District 2020-06 Water System Improvements	$	150,000		
5	Horace: District 2020-07 Connection to Cass RWD	$	75,750		
6	Williston: Williston Square Watermain	$	280,100		
7	Cavalier: Water Towner Replacement Change of Scope (Ground Storage Reservoir)	$	878,500		
8	GDCD: Red River Valley Water Supply Transmission Pipeline East (Contract 5A)	$	2,750,000		
	Sub Total	$	11,221,650	$	41,917,787
				$	26,600,000

	Rural Water		**Cost-Share**		
1	Southeast Water Users District: West System Supply Study	$	150,000		
2	Walsh Rural Water District: Drayton Water Supply Phase 2	$	3,256,100		
3	East Central Regional Water District: Grandin Water Supply	$	90,000		
4					
5					
	Sub Total	$	3,496,100	$	3,896,072
				$	-

	Pending Requests Total	**$**	**14,717,750**	$	146,393,590
				$	82,100,000

	Capital Assets (SWPP)		**Cost-Share**	
1	Strategic Improvements: New Hradec, Fairfield 1, Davis Butte 4 (Pending $2,700,000)	$	-	2019-2021
2	Strategic Improvements: Twin Buttes 1, Killdeer Mountain 2 (Pending $1,000,000)	$	-	2019-2021
3				
4				
5				
	Sub Total	$	-	

	Capital Assets (NAWS)		**Cost-Share**	
1	Contract 7-2A/4-1A - Biota Water Treatment Plant Phase 1	$	59,000,000	Line of Credit (BND)
2				
3				
4				
5				
	Sub Total	$	59,000,000	

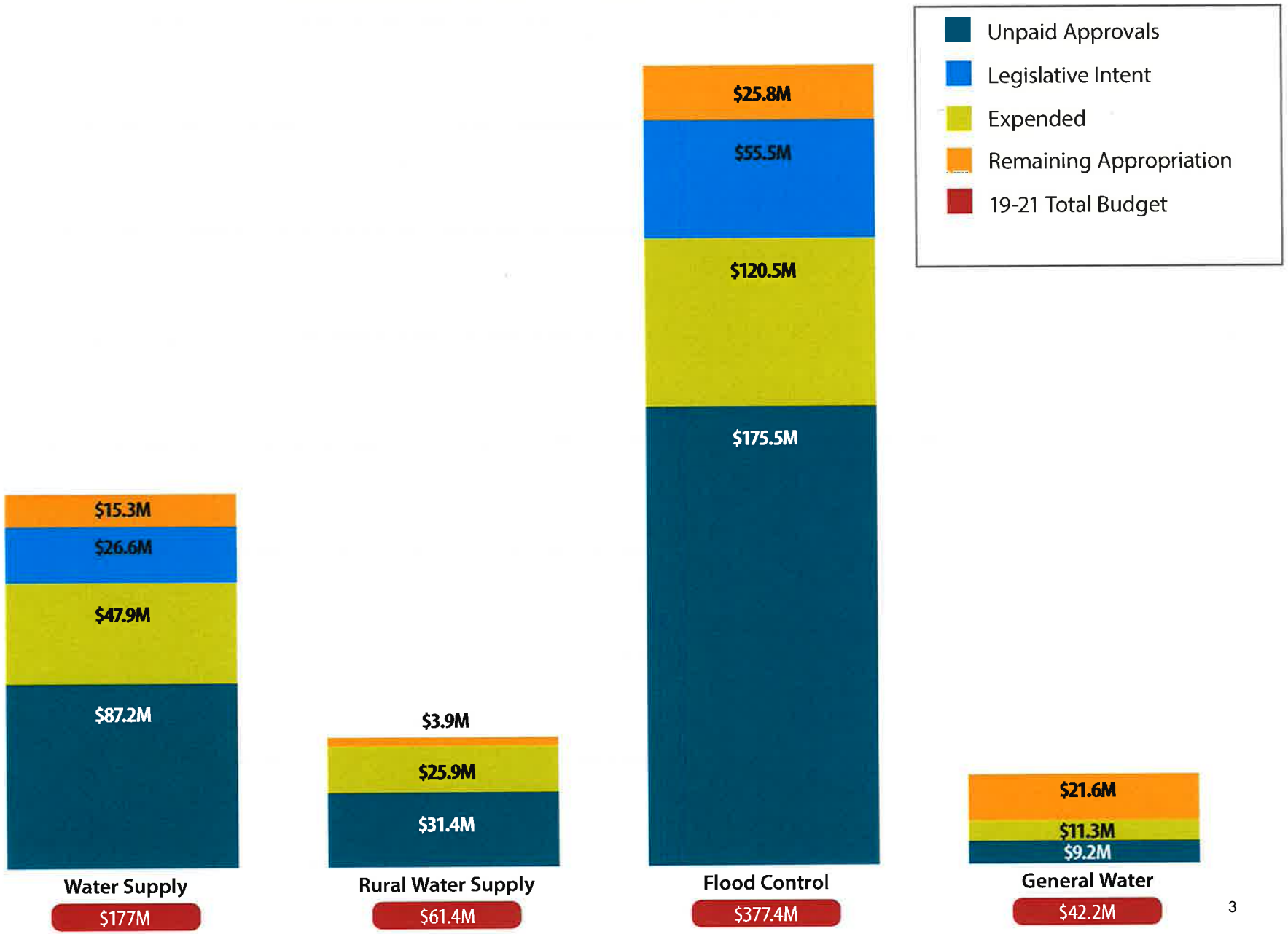
	Capital Assets Pending Requests Total	**$**	**59,000,000**	$	140,360,092

NORTH DAKOTA STATE WATER COMMISSION
OIL EXTRACTION REVENUE
FOR THE 2019 - 2021 BIENNIUM

MONTH / YEAR	ORIGINAL PROJECTED REVENUE	**ACTUAL/ PROJECTED REVISED**	ACCUMULATED REVENUE	**ACTUAL REVENUE**
JULY, 2019	$0	$0	$0	**$0**
AUGUST, 2019	$17,185,501	**$17,672,977**	$17,672,977	**$17,672,977**
SEPTEMBER, 2019	$17,771,816	**$19,201,153**	$36,874,130	**$19,201,153**
OCTOBER, 2019	$17,771,816	**$18,476,625**	$55,350,755	**$18,476,625**
NOVEMBER, 2019	$17,198,532	**$17,345,806**	$72,696,561	**$17,345,806**
DECEMBER, 2019	$17,771,816	**$17,405,340**	$90,101,901	**$17,405,340**
JANUARY, 2020	$17,391,086	**$18,355,681**	$108,457,582	**$18,355,681**
FEBRUARY, 2020	$18,310,424	**$19,867,894**	$128,325,476	**$19,867,894**
MARCH, 2020	$18,310,424	**$17,906,515**	$146,231,991	**$17,906,515**
APRIL, 2020	$16,538,448	**$14,558,705**	$160,790,696	**$14,558,705**
MAY, 2020	$18,310,424	**$7,885,721**	$168,676,417	**$7,885,721**
JUNE, 2020	$17,719,765	**$2,900,581**	$171,576,998	**$2,900,581**
JULY, 2020	$18,310,424	**$2,336,430**	$173,913,428	**$2,336,430**
AUGUST, 2020	$18,012,160	**$6,261,579**	$180,175,007	**$6,261,579**
SEPTEMBER, 2020	$18,733,084	**$8,081,761**	$188,256,768	**$8,081,761**
OCTOBER, 2020	$18,733,084	**$9,817,421**	$198,074,189	**$9,817,421**
NOVEMBER, 2020	$18,128,791	**$8,980,059**	$207,054,248	**$8,980,059**
DECEMBER, 2020	$18,733,084	**$9,368,874**	$216,423,122	**$9,368,874**
JANUARY, 2021	$18,128,791	**$9,883,280**	$226,306,402	**$9,883,280**
FEBRUARY, 2021	$18,733,084	$10,326,491		
MARCH, 2021	$18,733,084	$10,326,491		
APRIL, 2021	$16,920,205	$10,326,491		
MAY, 2021	$18,733,084	$10,326,491		
JUNE, 2021 (JULY 2021 POSTS BACK)	$36,861,876	$20,652,982		
TOTALS	**$433,040,803**	**$288,265,349**		**$226,306,402**

PROJECT FUNDS

December 31, 2020



STATE WATER COMMISSION
PROJECT SUMMARY
2019-2021 BIENNIUM

LEGISLATIVE INTENT

December 31, 2020

		2017-2019 CARRYOVER	2019-2021 FUNDING	2019-2021 TOTAL	SWC/SE APPROVED	REMAINING APPROPRIATION
MUNICIPAL & REGIONAL WATER SUPPLY:						
MUNICIPAL WATER SUPPLY		31,126,234	59,931,207	91,057,441	91,057,441	(0)
RED RIVER VALLEY		8,728,394	38,271,606	47,000,000	20,400,000	26,600,000
OTHER REGIONAL WATER SUPPLY		9,228,607	14,479,400	23,708,007	23,708,007	(0)
UNOBLIGATED MUNICIPAL/REG WATER SUPPLY		0	15,317,787	15,317,787		15,317,787
	Total	49,083,236	128,000,000	177,083,235	135,165,449	41,917,786
% OBLIGATED			67.25%			
RURAL WATER SUPPLY:						
RURAL WATER SUPPLY		24,134,571	33,303,929	57,438,500	57,438,500	(0)
UNOBLIGATED RURAL WATER SUPPLY		100,272	3,896,072	3,996,344		3,996,344
	Total	24,234,844	37,200,000	61,434,844	57,438,500	3,996,344
% OBLIGATED			89.26%			
FLOOD CONTROL:						
FARGO		105,735,612	66,500,000	172,235,612	149,735,612	22,500,000
MOUSE RIVER		42,969,758	67,400,000	110,369,758	77,369,758	33,000,000
VALLEY CITY		4,582,048	11,610,554	16,192,602	16,192,602	0
LISBON		1,411,117	0	1,411,117	1,411,117	0
OTHER FLOOD CONTROL		14,246,385	3,039,800	17,286,185	17,286,185	(0)
PROPERTY ACQUISITIONS		820,117	15,175,000	15,995,117	15,995,117	(0)
WATER CONVEYANCE		8,655,128	9,448,745	18,103,873	18,103,873	(0)
UNOBLIGATED FLOOD CONTROL		2,013,362	23,825,900	25,839,262		25,839,262
	Total	180,433,527	197,000,000	377,433,526	296,094,264	81,339,261
% OBLIGATED			58.71%			
GENERAL WATER:						
GENERAL WATER		14,680,861	5,844,619	20,525,481	20,525,481	0
UNOBLIGATED GENERAL WATER		444,526	21,249,157	21,693,683		21,693,683
	Total	15,125,386.68	27,093,776	42,219,164	20,525,481	21,693,683
% OBLIGATED			19.93%			
CAPITAL ASSETS:						
SWPP CAPITAL ASSETS		15,792,359	2,320,000	18,112,359	18,112,359	(0)
NAWS CAPITAL ASSETS		22,248,857	0	22,248,857	22,248,857	0
UNOBLIGATED SWPP CAPITAL ASSETS		0	0	0		0
	Total	38,041,216	2,320,000	40,361,216	40,361,216	0
% OBLIGATED			100.00%			
REVOLVING LOAN FUND:						
GENERAL WATER PROJECTS		0	4,026,600	4,026,600	4,026,600	0
UNOBLIGATED REVOLVING LOAN FUND		0	1,267,491	1,267,491		1,267,491
	Total	0	5,294,091	5,294,091	4,026,600	1,267,491
% OBLIGATED			76.06%			
TOTALS		306,918,209	396,907,867	703,826,076	553,611,510	150,214,565

Water Supply, Rural Water, Flood Control, General Water 2019-2021 Appropriation	389,293,777
SWC/SE Approved 2019-2021	240,346,701
Water Supply, Rural Water, Flood Control, General Water 2019-2021 Appropriation Balance	148,947,076

PROJECTED FUNDING

$332,414,674	RTF Balance 12/31/20
$72,100,000	Future Revenue (7 months)
	$10.3 Million / Month
$4,732,500	Other Revenue
	SWPP, Interest, etc.
$409,247,174	**Balance**

LEGISLATIVE INTENT BALANCE	UNPAID APPROVALS	SWC OPERATIONS	PENDING REQUESTS	PROJECTED BALANCE
$82,100,000	$328,880,000	$7,500,000	$11,970,000	$60,897,174
			$72,867,174	

STATE WATER COMMISSION
PROJECT SUMMARY
2019-2021 BIENNIUM

Dec-20

	SWC/SE APPROVED	EXPENDITURES	UNPAID APPROVALS
MUNICIPAL & REGIONAL WATER SUPPLY:			
MUNICIPAL WATER SUPPLY	91,057,441	31,504,001	59,553,440
RED RIVER VALLEY	20,400,000	4,000,000	16,400,000
OTHER REGIONAL WATER SUPPLY	23,708,007	12,406,573	11,301,435
TOTAL	135,165,449	47,910,574	87,254,875
RURAL WATER SUPPLY:			
RURAL WATER SUPPLY	57,438,500	25,969,276	31,469,224
FLOOD CONTROL:			
FARGO	149,735,612	61,224,568	88,511,044
MOUSE RIVER	77,369,758	34,116,034	43,253,724
VALLEY CITY	16,192,602	4,803,042	11,389,560
LISBON	1,411,117	1,032,826	378,291
OTHER FLOOD CONTROL	17,286,185	9,750,763	7,535,422
PROPERTY ACQUISITIONS	15,995,117	3,980,348	12,014,769
WATER CONVEYANCE	18,103,873	5,638,628	12,465,246
TOTAL	296,094,264	120,546,208	175,548,056
GENERAL WATER:			
GENERAL WATER	20,525,481	11,322,983	9,202,498
CAPITAL ASSETS:			
SWPP CAPITAL ASSETS	18,112,359	7,750,241	10,362,118
NAWS CAPITAL ASSETS	22,248,857	7,205,176	15,043,680
TOTAL	40,361,216	14,955,417	25,405,798
REVOLVING LOAN FUND:			
GENERAL WATER PROJECTS	4,026,600	0	4,026,600
WATER SUPPLY	0	0	0
TOTALS	553,611,510	220,704,458	332,907,052

STATE WATER COMMISSION
PROJECT SUMMARY
2019-2021 Biennium

WATER SUPPLY

Approved By	SWC No	Dept	Sponsor	Project	Approved Date	Total Approved	Total Payments	Dec-20 Balance
			Municipal Water Supply:					
SWC	2050-13	5000	Mandan	New Raw Water Intake	6/19/19	4,058,205	484,885	3,573,320
SWC	2050-15	5000	Washburn	New Raw Water Intake	10/7/13	1,889,711	16,762	1,872,949
SWC	2050-20	5000	Dickinson	Capital Infrastructure	10/6/15	0	0	0
SWC	2050-26	5000	Fargo	Fargo Water System Regionalization Improvements	7/29/15	1,971,286	182,854	1,788,433
SWC	2050-29	5000	Minot	Water Systems Improvement Project	10/6/15	310,163	310,163	0
SWC	2050-30	5000	Watford City	Water Systems Improvement Project	10/6/15	2,400,000	2,400,000	(0)
SWC	2050-32	5000	Williston	Water Systems Improvement Project	10/6/15	3,737,500	9,905	3,727,595
SWC	2050-37	5000	Dickinson	Dickinson State Avenue South Water Main	12/11/15	963,920	0	963,920
SWC	2050-49	5000	Grand Forks	Grand Forks Water Treatment Plant	8/23/17	7,089,371	7,089,371	0
SWC	2050-52	5000	New Town	Water Transmission Storage	10/11/18	743,477	659,190	84,288
SWC	2050-53	5000	West Fargo	Brooks Harbor Water Tower	8/23/17	797,335	0	797,335
SWC	2050-54	5000	West Fargo	North Loop Connection	8/23/17	510,000	0	510,000
SWC	2050-55	5000	West Fargo	West Loop Connection	8/23/17	1,110,000	0	1,110,000
SWC	2050-66	5000	Lincoln	Lincoln Water System Improvement Project	2/8/18	1,415,788	1,017,437	398,351
SWC	2050-67	5000	Williston	Williston Water System Improvements	2/8/18	2,336,000	1,758,737	577,263
SWC	2050-68	5000	Valley City	Valley City Membrane Replacement Project	2/8/18	0	0	0
SWC	2050-69	5000	Mandan	Sunset Reservoir Water Transmission Line	4/12/18	1,793,479	382,592	1,410,887
				TOTAL MUNICIPAL WATER SUPPLY CARRYOVER		***31,126,234***	***14,311,895***	***16,814,339***
SWC	2050-13	5000	Mandan	New Raw Water Intake	6/19/19	17,290,000	0	17,290,000
SWC	2050-75-19	5000	Bismarck	Lockport Water Pump Station	10/8/20	2,955,000	1,785,115	1,169,885
SWC	2050-76-19	5000	Mapleton	Water Storage Tank	6/19/19	840,000	840,000	0
SWC	2050-84-19	5000	Cavalier	Water Tower Replacement	10/10/19	1,022,500	0	1,022,500
SWC	2050-85-19	5000	Mapleton	300,000 Gallon Storage Tank	10/10/19	540,000	280,497	259,503
SWC	2050-86-19	5000	Minot	SW Water Tower	10/10/19	2,855,000	1,531,811	1,323,189
SWC	2050-87-19	5000	Streeter	Well Installation and Tower Rehabilitation	10/10/19	265,000	33,265	231,735
SWC	2050-88-19	5000	Davenport	Water Improvement District No. 2019-1	10/10/19	466,000	0	466,000
SWC	2050-89-19	5000	West Fargo	9th Street NW Water Main	10/10/19	594,000	0	594,000
SWC	2050-90-19	5000	Grand Forks	Water Treatment Plant	10/10/19	9,875,000	8,884,440	990,560
SWC	2050-94-19	5000	Watford City	Water Distribution 2019	12/6/19	541,400	0	541,400
SWC	2050-95-19	5000	Garrison	Water Supply Treatment and Transmission Line	2/13/20	3,396,000	97,200	3,298,800
SWC	2050-96-19	5000	Larimore	2020 Water System Replacement	12/11/20	4,041,500	0	4,041,500
SWC	2050-97-19	5000	Park River	2020 Water Main Improvement	2/13/20	970,000	970,000	0
SWC	2050-98-19	5000	Sykeston	Water Tower Replacement	2/13/20	587,000	53,754	533,246
SWC	2050-99-19	5000	Valley City	Water Main Improvement 100/101	2/13/20	350,000	0	350,000
SWC	2050-100-19	5000	Wyndmere	2020 Water Main Improvements	2/13/20	1,730,000	1,002,280	727,720
SWC	2050-101-19	5000	Fargo	Downtown Water Tower	2/13/20	2,814,000	0	2,814,000
SWC	2050-102-19	5000	Lincoln	Water Tank Replacement	2/13/20	1,268,000	0	1,268,000
SWC	2050-103-19	5000	Kindred	Water Main Looping 2020	2/13/20	134,000	98,454	35,546
SWC	2050-104-19	5000	Hazen	Water Storage Improvements	2/13/20	1,430,000	0	1,430,000
SWC	2050-105-19	5000	Williston	42nd Street and 16th Avenue Water Main	2/13/20	1,196,000	747,684	448,316
SWC	2050-106-19	5000	Parshall	Water Tower Storage	4/9/20	1,323,000	0	1,323,000
SWC	2050-107-19	5000	Dickinson	North Annexation Water Supply	4/9/20	856,400	0	856,400
SWC	2050-108-19	5000	Valley City	Water Treatment Plant Membrane Replacement	4/9/20	867,607	867,607	0
SWC	2050-115-19	5000	Killdeer	2020 Water Main and Pump Station Project	10/8/20	1,060,500	0	1,060,500
SWC	2050-116-19	5000	Portland	Water Systems Improvement Feasibility Study	11/16/20	45,300	0	45,300
SWC	2050-117-19	5000	Lakota	Water Transmission Line Replacement Project	12/11/20	618,000	0	618,000
				TOTAL MUNICIPAL WATER SUPPLY 2019-2021		***59,931,207***	***17,192,106***	***42,739,101***
				TOTAL MUNICIPAL WATER SUPPLY		***91,057,441***	***31,504,001***	***59,553,440***
			Regional Water Supply:					
SWC	1973-05	5000	WAWSA	WAWSA Phase IV (moved to Phase V)	10/6/15	3,001,967	3,001,967	0
SWC	1973-06	5000	WAWSA	WAWSA Phase V	12/8/17	6,226,640	6,226,640	0
HB 1020	325-105	5000	RRVWSP	RRVWSP Garrison Diversion	8/23/17	8,728,394	4,000,000	4,728,394
				TOTAL REGIONAL WATER SUPPLY CARRYOVER		***17,957,001***	***13,228,607***	***4,728,394***
SWC	1973-07	5000	WAWSA	WAWSA Phase VI	6/19/19	14,479,400	3,177,965	11,301,435
HB 1020	325-17-19	5000	RRVWSP	RRVWSP Garrison Diversion	10/8/20	11,671,606	0	11,671,606
				TOTAL REGIONAL WATER SUPPLY 2019-2021		***26,151,006***	***3,177,965***	***22,973,041***
				TOTAL REGIONAL WATER SUPPLY		***44,108,007***	***16,406,573***	***27,701,435***
				TOTAL		***135,165,449***	***47,910,574***	***87,254,875***
			Capital Assets:					
SWC	1736-05	8000	SWPP	Southwest Pipeline Project	7/1/17	18,112,359	7,750,241	10,362,118
SWC	2374	9000	NAWS	Northwest Area Water Supply	2/8/18	22,248,857	7,205,176	15,043,680
				TOTAL CAPITAL ASSETS		***40,361,216***	***14,955,417***	***25,405,798***

SWC Board Approved to Continue

	BUDGET	***APPROVED***	***BALANCE***
WATER SUPPLY OTHER CARRYOVER - RRVWSP		***4,728,394***	
WATER SUPPLY 2019-2021 - RRVWSP		***11,671,606***	
LEGISLATIVE INTENT	***43,000,000***	***16,400,000***	***26,600,000***
RRVWSP WATER SUPPLY	***43,000,000***	***11,671,606***	***31,328,394***
OTHER WATER SUPPLY	***85,000,000***	***74,410,607***	***10,589,393***
BUDGET WATER SUPPLY 2019-2021	***128,000,000***	***86,082,213***	***41,917,787***

STATE WATER COMMISSION
PROJECT SUMMARY
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RURAL WATER

Approved By	SWC No	Dept	Sponsor	Project	Approved Date	Total Approved	Total Payments	Dec-20 Balance
			Rural Water Supply:					
SWC	2373-41	5000	North Central Rural Water Consortium	Granville-Deering Area	10/24/16	459,137	459,137	0
SWC	2373-39	5000	North Central Rural Water Consortium	Carpio Berthold Phase 2	4/1/15	926,882	668,191	258,691
CE	2050-74	5000	Walsh RWD	Drayton Long-Term Water Supply Feasibility Study	5/8/19	37,500	37,500	0
CE	2050-73	5000	Northeast Regional WD	Master Plan	10/11/18	55,922	55,922	0
SWC	2050-72	5000	Stutsman RWD	Phase 6 Pettibone Project	4/12/18	464,606	464,606	(0)
SWC	2050-71	5000	East Central RWD	Grand Forks/Traill Project	12/7/18	2,004,028	1,833,069	170,960
SWC	2050-65	5000	Tri-County Rural Water District	System Expansion Project	8/9/18	1,316,004	1,287,074	28,929
SWC	2050-64	5000	McLean-Sheridan Water District	Turtle Lake Water Tower	8/9/18	846,065	781,448	64,617
SWC	2050-63	5000	Walsh RWD	System Expansion Project	4/12/18	624,987	624,987	0
SWC	2050-61	5000	North Prairie Rural District	Surrey/Silver Spring	6/12/18	38,289	6,629	31,659
SWC	2050-60	5000	North Prairie Rural District	Reservoir 9 Water Supply	6/12/18	398,997	58,204	340,793
SWC	2050-59	5000	Cass Rural Water District	Horace Storage Tank	10/11/18	1,336,637	1,336,637	0
SWC	2050-58	5000	North Central Regional Water District	Mountrail Co. Watery Phase III	8/23/17	3,430,000	0	3,430,000
SWC	2050-57	5000	North Central Regional Water District	Mountrail Expansion Phase II	8/23/17	3,034,288	0	3,034,288
SWC	2050-43	5000	All Seasons Water District	System 4 Connection to System 1	12/11/15	4,900,000	0	4,900,000
SWC	2050-35	5000	Southeast Water Users Dist.	System Wide Expansion	2/13/20	3,248,377	3,246,867	1,510
SWC	2050-34	5000	North Prairie RWD	Storage and Water Main	10/6/15	1,012,854	887,533	125,321
				TOTAL RURAL WATER SUPPLY CARRYOVER		***24,134,571***	***11,747,805***	***12,386,767***
SWC	2050-35	5000	Southeast Water Users Dist.	System Wide Expansion	2/13/20	225,000	0	225,000
SWC	2050-93-19	5000	Greater Ramsey Water District	2019 Expansion	10/10/19	1,328,000	578,123	749,877
SWC	2050-92-19	5000	East Central RWD	2019 Expansion Phase IV	10/8/20	4,086,000	311,814	3,774,186
SWC	2050-91-19	5000	Agassiz Water Users District	2019 Expansion	4/9/20	2,990,000	2,232,975	757,025
SWC	2050-83-19	5000	Tri-County Rural Water District	Phase 5	8/8/19	1,990,000	1,990,000	0
SWC	2050-82-19	5000	Missouri West Water System	North Mandan/Highway 25 and Harmon Lake Area	8/8/19	1,095,000	915,201	179,799
SWC	2050-81-19	5000	South Central RWD	North Burleigh Water Treatment Plant	6/19/19	920,000	920,000	0
SWC	2050-80-19	5000	Stutsman RWD	Phase 7, including Reule Lake	6/19/19	1,812,000	1,167,737	644,263
SWC	2050-79-19	5000	Northeast Regional WD	Devils Lake Water Supply Phase II	6/19/19	1,197,829	1,197,829	(0)
SWC	2050-78-19	5000	McLean-Sheridan Rural Water District	2019 Expansion	4/9/20	4,980,000	3,024,520	1,955,480
SWC	2050-77-19	5000	Dakota Rural Water District	2019 Expansion	4/9/20	4,650,000	1,883,272	2,766,728
SWC	2050-114-19	5000	Walsh RWD	Drayton Water Supply Project	10/8/20	4,713,600	0	4,713,600
SWC	2050-113-19	5000	North Prairie RWD	Minot to Velva Highway 52 Improvement	10/8/20	3,249,000	0	3,249,000
SWC	2050-112-19	5000	North Prairie RWD	Benedict Water Distribution System	8/13/20	67,500	0	67,500
				TOTAL RURAL WATER SUPPLY 2019-2021		***33,303,929***	***14,221,471***	***19,082,458***
				TOTAL RURAL WATER SUPPLY		***57,438,500***	***25,969,276***	***31,469,224***

SWC Board Approved to Continue

	BUDGET	***APPROVED***	***BALANCE***
LEGISLATIVE INTENT	***0***	***0***	***0***
OTHER RURAL WATER	***37,200,000***	***33,303,929***	***3,896,071***
BUDGET RURAL WATER 2019-2021	***37,200,000***	***33,303,929***	***3,896,071***

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FLOOD CONTROL

Approved By	SWC No	Dept	Sponsor	Project	Approved Date	Total Approved	Total Payments	Dec-20 Balance
			Flood Control:					
SWC	1974	M-15	Souris River Joint WRD	Mouse River Municipal Projects carryover 2015-17	various	4,928,633	4,069,655	858,978
SWC	1974	M-17	Souris River Joint WRD	Mouse River Municipal Projects carryover 2017-19	various	29,402,346	18,929,085	10,473,261
SWC	1974	Rural	Souris River Joint WRD	Mouse River Rural Projects	6/19/19	7,676,930	6,663,666	1,013,264
SWC	2118	5000	Cass County Joint WRD	Sheldon Subdivision Levee	10/11/18	370,200	0	370,200
SE	2122	5000	US Army Corps of Engineers	Development of Comprehensive Plan for Souris Basin	9/5/17	81,428	81,428	0
SE	2124	5000	City of Belfield	Heart River & Tributaries Flood Control Study	11/6/18	27,000	0	27,000
SWC	2131	5000	Lower Heart River WRD	Flood Risk Reduction Project	6/14/18	225,916	90,866	135,050
SWC	2131	5000	Lower Heart River WRD	Lower Heart Flood Risk Reduction	10/8/20	1,200,000	0	1,200,000
SB 2371	1344-02	5000	Lisbon	Sheyenne River Valley Flood Control Project	8/8/16	103,971	0	103,971
SWC	1344-04	5000	Valley City	Sheyenne River Valley Flood Control Project PHII	8/29/16	4,531	4,532	(0)
SWC	1504-01	5000	Valley City	Permanent Flood Protection Project Phase I	5/1/15	7,415	7,415	0
SWC	1504-03	5000	Valley City	Permanent Flood Protection PH II	12/9/16	2,149,907	2,149,907	0
SWC	1504-06	5000	Valley City	Permanent Flood Protection PH III & PH IV	12/8/17	153,732	153,732	0
SWC	1504-07	5000	Valley City	Permanent Flood Protection PH III Construction	10/11/18	1,786,179	1,771,353	14,826
SWC	1504-08	5000	Valley City	Permanent Flood Protection Erosion Sites	4/9/19	480,283	202,311	277,972
SWC	1771-01	5000	Grafton	Grafton Flood Control Project	10/12/16	12,284,127	8,819,339	3,464,788
SB 2020	1928-05	5000	Fargo Metro Flood Diversion	Fargo Metro Flood Diversion Authority 2015-2017	2/14/19	45,885,612	25,054,936	20,830,676
SB 2020	1928-17	5000	Fargo Metro Flood Diversion	Fargo Metro Flood Diversion Authority 2017-2019	2/14/19	59,850,000	36,169,632	23,680,368
SWC	1991-10	5000	Lisbon	Permanent Flood Protection - Levee F Project	4/12/18	457,173	182,854	274,320
SWC	1991-13	5000	Lisbon	Permanent Flood Protection - Levee C & E Extension	2/14/19	849,972	849,972	0
SWC	2079-01	5000	Williston	West Williston Flood Control	12/9/16	139,142	139,142	0
SWC	2107-02	5000	City of Minot	SWIF 2018 Outfall Pipe Project	10/11/18	880,421	322,437	557,984
				TOTAL FLOOD CONTROL CARRYOVER		***168,944,920***	***105,662,261***	***63,282,659***
SE	274	5000	City of Neche	Neche Levee Certification Project	9/16/19	36,600	26,378	10,222
SWC	1974	Rural	Souris River Joint WRD	Mouse River Rural Projects	6/19/19	24,575,000	1,306,179	23,268,821
SWC	1974	M-19	Souris River Joint WRD	Mouse River Municipal New Projects	6/19/19	9,750,000	2,668,584	7,081,416
SWC	2111	5000	Maple River WRD	Davenport Flood Risk Reduction	4/9/20	2,083,600	0	2,083,600
SE	2122	5000	US Army Corps of Engineers	Development of Comprehensive Plan for Souris Basin	12/16/19	75,000	75,000	0
SWC	2128	5000	City of Minot	Minot 2019 Bank Stabilization SWIF Action E	8/8/19	823,180	675,038	148,142
SWC	2129	5000	Burleigh County WRD	Sibley Island Flood Control Project	8/8/19	96,420	0	96,420
SWC	1504-09	5000	Valley City	Permanent Flood Protection PH IV and V	4/9/20	11,610,554	513,792	11,096,762
SB 2020	1928-19	5000	Fargo Metro Flood Diversion	Fargo Metro Flood Diversion Authority 2019-2021	10/8/20	44,000,000	0	44,000,000
				TOTAL FLOOD CONTROL 2019-2021		***93,050,354***	***5,264,971***	***87,785,383***
				TOTAL FLOOD CONTROL		***261,995,274***	***110,927,232***	***151,068,042***
			Floodway Property Acquisitions:					
SB 2371	1504-05	5000	Valley City	Valley City - Floodway Acquisitions	12/8/17	675,173	414,893	260,280
SWC	1993-05	5000	Minot	Minot Phase - Floodway Acquisitions	4/12/18	123,277	123,276	0
SWC	1991-05	5000	Lisbon	Lisbon - Floodway Acquisition	5/8/19	21,668	909	20,759
				TOTAL FLOOD FLOODWAY PROPERTY ACQUISITIONS CARRYOVER		***820,117***	***539,078***	***281,039***
SWC	1974-MA19	5000	Minot Acquisitions	Minot Phase - Floodway Acquisitions	6/19/19	11,950,000	976,794	10,973,206
SWC	1974-RA19	5000	Rural Floodway Acquisitions	Minot Rural - Floodway Acquisitions	6/19/19	3,225,000	2,464,476	760,524
				TOTAL FLOOD FLOODWAY PROPERTY ACQUISITIONS 2019-2021		***15,175,000***	***3,441,270***	***11,733,730***
				FLOODWAY PROPERTY ACQUISITIONS		***15,995,117***	***3,980,348***	***12,014,769***
				TOTAL FLOOD CONTROL		***277,990,391***	***114,907,580***	***163,082,811***
			Revolving Loan Fund: (General Water)					
SWC	1504	1050	Valley City	Valley City - Permanent Flood Protection Loan	12/6/19	3,676,600	0	3,676,600
SWC	0	1050	Golden Valley County WRD	Odland Dam Rehabilitation	12/11/20	350,000	0	350,000
				REVOLVING LOAN TOTAL		***4,026,600***	***0***	***4,026,600***
				TOTAL		***282,016,991***	***114,907,580***	***167,109,411***

SWC Board Approved to Continue

	BUDGET	APPROVED	BALANCE
LEGISLATIVE INTENT	***149,000,000***	***93,500,000***	***55,500,000***
FLOOD CONTROL	***40,000,000***	***14,725,354***	***25,274,646***
CONVEYANCE	***8,000,000***	***9,447,124***	***(1,447,124)***
BUDGET FLOOD CONTROL 2019-2021	***197,000,000***	***117,672,478***	***79,327,522***

STATE WATER COMMISSION
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WATER CONVEYANCE

Approved By	SWC No	Dept	Approved Biennium	Sponsor	Project	Approved Date	Total Approved	Total Payments	Dec-20 Balance
				Drain & Channel Improvement Projects:					
SE	1059	5000	2017-19	Bottineau Co WRD	Baumann Legal Drain	3/7/18	41,427	0	41,427
SWC	1059	5000	2017-19	Bottineau Co WRD	Baumann Legal Drain	12/7/18	378,976	42,825	336,151
SWC	1070	5000	2015-17	Maple River WRD	Drain #14 Channel Improvements	3/29/17	327,990	151,418	176,571
SWC	1222	5000	2015-17	Sargent Co WRD	Drain No 11 Channel Improvements	10/12/16	1,374,596	23,509	1,351,087
SWC	1314	5000	2015-17	Wells Co. WRD	Hurdsfield Legal Drain	3/29/17	644,292	534,225	110,067
SWC	1486	5000	2015-17	Griggs Co. WRD	Thompson Bridge Outlet No. 4 Project	10/6/15	590,146	170,657	419,489
SWC	1520	5000	2015-17	Walsh Co. WRD	Walsh County Drain 30-1	3/29/17	92,198	1,340	90,858
SWC	1520	5000	2017-19	Walsh Co. WRD	Walsh County Drain 30-2	10/11/18	301,501	207,355	94,146
SWC	1951	5000	2015-17	Maple River WRD	Lynchburg Channel Improvements	7/6/16	1,115,337	297,886	817,451
SWC	1978	5000	2015-17	Richland-Sargent Joint WRD	RS Legal Drain #1 Extension & Channel Improvements Phase II	3/29/17	70,422	20,704	49,718
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	24,609	20,628	3,981
SWC	2087	5000	2015-17	Walsh Co. WRD	Drain #87/McLeod Drain	3/29/17	2,419,961	1,925,563	494,398
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	81,176	0	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
					TOTAL RURAL FLOOD CONTROL CARRYOVER		***7,655,556***	***3,396,109***	***4,259,446***
SWC	1090	5000	2019-21	Southeast Cass WRD	Cass County Drain No. 40 Improvement Project	6/19/19	192,600	14,219	178,381
SWC	1217	5000	2019-21	Tri-County WRD	Drain No 6	10/10/19	738,900	248,372	490,528
SE	1299	5000	2019-21	Ransom County	Maple River Bridge Bank Stabilization	5/5/20	31,675	0	31,675
SE	1638	5000	2019-21	Rush River WRD	Auka Ring Dike	10/30/19	24,374	0	24,374
SWC	1999	5000	2019-21	Pembina Co. WRD	Tongue River Cutoff Channel Improvements	2/13/20	85,329	68,466	16,863
SWC	2094	5000	2019-21	McLean County WRD	Fort Mandan/4H Camp Access Road	4/9/20	67,996	0	67,996
SWC	2104	5000	2019-21	Bottineau Co. WRD	Overgaard Extension	2/13/20	215,969	0	215,969
SWC	2112	5000	2019-21	Pembina Co. WRD	Pembina Co Drain #81	2/13/20	284,982	0	284,982
SWC	2127	5000	2019-21	Sargent Co WRD	Sargent County Drain 12 Improvement	2/13/20	306,416	30,313	276,103
SWC	2135	5000	2019-21	Grand Forks-Traill County Joint \	Grand Forks County Legal Drain No. 9	12/11/20	2,783,837	0	2,783,837
SWC	2136	5000	2019-21	Pembina County WRD	Drain No. 39	4/9/20	210,928	183,245	27,683
SWC	2138	5000	2019-21	Pembina County WRD	Drain No. 82	12/6/19	1,011,666	0	1,011,666
SWC	2140	5000	2019-21	Grand Forks-Traill County Joint \	Thompson Drainage	4/9/20	688,107	23,216	664,892
SE	2143	5000	2019-21	Traill Co. WRD	Hillsboro Drain No. 26 Channel Improvements	3/27/20	72,041	62,309	9,732
SE	2149	5000	2019-21	Maple River WRD	Tower Township Improvement District No. 79	12/2/20	8,550	0	8,550
SE	2152	5000	2019-21	Enderlin Park Board	Maple River Bank Stabilization Project	6/24/20	11,250	6,955	4,295
SWC	2152	5000	2019-21	Enderlin Park Board	Maple River Bank Stabilization Project	12/11/20	132,500	0	132,500
SE	2153	5000	2019-21	Traill Co. WRD	Hong Drainage Improvement District No. 81	11/16/20	15,075	0	15,075
SWC	2155	5000	2019-21	Richland County, Center Townsl	Wild Rice River Bank Stabilization	10/8/20	78,644	0	78,644
SWC	2156	5000	2019-21	Bottineau County WRD	McHenry Laterals A and B	10/8/20	362,492	0	362,492
SWC/SE	1413-01	5000	2019-21	Traill Co. WRD	Camrud Drainage Improvement District No. 79	4/9/20	812,925	24,742	788,183
SE	2159	5000	2019-21	North Cass WRD	Cass County Drain 18 Extension	12/2/20	10,350	0	10,350
SE	2162	5000	2019-21	Steele Couty WRD	Drain 1 Lateral A - Preliminary Design Phase	12/10/20	4,500	0	4,500
SWC	PS/WRD/M	5000	2019-21	Mercer County WRD	Knife River Bank Stabilization	10/8/20	87,831	0	87,831
					TOTAL RURAL FLOOD CONTROL 2019-2021		***8,238,937***	***661,836***	***7,577,101***
					TOTAL RURAL FLOOD CONTROL		***15,894,493***	***4,057,946***	***11,836,547***
				Snagging & Clearing Projects:					
SE	2095	5000	2015-17	Nelson Co WRD	Sheyenne River Snagging & Clearing	4/10/17	19,700	0	19,700
					TOTAL SNAGGING & CLEARING CARRYOVER		***19,700***	***0***	***19,700***
SWC	568	5000	2019-21	Southeast Cass WRD	Sheyenne River Snag & Clear	8/8/19	294,000	123,103	170,897
SE	662	5000	2019-21	Walsh County WRD	Park River Snag and Clear	1/28/20	50,500	0	50,500
SE	1277	5000	2019-21	Emmons County WRD	2020-2021 Beaver Creek Snag & Clear	12/10/20	74,000	0	74,000
SE	1667	5000	2019-21	Traill County WRD	Goose River Snagging & Clearing	10/27/20	47,500	0	47,500
SWC	1694	5000	2019-21	Pembina County WRD	Tongue River Snag and Clear, City of Cavalier	10/8/20	98,400	0	98,400
SWC	1868	5000	2019-21	Southeast Cass WRD	2020-2021 Wild Rice River Snag & Clear	12/11/20	18,120	0	18,120
SE	1934	5000	2019-21	Traill County WRD	Elm River Snagging & Clearing	10/27/20	47,500	0	47,500
SE	2095	5000	2019-21	Barnes Co WRD	2019 Sheyenne River Snag & Clear Reach 1 - Project 2	9/16/19	49,750	0	49,750
SWC	2095	5000	2019-21	Southeast Cass WRD	2020-2021 Sheyenne River Snag & Clear	12/11/20	52,332	0	52,332
					TOTAL SNAGGING & CLEARING 2019-2021		***732,102***	***123,103***	***608,999***
					TOTAL SNAGGING & CLEARING		***751,802***	***123,103***	***628,699***
					TOTAL WATER CONVEYANCE		***16,646,295***	***4,181,049***	***12,465,246***
					TOTAL		16,646,295	4,181,049	12,465,246
					SWC Board Approved to Continue				

	BUDGET	APPROVED	BALANCE
WATER CONVEYANCE	***7,522,294***	***8,971,039***	***(1,448,745)***
COMPLETED WATER CONVEYANCE	***477,706***	***476,085***	***1,621***
BUDGET WATER CONVEYANCE 2019-2021	***8,000,000***	***9,447,124***	***(1,447,124)***

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COMPLETED WATER CONVEYANCE

Approvec By	SWC No	Dept	Approved Biennium	Sponsor	Project	Approved Date	Total Approved	Total Payments	*Dec-20* Balance
SE	662	5000	2015-17	Walsh Co. WRD	Park River Snagging & Clearing	2/17/17	0	0	0
SE	1056	5000	2015-17	Bottineau Co. WRD	Stead Legal Drain	2/16/17	0	0	0
SWC	1071	5000	2015-17	Maple River WRD	Cass County Drain #15 Channel Improvements	3/9/16	4,534	4,534	0
SWC	1180	5000	2017-19	Richland Co WRD	Legal Drain #7 Channel Improvements	12/7/18	200,812	200,812	0
SWC	1311	5000	2015-17	Traill Co. WRD	Buxton Township Improvement District No. 68	3/9/16	0	0	0
SWC	1331	5000	2015-17	Richland Co WRD	Drain #14 Reconstruction	12/9/16	0	0	0
SWC/SE	1413-01	5000	2019-21	Traill Co. WRD	Camrud Drainage Improvement District No. 79	4/11/19	14,557	14,557	0
SWC	1650	5000	2017-19	Sargent Co WRD	Sargent County Drain No. 7 Cost Overrun	6/19/19	110,638	110,638	0
SWC	2049	5000	2015-17	Grand Forks Co. WRD	Grand Forks Legal Drain No. 58	3/29/17	517,128	517,128	0
SWC	2068	5000	2015-17	Traill Co. WRD	Stavanger-Belmont Drain No. 52 Channel Impr	10/12/16	44,342	44,342	0
SE	2069	5000	2017-19	Center Township	Center Township Bank Stabilization	6/28/19	3,720	3,720	0
SWC	2088	5000	2015-17	Pembina Co. WRD	Drain No. 79	12/9/16	52,764	52,764	0
SE	2110	5000	2015-17	Ward Co. WRD	Meadowbrook Snagging & Clearing	6/21/17	33,000	33,000	0
SE	2093/1427	5000	2015-17	Bottineau Co. WRD	Moen Legal Drain	9/6/16	0	0	0
					TOTAL WATER CONVEYANCE CARRYOVER		***981,494***	***981,494***	***0***
SE	1273	5000	2019-21	City of Oakes	James River Bank Stabilization	11/26/19	16,869	16,869	0
SE	1277	5000	2019-21	Emmons County WRD	Beaver Creek Snag and Clear	1/16/20	74,000	72,581	1,419
SWC/SE	1694	5000	2019-21	Pembina County WRD	Tongue River Snag and Clear	4/2/20	116,837	116,635	202
SE	1842	5000	2019-21	Richland County WRD	2019 Wild Rice River Snag and Clear	1/15/20	150,000	150,000	0
SWC	1868	5000	2019-21	Southeast Cass WRD	Wild Rice River Snag and Clear	8/8/19	120,000	120,000	0
					TOTAL WATER CONVEYANCE 2019-2021		***477,706***	***476,085***	***1,621***
					TOTAL		1,459,200	1,457,578	1,621

STATE WATER COMMISSION
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GENERAL PROJECTS

Approved By	SWC No	Dept	Approved Biennium	Sponsor	Project	Approved Date	Total Approved	Total Payments	Dec-20 Balance
				Hydrologic Investigations:					
SWC	2041	3000	2017-19	USGS	Stream Gage Joint Funding Agreement	12/7/18	613,382	613,382	0
					TOTAL CARRYOVER		***613,382***	***613,382***	***0***
SWC	2041	3000	2019-21	USGS	Stream Gage Joint Funding Agreement	6/9/20	638,354	220,454	417,900
SE	989	3000	2019-21	ND Dept of Environmental Quality	Water Sampling Testing	8/13/19	110,000	110,000	0
					TOTAL 2019-2021		***748,354***	***330,454***	***417,900***
					Subtotal Hydrologic Investigations		***1,361,736***	***943,836***	***417,900***
				Devils Lake Basin Development:					
SWC	416-10	4700		Operations	Devils Lake Outlet Operations	4/9/19	3,760,132	3,760,132	(0)
					Subtotal Devils Lake Basin Development		***3,760,132***	***3,760,132***	***(0)***
				General Water Management:					
SWC	160	5000	2017-19	McLean Co WRD	Painted Woods Lake Flood Damage Reduction & Habita	8/9/18	284,768	279,221	5,547
SWC	269	5000	2017-19	Walsh Co. WRD	Fordville Dam Rehabilitation	6/19/19	122,595	31,260	91,335
SWC	391	5000	17-19	Sargent Co WRD	Silver Lake Dam Improvements	12/20/18	28,606	28,606	0
SWC	394	5000	17-19	Golden Valley Co WRD	Odland Dam Rehabilitation Project	12/7/18	110,055	110,055	0
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	11,573	0	11,573
SE	531	5000	2017-19	Benson Co WRD	Bouret Dam Rehabilitation	12/20/18	31,843	23,719	8,124
SWC	531	5000	2017-19	Benson Co WRD	Bouret Dam Rehabilitation	4/9/19	591,750	5,034	586,716
SWC	551	5000	2015-17	McHenry Co. WRD	Buffalo Lodge Lake Outlet	6/22/17	61,540	0	61,540
SWC	688	5000	2017-19	Grand Forks Co WRD	Larimore Dam Rehabilitation	6/19/19	91,800	13,873	77,927
SWC	848	5000	2017-19	Sargent Co WRD	Brummond/Lubke Dam	10/11/18	280,043	192,439	87,604
SWC	980	5000	2015-17	Cass Co. Joint WRD	Rush River Watershed Detention Study	1/7/16	99,257	50,566	48,692
SWC	980	5000	2015-17	Cass Co. Joint WRD	Upper Maple River Watershed Detention Study	1/11/16	70,699	29,490	41,209
SE	1264	5000	2013-15	Barnes Co WRD	Little Dam Repurposing Feasibility Study	6/17/15	12,385	6,588	5,797
SE	1289	5000	2015-17	McKenzie Co. Weed Board	Control of Noxious Weeds on Sovereign Land	4/10/17	27,549	5,246	22,304
SWC	1303	5000	2015-17	Sargent Co WRD	Shortfoot Creek Watershed Planning Program	3/9/16	84,475	21,823	62,652
SWC	1389	5000	2013-15	Bank of ND	BND AgPace Program	8/8/19	30,365	30,365	0
SE	1453	5000	2017-19	Hettinger County WRD	Karey Dam Rehabilitation Design & Planning	12/14/18	48,284	0	48,284
SE	1453	5000	2017-19	Hettinger County WRD	Karey Dam Rehabilitation Project	4/9/19	971,325	789,664	181,661
SWC	1968	5000	2015-17	Garrison Diversion	MM 15 Irrigation Project	3/29/17	93,615	0	93,615
SWC	1968	5000	2015-17	Garrison Diversion	MM 42L Irrigation Project	8/23/17	77,958	0	77,958
SWC	1968	5000	2017-19	Garrison Diversion	MM 0 and MM 0.4 Irrigation Project	12/7/18	1,673,793	45,746	1,628,047
SE	2055	5000	2015-17	Red River Joint Water Resource District	Lower Red Basin Regional Detention Study	7/17/15	45,000	0	45,000
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	2017-19	Walsh Co. WRD	Matejcek Dam Rehabilitation	10/11/18	194,345	93,079	101,266
SE	2072	5000	2015-17	Barnes Co WRD	Ten Mile Lake Flood Risk Reduction Project	6/8/16	36,812	10,318	26,494
SWC	2075	5000	2015-17	Ward Co. WRD	Second Larson Coulee Detention Pond	7/6/16	602,307	602,307	0
SE	2089	5000	2015-17	Maple River WRD	Tower Township Improvement District No. 77 Study	12/19/16	16,458	0	16,458
SE	2090	5000	2015-17	International Water Institute	River Watch Program	1/12/17	5,234	5,234	0
SWC	2103	5000	2017-19	Walsh Co. WRD	Bylin Dam Rehabilitation	6/19/19	131,370	33,101	98,269
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	55,961	51,690	4,271
SWC	2115	5000	2017-19	Applied Weather Associates, LLC	(PMP) Probable Maximum Precipitation Estimates	10/11/18	600,000	359,405	240,595
SWC	2121	5000	2017-19	Pembina Co. WRD	Senator Young Dam Rehabilitation	6/19/19	129,210	15,065	114,145
SWC	2123	5000	2017-19	Geotech, Inc.	Airborne Electromagnetic (AEM) 2018	8/9/18	427,354	404,250	23,104
SE	1396-01	5000	2013-15	State Water Commission	Missouri River Recovery Program	11/17/15	46,510	0	46,510
SWC	1851-01	5000	2015-17	ND State Water Commission	Drought Disaster Livestock Water Supply Assistance	2/8/18	656,983	99,705	557,277
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	PS/IRR/LOW	5000	2017-19	Lower Yellowstone Irrigation District #2	Lateral W Irrigation Project	6/14/18	366,445	0	366,445
SE	PS/WRD/LOW	5000	2015-17	Lower Heart WRD	Lower Heart Flood Control Study	5/10/17	21,140	0	21,140
					TOTAL GENERAL WATER CARRYOVER		***9,673,431***	***3,951,231***	***5,722,201***
SE	299	5000	2019-21	City of Pembina	Pembina City Dam Renovation Alternatives Eval.	11/3/20	30,045	0	30,045
SWC	391	5000	2019-21	Sargent Co WRD	Silver Lake Dam Improvements	4/9/20	161,918	11,201	150,717
SWC	394	5000	2019-21	Golden Valley Co WRD	Odland Dam Rehabilitation Project	4/9/20	595,800	15,317	580,484
SWC	394	5000	2019-21	Golden Valley Co WRD	Odland Dam Rehabilitation Project	12/11/20	306,000	0	306,000
SE	477	5000	2019-21	City of Valley City	Mill Dam Rehabilitation	11/16/20	74,625	0	74,625
SE	531	5000	2019-21	Benson Co WRD	Bouret Dam Rehabilitation	12/2/20	75,000	0	75,000
SE	632	5000	2019-21	Bottineau County Highway Dept	Antler Dam Repair	1/16/20	34,800	0	34,800
SE/SWC	1267	5000	2019-21	Bottineau County WRD	Westhope Dam Rehabilitation	6/9/20	71,293	0	71,293
SE	1378	5000	2019-21	Barnes Co WRD	Clausen Springs Dam EAP	8/8/19	72,052	51,490	20,562
SWC	1389	5000	2013-15	Bank of ND	BND AgPace Program	6/30/19	150,000	129,709	20,291
SE	1431	5000	2019-21	USGS/LaMoure County	Rapid Deployment Gages under FEMA Hazard Mit	10/17/19	500	0	500
HB1202	1625	5000	2019-21	Various Consulting Firms	Sovereign Land Navigability Determination	8/8/19	0	0	0
SWC	1785	5000	2019-21	Maple River WRD	Maple River Dam Site T-180 Improvements	2/13/20	212,216	0	212,216
SE	2055	5000	2019-21	Red River Joint Water Resource District	Lower Red Basin Regional Detention Study	12/6/19	32,905	0	32,905
SE	2090	5000	2019-21	International Water Institute	River Watch Program	8/2/19	53,840	36,510	17,330
SWC	2109-02	5000	2019-21	Logan County WRD	McKenna Lake Hydrologic Study Phase 2	10/8/20	111,876	0	111,876
SWC	2141	5000	2019-21	Pembina Co. WRD	Weiler Dam Gate and Catwalk Retrofit	4/9/20	118,924	0	118,924
SE	2142	5000	2019-21	City of Bismarck	Jackman Coulee Dam 2 Emergency Action Plan	5/5/20	25,600	0	25,600
SE	2146	5000	2019-21	City of Bismarck	Jackman Coulee Dam 2 Pipe Rehab	5/5/20	65,000	0	65,000
SE	2150	5000	2019-21	SD Dept of Transportation	Multi-State DOT Pooled Fund Study	7/1/20	55,600	0	55,600
SE	2154	5000	2019-21	Elm River Joint WRD	Elm River Watershed Study	11/3/20	72,000	0	72,000
SWC	2161	5000	2019-21	AE2S	Strategic Governance and Finance Study	10/8/20	190,050	4,880	185,170
SWC	ARB-WMI-19-1	7600	2019-21	Weather Modification, Inc.	Atmospheric Resource Operations and Research Gr	6/19/19	875,722	286,025	589,697
SE	AOC/WEF	5000	2019-21	ND Water Education Foundation	ND Water Magazine	7/23/19	26,000	19,500	6,500
SWC	AOC/RRB	5000	2019-21	Red River Basin Commission	Red River Basin Commission Contractor	6/19/19	200,000	150,000	50,000
SWC	AOC/ASS	5000	2019-21	Assiniboine River Basin Initiative	ARBI's Outreach Efforts	6/19/19	100,000	50,000	50,000
SE	AOC/IRA	5000	2019-21	ND Irrigation Association	Water Irrigation Funding	6/19/20	100,000	100,000	0
SE	AOC/WRD	5000	2019-21	ND Water Resource Districts Association	Water Managers Handbook and Workshops	7/1/20	20,500	0	20,500
SE	PS/WRD/DEV	5000	2019-21	Devils Lake Basin Joint WRB	Board Manager	7/1/19	60,000	0	60,000
SE	PS/WRD/MRJ	5000	2019-21	Missouri River Joint WRB	MRRIC Terry Fleck	5/2/19	45,000	20,237	24,763
					TOTAL GENERAL WATER 2019-2021		***4,685,620***	***1,205,322***	***3,480,298***
					TOTAL GENERAL WATER		***14,359,051***	***5,156,553***	***9,202,499***
					TOTAL		**18,119,183**	**8,916,685**	**9,202,498**

SWC Board Approved to Continue

	BUDGET	***APPROVED***	***BALANCE***
GENERAL WATER	***25,939,450***	***4,685,620***	***21,253,830***
COMPLETED GENERAL WATER	***1,154,326***	***1,154,326***	***0***
BUDGET GENERAL WATER 2019-2021	***27,093,776***	***5,839,946***	***21,253,830***

STATE WATER COMMISSION
PROJECT SUMMARY
2019-2021 Biennium
Resources Trust Fund

COMPLETED GENERAL PROJECTS

Approved By	SWC No	Dept	Approved Biennium	Sponsor	Project	Approved Date	Total Approved	Total Payments	Dec-20 Balance
0	0	0	0	0	***Hydrologic Investigations:***	0 1/0/00	0	0	0
							0	***0***	***0***
SE	1303	5000	2013-15	Sargent Co WRD	Gwinner Dam Improvement Feasibility Study Program	4/17/15	20,181	501	19,681
SE	390	5000	2015-17	Logan County WRD	Beaver Lake Dam Rehabilitation Feasibility Study	6/8/16	2,140	369	1,771
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 Feasibility Study	6/8/16	2,937	2,937	0
SE	512	5000	2015-17	Emmons County WRD	Nieuwsma Dam Emergency Action Plan	11/28/16	6,720	6,707	13
SE	561	5000	2015-17	City of Tioga	Tioga Dam EAP	5/20/16	40,000	40,000	0
SE	1270	5000	2015-17	City of Wilton	Wilton Pond Dredging Recreation Project	12/29/15	35,707	0	35,707
SWC	1296	5000	2015-17	Pembina Co. WRD	Tongue River NRCS Watershed Plan	3/9/16	64,334	64,334	0
SWC/SE	1301	5000	2015-17	Richland Co. WRD	North Branch Antelope Creek NRCS Small Watershed	3/9/16	53,939	53,939	0
SE	1444	5000	2015-17	City of Pembina	Flood Protection System Certification	4/19/16	1,657	1,657	0
SE	1453	5000	2015-17	Hettinger County WRD	Karey Dam Rehabilitation Feasibility Study	5/23/16	6,853	6,853	0
SWC	2060	5000	2015-17	Walsh Co. WRD	Forest River Watershed Study	4/10/17	154,012	99,632	54,380
SE	2070	5000	2015-17	Garrison Diversion Conservancy Dist.	Mile Marker 42 Irrigation Project	5/20/16	444	0	444
SE	2071	5000	2015-17	Foster County WRD	Alkali Lake High Water Feasibility Study	4/19/16	4,830	4,009	821
SWC	2074	5000	2015-17	City of Wahpeton	Breakout Easements	7/6/16	265,250	265,250	0
SWC	2074	5000	2015-17	City of Wahpeton	Flood Control - Levee Certification	7/6/16	247,500	247,500	0
SWC	2083	5000	2015-17	Pembina Co. WRD	Herzog Dam Gate & Catwalk Retrofit - Construction	10/12/16	106,188	85,762	20,425
SE	2085	5000	2015-17	Adams Co WRD	Orange Dam Rehabilitation Feasibility Study	10/13/16	8,840	0	8,840
SWC	2096	5000	2015-17	Southeast Cass WRD	Sheyenne-Maple Flood Control Dist. #2 Improvements	3/29/17	322,617	43,539	279,079
SWC	1859	5000	2017-15	ND Dept of Environmental Quality	NPS Pollution	8/23/17	629	0	629
SE	667	5000	2017-19	Burke Co WRD	Northgate Dam 2 Emergency Action Plan	9/5/17	26,396	25,866	530
SE	1431	5000	2017-19	USGS	Rapid Deployment Gage on the James River at Adrian	3/20/19	4,900	4,900	0
SWC	2120	5000	2017-19	Apex Engineering	SWPP Transfer of Ownership Study	4/9/19	170,909	170,876	33
SE	2090-02	5000	2017-19	International Water Institute	River of Dreams Program	6/6/18	8,331	8,331	0
SE	849-01	5000	2017-19	Pembina Co. WRD	Goschke Dam Spillway Gate Retrofit	4/9/19	119,010	119,010	(0)
					TOTAL GENERAL WATER CARRYOVER		***1,691,824***	***1,251,972***	***439,852***
SWC/SE	1301	5000	2019-21	Richland Co. WRD	North Branch Antelope Creek NRCS Small Watershed	6/19/19	17,500	12,826	4,673.88
SE	1403	5000	2019-21	NDSU	ND Water Resource Institute grant student stipends	1/16/20	25,000	25,000	0
HB1202	1625	5000	2019-21	Various Consulting Firms	Sovereign Land Navigability Determination	8/8/19	0	0	0
SWC	1859	5000	2017-15	ND Dept of Environmental Quality	NPS Pollution	8/8/19	200,000	200,000	0
SB2009	1986	5000	2019-21	ND Dept of Agriculture	Wildlife Services	8/15/19	125,000	125,000	0
SE	AOC/WEF/TOURS	5000	2019-21	ND Water Education Foundation	Summer Water Tours	3/20/20	0	0	0
SE	ARB-NDAWN	5000	2019-21	North Dakota State University	North Dakota Agricultural Weather Network	3/16/20	1,500	1,500	0
SWC	FUGRO	5000	2019-21	FUGRO	Aerial Imagery Project	6/19/19	790,000	790,000	0
					TOTAL GENERAL WATER 2019-2021		***1,159,000***	***1,154,326***	***4,674***
					TOTAL GENERAL WATER		***2,850,824***	***2,406,298***	***444,526***
					TOTAL		2,850,824	2,406,298	444,526

8 Results of life cycle cost analysis for 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~~ two years if the term of the project exceeds ~~four~~ two 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 two hundred thousand 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 water supply projects must complete the Water Commission's life cycle cost analysis worksheet. The completed worksheet must include a no action alternative, and up to three additional plausible alternatives - including repair, replacement, and regionalization options. If repair, replacement, and regionalization alternatives are excluded from the life cycle cost analysis, justification must be provided by the project sponsor.

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. The Commission will consider cost-share requests and issue agreements under a two-tier process. Cost-share for pre-construction expenses will be considered first; followed by construction-related expenses after completion of pre-construction activities, including plans and specifications for bidding project construction.

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 a 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

APPENDIX C

STATE WATER COMMISSION
SUMMARY of PROJECT FOUR YEAR PROGRESS REPORTS
2019-2021 Biennium
January 22, 2021

Requesting Extension

Project #	Sponsor	Project	Project Category	Approved Date	Total Cost	Cost-Share %	Cost-Share Approved	Total Payments	1/22/2021 Balance
2072	Barnes County WRD	Ten Mile Lake Flood Risk Reduction Feasibility Study	Flood Control	6/8/16	$108,000	35	$37,800	$18,372	$19,428
1771-01	Grafton	Grafton Flood Control Project	Flood Control	10/12/16	$43,181,250	35/75	$32,175,000	$28,710,212	$3,464,788
980	Cass County Joint WRD	Rush River Watershed Detention Study Phase II	General	1/7/16	$940,000	35	$154,000	$115,398	$38,602
980	Cass County Joint WRD	Upper Maple River Detention Study Phase II	General	1/7/16	$940,000	35	$154,000	$140,840	$13,160
1303	Sargent County WRD	Shortfoot Creek Watershed Planning Program	General	7/7/16	$940,000	35	$154,000	$105,135	$48,865
2050/DIK	City of Dickinson	State Avenue South Water Main	Municipal	12/11/15	$1,500,000	60	$965,000	$1,080	$963,920
2050/FAR	City of Fargo	Water System Regionalization Improvements	Municipal	07/29/15	$12,000,000	60	$6,841,750	$5,464,303	$1,377,447
2050/WLL	City of Williston	System Improvements 2015	Municipal	10/06/15	$12,452,752	60	$6,770,962	$3,043,367	$3,727,595
2050/ALL	All Seasons Water Users District	System 4 Connection to System 1	Rural Water	12/11/15	$6,638,000	75	$4,900,000	$0	$4,900,000
2016	Pembina County WRD	Establishment of Pembina County Drain 80	Water Conveyance	4/10/17	$214,185	35	$74,965	$70,984	$3,981
1222	Sargent County WRD	Sargent County Drain 11 Channel Improvements	Water Conveyance	10/12/16	$3,900,000	35/45	$1,417,967	$66,880	$1,351,087
2087	Walsh County WRD	Walsh County Drain 87/McLeod Drain	Water Conveyance	3/29/17	$15,517,607	35/45	$5,273,586	$4,779,188	$494,398
				TOTALS	$98,331,794	*N/A*	$58,919,030	$42,515,759	$16,403,271

STATE WATER COMMISSION
SUMMARY of PROJECT FOUR YEAR PROGRESS REPORTS
2019-2021 Biennium
January 22, 2021

Completed - pending final reimbursement request

Project #	Sponsor	Project	Project Category	Approved Date	Total Cost	Cost-Share %	Cost-Share Approved	Total Payments	1/22/2021 Balance
0420	Hettinger Park Board	Mirror Lake Dam Emergency Action Plan	General	12/2/16	$35,000	80	$24,400	$12,827	$11,573
PS/WRD/LOW	Lower Heart WRD	Lower Heart Flood Control Study	General	5/10/17	$73,100	35	$21,140	$0	$21,140
0237-03/CAR	North Prairie Regional Water District	Carpio Berthold Phase 2	Rural Water	04/01/15	$4,135,000	75	$3,050,000	$2,791,309	$258,691
2050/NOR	North Prairie Regional Water District	2016 Storage and Main	Rural Water	10/06/15	$4,789,502	75	$3,459,837	$3,334,516	$125,321
1314	Wells County WRD	Hurdsfield Legal Drain	Water Conveyance	3/29/17	$1,570,370	35/45	$644,292	$540,330	$103,962
1978	Richland Sargent Joint WRD	Richland Sargent Legal Drain 1 Reconstruction Phase II	Water Conveyance	3/29/17	$1,000,000	45	$378,000	$357,161	$20,839
								TOTAL	$541,526

Turnback

Project #	Sponsor	Project	Project Category	Approved Date	Total Cost	Cost-Share %	Cost-Share Approved	Total Payments	1/22/2021 Balance
2108	Walsh County WRD	Improvement of Walsh County Drain 22	Water Conveyance	6/22/17	$738,043	35/45	$266,086	$192,747	$73,339
1520	Walsh County WRD	Walsh County Drain 30-1	Water Conveyance	3/29/17	$707,792	35/45	$282,307	$191,782	$90,525
2050/MIN	City of Minot	Water System Improvements 2015	Municipal	10/06/15	$6,194,539	60	$3,634,000	$3,344,862	$289,138
1070	Maple River WRD	Cass County Drain 14 Channel Improvements	Water Conveyance	3/29/17	$2,065,700	35/45	$741,562	$564,991	$176,571
1301	Richland County WRD	North Branch Antelope Creek NRCS Small Watershed Planning Program	General	3/6/16	$874,000	35	$130,900	$126,226	$4,674
								TOTAL DEOBLIGATED	$470,383

APPENDIX D

Change Order

No. 8

Date of Issuance: December xx, 2020 Effective Date: _____

Project: Southwest Pipeline Project	Owner: ND State Water Commission	Owner's Contract No.: Contract 1-2A
Contract: Supplementary Raw Water Intake Caisson, Intake Pipe, & Screen		Date of Contract: August 20, 2013
Contractor: James W. Fowler Co.		Engineer's Project No.: 003033.990

The Contract Documents are modified as follows upon execution of this Change Order:

The modifications under this Change Order consist of the following eleven items to acknowledge the James W. Fowler Company's (Fowler's) redesign of the intake pipe and screen and abandonment of the installed micro-tunnel along the second alignment. This Change Order is not intended to eliminate any right that ND State Water Commission (NDSWC) may have under the Contract to pursue damages as a result of any future material breach by Fowler of the Contract, including abandonment of the Project.

1. NDSWC agrees to accept the Horizontal Directionally Drilled (HDD) intake pipe concept, if constructed as proposed by Fowler in the ND SWPP Alternate Plan 9.17.20 D.pdf package and the modified caisson shaft as proposed by Fowler in Submittal #50 Existing Micro-tunnel Backfill & New HDD Breakthrough Design, both attached by reference to this change order. Such acceptance is contingent on receipt of acceptable technical submittal information as required by NDSWC. Attachment 1 includes several reference drawings from the Alternate Plan 9.17.20 package and Submittal #50.
2. NDSWC agrees to accept, and Fowler agrees to construct, the Intake Screen Structure Support and the connecting pipe to the HDD product pipe, generally as proposed in Attachment 2. Attachment 2 includes several reference conceptual design drawings of the screen support structure and connecting pipe.
3. The acceptance of items 1 and 2 above by NDSWC is contingent upon Fowler providing timely and adequate drawings, information, calculations, and other supporting documentation required for NDSWC or Fowler to obtain all permits, easements, construction licenses, etc. required by all permitting agencies.
4. Fowler agrees to provide a warranty for a period of ten years from Substantial Completion date for repair of any damage caused by ground movement or settlement along or inside NDSWC's US Army Corps of Engineers easements.
5. Fowler agrees that the "technical data" upon which the Contractor can rely, as described in Change Order No. 3, applies to the revised intake pipe alignment and that the "tunnelman's ground classification" expected for the revised alignment is "flowing" or "running." Fowler acknowledges that the strata boundary depths and materials encountered during construction may vary between boreholes, in part because the boreholes in the Shannon & Wilson report are not located on the proposed HDD alignment.
6. NDSWC approves of Fowler's selection of ECI Drilling International as HDD subcontractor, Staheli Trenchless Consultants as HDD consultant, Propipe as HDD pipe subcontractor, AE2S as diving consultant, and Anchor Diving as diving subcontractor.
7. NDSWC agrees to extend the Contract Substantial Completion date to February 28, 2022, and Final Completion date to April 30, 2022.
8. Items 4 and 5 in Change Order No 7 are replaced with items 9, 10, and 11 below.
9. Fowler agrees to reimburse NDSWC for expenses NDSWC has incurred or will incur under its contract with Bartlett & West/AECOM under Specific Authorization No. 190 since November 1, 2015 through the Substantial Completion of Contract 1-2A. The expenses under Specific Authorization No. 190 includes construction

administration and construction observation expenses. Fowler also agrees to reimburse NDSWC expenses associated with the anticipated geotechnical investigation for the pump station design, and additional estimated expenses for construction of a deep foundation to support the pump station, if required, due to the repair work following the November 1, 2015 incident. These costs have been estimated at $1,395,000. See Attachment No. 3.

10. When NDSWC resumes progress payments to Fowler under Contract 1-2A, NDSWC will withhold a prorated amount as additional retainage in accordance with the terms of Contract 1-2A. The amount of additional retainage for the first payment will be calculated by taking the number of days from November 1, 2017 to the date of the progress payment, divided by 1,580 and multiplied by the $1,395,000 estimate of NDSWC's expenses. Subsequent payments will utilize the number of days between the current progress payment and the last prior progress payment, divided by 1,580 and multiplied by $1,395,000. However, under no circumstance will NDSWC retain any amounts in excess of actual costs incurred (under item 9) after accounting for any insurance proceeds already received. Upon Substantial Completion and finalization of actual expenses and all insurance proceeds, the NDSWC will adjust the final amount owed Fowler in a final change order.
11. Before final payment is made on Contract 1-2A, NDSWC agrees to subtract any insurance proceeds it recovers from the amount of its total expenses to calculate NDSWC's expenses reimbursed by Fowler under item 9 above. For example, if the total expenses from November 1, 2017 through Substantial Completion of Contract 1-2A equal $1,500,000 but NDSWC obtains $350,000 in insurance proceeds, the total amount deducted from Contract 1-2A would be $1,150,000 under item 9 above.

CHANGE IN CONTRACT PRICE:

Original Contract Price:

$ 12,994,000.00

[Increase] [~~Decrease~~] from previously approved Change Orders No. 1 to No. 6R :

$ 3,523,535.00

Contract Price prior to this Change Order:

$ 16,517,535.00

[Increase] [Decrease] of this Change Order:

$ 0.00

Contract Price incorporating this Change Order:

$ 16,517,535.00

CHANGE IN CONTRACT TIMES:

Original Contract Times: Working days [X] Calendar days

Substantial completion (days or date): Nov. 30, 2014

Ready for final payment (days or date): Jan. 15, 2015

[Increase] [Decrease] from previously approved Change Orders No. 1 to No. 7 :

Substantial completion (days): see date below

Ready for final payment (days): see date below

Contract Times prior to this Change Order:

Substantial completion (days or date): Dec. 31, 2018

Ready for final payment (days or date): Feb. 15, 2019

[Increase] [Decrease] of this Change Order:

Substantial completion (days or date): Feb 28, 2022

Ready for final payment (days or date): Apr 30, 2022

Contract Times with all approved Change Orders:

Substantial completion (days or date): Feb 28, 2022

Ready for final payment (days or date): Apr 30 2022

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable):

_____ Date: _____

APPENDIX E

DRAFT

Funding, financing and delivery options for large water projects in North Dakota

Primer prepared for the North Dakota State Water Commission

[DRAFT DATE JANUARY 2021]

The scope of this Primer

The North Dakota State Water Commission ("NDSWC") has engaged AE2S to undertake a Strategic Governance and Finance Study to guide decision-making relating to delivery of regional water system projects in the State. This study includes preparation of this white paper (the Primer) to identify potential federal, State and local funding and financing options for large water projects, and to identify potential contracting structures for the delivery of such projects. This Primer is not intended to provide any recommendation to NDSWC regarding these options or relating to specific water projects in the State, but will inform discussion and consideration of different delivery and funding structures in the context of specific projects as part of the broader study.

Limitations of scope

- *AE2S is not acting as a municipal advisor on behalf of NDSWC as that term is defined in Section 15B of the Securities Exchange Act of 1934, as amended.*
- *The scope of this Primer was determined by NDSWC, and no representation is made as to the sufficiency of the Primer and related work for any other purposes. Any third parties that read the Primer must be aware that it is subject to limitations, and the scope of the Primer was not designed for use or reliance by third parties for investment purposes, or any other purposes. The Report does not evaluate the relative merits of existing or proposed large water projects in the State of North Dakota or elsewhere. Further, the Primer does not make any recommendations as to the sources of funding or financing that should be used to develop these or other projects, the methods of repayment or the ability of project beneficiaries to repay specific project costs.*
- *The findings and analyses contained in the Primer are based in part on publicly available information from reputable sources which are referenced in the Primer to provide additional context to specific statements of fact or opinion. No procedures were performed to evaluate the reliability or completeness of information publicly sourced.*
- *The Primer does not constitute legal opinion or advice. No representation is made relating to matters of a legal nature, including, without limitation, matters of title or ownership, legal description, encumbrances, liens, priority, easements and/or land use restrictions, the validity or enforceability of legal documents, present or future national or local legislation, regulation, ordinance or the like, or legal or equitable defenses.*
- *[Certain information in the Primer is based on estimates and/or assumptions about future events. Please note that there will usually be differences between estimated and actual results because future events and circumstances frequently do not occur as expected, and those differences may be material. No representation is made of, nor is any responsibility taken for, the achievement of estimated or projected results.]*
- *Should additional relevant data or information become available subsequent to the date of the Primer, such data or information may have a material impact on the findings in the Primer. There is no future obligation to update the Primer.*
- *The Primer assumes market conditions as at the date set out on the front cover and does not address potential effects of financial market disruption resulting from the Covid-19 pandemic or other significant political or economic events. Further analysis may be required if market disruptions persists.*

Contents

Glossary

Abbreviation	Definition
AP	Availability payment
BEIS	Department of or Business, Energy and Industrial Strategy
BOOT	Build-operate-own-transfer
BOT	Build-operate-transfer
CFP	Capital Financing Program
CM	Construction manager
CMA	Construction manager-as-agent
CMAR	Construction manager-at-risk
COP	Certificate of participation
DB	Design-build
DBB	Design-bid-build
DBF	Design-build-finance
DBFOM	Design-build-finance-operate-maintain
DBM	Design-build-maintain
DBO	Design-build-operate
DBOM	Design-build-operate-maintain
DEQ	ND Department of Environmental Quality
DWU	Dallas Water Utilities
EPA	Environmental Protection Agency
GC	General contracting
GMP	Guaranteed maximum price
GO bond	General Obligation Bond
IPL	Integrated Pipeline Project
LBO	Lease-build-operate
LDO	Lease-develop-operate
MR&I	Municipal, Rural and Industrial
NAWS	Northwest Area Water Supply
ND	North Dakota
NDCC	North Dakota Century Code
NMFA	New Mexico Finance Authority
NRWA	National Rural Water Association
O&M	Operations & maintenance
OET	Oil Extraction Tax
PABs	Private Activity Bonds
RFP	Request for Proposal
RLF	Revolving Loan Fund
SAWS	San Antonio Water System
SPV	Special purpose vehicle
SRF	State Revolving Fund
SWIFT	State Water Implementation Fund for Texas
SWPP	Southwest Pipeline Project
TRWD	Tarrant Regional Water District
TTT	Thames Tideway Tunnel
TWDB	Texas Water Development Board
USBR	US Bureau of Reclamation
USDA	US Department of Agriculture
USEDA	US Economic Development Administration
USHUD	US Department of Housing and Urban Development
WIFIA	Water Infrastructure Finance & Innovation Act

Section A

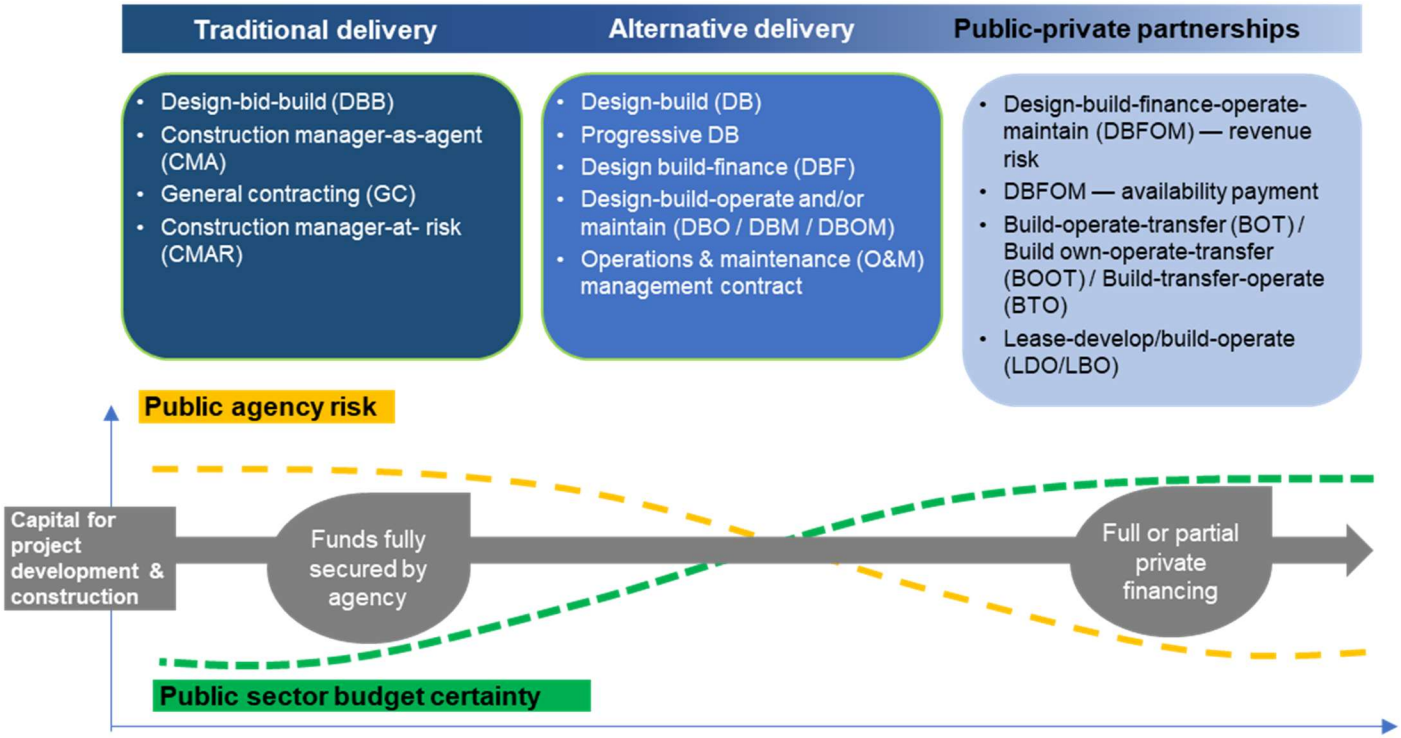
Potential contracting and delivery models

A. Potential contracting and delivery models

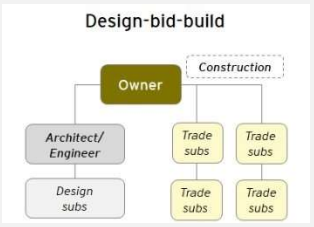
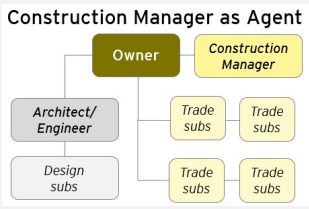
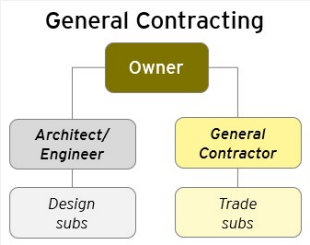
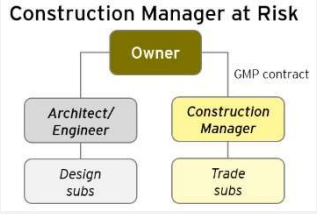
This section discusses the range of potential contracting and delivery models that can be applied to large water infrastructure projects, categorized as follows:

1. Traditional delivery — most projects to date have awarded contracts for the design/development, construction, operation and maintenance of water infrastructure on a discrete basis via individual procurement processes, or in some cases identifying a single contractor or general project manager to oversee such processes, albeit not taking any material delivery risk
2. Alternative delivery — A number of contracting models combine multiple phases of project development to be awarded via a single procurement process, with the selected entity responsible for the delivery of those phases and associated risk and reward of doing so.
3. Public-Private Partnerships (or "P3") — there is no single agreed definition of P3, but for the purposes of this Primer, P3 structures are ones that:
    - Are long-term performance-based contracts that allocate risks to the party best suited to manage them
    - Combine responsibility for design, build and operations and substantially allocate this responsibility to the private sector
    - Link private sector financial outcomes to contractual performance specifications.
    - Typically include some element of private financing to reinforce performance risk transfer

The graphic below summarizes the specific contracting/delivery models that can be allocated to the categories above and are described in more detail in this section.

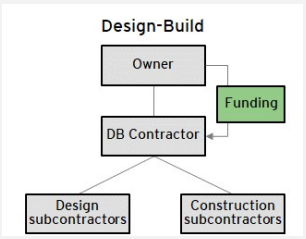
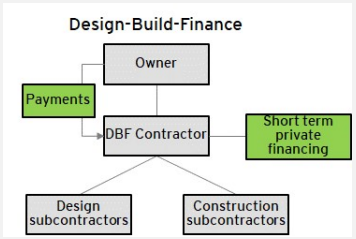


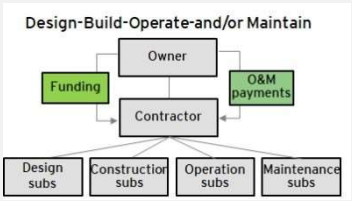
1. Traditional delivery

Model	Summary description
Design-bid-build (DBB)	 ▪ DBB is a long-standing project delivery method whereby the public owner or sponsor contracts with separate entities for the design and construction of a project. This typically involves the competitive procurement of an architect or engineer to design the project, and then a request for bids from relevant companies to construct the project per the design specification. This may involve contracting and managing multiple contractors for different elements as relevant to project. Contracts are typically awarded with a heavy focus on the lowest cost bid(s). ▪ DBB is a relatively straight forward approach that gives projects owners the highest degree of control over project development and encourages reliable construction pricing given it is based on complete project design. However, the lack of interface between designer and contractor increases the risk of gaps or alternations leading to costly or time-consuming change orders, and means the owner retains the majority of risks associated with deliverability of the designed project, including all third party contracts. The separate and linear procurement processes can also make overall project timetable relatively protracted.
Construction manager-as-agent (CMA)	 ▪ The delivery structure is substantially as per the DBB model, but a public owner may opt to involve a CMA, typically early on in the project, to assist with scheduling and coordination, constructability review of the design, nonbinding estimating, value engineering recommendations, observation of the work for conformance with the contract, project documentation and similar activities. ▪ The CMA acts in purely advisory capacity (for a fee) and does not perform any construction work, or hold or directly enforce the contractor contracts, with the owner retaining the same control and risks as under a DBB. However, the owner can gain insights on the constructability and pricing from the CMA and receive additional support in making critical project decisions, which can potentially improve overall project risk management and the likelihood of success, particularly for complex or multi-contractor projects.
General contracting (GC)	 ▪ The GC model sees the public owner procuring a single prime construction contractor to hold all of the subcontracts and be responsible for scheduling and coordinating their work delivery and quality. ▪ Prospective GCs typically submit a fixed price lump sum bid for project delivery based on the design and engineering specifications and associated contract documents prepared by the owner, albeit this price may still be subject to change based on potential design issues or unforeseen conditions and/or delays outside the general contractor's control. Alternatively, a cost-plus contract can be agreed when the scope has not been clearly defined, whereby the owner agrees to pay the cost of the work, plus an amount for contractor's overhead and profit, with the owner retaining the risk and rewards of any cost overruns and savings. ▪ A GC approach reduces the procurement, coordination and contract management burden on the project owner, and can enhance the degree of cost certainty compared to a multiple prime contractor approach. However, the lack of interface between design and construction phases and responsible parties means the public owner still retains the balance of delivery risk.
Construction manager-at-risk (CMAR)	 ▪ Under a CMAR structure the owner will have two separate contracts for design and construction as per a standard DBB, but similar to GC, will procure a single prime contract with the CMAR for actual project delivery, which will then enforce scheduling and coordination obligations directly with regard to the subcontractors. ▪ The main difference is that a CMAR will typically be brought on earlier in the project to advise on project structuring and participate in the design process to identify constructability problems, budgetary concerns, material availability

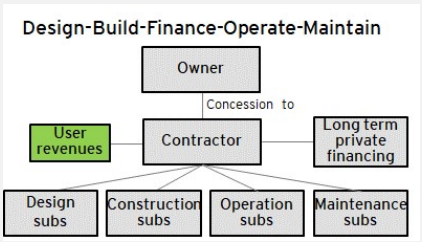
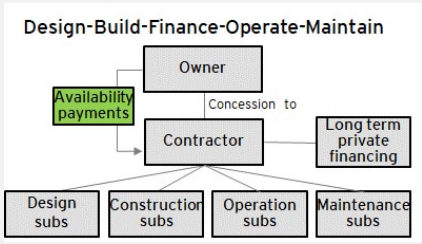
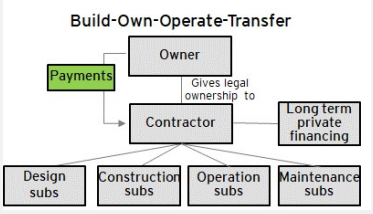
	issues, schedule concerns, and even designer selection. Although not responsible for design aspects that are unique to design professionals' obligations, these CMAR preconstruction services, combined with its familiarity with the project at the time construction begins, can reduce potential integration and interface problems during a project. ▪ The CMAR will also provide a guaranteed maximum price (GMP) for project construction once the design specifications are sufficiently developed (i.e., to around 80-90%). All of the CMAR's costs are subject to open-book pricing, which gives the owner the ability to audit the CMAR's costs and verify that the proper costs are being charged against the GMP. Any costs exceeding the GMP that are not change orders are the financial liability of the CMAR, and if the project is completed under the GMP, the owner can retain all of the savings or establish a sharing provision with the CMAR.

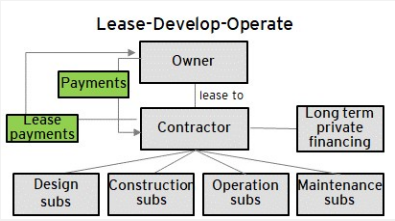
2. Alternative delivery

Model	Summary description
Design-build (DB)	▪ A DB approach sees the public owner competitively procure a single contractor to provide both design and construction services. The owner usually completes project scoping and design to around 30% or at least a sufficient level to describe key design concepts and parameters, and then prepares request for proposals to select a DB contractor to finish the remaining design and undertake construction. ▪ The public owner will provide the capital required to undertake such works as required per the schedule developed by the contractor. The owner also retains control of the assets and is responsible for operation and maintenance, but the private entity takes on much of the risk associated with the initial project development process. ▪ The committed price is also usually more reliable due to the lower interface risk between design and construction and associated cost increases, although such cost certainty typically attracts a price premium to compensate for the additional risk transfer. 
Progressive DB	▪ A Progressive DB is substantially the same as a DB except that the contractor is brought on even earlier in the design process and sometimes before the design has been developed at all, so that it can be developed by the owner and DB contractor in a step-by-step progression. This can be particularly helpful for more complex projects with less upfront scope certainty. ▪ In this case, the DB contractor is generally selected based on qualifications and a cost budget to develop the design to around 60-75%. At that point, a GMP for completion of design and construction is negotiated and the design progresses to the next step of completion, albeit if the negotiation fails, the owner can take what is commonly referred to as the “PDB off ramp” and use conventional DBB to complete the project  ▪ Progressive DB has the same benefit of single interface as DB and allows earlier design input from the DB contractor. It can also reduce the owner’s procurement cost and time given the reduced initial design specification expectations and qualifications-focused evaluation process. However, a Progressive DB does not offer the same competitive tension or price and schedule certainty for the design phase DB during the initial procurement phase
Design-build-finance (DBF)	▪ With the DBF procurement model, a single contract is awarded for the design, construction, and full or partial financing of a facility. Responsibility for the long-term maintenance and operation of the facility remains with the project sponsor but could be included in a separate agreement. ▪ This approach takes advantage of the efficiencies of DB approach and also allows the project sponsor to defer financing either completely or partially during the construction period. It can also accelerate project delivery where the project owner is construction funding or financing constrained and this is a key barrier to efficient project progression. More generally, this can enhance schedule certainty by reducing risks associated with funding availability.  ▪ The need to repay third party investors can also further incentivize the contractor’s timely performance and quality of delivery, since it will only receive payment from the owner once it meets the relevant construction completion tests. However, private capital is typically more expensive than public funding or financing, and lenders will also impose relatively strict creditworthiness tests to manage their repayment exposure, albeit such requirements and associated diligence can also help to enhance the overall quality and robustness of a project.
Design-build-operate and/or maintain	▪ DBO, DBM, DBOM delivery models combine the design and construction of a project with its operation and/or maintenance under a single contractual interface with the private sector. The financing for project development is provided by the owner, who will also make periodic payments to the contractor during the operating period that are typically fixed or per a pre-agreed schedule.

(DBO / DBM / DBOM)	▪ Operations refers to the day-to-day management of a project, including basic routine upkeep of key plant or equipment, while maintenance typically refers periodic or lifecycle upgrades or replacement of plant or equipment. Typically, both would be captured in the turnkey agreement (i.e., a DBOM), but it is possible that an owner may wish to have the contractor operate the project but separately procure or manage major maintenance works at a later date (i.e., a DBO approach), or it may wish take responsibility of operations itself and just retain the private partner for larger maintenance projects (i.e., a DBM)  ▪ The combination of responsibility allows better integration and reduced interface risk across the various project phases and incentivizes the project design and construction to take account of long-term O&M issues and costs given the same party will be responsible for all. The effective transfer of risk for long-term operations and maintenance responsibilities also puts greater pressure on the development of clearly defined performance specifications, parameters and contractual remedies for failures to meet these, beyond the initial construction period, as well as a clear and implementable mechanism to connect payment to performance.
Operations & maintenance (O&M) management contract	▪ Public agencies can use O&M agreements to transfer operation and management responsibilities separately to a private partner. Contractors can be paid either on a fixed fee basis or on an incentive basis, where they receive premiums for meeting specified performance targets. ▪ When in the purview of the public sector, decisions on major repairs can be affected by budget availability or other political sensitivities. Transferring O&M responsibilities to the private sector may allow owners to take better advantage of lifecycle cost and asset management practices.

3. Public-private partnerships

Model	Summary description
Design-build-finance-operate-maintain (DBFOM) — Revenue Risk	▪ Under a revenue risk DBFOM, the responsibility for, design, build, finance and operation and maintenance of a project is transferred to the private partner, which in turn uses project revenues to repay its debt, cover the O&M costs over the contract term and earn a fair return on its equity investment. The contractor has a reasonable degree of autonomy in the collection and use of revenues to meet project costs and obligations (albeit sometimes subject to certain regulatory restrictions on rate setting), and if project revenues exceeds certain pre-defined thresholds, a revenue-sharing provision may be used for the owner to retain some financial upside.  ▪ The DBFOM structure provides a high degree of risk transfer for project delivery to the private contractor, who is incentivized to perform not only by contractual provisions (including full handback of the infrastructure to the owner at the end of the contract term), but also by its reliance on effective performance to generate the necessary revenues to meet its financial obligations. However, such a contracting structure is only viable and effective if the current or anticipated revenues streams are sufficiently stable and creditworthy for the contractor to secure the necessary financing to fund project development.
Design-build-finance-operate-maintain (DBFOM) — Availability Payment	▪ For projects or assets without any associated revenue source, or where contractors are unable or unwilling to accept the revenue risk, the owner can still transfer DBFOM responsibilities and risks to a turnkey contractor if it can commit to make periodic fixed availability payments throughout the operating period that are set at a level to effectively cover the contractor's project costs, including any debt service. Such availability payments are typically tied to the contractor meeting the contractual performance specifications and may be adjusted to reflect under (or over) performance in accordance with the agreed payment mechanism.  ▪ Availability payment-based DBFOM structures are typically more favorable to contractor partners because they represent a more stable and predictable source of repayment revenue to underpin financing requests relative to a revenue risk project, which can help to return more competitive bidding. ▪ However, both contractors and lenders will still put a significant degree of scrutiny on the robustness and creditworthiness of whatever underlying source of funding or revenues the owner intends to use to make the availability payments, and this can be particularly challenging where there is a heavy reliance on appropriations or budget cycles, or exposure to legislative provisions, prompting a focus on credit enhancement or backstops. But, the owner in turn benefits from a high degree of risk transfer, performance guarantees and budget certainty.
Build-operate-transfer (BOT) / Build-own-operate-transfer (BOOT) / Build-transfer-operate (BTO)	▪ BOT, BOOT and BTO arrangements are essentially the same as a DBFOM in terms of the transferred functional responsibilities to develop and operate the project over a specified contract term but makes a clearer distinction regarding the (temporary) change in legal ownership.  ▪ While a DBFOM arrangement sees the legal ownership of the relevant site and water facility or infrastructure remain with the public owner throughout the term, under a BOT project, the private company owns the project assets until they are transferred at the end of the contract. BOOT is often used interchangeably with BOT and has a similar arrangement, while in contrast, in a BTO contract, asset ownership is transferred once construction is complete.

Lease-develop-operate (LDO) /Lease-build-operate (LBO)	 ▪ Where there is an existing facility or infrastructure, a private party may lease this from a public agency for a period anywhere from 25 to 100 years, invest its own capital to finance capital improvements, and then operate it during the lease period, including commitment to address repair and replacement needs throughout the term. ▪ The contractor makes a lease payment to the public owner either as an upfront lump sum or over time, and then has a reasonable degree of autonomy on the management of the facility or infrastructure over the lease period, subject to certain regulatory or contractual provisions. ▪ Lease structures are normally applied to projects with independent and stable revenue streams, whereby either the private entity is allowed to set and collect rates within certain parameters, or where the public entity sets and collect rates from consumers, paying the contractor a service fee over the term of the lease.

Section B

Water project funding and financing options

B. Project funding and financing options

This section sets out the potential sources of funding and financing that may be available to meet the upfront capital costs associated with large water infrastructure projects in North Dakota. Though often used interchangeably, the distinction between funding and financing sources can have important implications for project deliverability and affordability.

Different sources of funding and financing are available through public sector agencies or conduits at a federal and state level, as well as at a local level through the municipalities or districts benefitting from a particular project. There is also a growing interest in alternative sources that involve a greater role for private capital or credit enhancement tools. It is increasingly the case that a hybrid of different funding and financing sources is required to deliver large water projects in the US.

Funding

Public money made available to the project to fund as-incurred capital. This contributed capital is not intended to be repaid or carry a financing cost. Project revenues (including user rates, fees, taxes etc.) are also considered funding.

Financing

Money provided by a third party to a public or private borrower to pay for construction costs, concession payments and other large upfront project costs.

This capital is intended to be repaid and does carry a cost (i.e. interest or return on investment).

The following sources of funding and financing have been identified and summarized in this Section. The categorizations are based on the level at which funds are administered.

	Federal	State	Local (project beneficiaries)	Alternative
Funding source	▪ Federal appropriations ▪ Federal agency grants[1]	▪ State appropriations ▪ Municipal, Rural and Industrial (MR&I) Water Supply Program ▪ ND Resources Trust Fund ▪ ND Legacy Fund [2]	▪ Cash reserves ▪ User revenues (e.g., impact or connection fees, water rates, property taxes) ▪ Sales tax, property tax and special assessments	▪ Interest buy down (mechanism in conjunction with other sources)
Financing source	▪ Environmental Protection Agency (EPA) Water Infrastructure Finance & Innovation Act (WIFIA) loan program ▪ Federal Agency loans[1]	▪ General obligation bonds ▪ Revenue bonds ▪ State Revolving Fund (SRF) loan programs ▪ State infrastructure financing authority WIFIA (SWIFIA) program ▪ Bank of ND Infrastructure Revolving Loan Fund ▪ ND Public Finance Authority Capital Financing Program ▪ ND Resources Trust Fund Infrastructure Revolving Loan Fund ▪ Bank of ND Community Water Facility Revolving Loan Fund ▪ ND Legacy Fund Loan [2]	▪ Locally-issued / municipal general obligation bonds ▪ Locally-issued / municipal revenue bonds	▪ Private finance / project finance (debt+/or equity) ▪ Private Activity Bonds (PABs) ▪ Tax-exempt debt via non-profit conduit ▪ Lease financing (e.g., certificates of participation, lease revenue bonds) ▪ National Rural Water Association Revolving Loan Fund

[1] For example, relating to grant and loan programs administered by the US Department of Agriculture Rural Development, US Economic Development Administration Department of Commerce, US Department of the Interior Bureau of Reclamation)
[2] The North Dakota Legacy Fund is not a traditional state funding or financing source but is included as a potential source for further exploration

4. Federal sources

Source	Summary description
Federal appropriations	▪ A federal appropriation is essentially a law authorizing payment of funds from the Treasury for specific purposes– usually accompanied by authorization for an agency to incur obligations and ultimately draw that money to satisfy the obligations. The process and timing by which appropriations are proposed and approved is often closely tied to the federal government's annual budget. ▪ Federal appropriations can be available to state-level infrastructure projects both directly as a dedicated source of funding or indirectly via other grant or loan programs (described in subsequent categories). With an increasing proportion of federal appropriations for water infrastructure allocated to the various programs, the commitment of direct cash contributions to specific projects has declined in recent years. ▪ Any federal funding available will reduce the funding burden on the State and/or end users, though there is limited precedent for current or recent direct federal appropriations to State projects at scale. There is also a risk that the funding required to deliver the project on an efficient schedule will not materialize given the inherent risk of relying on the annual budget setting and legislative intent of the federal government.
Federal agency grants and loans	▪ There are a series of specific grants administered by federal agencies such as US Environmental Protection Agency (EPA), US Department of Agriculture (USDA), US Bureau of Reclamation (USBR), US Economic Development Administration (USEDA) and US Department of Housing and Urban Development (USHUD). Example programs include: • **EPA's Water Infrastructure Improvements for the Nation Act Grant Program**: supports small and disadvantaged communities drinking water projects. • **USDA's Rural Development Water & Waste Disposal Loan & Grant Program**: provides funding and long-term low-cost loans for drinking water, treatment, storage and distribution to eligible rural areas. • **USBR's Drought Response Program**: offers financial assistance for resiliency projects that focus on reliability and availability of water. • **USBR's Title XVI program:** provides funding for water reclamation reuse projects. • **USEDA's Public Works Program:** provides revolving loan funding to infrastructure projects that enable the revitalization of distressed communities. • **USHUD's Community Development Block Grant and Loan Guarantee Program**: provides grants to cities with fewer than 50,000 people and counties with less than 200,000 people. • **US Army Corps of Engineers (USACE):** USACE is an agency within the Department of Defense with both military and civil works responsibilities. Congress directs USACE's civil works activities through authorization legislation, annual and supplemental appropriations. USACE will use these federal appropriations directly in the planning and construction of projects. ▪ Federal agency grants have no repayment obligations while federal agency loans typically have below market interest rates. However, most federal grants and loans are for a specific type of water project and they are only able to make up a small portion of the overall capital requirement. They also often target small or disadvantaged communities.
EPA WIFIA loan program	▪ The WIFIA program is a federal loan program administered by the US Environmental Protection Agency (EPA) that can finance up to 49% of eligible project costs, subject to a maximum of 80% from federal sources. Eligible borrowers include local, state, tribal, and federal government entities; partnerships and joint ventures; corporations and trusts and Clean Water and Drinking Water State Revolving Fund (SRF) programs. Since its first round of applications in 2017, WIFIA has closed 41 loans totaling $7.8b in credit assistance to help finance $16.8b for water infrastructure projects. ▪ The program assumes a minimum project size of $20m for large communities and $5m for small communities with population of 25,000 or less. The interest rate is equal to or greater than the US Treasury rate of a similar maturity at the date of closing, and projects can defer repayment for up to five years from substantial completion, subject to a maximum maturity date of 35 years from completion.

	Borrowers also have flexibility to draw and amortize the loan based on project needs and the anticipated availability of project revenues. ▪ The relatively low interest rate, flexible terms, scalability and eligibility of both public and private borrowers are making WIFIA an increasingly attractive source of financing for a wide range of water projects, as part of a hybrid capital plan. Projects must demonstrate, however, that they are creditworthy with a dedicated source of repayment or security pledge to support repayment, and that they meet the EPA's selection criteria for the particular application year. Projects are also subject to various federal cross-cutter requirements, including but not limited to NEPA, Davis-Bacon, and American Iron and Steel provisions. The application process and timing, and the competitive nature of such process, also needs to be factored into the overall project schedule and financing plan.

2. State sources

Source	Summary description
State appropriations	▪ The legislature has the authority to appropriate moneys for either general grant programs that can benefit projects, loan programs that projects could apply, or directly to specific line items. These appropriations may come from any revenue source the legislature deems appropriate. ▪ In the case of water projects, appropriations are primarily administered and awarded via the State Water Commission, and largely come from the North Dakota Resources Trust Fund (described below). ▪ . ▪ The Commission allocated water-related appropriations of approximately $1B in the period 2015 to 2018, and to date in the current 2019-2021 biennium, has allocated around $225M, ranging from ~$25k to $112M. These span a range of purposes and are not always project-specific. State appropriations have no repayment obligations, however, the allocation of appropriations depends on the State's annual budget setting, so that the availability of funds year-to-year may be uncertain even when legislative intent is given and may not provide sufficient funding certainty to accommodate the most efficient delivery schedule. Specific projects are also competing with a wide range of state and local funding requirements that need to be supported by the Commission.
MR&I Water Supply Program	▪ The federal Municipal, Rural and Industrial (MR&I) Water Supply Program was authorized by Congress through the 1986 Garrison Diversion Unit Reformulation Act and it is jointly administered by the Garrison Diversion Conservancy District, and the State Water Commission. ▪ The 1986 Act authorized a MR&I grant program of $200M, which has all been expended. An additional $600m was authorized by the Dakota Water Resources Act of 2000 and allocated to various regional projects, of which approximately $83M remains for the MR&I grant program. ▪ The MR&I program is a dedicated source of funding for major water supply projects in North Dakota and has to date funded system expansions and improvements across dozens of municipal and rural water systems, although annual MR&I funding is dependent upon US Congressional appropriation, which introduces some risk regarding the timing and volume of funds.
ND Resources Trust Fund	▪ The ND Resources Trust Fund (RFT) was established in 1991 to allocate a percentage of Oil Extraction Tax (OET) revenues to the resource trust fund to be expended on the construction of water projects and energy conservation program. ▪ Provided for both in statute and in the North Dakota Constitution at Article X, § 22, the North Dakota Century Code allocates 20.5% of OET collections to the RTF. The fund received over $230M in Oil Extraction Tax dollars during the 2015-2017 biennium and over $350M during the 2017-2019 biennium. ▪ The RTF forms the majority of the State Water Commission's budget and can be used to allocate grant-based funding to specific projects or initiatives in the form of state appropriations (as noted above). ▪ The RTF can also be leveraged to as a source of lending to specific projects. Senate Bill 2233 amendments in 2015 established an Infrastructure Revolving Loan Fund within the RTF, which means that in addition to the OET as a source of income, the fund earns interest on the repayment of loans made for certain regional water projects. Such loans are managed and administrated by the Bank of North Dakota, and interest is charged at 1.5%. The Bank may deduct an annual service fee of 0.5% for administrating the infrastructure loan fund. ▪ Under the legislation, 10% of oil extraction moneys deposited in the RTF are made available on a continuing basis for making loans to water supply, flood protection, or other water development and water management projects. Projects not eligible for the State Revolving Fund loan program (see below) will be given priority for these funds
State Revolving Fund (SRF) loan programs	▪ The Clean Water and Drinking Water SRFs were established in 1990 and 1998 respectively to enable North Dakota to receive federal capitalization grants authorized under the Clean Water Act and Safe Drinking Water Act. The SRFs are used to make below-market interest rate loans to political subdivisions to finance authorized projects, including wastewater treatment, non-point source pollution

	control projects and public water systems. The SRF programs have jointly provided more than $1.5b in water and wastewater infrastructure funding in North Dakota since they were established. ▪ Although the original source of funding is at the federal-level, allocated to individual states by the US EPA, the funds are administrated and awarded to projects at a state-level by the ND Public Finance Authority (PFA) and the ND Department of Environmental Quality (DEQ), which also set the interest rates. The current interest rate for SRF loans is 2%, while the rate for eligible recipients that do not qualify for tax exempt financing is 3.0% — both rates include a 0.5% administrative fee. Interest rates are fixed for a term up to 30 years, depending on the useful life of the project, and the SRF only requires borrowers to pay interest on the loan as funds are drawn (compared to a bond issuance, for example, whereby interest would accrue on the full amount). ▪ While the SRFs ultimately rely on federal-level budgeting and fund allocations, they are also relatively proven and stable financing programs with proven track record and a strong credit rating (Aaa by Moody's and AAA by S&P), and the state has a reasonable amount of discretion over the allocation and terms of individual financing applications, subject to certain criteria.
State infrastructure financing authority WIFIA (SWIFIA) program	▪ The SWIFIA program was authorized by Congress in section 4201 of America's Water Infrastructure Act of 2018 and is a new loan program exclusively for State infrastructure financing authority borrowers (such as SRFs). The EPA defines State infrastructure financing authority as the State entity established or designated by the Governor of a State to receive a capitalization grant provided by, or otherwise carry out the requirements of, title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et. seq.) or section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12). ▪ The SWIFIA program shares many of the same terms as the federal WIFIA program — for example, $20m minimum project size; 49%: maximum portion of eligible project costs to be financed; 35 years: maximum final maturity date from first disbursement; 5-year repayment grace period; interest rate equal to or greater than the US Treasury rate of a similar maturity at the date of closing. ▪ In FY 2020, EPA invited the California State Water Resources Control Board, Iowa Finance Authority, and Rhode Island Infrastructure Bank to apply for loans totaling $695m.
General obligation (GO) bonds	▪ A GO bond is a type of municipal bond that is secured by a state government's pledge to use legally available resources, including tax revenues to repay bondholders. They are administered by State of North Dakota, State Treasurer and State Industrial Commission. GO bonds are not water specific and can be issued for a wide range of infrastructure and project needs. ▪ The North Dakota Debt Limit Initiative (1918) limits the sum of all outstanding state debt to no more than$2m. Bonds in excess of $2m need to be secured by mortgages. GO bonds can have up to a 20-year maturity and debt service is paid from an excess mill levy on all taxable property in the state. GO bonds are typically considered relatively low risk by investors given they are backed by a full faith and credit pledge of the state for the prompt and full payment of all bonds.
Revenue bonds	▪ The state may also issue revenue bonds for the purpose of providing part or all of the funds required for an infrastructure project, provided such project generates sufficient revenue to be pledged as a source of repayment or some other dedicated source of revenue is identified and pledged. ▪ Since revenue bonds are only secured by specific project revenues, they are not subject to the constitutional debt limits and do not add to state's total debt outstanding. However, revenue bonds are considered riskier than GO bonds and typically bear higher interest rates, and there is limited precedent for revenue bonds for water infrastructure projects at a state level.
Bank of ND Infrastructure Revolving Loan Fund	▪ The Bank of ND Infrastructure Revolving Loan Fund provides loans to political subdivisions, the Garrison Diversion Conservancy District and the Lake Agassiz Water Authority for new construction, repair, replacement of water or wastewater treatment plants; sewer, storm sewer and water lines; transportation infrastructure including curb and gutter construction; and other infrastructure needs ▪ Interest is charged at a fixed rate of 2% and cumulative loan amounts may not exceed $15m per applicant over a maximum 30-year term. This loan program is intended to provide gap funding if the full project cost cannot be met through other funding sources or if there are no other funding sources available, and so an applicant must attempt to access other state and federal government funding options first in order to qualify for these funds. Application windows are opened as funding is available.

ND Public Finance Authority (PFA) Capital Financing Program (CFP)	▪ Under its CFP, the PFA makes loans to North Dakota political subdivisions for any purpose for which the political subdivision has the legal authority to borrow money, subject to credit requirements and certain program requirements. Financing is available in any dollar amount as long as the ability to repay can be demonstrated. ▪ The PFA raises the funds to be loaned through public bond issuances and the interest rates payable by a political subdivision are based on market rates set through a competitive bid process when the PFA issues and sells its bonds. ▪ Since the CFP has been assigned a rating of "AA-" by S&P, it is typically able to achieve relatively low interest rate on its bonds and pass this through to the loans made under the CFP.
Bank of ND Community Water Facility Revolving Loan Fund	▪ The primary use for the Community Water Facility Revolving Loan Fund is supplementary financing in conjunction with the federal USDA Rural Development program, and it may be used when the cost of community water projects exceeds the loan limits set by the program (75% of eligible cost). ▪ An applicant may be a city, association, cooperative or corporation operated on a nonprofit basis with the legal authority to construct, operate and maintain water facilities, and must demonstrate the ability to repay the loan in accordance with USDA Rural Development program requirements. The maximum borrowing is 50% of the total project cost or the remaining available funds in the revolving account, with a fixed interest rate of 3% and maximum 40-year term.
ND Legacy Fund	▪ The ND Legacy Fund was created in 2010 for the deposit of 30% of tax revenues from oil and gas production or extraction (ND Constitution Article X, Section 26). The legislation required that the principal and earnings of the legacy fund not be expended until after June 2017, and an expenditure of principal after 2017 requires a vote of at least two-thirds of the members elected to each house of the legislative assembly. Furthermore, not more than 15% of the principal of the Legacy Fund may be expended during any biennium. ▪ The fund holds around $6.8b at present and is expected hold nearly $1b in interest earnings by the end of the next budget cycle. None of the fund's principal has yet been expended but approximately $455m has been spent from the earnings since 2017. ▪ The Legacy Fund is not a traditional source of state funding or financing for water infrastructure projects, but policy makers are increasingly exploring and discussing ways to leverage the fund in the form of both grants and low-interest loans.

3. Local (project beneficiary) sources

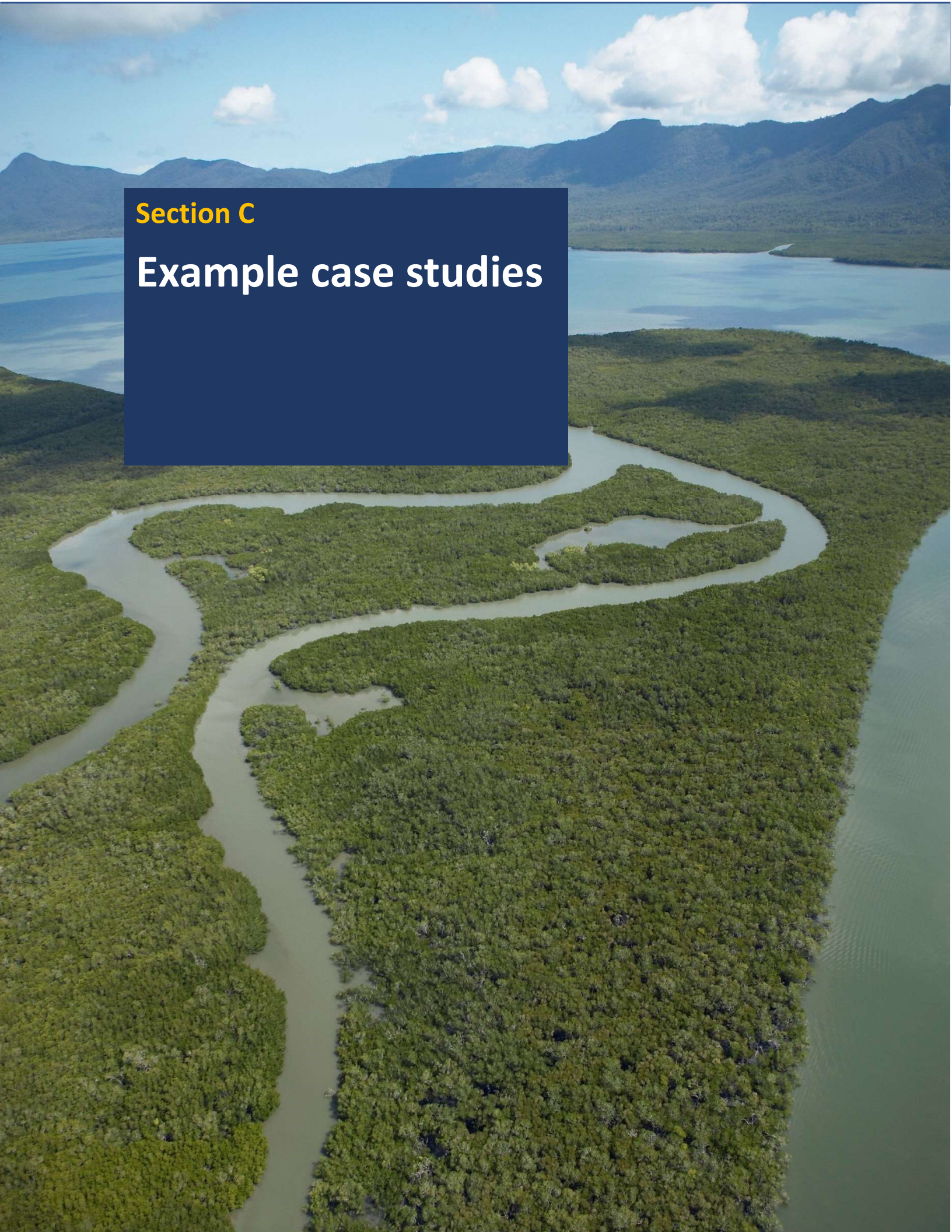
Source	Summary description
Cash reserves	▪ Cash reserves include unrestricted and restricted cash on a local authority's balance sheet that could be used to fund the local user cost share portion of water infrastructure projects. Cash reserves are directly available and don't need repayment, but they are also subject to local authority's annual budget and other potential competing priorities, and the availability may not be consistent and certain each year. There are many different types of cash reserves and how they may be used for projects can be very specific to each local authority. ▪ There are also dedicated cash reserves to support long-lead regional water supply projects in the form of the Replacement and Extraordinary Maintenance Fund (REM). This, along with other renewal and replacement type funds, are generally intended to cover costs of an extraordinary nature and/or to replace parts of an aging distribution system. While this funding is not generally available for project completion or buildout, it may provide a source of funding in the future..
User revenues (e.g., connection fees and water rates)	▪ Local municipalities or water districts typically receive revenue from water users in the form of: ▪ **Connection fees or other upfront charges**: typically, a one-time charge imposed by local governments to mitigate the impact on local infrastructure caused by new development and recover the costs of providing necessary capacity to serve this new demand. Charges vary by region and can also be known as impact fees, capacity fees, capital recovery charges, readiness to serve fees, capital contribution fees, capital facility fees, system development charges, system buy-in charges, ▪ **Water rates**: charge for water consumed by residential, commercial or agricultural customers, set by local districts or public utilities and charged via water bills. The rate structure can vary, from fixed fee to flat rates, uniform rates or seasonal rates, to tiered rates based on volumetric blocks. ▪ User revenues are a direct source of funding that don't require repayment and are typically used to either fund reserves for capital projects or repay debt. However, given they are typically required to fund day-to-day utility operations or major maintenance or expansion of existing infrastructure, sufficient excess revenue may not exist to cover the cost of additional large-scale projects without significant reserving or increases in rates or fees. Such reserving for capital projects is potentially more likely with connection fees or equivalent, while water rate revenue can typically be better leverage as a pledged source of debt service for borrowing to raise capital for project upfront project development.
Sales tax, property tax and special assessments	▪ A sales tax is a tax paid to a governing body for the sales of certain goods and services and allows the seller to collect funds for the tax from the consumer at the point of purchase. The North Dakota state sales tax rate is 5% for most retail sales but can be up to 8.5% depending on local municipalities. North Dakota assesses local sales? tax at the city and county level but does not assess local sales? tax for special jurisdictional areas such as school districts or transportation authorities. ▪ A municipal agency or district may also have the authority to levy a property tax assessment for specific projects or services, which would typically earmark a portion of existing or increased property taxes for the benefitting area. A similar but distinct concept is a "special assessment", which a city of municipality can use to pay for infrastructure improvements that benefit properties, such as water main replacement and flood protection projects, with the cost of such. projects divided among properties that benefit from them and recovered as an additional levy. ▪ Sales taxes, property taxes and special assessments can be pledged in part or full to fund specific project capital costs or be used as a source of debt service to borrow against. This can involve earmarking of existing taxes for a specific purpose, increase existing taxes and siphoning the additional revenue for such purposes, or the creation of a new tax or levy for a specific purpose or project. ▪ Alternatively, the authority to levy these taxes or special assessments can be considered a form of credit backstop to raise funds in the event the primary funding plan is unable to meet the project's capital needs. Any such tax increases or new levies are typically subject to legislative process and approvals. ▪ In North Dakota, there is already some precedent for city and county-level sales and use taxes being levied to fund major water infrastructure projects, specifically the Fargo-Moorhead Flood Diversion Project (see case studies). The project has also established special assessments to act as credit backstops in the event these taxes are insufficient to meet project costs, and while no property tax

	assessments are currently envisaged in the financial plan, it is noted that one of the participating county-level water resource districts does have legislative authority to levy these if necessary.
Locally-issued / municipal general obligation bonds	▪ Similar to state-level GO bonds, the North Dakota Century Code stipulates that local municipality outstanding GO debt must not exceed 5% of the assessed value of taxable property in the relevant jurisdiction, albeit subject to a provision to change if approved by two-third of the voters. However, for water and sewer projects, the additional indebtedness approved by voters may never exceed an additional 4% of the assessed property value. ▪ Locally-issued GO bonds are similarly backed by a full faith and credit pledge to repay, albeit typically have lower credit ratings (and therefore higher interest rates) than state-issued GO bonds. While local GO bonding capacity is typically juggling competing funding needs across multiple infrastructure sectors (i.e., not just water), there is reasonable precedent and track record of municipalities funding local and regional water projects from bond proceeds.
Locally-issued / municipal revenue bonds	▪ The North Dakota Constitution allows political subdivisions, including cities, water districts and water resource districts to issue revenue bonds, subject to a maximum 40-year term. ▪ Revenue bonds are payable solely from user revenues generated by a particular enterprise, such as a water or sewer system or utility. In addition to traditional water and sewer revenue bonds, some cities and counties have issued sales tax revenue bonds.

4. Alternative sources

Source	Summary description
Private financing (e.g., debt and equity)	▪ Private finance for infrastructure projects can be raised in various ways, including taxable bonds, private placement, bank debt and private equity. Based on market precedent in the US and globally, private financing is typically most successful when part of an alternative delivery model structure that seeks to wrap the responsibility for project delivery and associated risk transfer with a single counterparty and generate a fixed price for upfront project development (for example, DBF or DBFOM delivery models as described in Section A). ▪ The debt-equity ratio is highly dependent on the specific risk the private sector developer is bearing. For example, a typical Availability Payment deal may only require 8-10% of the financing to be equity, while deals with revenue risk can have as much as 40% equity. ▪ Taxable debt is typically more costly than tax-exempt debt where interest is not subject to federal income tax to entice investors to accept a lower interest rate. Equity typically requires a higher return still to reflect the relative risk profile (i.e. dividends are not guaranteed and are typically lowest in the cash flow waterfall, thereby contingent on project performance). As such, the blended cost of capital will generally be higher than a purely debt financing. ▪ However, private financing can serve a number of purposes in delivering large-scale water projects, such as project acceleration (particularly in the face of project owner liquidity constraints), cost and performance efficiencies and enhanced risk transfer.
Private Activity Bonds (PABs)	▪ PABs are issued by (or on behalf of) a local or state government on behalf of a private entity. Instead of being issued to finance facilities solely for public use, they are issued for the benefit of, or due to the substantial participation of, private entities. ▪ PABs utilize private capital instead of public debt, and unlike typical municipal bonds, the payment of principal and interest is the responsibility of the private business receiving the proceeds, rather than of the issuing government agency, thereby shifting the risk and long-term debt to the private partner. ▪ The structure must meet a number of “private business” test requirements to be a categorized as a PAB rather than a government bond. By default, PABs are taxable, but certain specified categories of “qualified” PABs can be tax-exempt. In the water sector, bonds are eligible for tax-exempt treatment if they are issued to fund (a) facilities for the furnishing of water (e.g., drinking water supply systems), or (b) sewage facilities. ▪ Each state is subject to a federally-set annual PABs limit, and particular categories of issuance within this are also subject to volume caps set at a state level. Eligible water projects are subject to such a cap, albeit proposed bipartisan legislation is seeking to remove this. In the case of North Dakota, the annual PAB volume cap has remained at the highest absolute $ value (i.e. $300m–$311m) in recent years, supplemented by a (three-year) carry forward of around $700m+ each year. Issuances within the year have similarly stayed around $300m, hence the consistent carry-forward. However, most if not all issuances have related to “Mortgage Revenue”, with little or none for exempt facilities, and as such there is limited precedent for use of PABs to fund water projects in the state.
Tax-exempt debt via non-profit conduit 501(c)(3)	▪ A water project may take advantage of a 501(c)3 non-profit organization’s tax-exempt status, or utilize internal Revenue Service (IRS) Rule 63-20 that allows a private nonprofit public benefit corporation to be set up to issue tax-exempt debt on behalf of a municipality or government agency to deliver a public project. ▪ Interest on a nonprofit / qualified 501(c)(3) bond is exempt from federal income taxation, alternative minimum tax and, usually, State income tax. Absent true equity subordinated tax-exempt debt can also be used to incentivize long-term participation and performance in the project, although it provides a fixed rate of return and the degree of risk transfer is more limited than equity. ▪ Although a model that is already being used to fund US infrastructure projects, it is relatively untested structure for large-scale/capital intensive infrastructure projects — and water in particular — having mainly been used for smaller-scale social infrastructure or real estate projects to date. 501(c)3 organizations are also typically subject to a series of strict annual certification and compliance requirements.

Interest buy-down	▪ Interest buy-downs involve using public funds to lower the effective interest rate that project beneficiaries pay even if they are raising financing at a higher market rate (for example, via locally-issued bonds or private financing), to the point where different financing options become relatively competitive on a cost basis. ▪ In this model, the State would provide a subsidy payment based on the difference between debt service at the market rate and some other target (public sector / tax exempt) preferential rate. ▪ This can help to make a financing source viable that otherwise would not be competitive with other options on a cost basis, but is attractive for other reasons (i.e., accelerated project delivery, managing debt capacity limits). It also enables the State to support more or larger projects with the same amount of funding, since it is only providing the debt service differential rather than the entire required capital sum, although since the interest subsidy is not repaid, it also has a more depletory effect on State funds compared to a low interest loan for example. ▪ Although not water specific, there is already precedent for interest buy-down mechanisms in North Dakota, in particular via the Bank of North Dakota's PACE and Flex programs.
Lease financing (certificates of participation, lease revenue bonds)	▪ A lease financing structure sees the private contractor financing the project via certificates of participation or lease revenue bonds, and "leasing" project to the government agency via a Lease-Purchase Agreement, for which it receive lease payments that used to satisfy debt service on such financing ▪ The financing raised to fund the project is not considered an obligation or indebtedness of the public sector provided a non-appropriations clause is included that articulates rental/lease payments are subject to biennial appropriations, with no assurance that such funds will be appropriated in any fiscal year. Where such funds are not appropriated, the Lessee's obligations under the Lease-Purchase Agreement will simply be terminated. ▪ The raising of finance to fund the underlying project /asset being leased is typically via either through lease revenue bonds (LRBs) — where permitted by State — and certificates of participation (COP), the latter being securities whereby investor purchases a share of the lease revenues of a program rather than the bond being secured by those revenues. In both cases, the interest is tax-exempt for Federal, State and AMT?? purposes. ▪ The University of North Dakota leveraged this model for its steam plant upgrade based on issue of $95m COPs (of which $79m tax-exempt) by Bank of North Dakota in 2018, to be repaid via appropriations received from the State. North Dakota building authority issued LRBs to finance the acquisition, construction, improvement or equipping of certain facilities, while several school districts, park districts, and counties in North Dakota have used lease revenue bond financing.
National Rural Water Association (NRWA) Revolving Loan Fund (RLF)	▪ The NRWA RLF was established under a grant from USDA's Rural Utilities Service to provide financing to eligible utilities for pre-development costs associated with proposed water and wastewater projects. RLF funds can also be used with existing water/wastewater systems and the short-term costs incurred for replacement equipment, small scale extension of services or other small capital projects that are not a part of your regular operations and maintenance. ▪ Systems applying must be public entities or nonprofit corporations including cooperatives, with up to 10,000 population and rural areas with no population limits. ▪ Loan amounts may not exceed $100,000 or 75% of the total project cost, with a maximum loan term of 10 years. Loans will be made at the lower of the poverty or market interest rate as published by USDA's Rural Utilities Service, with a minimum of 3% at the time of closing.



Section C

Example case studies

C. Example case studies

This section provides a summary of six large water infrastructure projects in the US and globally that are related to regional water supply needs. As such, they are particularly relevant to the four major water supply projects that the North Dakota State Water Commission is currently charged with delivering. Specifically, this refers to the Northwest Area Water Supply project (NAWS), Southwest Pipeline Project (SWPP), Western Area Water Supply project (WAWS)and the Red River Valley Water Supply Project (RRVWSP).

These example projects have deployed a range of contracting and financing structures, focusing particularly on alternative and P3 delivery as an emerging trend. These examples reflect delivery-financing combinations based on real-world project examples, but are not exhaustive of all possible project structures.

The example project case studies summarized in this section are:

1) **Fargo-Moorhead Area Diversion Project, North Dakota (DBFM & DBB-federal portion)**
   Relevance: A major water project in North Dakota delivered utilizing a split delivery, which takes advantage of both a locally led P3 component and a traditional federal DBB component.

2) **San Antonio Pipeline, Texas (DBFOM)**
   Relevance: A pipeline project delivered under a P3 structure with a hybrid of public subsidy and project revenues.

3) **Stockton Delta Water Supply Project, California (Progressive DB)**
   Relevance: A pipeline project delivered under a Progressive DB structure. Government agency was responsible for financing.

4) **Buckman Direct Diversion Project, New Mexico (DB)**
   Relevance: A pipeline project delivered under a DB structure. Government agency was responsible for financing.

5) **Thames Tideway Tunnel, London, UK (DBF/OM)**
   Relevance: A mega sewerage project delivered under a DB/FOM hybrid structure, with separate private entities responsible for DB and FOM. A significant government direct contribution was also included.

6) **Wentworth to Broken Hill Pipeline, New South Wales, Australia (DBOM)**
   Relevance: A pipeline project delivered under DBOM structure. The private partner was responsible for DBOM, while the public agency was responsible for financing the project.

This section also provides an overview of how similar regional water projects are funded in a selection of other states and regions, specifically:

- Neighboring states: South Dakota, Minnesota state, Montana
- Lewis & Clarke Regional Water System
- Texas state funding programs
- Texas Tarrant Regional Water District Integrated Pipeline Project
- North Carolina state funding programs
- Other innovative funding approach examples

Case study 1: Fargo-Moorhead Area Diversion Project, ND

The Fargo-Moorhead Area Diversion Project is a $2.75b effort to establish permanent flood protection measures for the flood-prone Fargo-Moorhead Metro area. The current plan includes a 20,000 cubic feet per second, 30-mile long diversion channel with 30,000 acres of upstream staging, as well as 20 miles of dam and embankment.

The US Army Corps of Engineers (USACE) will deliver the dam and embankment while the channel and associated infrastructure will be delivered via a public-private partnership, and other elements of the comprehensive project will be delivered through separate contracts.

Delivery model

Traditional federal design-bid-build (DBB) for the USACE portion, and Availability Payment-based design, build, finance and maintain (DBFM) for the P3 components.

Sources of funding & financing

The USACE portion of the project is funded via federal appropriations according to a Project Partnership Agreement with local sponsors, which commits the federal government to $750m in grant funds. The non-federal portion of the capital expenditures, including the P3, will be funded via State appropriations, and local sales and use taxes in Cass County and the City of Fargo.

The State of North Dakota has committed $750m in total to the project, and the local sponsors are seeking $86m from the State of Minnesota. Local voters have approved city and county-level taxes, specifically a ½ cent sales tax levied by Cass County, and a series of City of Fargo sales and use taxes (i.e., a ½ cent City Flood Control Tax, a ½ cent City Infrastructure Tax and a ¼ City Capital Improvement Tax). A Special Assessment District has also been authorized as a financing and funding backstop in the event sales tax revenues are insufficient.

The local sponsors will use a number of tools and delivery approaches to pay for capital expenditures as part of the P3 contract. Milestone payments will primarily be funded by North Dakota appropriations, a North Dakota SRF loan request, and an EPA WIFIA loan. Availability payments will primarily be funded through local sales and use taxes. The P3 developer will finance against these availability payments and a USDOT PABs allocation has been secured, which the P3 developer can access to reduce financing costs.

Key challenges & success factors

Complex stakeholders: The project involves multiple federal agencies, two states, two cities and two counties. A "Split Delivery Model" was established to delineate USACE vs non-federal work. A Metro Flood Diversion Board of Authority was formed between the local political subdivision (comprising Fargo, Moorhead, Cass County, Clay County and the Cass County Joint Water Resources District) to deliver the non-federal work, including the P3. Mitigation of project impacts was also a key challenge with affected stakeholders.

Hybrid funding plan and risk allocation: Developing a financial plan that structured the project as an Availability Payment DBFM to facilitate substantial risk transfer and timely delivery through access to private finance, but incorporating publicly financed milestone payments, in a combination that addresses key factors such as affordability and inter-generational equity.

Case study 2: San Antonio Water Vista Ridge System, TX

The ~$1b Vista Ridge Pipeline is a 142-mile water project completed in 2020 to pump and distribute fresh water from wells in the major Carrizo-Wilcox aquifer in Texas (also extending into parts of Arkansas and Louisiana) through to the City of San Antonio municipal water utility system. The project will provide 20% more water for San Antonio, and also provide protection to the Edwards Aquifer during drought.

Delivery model

The San Antonio Water System (SAWS) entered into a 30-year agreement with selected developer, Vista Ridge LLC, in 2014 for the design, build, finance, operate and maintenance (DBFOM) of the project

Ownership of the wells and pipeline system will transfer to SAWS at the end of the term (which may be extended to 50-years), after which a separate agreement with the owner of the groundwater leases will give SAWS the ability to continue production for an additional 30-year term and deliver the water at a lower price.

Sources of funding & financing

The project was fully funded by private debt and equity, with the debt obtained as a $875m construction financing under a five-year credit facility with a syndicate of nine international banks, reaching financing close in November 2016. The loans were able to achieve favorable pricing due to, among other factors, the strong credit rating of the offtaker (contracted buyer) SAWS (Aa1/AA+/AA+). This construction debt was refinanced in 2020 and is understood to have been termed out with a $1b+ fully amortizing private placement bond that will be paid back in instalments between now and the end of the 30-year concession period. The revenue to meet this debt service is being provided by SAWS in the form of a fixed unit price for water delivered, plus payment of certain agreed O&M and utility costs on a passthrough basis.

Key challenges & success factors

Transfer of risks and responsibilities: The private developer assumed all responsibility for securing and consolidating the pool of necessary wells, leases, water rights and permits, dealing with nearly 500 property owners along the 142-mile pipeline length.

Change in the sponsor group before financial close: The financial stress of the parent company of the winning developer and majority equity owner, Abengoa, between commercial close and financial close, resulted in the transfer of 80% of the equity to the project's prime contractor, Garney Companies Inc. and a series of project contracts being re-finalized, which caused some project delays.

Case study 3: Stockton Delta Water Supply Project, CA

The ~$200m Delta Water Supply Project was developed to provide supplemental water supply system for the City of Stockton.

The project, completed in 2012, comprises a surface water intake facility on the San Joaquin River, 13-miles of new pipelines to convey the raw water to a new 30-million-gallon-per-day (mgd) water treatment facility located just north of the City (expandable to 60 mgd initially and as much as 160 mgd long-term), and 7-miles of pipelines to deliver treated water to the City's distribution system.

Delivery model

The intake facility was delivered via traditional design-bid-build (DBB), while the pipelines and water treatment plant used a progressive design-build (DB) structure that saw City of Stockton Municipal Utilities Department work with CDM Smith as prime contractor. Phase 1 of the project included 65% design and a cost proposal for project completion, and a potential offramp. The City moved forward with CDM Smith for phase 2 design completion and construction.

Sources of funding & financing

The project was funded completely by public financing, of primarily water revenue bonds issued by Stockton Public Financing Authority, as well as some state grants from California Department of Water Resources.

Key challenges & success factors

Design & Construction challenges: The pipeline design and construction involved several technical challenges, including difficult soil conditions, groundwater dewatering and tunnel crossings of major canals, interstate highway, major railroad and roadways. A plume of the petroleum contamination was also discovered on the pipeline route. The city had to obtain a permit from the state to build a hydraulic barrier around the contaminated area to contain it.

Different delivery models for different project components: DBB was used for the intake facility on the river. A separate DB was used for the pipelines and water treatment plant. Aligning the design and construction standards among the two components was a key factor for project success.

Addressing other sustainability goals: The project incorporated sustainable building practices, particularly in the water treatment plant's administration and operations building. Photovoltaic solar panels on the parking area carport surfaces provide more than half the building's power—a feature that helped earn the project LEED® Gold certification. Additional green features include reclaimed water and micro-irrigation systems for a 50 percent reduction in water consumption, ozone-safe heating and air conditioning systems, and recycled construction materials.

Case study 4: Buckman Direct Diversion Project, NM

Buckman Direct Diversion is a $180.9m project to divert, treat, and distribute water from the Rio Grande river to the City of Santa Fe and Santa Fe County.

The project, completed in 2011, includes 11 miles of raw water pipeline, a new 15-million-gallon-per-day water treatment plant, and 15 miles of finished water pipelines, to collectively reduce reliance on over-taxed groundwater resources and meet future drinking water needs.

Delivery model

The Jacobs/Kiewit (Western Summit Constructors) Joint Venture design-build team was selected by the Buckman Direct Diversion Board to complete the project via a fixed price design-build contract.

The Buckman Diversion Board was created by the City of Santa Fe and Santa Fe County via a joint power agreement to oversee implementation and operation of the diversion project.

Sources of funding & financing

The project is completely funded by the public, which includes grants from the New Mexico Finance Authority (NMFA) and the New Mexico Economic Development Department, a 2% interest loan from the NMFA, and a small grant from the US Bureau of Reclamation. The City of Santa Fe is using two sources to fulfill its funding commitment: a quarter cent capital outlay gross receipts tax and municipal bonds backed by a scheduled set of increases in water rates and charges. Since Santa Fe County does not yet have a customer rate base, the County is meeting its commitment by reallocating capital outlay monies and through a 0.0625% environmental gross receipts tax in the unincorporated area.

Key challenges & success factors

Permitting: Resolving permitting challenges were key concerns due to the sensitive location of the river intake and crossing of multiple jurisdictions for the pipeline alignments. Returning sediment to the river required a National Pollutant Discharge Elimination System permit, while pipeline routes required right of ways permits from Bureau of Land Management property.

Environment: There are several endangered spices of trees and birds in the region and the project has to re-rout a pipeline to avoid a nesting site for burrowing owls and halting construction near the Rio Grande during the mating/migration season.

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Case study 5: Thames Tideway Tunnel, UK

The $6.6b Thames Tideway Tunnel (TTT) is a ~16-mile sewer pipeline that will run up to ~213 feet below the River Thames and aims to redirect the approximately 10 billion gallons of untreated sewage and storm water that is currently discharged into the River Thames in a typical year. Construction began in 2016 and is expected to reach completion by 2023. The project is also the first major infrastructure project in the UK privatized water sector that has a mix of both private financing and public financing from the UK central government.

Delivery model

An infrastructure consortium special purpose vehicle (SPV) was selected via competitive tender to finance, operate and maintain the project, as well as coordinate construction. This SPV is effectively acting as a regulated investor-owned utility.

Separate competitions were run to select companies to develop and construct the TTT — given the scale of the project, the construction work was split into three parcels (west, central and east), with each broadly reflecting different depths and ground conditions over the course of the tunnel.

Sources of funding & financing

The SPV investor consortium committed almost $2b of shareholder equity upfront and negotiated a senior debt revolving credit facility from a six-bank group, which received a Baa1 (Moody's) rating. It also sought an inflation -indexed loan from the European Investment Bank (EIB) and has since issued a number of green bonds. Project debt service and operating costs will be met by an additional charge to Thames Water customer, being, the large private utility company responsible for the public water supply and waste water treatment in most of Greater London.

Key challenges & success factors

More detailed planning and target pricing: To enhance confidence over the financial envelope, the project sponsor developed detailed planning and cost estimations prior to selecting contractors. It also selected companies based on "target price" contracts rather than fixed price turnkey (to avoid unduly high contingencies for a project of such scale and complexity) – under this structure the contractor shares a proportion of any underspend/overrun with the SPV financing the project.

Splitting construction into parcels: This increased the number of companies that could realistically bid for any single parcel, which may have also put downward pressure on pricing through increased competition. Further, to give contractors incentives to work together to ensure the overall project succeeds, all construction contractors share in a £1.6b bonus pool if the whole TTT is delivered early or below the target price.

Government financing support: Although fully privately financed, the UK government developed a "Government Support Package" (GSP) during the financing competition whereby it agreed to take on certain risks until the TTT has been delivered, subject to certain conditions. It is the central mechanism the UK government has used to protect private parties from responsibility for difficult-to-quantify, high-impact low-probability risks and uncertainties, and place downward pressure on price. As a result, the private financing competition for the SPV was one of the last steps in setting up the TTT project and the winning weighted average cost of capital bid had a 2.5% real rate of return

Case study 6: Wentworth to Broken Hill Pipeline, Australia

The ~$500m Wentworth to Broken Hill Pipeline is a major piece of public infrastructure supplying up to 10 million gallons of raw water per day via a 168-mile pipeline from the River Murray near Wentworth to Broken Hill in New South Wales, to address significant water shortages in the area. The project was completed in 2019.

Delivery model

The development of the WBH Pipeline was procured by WaterNSW using the design-build-operate-maintain (DBOM) procurement model. The selected John Holland/MPC Group Joint Venture is responsible for the design, construction, and the first 20 years of operation and maintenance of the project, while the public agency is responsible for financing the project.

Sources of funding & financing

The project was completely funded by the public agency. The New South Wales Government set aside $500M in 2015 from the sale of electricity infrastructure to fund this project.

Key challenges & success factors

Project acceleration requirements: In selecting a private partner, delivery was assessed with regard to a bidder's resources to build the pipeline in a very time-constrained window set by Ministerial Direction. The commercial solution criterion related to the wrap of the D&C Contract and O&M Contract under the DBOM procurement model, including the 'cleanness' of the contractual relationships with WaterNSW. The selected contractor was able to construct and deliver the biggest water pipeline in Australia's recent history in a record time of just 12 months.

Post completion challenges: As the project completed in 2019, challenges from the Natural Resources Commission regarding unfair water-sharing rules that underpinned the project business case from 2016 were raised and called for an overhaul of such rules.

Other funding program examples

State funding program for neighboring states (South Dakota, Minnesota, Montana)

The neighboring states South Dakota, Minnesota, Montana have mostly been using traditional public finance approach to fund water projects. These states have mostly relied on federal and state appropriations and bonding to provide funds to water projects in the format of either direct contribution or low interest loans.

- **South Dakota:** uses mainly federal and state appropriations to issues low interest loans to water projects. It has mainly 3 funding programs: Drinking Water Fund, Sanitary and Storm Sewer Project Fund, and Watershed Restoration Project Fund. Projects requesting funding must be on the State Water Plan.
- **Minnesota:** uses mainly federal and state appropriations, as well as the issuance of GO bonds to provide direct grants and low interest loans to water projects. Minnesota also has a Credit Enhancement Program that helps local municipalities reduce the costs of borrowing by using a state credit backing.
- **Montana:** uses mainly federal and state appropriation, as well as the issuance of GO bonds to provide direct grants and low interest loans to water projects. Key programs include Treasure State Endowment Program, Community Development Block Grant, Department of Natural Resources & Conservation water grants, State Revolving Fund etc.

Lewis & Clark Regional Water System: Tristate drinking water system in South Dakota, Iowa and Minnesota

Lewis & Clark will eventually be a wholesale water provider to 20 member cities and rural water systems in southeast South Dakota, northwest Iowa and southwest Minnesota. A combination of federal (~80%), state (~10%), and local (~10%) grants are being used for funding construction. One exception to this funding breakdown is the City of Sioux Falls' requirement to contribute 50% of the incremental cost of capacity for their need from the project.

- **Federal funding:** The Lewis & Clark Rural Water System Act became law in July 2000. It authorized federal grant in the amount of $213.9M in FY93 dollars. Indexed for inflation, the approved funding ceiling at the time of authorization was $270M. Each year the Bureau of Reclamation indexes the remaining federal funding ceiling for inflation and other factors. Through FY16 the federal government has appropriated $239M in nominal terms to the project.
- **State funding:** South Dakota, Iowa and Minnesota states prepaid 100% of their original cost share many years in advance — South Dakota $31.88M, Iowa $7.01M and Minnesota $5.45M - a combined $44.34M. Due to the slow pace of federal funding, Lewis & Clark also turned to the states for "federal funding advances" to keep construction moving forward. These are zero interest unsecured loans to be repaid with federal funding after the 20 members are connected. To date, a total of $55M has been advanced from the three states.
- **Local funding:** The 20 local members prepaid 100% of their cost share many years in advance. Members who requested additional capacity after Lewis & Clark was authorized also paid 100% of the incremental cost to upsize the system. The combined total paid by the members is $109M.

Groundbreaking for Lewis & Clark was held on August 21, 2003. Construction is currently ~82% complete. Construction oversight is provided by the Bureau of Reclamation.

Texas: State financial assistance programs

In Texas, local governments have traditionally provided the majority of the financing for water projects through municipal bond and less frequently with cash or private financing. Water projects have also historically relied heavily on federal assistance, but such federal assistance has declined considerably in recent years.

The state's financial assistance programs are administered by Texas Water Development Board (TWDB). These programs use proceeds from state general obligation (GO) bonds or revenue bonds to offer low interest loans to water projects. TWDB also uses separate programs dedicating to projects in the State Water Plan, and projects that are not.

- **State Water Implementation Fund for Texas (SWIFT):** Texas legislature combined multiple loan and grant programs and created the SWIFT to prioritize funding for large regional projects in the State Water Plan. The program also prioritizes projects based on a uniform standard such as how many people will be served by the project, whether the project will serve a diverse urban and rural population, whether the project provides regionalization, the percentage of water supply needs met by the project within the first decade, whether the project addresses an emergency need, the impact on conservation, and the priority ranking assigned to the project by the applicable Regional Water Planning Group etc. The program helps communities develop cost-effective water supplies by providing low-interest loans, extended repayment terms, deferral of loan repayments, and incremental repurchase terms. Through 2016, SWIFT committed over $4.6B for water projects across Texas.
- **State Participation Program**: The program is limited to funding the excess capacity of a regional project when the local sponsors are unable to assume debt for the optimally sized facility, thus allowing for the "right sizing" of projects to accommodate future growth. The TWDB assumes a temporary ownership interest, and the local sponsor repurchases the TWDB's interest in the project as the growth is realized and additional customers connect to the system. To support the program, the TWDB issues GO bonds.
- TWDB also has several other programs that are dedicated to projects that are not in the State Water Plan, such as Texas Water Development Fund, Rural Water Assistance Fund, Agricultural Water Conservation Program, Economically Distressed Areas Program etc., as well as some federally funded programs such as Clean Water State Revolving Fund and Drinking Water State Revolving Fund.

Texas: Tarrant Regional Water District (TRWD) Integrated Pipeline (IPL) Project

TRWD and the City of Dallas Water Utilities (DWU) have partnered to design, construct, finance and operate the $2.3B IPL Project. The IPL Project is an integrated water transmission system connecting Lake Palestine in the Dallas region to 2 lakes in the TRWD region, integrating all 3 lakes and TRWD's existing pipelines to supply water to customers in both City of Dallas and TRWD. The IPL consists of 150 miles of pipeline, several pump stations and supporting facilities, delivering ~ 350 million gallons per day of raw water to both districts.

The project has been broken down to 11 pipeline segments, 4 pump stations, and 4 supporting facilities, with each segment being ~$100M. Projects have been funded and constructed segment by segment. Since Lake Palestine is located further east than TRWD reservoirs, DWU is paying the additional cost to make that connection. The cost of other sections will be shared by DWU and TRWD. And the final locations where the water begins its solo journey into Dallas or Tarrant County, will be the responsibility of the agency receiving the water. The cooperation saves roughly $1B by avoiding two agencies building separate lines. Each agency shares ~50% of the cost.

TRWD issues all bonds for the project including Dallas' portion, and secured by the water revenues in both TRWD and DWU region. TRWD has issued ~$1.3B bonds through 2016 (TRWD share $818M, Dallas share $508M). Roughly half of the segments have been completed to date.

North Carolina: State funding programs

North Carolina, similar to other states, has traditional funding methods for water projects such as federal and state appropriations and bonding. However, it has two unique approaches that are worth highlighting:

- **Combining multiple loan funds into comprehensive program to increase collective impact:** In 2013, the State of North Carolina combined their Drinking Water SRF, Clean water SRF, and Community Development Block Grant infrastructure programs into one division for a more streamlined and effectively prioritized funding approach. The objects were to make limited dollars go further and to encourage comprehensive planning at the community level. The same year, the State Water Infrastructure Authority was created as an independent body with primary responsibility for awarding both federal and state funding for water and wastewater projects.
- **Incentivize stronger management standards through grant/loan awards:** States can incentivize management best practices by making grant and loan funding contingent on having best practices in place. In the SRF program today, funding eligibility is contingent on preparing a plan of financial viability, including managing utility accounts in accordance with accepted accounting procedures. However, this SRF requirement often is not enforced, and funding often is provided to systems without a viable financial plan. These accounting requirements should be enforced, and this information should be made available for public review. Specific grant programs also can be used to incentivize management best practices. For example, NC Department of Environmental Quality provides grants for utilities to inventory their existing systems, document the condition of the inventoried infrastructure, and take the next steps to define and prioritize critical projects.

Other innovative funding approach examples:

- **State of Washington**: Similar to NC, Washington also has this combined funding program (Water Quality Combined Funding program) that uses a single annual application process for funding from multiple sources at once. Clean Water Act Section 319 federal grants, Centennial Clean Water Program grants, Clean Water State Revolving Fund loans, Stormwater Financial Assistance Program grants have been all combined into one single Water Quality Combined Funding Program.
- **City of Atlanta**: Adopted a one-cent municipal option sales tax (MOST), which allows visitors and business people who use the city's water and sewer infrastructure, but do not pay city water/sewer bills, to help pay for upgrading and maintaining the infra□structure. Since it was implemented in 2004, the MOST has raised more than $1 billion to help fund the city's water infrastructure needs.
- **City and County of Honolulu**: In designing utility rates and charges, it is important to understand the customer base and ensure full cost recovery from users who access the utility system. For example, acknowledging the large tourist population that uses its wastewater infrastructure, the City and County of Honolulu modified its non-residential customer class, which applies to hotels, to include a fixed rate reflecting full occupancy capacity needs in addition to charges based on water use.