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NORTH Dakota | Water Resources
Be Legendary.

Water Development PLAN

NORTH DAKOTA

2021

NORTH Dakota | Water Commission

Be Legendary.™

A MESSAGE FROM THE STATE ENGINEER & WATER COMMISSION

We are pleased to present you with the 2021 North Dakota Water Development Plan.

Those involved in water project development know that existing projects evolve, and new projects are continuously being considered by local water managers. For that reason, it is necessary for the state to assemble updated water project information on a biennial basis, to coincide with the state's biennial budget cycles. This information then provides our elected officials and the agency with the most up-to-date project information possible to plan for, and support our state's highest water development priorities.

As you review the content of this plan, there are a few fundamental concepts that we hope readers will take away. The first is that the State of North Dakota has made unprecedented progress on water development projects in the last several biennia. From large-scale flood control and water supply projects, to smaller-scale general water management efforts, much has been accomplished. Second, there remains a tremendous amount of interest among project sponsors across the state to pursue hundreds of new projects. Bearing that in mind, the state continues to manage revenue in order to sustain its support of local project sponsors for the long term.

Remaining focused on the future, a key element of this plan is the emphasis on longer-term planning horizons. By estimating the potential financial needs of water-related infrastructure in ten years and beyond, we will be better positioned to accomplish our goals in a future of increasing uncertainty.

And finally, through extensive project reviews, Commissioner and staff interactions with local sponsors, and careful consideration of the agency's revised Water Project Prioritization Guidance, we have also outlined the financial needs of multiple levels of priorities for future water development efforts.

As we look ahead, continued success will require careful planning, coordination, and communication between North Dakota's water stakeholders. We believe that this document, the 2021 Water Development Plan, will serve as an important tool in achieving further successes. On behalf of North Dakota's Water Commission, I appreciate your interest and continued support of North Dakota's future water management and development endeavors.

Sincerely,

John Paczkowski, P.E., Interim State Engineer, Chief Engineer-Secretary

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EMPOWER PEOPLE, IMPROVE LIVES, AND INSPIRE SUCCESS

INTRODUCTION

It is the vision of the North Dakota State Water Commission that, "Present and future generations of North Dakotans will enjoy an adequate supply of good quality water for people, agriculture, industry, and fish and wildlife; Missouri River water will be put to beneficial use through its distribution across the state to meet ever increasing water supply and quality needs; and successful management and development of North Dakota's water resources will ensure health, safety, and prosperity and balance the needs of generations to come."

This 2021 Water Development Plan was developed in part to continue the Commissoin's pursuit of this vision in the 2021-2023 biennium and beyond.

A SHARED PURPOSE

In addition, as members of Team North Dakota, the Water Commission will continue to work toward a shared purpose to - Empower People, Improve Lives, and Inspire Success.

ORGANIZATION & BACKGROUND

North Dakota's Legislature established the Office of the State Engineer in 1905 to regulate the allocation of water, manage drainage, and promote irrigation. The State Water Commission (Water Commission, Commission, or SWC) was established in 1937 to promote, plan, and build water development projects. Today, the State Water Commission and Office of the State Engineer coexist as a multi-purpose agency, with similar, yet distinctly different responsibilities.

The Water Commission is comprised of the Governor, the State Agriculture Commissioner, and eight members appointed by the Governor that represent each of the state's eight major drainage basins. North Dakota's State Engineer serves as Chief Engineer and Secretary to the State Water Commission. In a separate role, North Dakota's State Engineer is responsible for several regulatory functions and responsibilities, including allocation of the state's waters, dam safety, sovereign land management, and drainage.

Overall, both entities are responsible for the wise management and development of North Dakota's most precious resource - water.

AUTHORITY

By virtue of North Dakota Century Code (NDCC), Section 61-02-14, Powers and Duties of the Commission; Section 61-02-26, Duties of State Agencies Concerned with Intrastate Use or Disposition of Waters; and Section 61-02-01.3, Comprehensive Water Development Plan, the Commission is required to develop and maintain a comprehensive water development plan.

PURPOSE OF THE 2021 WATER DEVELOPMENT PLAN

- Outline water development goals and priorities;
- Outline the planning process;
- Provide a progress report on the state's priority water management and development efforts from the 2019-2021 biennium;
- Provide information regarding North Dakota's current and future water development project funding needs and priorities;
- Provide information regarding North Dakota's revenue sources for water development;
- Serve as a formal request for an appropriation from the Resources Trust Fund;
- Outline the state's water development priorities by purpose for the 2021-2023 biennium; and
- Provide recommendations regarding the State Water Commission's Cost-share Policy, and Water Project Prioritization Guidance.

WATER DEVELOPMENT GOALS & KEY PRIORITY INITIATIVES

GOAL

Protect North Dakota's citizens and economy from flood-related impacts.

Priority Initiatives

- Address imminent flood or dam related threats to human life, primary residences, or emergency response efforts.
- Support advancement of federally authorized flood control projects.
- Support projects that protect primary residences or businesses from flooding in population centers or involve flood recovery property acquisitions.

GOAL

Provide safe and reliable water supplies for the health and prosperity of North Dakota's citizens and economy.

Priority Initiatives

- Address imminent water supply losses to existing multi-user systems, or emergency response efforts.
- Support advancement of federally authorized water supply projects.
- Correct violations of primary water quality conditions in water supply systems.
- Correct situations that involve a lack of water supply for a group of water users.
- Support connections of cities to regional and rural water supply systems.
- Support efforts that address severe or anticipated water supply shortages for domestic use in a service area or city with rapid population growth.

THE PLANNING PROCESS & **COMMISSIONER-HOSTED MEETINGS**

The 2021 water planning process began in January 2020. At that time, the Water Commission sent letters of request to potential water project sponsors across the state, asking them for information regarding water projects and programs that could be considered for inclusion in the 2021 Water Development Plan.

Water projects and water management efforts are continually evolving and advancing, making it necessary to update project information on a biennial basis. Simultaneously, the Water Commission is charged with ensuring responsible stewardship of state funding in both the short- and long-term. For those reasons, the 2021 water planning process involved a request to project sponsors to forecast funding needs for multiple biennia into the future. The information received from local project sponsors as part of this project inventory process ultimately becomes the foundation of the Commission's budget request to the Governor and Legislature.

The other key element of the 2021 planning process was Water Commissioner-hosted basin meetings. To promote and encourage local project sponsor participation in water planning and in legislative and agency biennial budgeting efforts, the 2013 Legislative Assembly passed House Bill 1206 (NDCC 61-02-01.3), requiring the agency to host meetings within the Commissioners' seven major drainage basins that they represent. In 2019, the Legislature added an eighth basin and member of the Water Commission. As required by statute, the meetings are to be held in the lower and upper Red; James; Mouse; lower and upper Missouri River; Little Missouri, Upper Heart, and Cannonball; and Devils Lake basins.

As part of the 2021 planning process, water management and development stakeholders, and project sponsors were invited and encouraged to attend a series of Water Commissioner-hosted basin meetings in July 2020.

Specific areas of focus for the meetings included:

- Water Commission budget updates;
- 2019-2021 biennium cost-share policy modifications;
- The 2021 water development planning process;
- Project summaries and updates from sponsors who submitted projects to the Commission as part of the 2021 water planning and budgeting process; and
- General question, answer, and discussion.

The presentations from sponsors regarding their projects were the primary focus of the meetings. The presentations gave local project sponsors an opportunity to have a discussion with Commission members and staff regarding their projects, and in some cases, to provide updated information from what was submitted during the project inventory process earlier in the year.

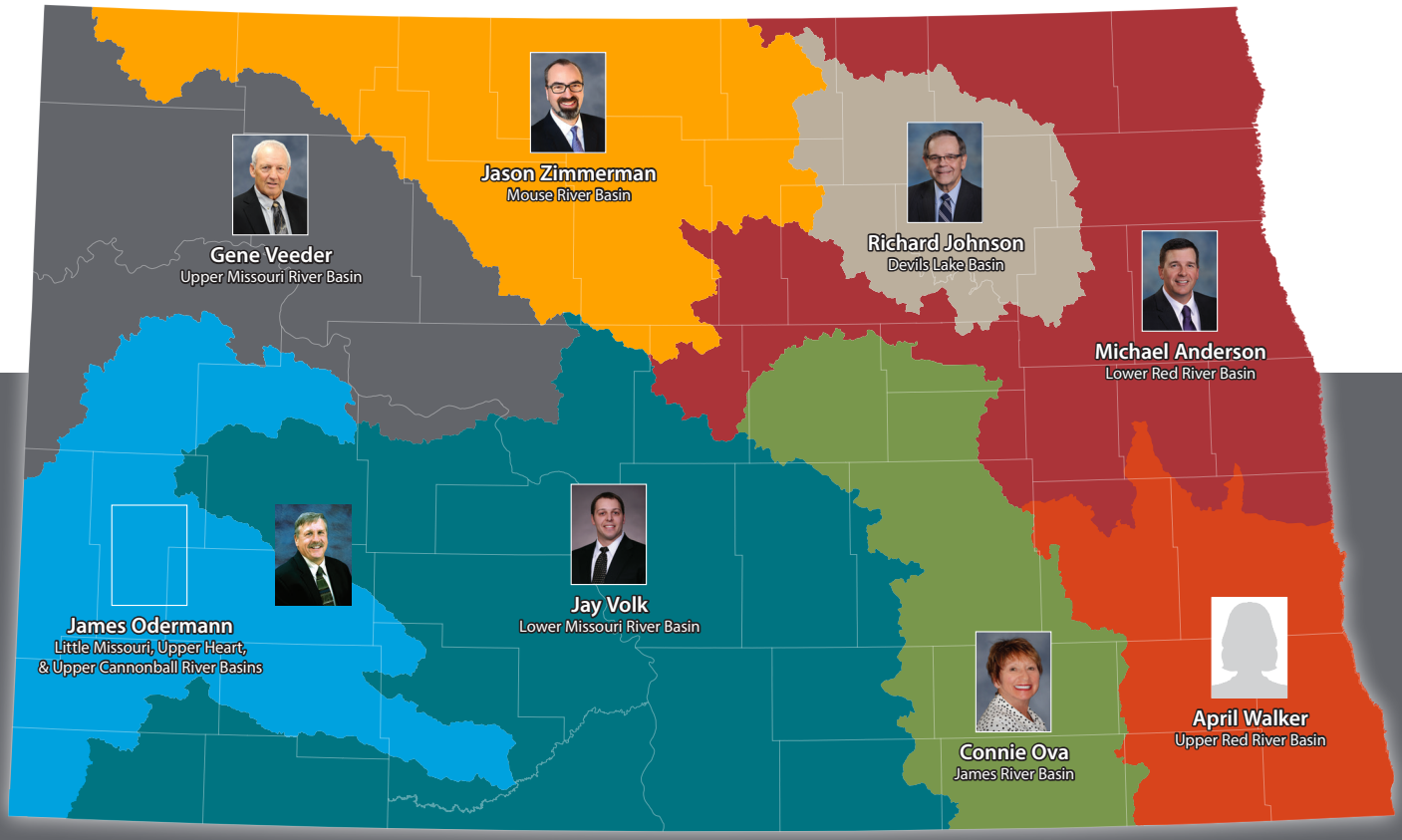


Figure 1 - North Dakota's major drainage basins and Commission members.

In addition to presentations from project sponsors, Water Commissioners and staff also heard from stakeholders from around the state who had concerns about water management or development challenges in their respective drainage basins.

PARTNERSHIPS

North Dakota's water planning process strives to encourage collaboration between stakeholders and the formation of partnerships with numerous government entities at all levels of government, as well as with the Legislature. It is also important to recognize the unique relationships between the private sector and many of the state's local government entities and water managers. This important tie completes North Dakota's grassroots approach to water management and development, where the state recognizes that many of the best solutions are forged at the local level.

The Water Commission has a long history of working together with all stakeholders, while encouraging partnerships to ensure the wise management and development of North Dakota's water resources for the benefit of current and future generations. As we look to the future, North Dakota faces many challenges in managing its water. But working together with all stakeholders will enable the state to move more efficiently toward effective development and management of the state's water resources.

2020 COMMISSIONER-HOSTED BASIN MEETINGS	
July 20	Upper Missouri River Basin Hosted by Commissioner Mark Owan
July 21	Lower Missouri River Basin Hosted by Commissioner Jay Volk
July 21	Little Missouri, Upper Heart, & Upper Cannonball River Basin Hosted by Commissioner Steven Schneider
July 23	James River Basin Hosted by Commissioner Katie Hemmer
July 23	Upper Red River Basin Hosted by Commissioner Matthew Pedersen
July 27	Devils Lake Basin Hosted by Commissioner Richard Johnson
July 28	Mouse River Basin Hosted by Commissioner Jason Zimmerman
July 28	Lower Red River Basin Hosted by Commissioner Michael Anderson

Figure 2 - North Dakota's Commissioner-Hosted Basin Meetings Schedule.

DEVELOPING ND'S WATER RESOURCES: **LEGISLATIVE UPDATES**

Despite the volatility of North Dakota's oil industry over the course of the last several biennia, unprecedented revenues into the Resources Trust Fund have enabled the Commission and the water community to advance several water development priorities across the state. In preparing for the 2019-2021 biennium, a path forward was forged through the cooperative efforts of the Water Commission, Governor's Office, Legislature, and the water community - through the concept of "Purpose Funding." The following is a summary of legislation passed during the 2019 Assembly that directly impacted water development projects or policies.

House Bill 1085 – Drought Disaster Livestock Water Assistance Program

House Bill 1085 removed limitations on the cost reimbursement amount an applicant can submit for the Drought Disaster Livestock Water Assistance Program. The bill was declared to be an emergency measure and became effective March 6, 2019.

Senate Bill 2020 – Water Commission Budget

Senate Bill 2020 is the Water Commission's 2019-2021 biennium budget bill. It provided a total appropriation to the Water Commission of $968,154,091 (Table 1). In addition, there were a number of other provisions included in the bill. Specifically, Senate Bill 2020:

- Reduced the agency's authorized employees from 93 to 90.
- Designated purpose funding allocations for water supply ($128 million), rural water supply ($37.2 million), Fargo Metro-area flood control ($66.5 million), Mouse River flood control ($82.5 million), other flood control ($48 million), and general water projects ($27 million).
- Authorized within the purpose funding total for water supply that up to $43 million could be allocated for the Red River Valley Water Supply Project.
- Provided for a one-time line of credit from the Bank of North Dakota in the amount of $75 million to support advancement of the Northwest Area Water Supply project.
- Designated $25.9 million to pay off outstanding debt.
- Specified that agency carryover funds totaling $308 million could only be used for carryover projects.
- Provided authority of $1 million for a pilot project to support implementation of a basin wide plan involving water conveyance, flood control, and other water projects.
- Amended the interest rate for loans made from the infrastructure loan fund to be the same rate as the revolving loan fund established under NDCC § 61-28.1 and § 61-28.2.

Senate Bill 2139 – Cost-Share Policy and Commission Membership

Senate Bill 2139 included provisions related to modification of the Water Commission's cost-share policy requirements; clarified that snagging and clearing projects are eligible for cost-share; amended the composition of the State Water Commission to include an additional member from the Little Missouri, upper Heart, and upper Cannonball River basins; and amended the Commission's powers and duties.

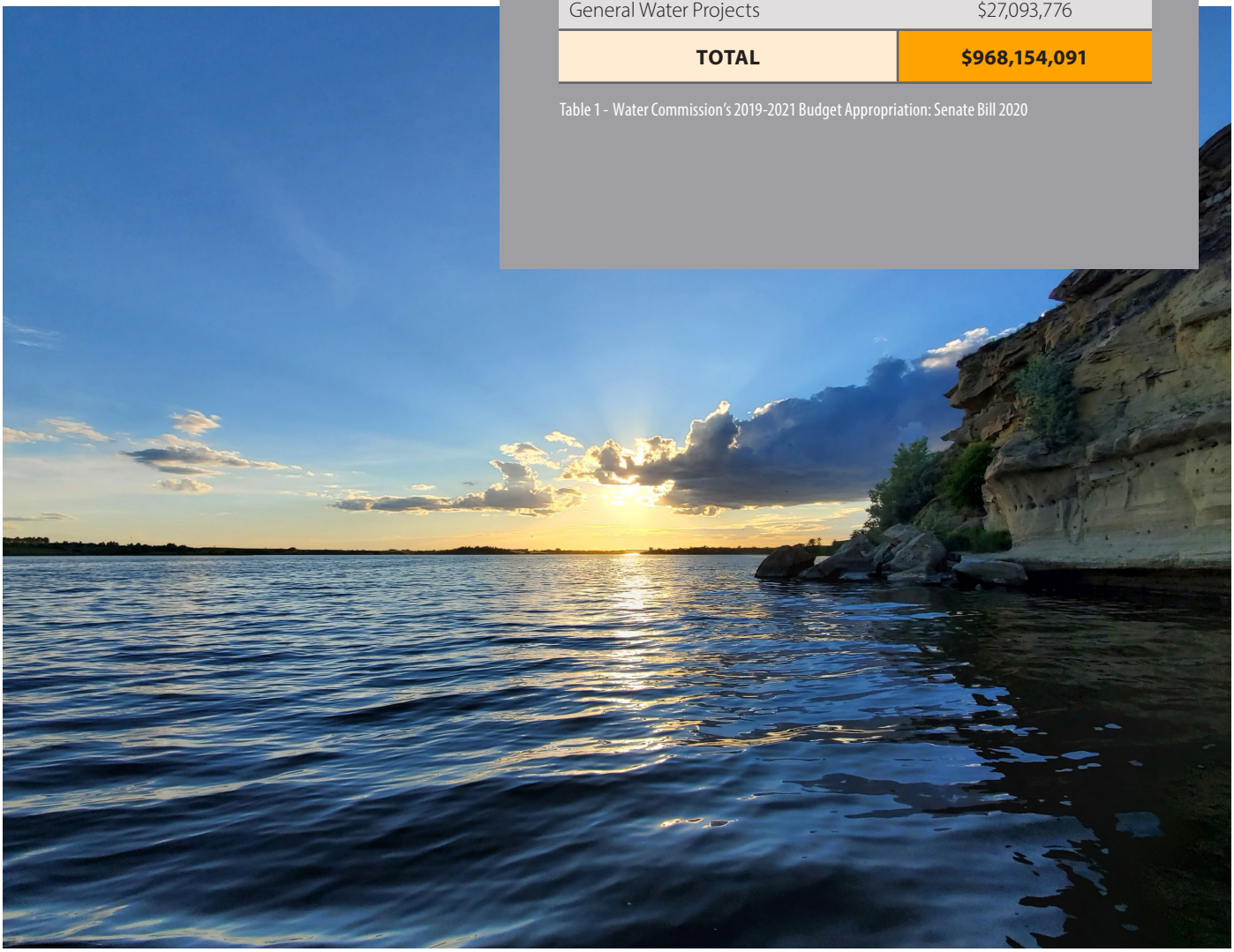
Senate Bill 2358 – Red River Valley Water Supply

Senate Bill 2358 allows contracts to purchase water from the Red River Valley Water Supply project to exceed 40 years, and removed voter approval requirements.

WATER COMMISSION'S 2019-2021 BUDGET APPROPRIATION: SENATE BILL 2020

Purpose	Appropriation
Salaries and Wages	$19,831,986
Operating Expenses	$69,755,753
Capital Assets	$180,938,758
Project Carryover	$308,333,818
Water Supply	$128,000,000
Rural Water Supply	$37,200,000
Fargo Metro-Area Flood Control	$66,500,000
Mouse River Flood Control	$82,500,000
Other Flood Control	$48,000,000
General Water Projects	$27,093,776
TOTAL	**$968,154,091**

Table 1 - Water Commission's 2019-2021 Budget Appropriation: Senate Bill 2020



EMPOWER PEOPLE, IMPROVE LIVES, AND INSPIRE SUCCESS

PRIORITY PROJECT UPDATES

The following two-page summaries provide an overview of progress and efforts related to seven of the state's largest projects. Each of the seven projects received funding through Senate Bill 2020 during the 2019 Legislative Assembly, and are seeking substantial financial investment from the state not only in 2021-2023, but several biennia beyond. In addition to the seven larger projects, overviews of municipal and rural water supply and general water management development efforts are also included. These types of projects have, and will continue to seek state support in all areas of North Dakota.

Scan this code using your smartphone camera to stay up to date on the latest project updates.

SCAN ME

FARGO-MOORHEAD
AREA DIVERSION PROJECT

QUICK FACTS

In-Town Protection | 100-Year Flood Protection | $2.9 Billion Total Cost | Diversion Channel (30 Miles Long, 1,500 Feet Wide)

The Fargo-Moorhead Area Diversion Project (Project or FMADP) aims to reduce flood risk to the cities and townships that make up the metropolitan area of Fargo-Moorhead. The Project provides flood risk reduction from the Red River and its North Dakota tributaries, including the Wild Rice, Sheyenne, Maple, Rush, and Lower Rush Rivers. The Project has three major elements which include (i) the in-town levee system located in Fargo and Moorhead, (ii) the Diversion Channel and Associated Infrastructure (DCAI), and (iii) the Southern Embankment and Associated Infrastructure (SEAI). The in-town work includes the construction of more than 22 miles of in-town levees. The DCAI will require the excavation of approximately 50 million cubic yards of earth, two aqueducts, twelve county highway bridges, four railroad bridges and two Interstate highway crossings. Construction of the SEAI will involve the construction of three gated control structures and an earthen embankment on the south side of the metro area (See Map Appendix).

The Project's original feasibility study was sponsored in 2008 by the cities of Fargo and Moorhead, and was completed in July 2011. However, in 2013 a lawsuit was filed against the Project, and in September 2017 an injunction stopping construction was ordered. Through collaboration between the states of Minnesota and North Dakota, the project was altered in an attempt to conform with all applicable laws via a project change known as Plan B, explained below.

PLAN B EXPLAINED

Following the injunction mentioned above, major stakeholders began the process of additional consideration and information gathering to move the Project forward. Three groups representing a wide geographic area were important to this process: a Governor's task force, a technical advisory group, and a policy group. From this process came several compromises, including increased flow through Fargo-Moorhead, fewer staging acres in Minnesota, and reduced impacts to the counties of Richland, ND, and Wilkin, MN. Plan B has obtained all applicable permits to date from North Dakota and Minnesota, though the permit granted in 2018 by the Minnesota Department of Natural Resources has been challenged. Resolution of the Minnesota permit challenge is anticipated in late 2020.

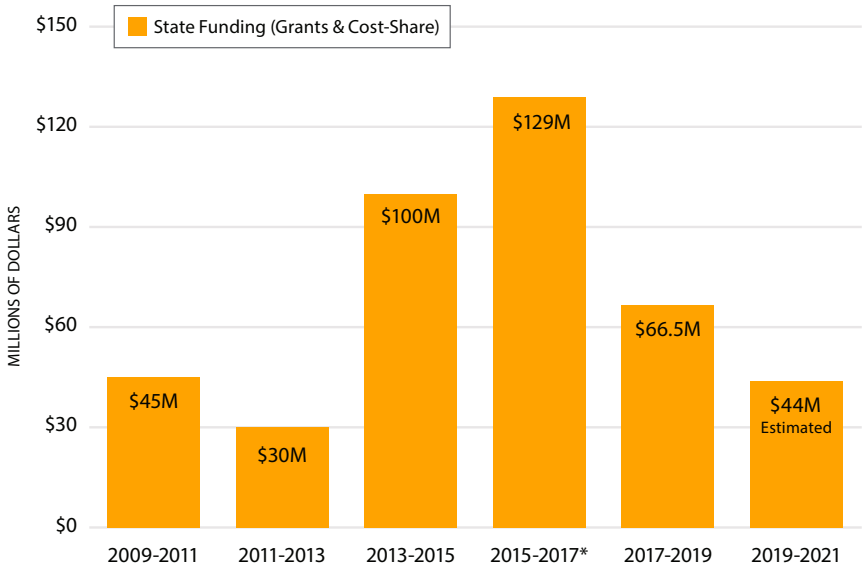
2019-2021 FUNDING & PROGRESS

In the 2019-2021 biennium, the State Legislature approved a $66.5 million allocation for the Project. Due to revenue projections regarding the flow of revenue into the Resources Trust Fund, the Project sponsors deferred $22.5 million to future biennia. In previous biennia, the state had committed $370.5 million to the Project. With the deferred amount considered, the state's funding total is $414.5 million to date.

Despite ongoing litigation and COVID-19 concerns, construction and land acquisition made significant progress during the 2019-2021 biennium. The U.S. Army Corps of Engineers has awarded construction contracts for two large structures and the $58 million Wild Rice River Control Structure. In addition, over 400 parcels and 4,000 acres of land have been acquired for Project construction. Two-hundred residents have been relocated, and eminent domain actions are being used as a last resort to acquire the lands needed for construction.

HISTORIC FUNDING DATA

STATE FUNDING



*$60M of the 2015-2017 funding was designated for Fargo interior flood protection only.

Figure 3 - Historic State Funding For FMADP.

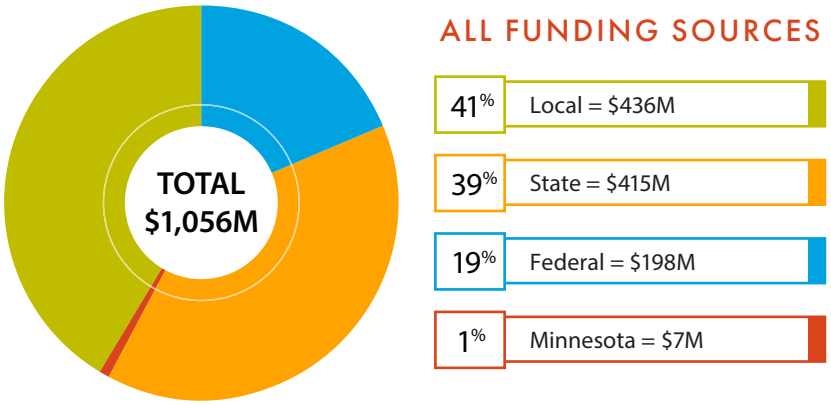


Figure 4 - Historic FMADP Funding Sources.

LOOKING AHEAD

2021-2023

$66.5 MILLION

STATE REQUEST

TOTAL FORESEEABLE FUNDING NEEDS

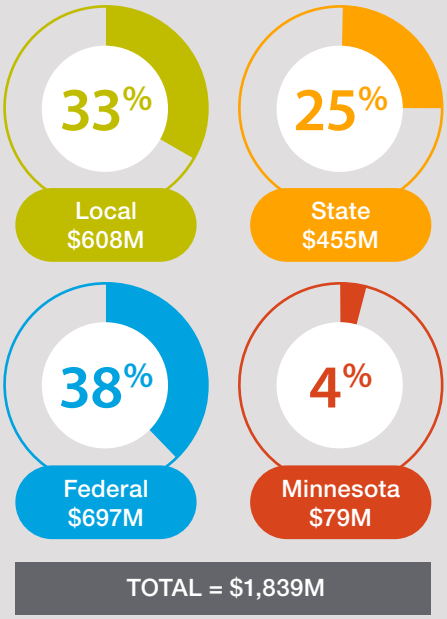


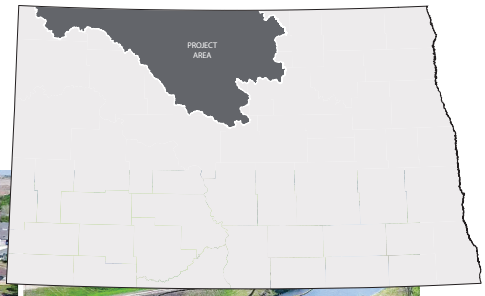
Figure 5 - FMADP Total Foreseeable Funding Needs.

THE DIVERSION AUTHORITY AND LOCAL FUNDING SHARE

The communities of Fargo and Moorhead, along with Cass County, Clay County, and the Cass County Joint Water Resources District, have signed a joint powers agreement, which created the Metro Flood Diversion Board of Authority (Diversion Authority). The Diversion Authority is led by thirteen board members from the stakeholder entities. Its purpose has been to work with the US Army Corps of Engineers to build, finance, operate, and maintain a comprehensive project to provide the Fargo-Moorhead metropolitan area with permanent flood protection from the Red River of the North and its tributaries.

The Diversion Authority has developed a comprehensive and prudent financial model for the Project that assumes cost-share funding from federal and state grants. The local share of approximately $1.1 billion is being funded via a Cass County and City of Fargo sales tax. Voters have approved three half-cent sales taxes to be extended through 2084 to cover the local share.

MOUSE RIVER ENHANCED
FLOOD PROTECTION PROJECT



QUICK FACTS

4 Counties | 26 Combined Projects | Estimated $1 Billion Project Cost | Implementation Plan Through 2039

The Mouse River Enhanced Flood Protection Project (MREFPP) is designed to provide flood relief to Mouse River Valley residents - both urban and rural (See Map Appendix). The project was originally initiated by the Water Commission in response to a request from the Souris River Joint Water Resource Board (SRJB) following the record-setting Mouse River flood of June 2011. The initial phases of the MREFPP involved developing flood risk solutions, first to the urbanized portions of the basin, and then for the rural reaches.

The current focus is on implementation of those solutions, with multiple phases through the cities of Minot and Burlington permitted and under construction. Of particular interest to Ward County residents is FEMA's regulatory floodplain, which will carry mandatory requirements for flood insurance on homes with a federally backed mortgage. Following the construction of the initial phases of the MREFPP, the regulatory floodplain will be amended, removing approximately 60 percent of the homes affected in Minot.

2019-2021 FUNDING & PROGRESS

To date, the MREFPP has been supported mostly by state and local funds. Funding through the Water Commission has been provided in the form of 75 percent cost-share for property buyouts, and 65 percent cost-share for other work. The MREFPP was appropriated $82.5 million in state funding for the 2019-2021 biennium. However, the SRJB and Minot recognized that revenues would likely not reach the level of appropriation, and accommodated a 40% budget reduction ($33 million in state funding) into the 2019-2021 biennium MREFPP work plan.

The SRJB has identified a total funding need of $115 million for the upcoming 2021-2023 biennium, with a potential SWC cost-share of $76 million.

In addition, House bill 1020, the Water Commission's funding bill passed by the Legislature in 2017, provided Legislative intent that the MREFPP receive $193 million in state funding for work in Minot through the 2023-2025 biennium. As of December 2020, about $80 million has been committed.

The City of Minot remains the primary source for the local funding share. Presently, Minot is collecting a 0.7 percent sales tax for flood control, which is generating approximately $7 million per year. Discussions are ongoing to examine the possibilities associated with increasing revenues through additional sales taxes, property taxes, or other fees. The city also received Disaster Recovery Assistance from the U.S. Department of Housing and Urban Development (HUD), and elected to utilize those funds for flood control acquisitions, as HUD funds may not be used for the construction of flood control features.

The phases of the initial milestones in Minot continue to move forward, with construction taking place on various structures including a pump station, tieback levee, roads, and bridge work. In addition to works located in Minot, a number of projects in rural portions of the Mouse River Basin are moving forward. A portion of the flood protection in the City of Burlington is being constructed, along with the recent completion of the Colton Avenue bridge reconstruction. Similarly, design has been completed on bridges in rural Renville, Ward, and McHenry counties to reduce flood risk at Mouse River Park, Sawyer, and Velva, respectively. Construction is dependent upon funding, but is projected to begin in 2022.

Additional assistance has been provided to property owners outside of planned levee systems via the Rural StARR program. The program is currently being closed out after facilitating 166 structure acquisitions, three structure relocations, and one ring dike - all totaling $12 million.

HISTORIC FUNDING DATA

STATE FUNDING

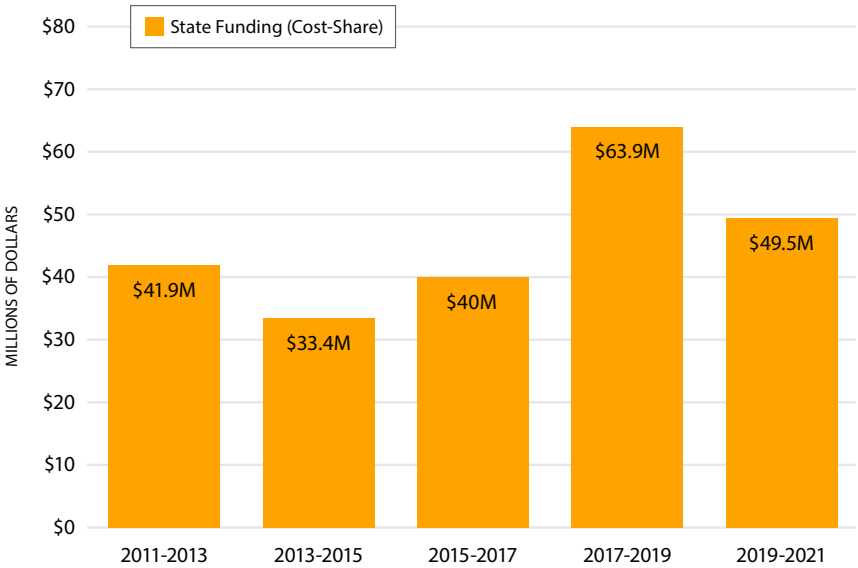
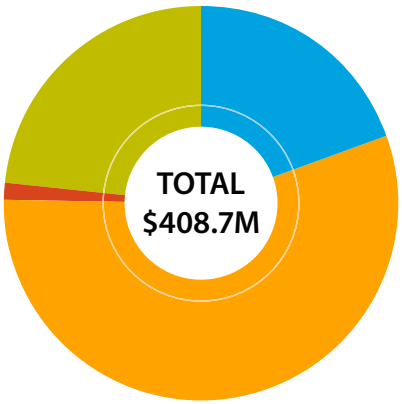


Figure 6 - Historic State Funding For MREFPP.



ALL FUNDING SOURCES

- 23% Local = $95M
- 56% State = $228.7M
- 20% Federal = $80M
- 1% ND Emerg. Services = $5M

Figure 7 - Historic MREFPP Funding Sources.

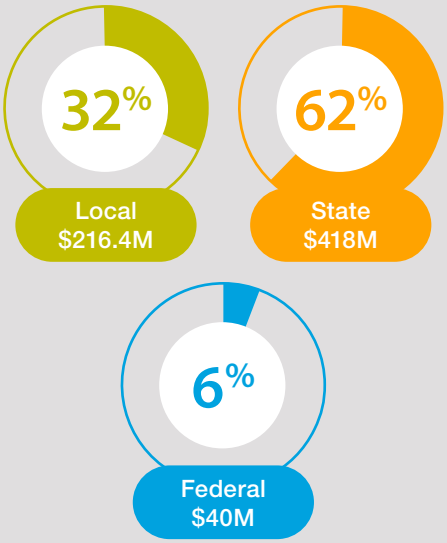
LOOKING AHEAD

2021-2023

$76 MILLION

STATE REQUEST

TOTAL FORESEEABLE FUNDING NEEDS



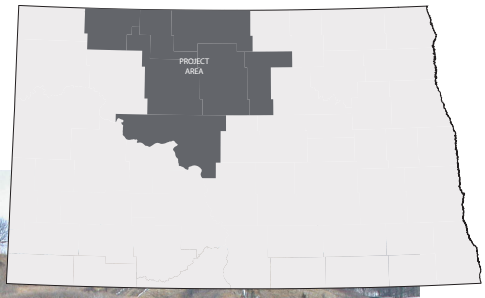
TOTAL = $674.4M

Figure 8 - MREFPP Total Foreseeable Funding Needs.

SOURIS RIVER JOINT WATER RESOURCES BOARD

The Souris River Joint Water Resources Board (SRJB) oversees activities related to the Mouse/Souris River in North Dakota. The board is made up of one representative from each of the four member county water boards (Bottineau, McHenry, Renville, and Ward), and one representative from the City of Minot.

NORTHWEST
AREA WATER SUPPLY



QUICK FACTS

9 Communities | 4 Rural Water Systems | 230 Miles Of Pipe | 2 Ground Storage Reservoirs | 4 Booster Pump Stations

Owned by the State of North Dakota and overseen by a 9-member advisory committee, Northwest Area Water Supply's (NAWS) purpose is to deliver Missouri River water to residents in north central North Dakota (See Map Appendix). Under the preferred alternative identified through the NEPA process, NAWS will be of sufficient size to deliver a maximum daily flow of 27 million gallons per day to approximately 81,000 people.

NAWS was authorized by the federal government through the Garrison Diversion Reformulation Act of 1986 and the Dakota Water Resources Act of 2000. In 1991, the North Dakota Legislature created the NAWS Advisory Committee and authorized the Water Commission to pursue the project. Since 2002, lawsuits and funding uncertainty have slowed construction of NAWS, creating the need for an interim water supply from the City of Minot. However, court approval allowed 45 miles of transmission line to be built from Lake Sakakawea to Minot, along with 185 miles of bulk distribution pipeline for the surrounding service area prior to the successful conclusion of the litigation in 2019.

2019-2021 FUNDING & PROGRESS

NAWS requested $82 million for the 2019-2021 biennium. As of September 2020, $26.2 million in carryover funds had been committed to the project in the 2019-2021 biennium.

Construction continues on the Phase II improvements to the Minot Water Treatment Plant, which is expected to be completed in winter 2020-2021. Design work has been completed for the biota water treatment plant, to be constructed near Max, and bids were opened in November 2020. Design of the intake modifications at Snake Creek Pumping Station to supply a raw water intake for NAWS is nearing completion and will be ready to bid in early 2021.

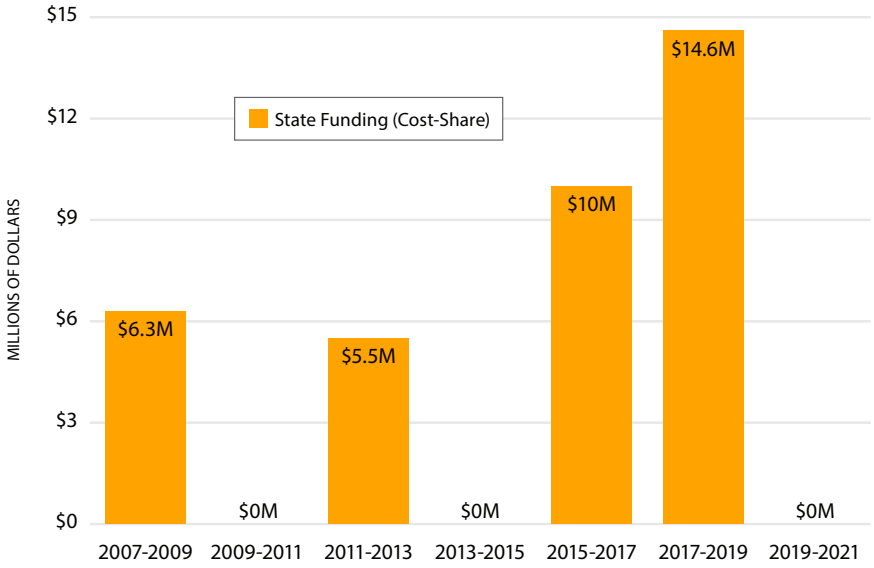
Three of the last four finished water distribution pipelines are under contract, with one complete and the other two to be completed in late 2020. The final pipeline contract to Bottineau was bid in November 2020. Bids were opened for the Lansford Reservoir and Pump Station in September 2020, with construction to be completed in spring 2022. Design of remaining project components necessary to deliver Lake Sakakawea water to Minot will be ready to bid for construction in the 2021-2023 biennium.

PURPOSE AND NEED

Prior to the NAWS project, communities within the project area were supplied by groundwater, were constrained by water quality and quantity issues, and did not meet secondary drinking water standards. Since 2008, the City of Minot has been providing water from the city's groundwater wells to the communities of Berthold, Burlington, Kenmare, Sherwood, and Mohall, and to rural water systems including West River, All Seasons, Upper Souris, and North Prairie to temporarily alleviate some of the area's most severe problems. However, this water supply plan is not sustainable long-term, further reinforcing the need for the NAWS project.

HISTORIC FUNDING DATA

STATE FUNDING



Note: NAWS received $18 million in state funding prior to 2007.

Figure 9 - Historic State Funding For NAWS.

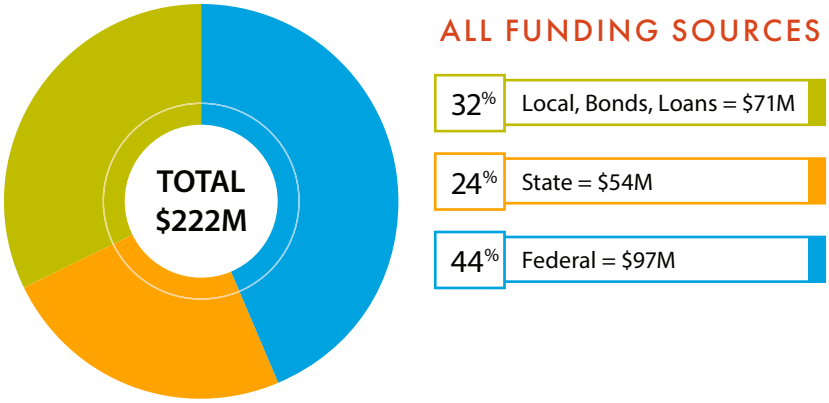


Figure 10 - Historic NAWS Funding Sources.

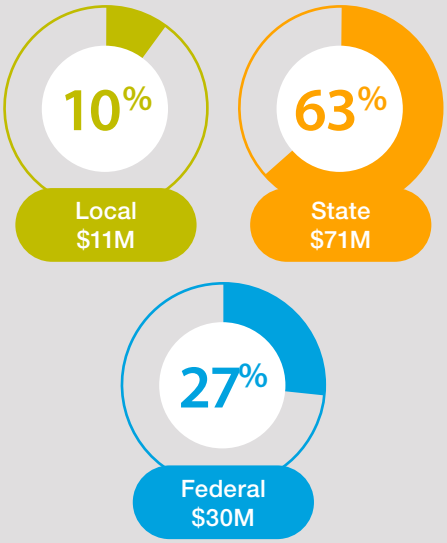
LOOKING AHEAD

2021-2023

$41.5 MILLION

STATE REQUEST

TOTAL FORESEEABLE FUNDING NEEDS



TOTAL = $112M

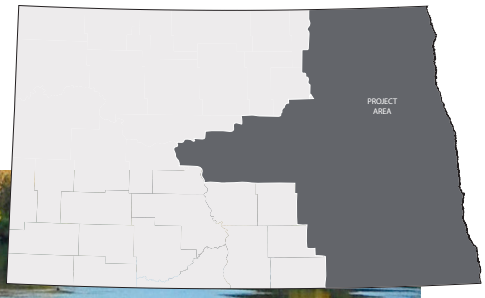
NOTES: It is anticipated that a portion of the state's funding share will be reimbursed by the federal government. In addition, the state's share is larger than normal to match local contributions from previous biennia.

Figure 11 - NAWS Total Foreseeable Funding Needs.

LEGAL CHALLENGES

After more than a decade of legal proceedings filed by the Canadian Province of Manitoba and the State of Missouri against the U.S. Bureau of Reclamation (Bureau) and State of North Dakota, NAWS received a favorable ruling in August 2017. The District of Columbia District Court ruled in favor of NAWS, allowing the State of North Dakota to move forward with construction of the project. Both the State of Missouri and the Province of Manitoba appealed the District Court's ruling. The Bureau and State of North Dakota reached a settlement with Manitoba, ending its appeal of the U.S. District Court's August 2017 ruling. The settlement has resolved Manitoba's appeal, and summary judgement has been granted in favor of NAWS. The U.S. Appellate Court for the District of Columbia Circuit upheld the District Court's August 2017 ruling in May 2019, ending nearly 17 years of litigation.

RED RIVER VALLEY
WATER SUPPLY PROJECT



QUICK FACTS

165 Miles Of 72" Main Transmission Line | Max Flow Of 165 cfs | 20 Cities | 15 Rural Systems | Supplemental Water Supply

The Red River Valley Water Supply Project (RRVWSP) was first initiated as a collaborative federal, state, and local project. The Dakota Water Resources Act of 2000 authorized the RRVWSP in order to provide a reliable supply of quality drinking water to the Red River Valley. A federal Environmental Impact Statement (EIS) was released for the original project in 2007, but a record of decision was never signed. By 2013 it was apparent the project would not receive federal authorization, so a new plan proceeded.

The current version of the project is a state- and locally-sponsored option that proposes to transport Missouri River water to central and eastern North Dakota. The water will be carried via pipeline from an intake site near Washburn, and then east along Highway 200 to the Sheyenne River, just north of Valley City (See Map Appendix). When developed, the RRVWSP will be owned by the Lake Agassiz Water Authority (LAWA) and Garrison Diversion Conservancy District (Garrison Diversion). Operation will be the responsibility of Garrison Diversion.

2019-2021 FUNDING & PROGRESS

The RRVWSP received a $13 million grant allocation from the State Legislature for the 2019-2021 biennium, which was continuing intent from the 2017-2019 biennium. The Legislature also stipulated that RRVWSP will receive no more than $30 million through 2023 at a state cost-share of 75%. One of RRVWSP's major goals for the 2019-2021 biennium is to initiate construction in order to ensure coverage under current regulatory policies. Final designs of the pipeline, discharge structure, and intake are underway, and strategic construction is forecast to begin in 2021.

The proposed work plan for the RRVWSP during the 2021-2023 biennium currently includes: a Missouri River intake pumping wetwell, preliminary design of a biota water treatment plant, a discharge structure on the Sheyenne River, land acquisitions, and some pipeline placement. The project sponsors have estimated a total financial need of $66.7 million in the 2021-2023 biennium. Of that total, approximately $50 million could be eligible for cost-share assistance from the Water Commission.

GARRISON DIVERSION CONSERVANCY DISTRICT

The Garrison Diversion Conservancy District is made up of 28 member counties who each elect a citizen every four years to serve on the Garrison Diversion board of directors. Garrison Diversion is headquartered in Carrington, ND, with offices in McClusky, New Rockford, and at the Snake Creek Pumping Plant, employing a total of 33 people. Their principal mission is to provide a reliable, high quality, and affordable water supply to benefit the people of North Dakota.

LAKE AGASSIZ WATER AUTHORITY

In 2003, the North Dakota Legislature created the Lake Agassiz Water Authority (LAWA) to collaborate on a plan to meet future water supply needs in the Red River Valley. The Legislature further directed LAWA to develop a reliable supply of drinking water to central and eastern North Dakota. LAWA currently serves as the representative for RRVWSP water users, and is a cooperating entity with the Garrison Diversion Conservancy District.

HISTORIC FUNDING DATA

STATE FUNDING

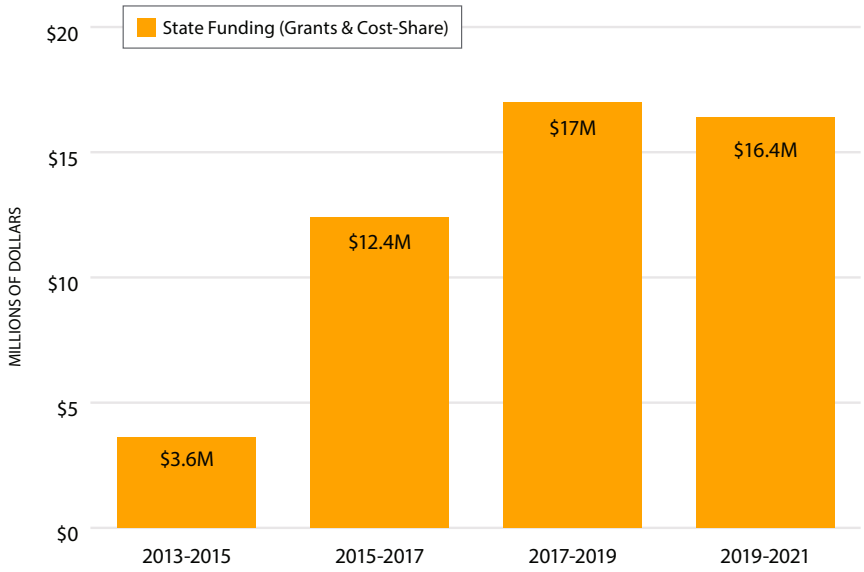
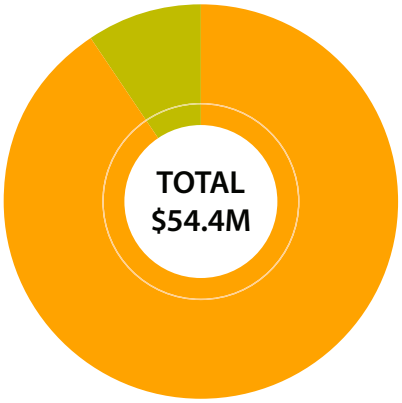


Figure 12 - Historic State Funding For RRVWSP.



ALL FUNDING SOURCES

9% Local = $5M*

91% State = $49.4M

* Prior to 2013, GDCD and LAWA incurred costs as a result of preparation for the RRVWSP. These costs may be considered local funding, and are not reflected here.

Figure 13 - Historic RRVWSP Funding Sources.

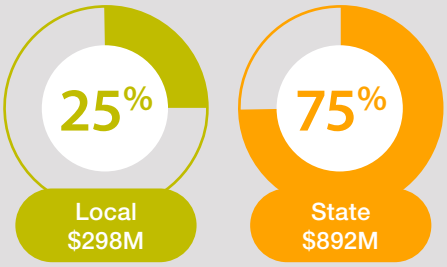
LOOKING AHEAD

2021-2023

$50 MILLION

STATE REQUEST

TOTAL FORESEEABLE FUNDING NEEDS

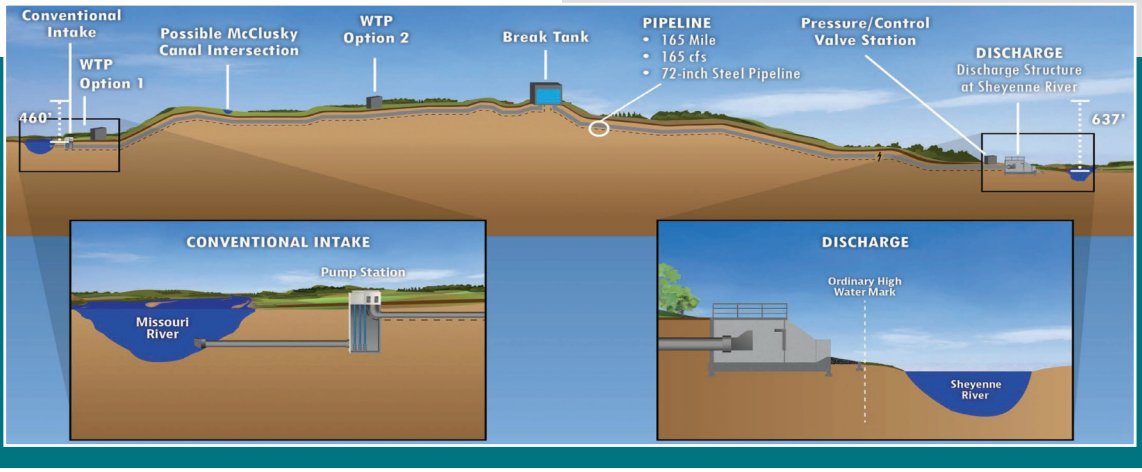


TOTAL = $1,190M

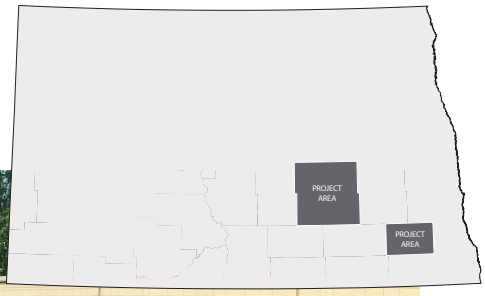
Figure 14 - RRVWSP Total Foreseeable Funding Needs.

PROPOSED PROJECT FEATURES

Figure 15 - Proposed RRVWSP Features.



SHEYENNE RIVER VALLEY
FLOOD PROTECTION



QUICK FACTS

Federal & State Property Acquisitions | Nearly 1,000 Total Structures Removed From Floodplain | Earthen Levees & Flood Walls

The Sheyenne River flows roughly 591 miles from central North Dakota, eventually meandering its way east to the Red River near Fargo. Valley City and Lisbon sit along the Sheyenne River, downstream of Baldhill Dam, which forms Lake Ashtabula. During a typical spring each year, the river swells from snow melt with water levels peaking around March and April, often creating flood conditions. After experiencing major flooding in 2009, 2010, and 2011, the cities of Valley City and Lisbon each decided to pursue permanent flood protection from the Sheyenne River.

While each city has identified its own unique solutions to combat flooding problems, the projects have become collectively known as Sheyenne River Valley Flood Protection (SRVFP). Through the State Water Commission's Cost-Share Program, both Valley City and Lisbon are receiving an 80 percent grant to fund their flood protection projects. The cities are receiving an elevated cost-share percentage due to past and potential future impacts caused by water releases from the Devils Lake outlets, which empty into the Sheyenne River.

VALLEY CITY

Valley City's permanent flood protection plan is outlined in approximately eight phases. Phase 1 of the project, protecting residential property and Valley City State University, was completed in fall 2016. Unique to this project is VCSU, which helped Valley City secure additional funding from the state through the North Dakota University System for flood protection around the university's campus, as well as adjacent properties. Phase 2 focused on protecting the I-94 Business Loop, Valley City's Main Street, and one of the city's distribution power substations. Phase 2 work started in 2017 and was completed in summer 2020. Phase 3 focused on protecting the City's Sanitary Master Lift Station. Work started in fall 2019 and was completed in summer 2020. Preliminary and design engineering work is ongoing for future phases. The scope of work includes permanent concrete flood walls, removable flood walls, clay levees, storm water pump stations, and even bioengineered stream bank restoration projects.

2019-2021 FUNDING & PROGRESS

During the 2019-2021 biennium, the State Water Commission approved funding for Valley City that totaled $11.6 million as of December 2020. Current project elements and designs are being reviewed by FEMA for issuance of a Conditional Letter of Map Revision (CLOMR) before additional construction proceeds.

LISBON

After the 2011 flood, Lisbon city leaders worked toward protecting its residents and infrastructure from the 2.5 miles of Sheyenne River banks stretching through the city. Through a cooperative effort, a series of levees were designed to be strategically placed along the river. As part of Phase I, the first permanent levee was constructed in 2014, and the final levee was completed in 2018. The completed project removed over 1,000 parcels of land and 400 structures from the 100-year floodplain. The city is currently considering an additional phase of the project that would provide flood protection in another portion of Lisbon.

HISTORIC FUNDING DATA

STATE FUNDING

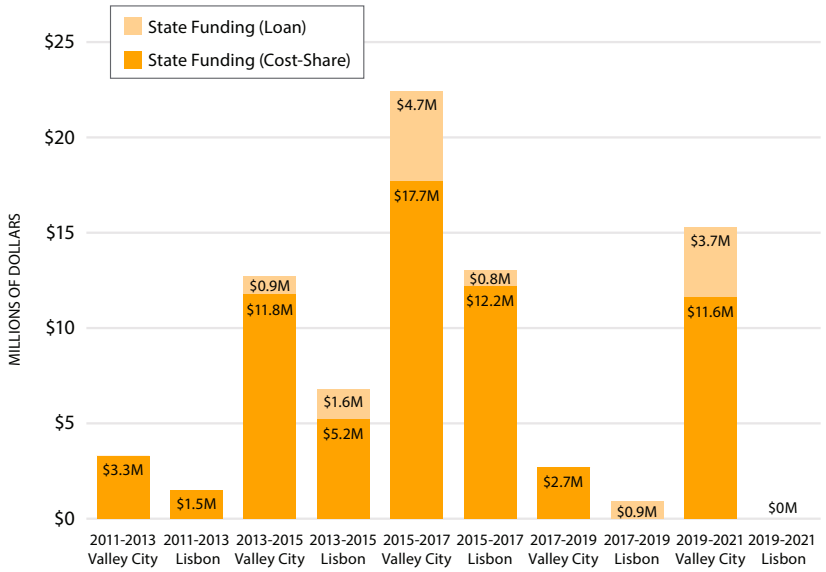
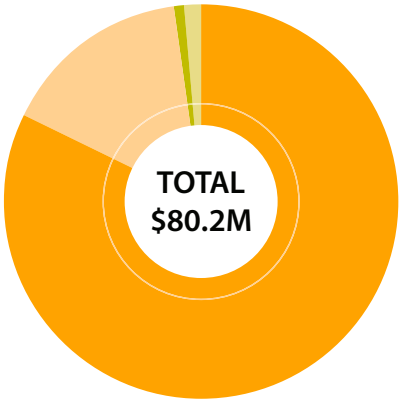


Figure 16 - Historic State Funding For SRVFP.



ALL FUNDING SOURCES

- 1% Local (Lisbon) = $0.9M
- 1% Local (Valley City) = $0.8M
- 16% State (Loans) = $12.5M
- 82% State (Cost-Share) = $66M

Figure 17 - Historic SRVFP Funding Sources.

LOOKING AHEAD

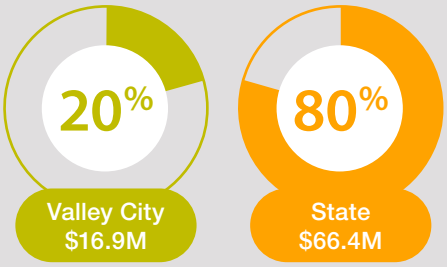
2021-2023

$11 MILLION

STATE REQUEST

NOTE: Valley City only.

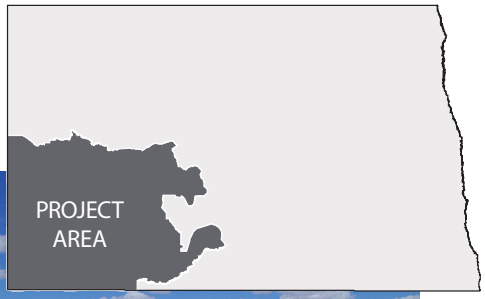
TOTAL FORESEEABLE FUNDING NEEDS

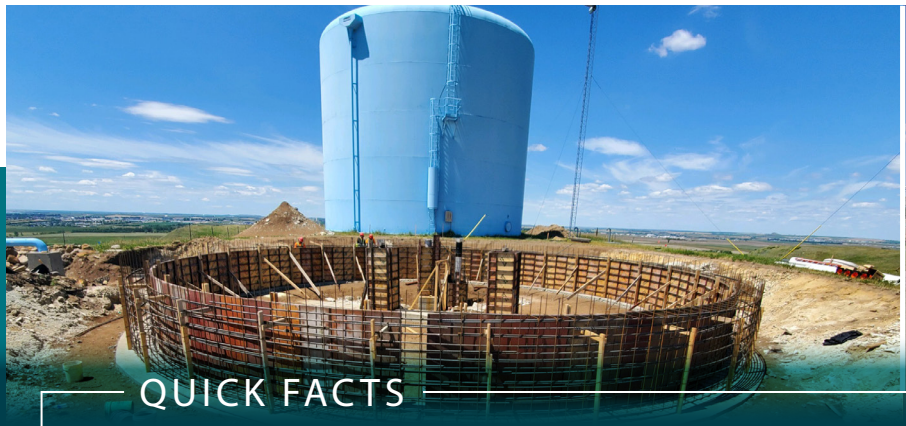


TOTAL = $83.3M

Figure 18 - SRVFP Total Foreseeable Funding Needs.

SOUTHWEST
PIPELINE PROJECT





QUICK FACTS

56,000 Water Users | 33 Communities | 21 Contract Customers | 22 Raw Water Customers | 2 Rural Water Systems

Authorized by the North Dakota Legislature in 1981, the Southwest Pipeline Project (SWPP or Project) transports raw water from Lake Sakakawea to Dickinson and Zap where it is treated and delivered to the Project's customers in southwest North Dakota and Perkins County, South Dakota. Since construction began in 1986, the Project now includes three water treatment plants, 35 pumping stations, 29 water storage reservoirs, and over 5,000 miles of pipe. By the end of 2020, two additional reservoirs are expected to become operational for SWPP.

The SWPP is owned by the State of North Dakota and administered through the Water Commission. In 1996, the operation and maintenance of the SWPP was transferred to Southwest Water Authority (SWA), a political subdivision established by the State Legislature. SWA is governed by a 15-member, publicly elected board of directors, representing 12 counties throughout the SWPP service area, and the cities of Dickinson and Mandan.

THE REPLACEMENT & EXTRAORDINARY MAINTENANCE (REM) FUND

The REM fund was created to cover costs of an extraordinary nature or to replace parts as they reach their life expectancy. A portion of the rate charged to SWPP's users goes into the REM fund. Originally, the rate was set at $0.30 per thousand gallons of water sold, and has gradually increased to $0.70 for contract customers, and $0.80 for rural customers in 2020. Currently, over $22 million is available in the fund for REM purposes. Disbursements from the REM fund must be approved by the Commission and SWA Board of Directors.

2019-2021 FUNDING & PROGRESS

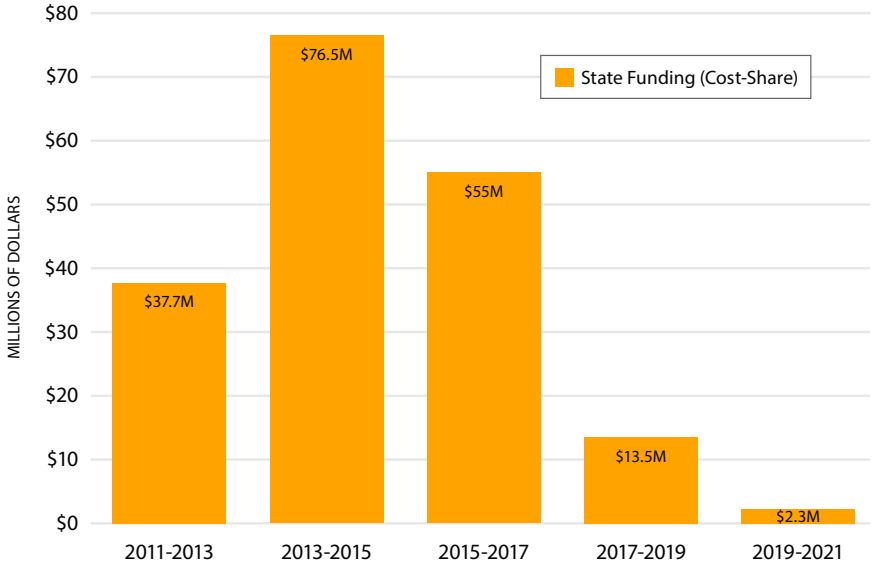
SWA requested $30.5 million for the 2019-2021 biennium. The request was based on several projects, including Dodge and Richardton pump station upgrades, a supplemental intake pump station at Lake Sakakawea, Ray Christensen Pump Station upgrades, second Belfield and Davis Buttes reservoirs, and raw water parallel piping from Dickinson reservoir to the Southwest Treatment plant. As of December 2020, a total of $2.32 million had been committed to the Capital Assets portion of the project during the 2019-2021 biennium. Salaries and agency operations for SWPP are covered under the State Water Commission's salaries and operations budget.

Progress on the SWPP during the 2019-2021 biennium continues to move forward. A supplemental raw water intake is under construction at Renner Bay, Lake Sakakawea. The secondary intake will increase capacity for the entire project. The residual handling facility, which processes the lime sludge from the existing water treatment plant and Southwest Water Treatment Plant, became operational. The contract for the pump station upgrades at the Dodge and Richardton pump station was awarded in October 2018. Construction began in late 2019. The completion of this contract is expected to be in late 2020.

A contract to upgrade blowoff valves along the raw water main transmission line because of the raw water pump station upgrades was awarded in August 2019, with construction expected to be completed by the end of 2020. The second Belfield and Davis Buttes Reservoir contracts were awarded in fall 2019. Construction on these two reservoirs is expected to be completed by the end of 2020.

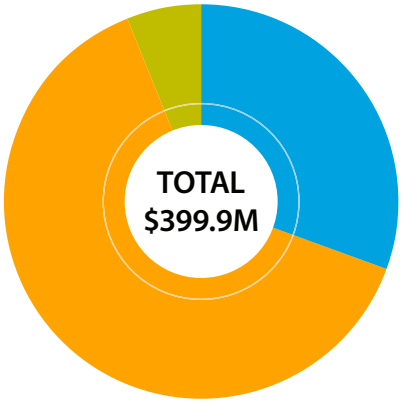
HISTORIC FUNDING DATA

STATE FUNDING



Note: Approximately $68.5 million of state funding was spent on SWPP prior to 2011.

Figure 19 - Historic State Funding For SWPP.



ALL FUNDING SOURCES

6% Local, Bonds, Loans = $24.2M

63% State = $253.5M

31% Federal = $122.2M

Figure 20 - Historic SWPP Funding Sources.

LOOKING AHEAD

2021-2023

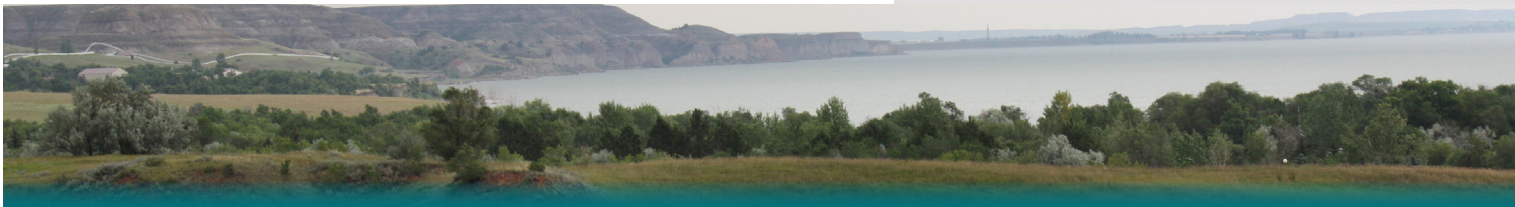
$32.5 MILLION

STATE REQUEST

TOTAL FORESEEABLE FUNDING NEEDS

TOTAL = $206M

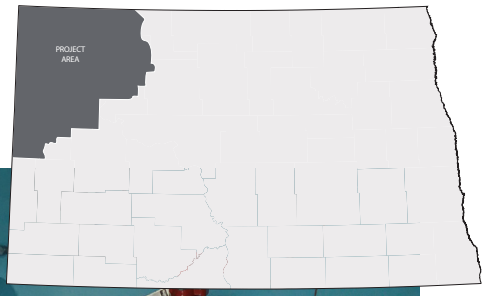
Figure 21 - SWPP Total Foreseeable Funding Needs.

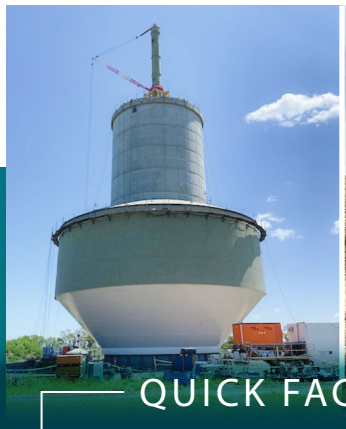


RETURN ON INVESTMENT (REPAYMENT)

Capital repayment is a portion of the water rate charged by SWA to pay back the cost of construction of the Project. While the SWPP has been a substantial investment for the State of North Dakota, the Project continues to pay dividends back to the state. These capital repayments will be made in perpetuity. As of August 2020, North Dakota's return on investment (ROI) in the SWPP is approximately $76.5 million, or 28 percent ROI for the state, factoring in state grants and bonds.

WESTERN
AREA WATER SUPPLY





QUICK FACTS

60,000 Water Users | 13 Communities | 4,000 Rural Connections | 8 Industrial Depots | 38 Fill Ports

Owned and operated by the Western Area Water Supply Authority (WAWSA), the Western Area Water Supply (WAWS) project utilizes a combination of Missouri River water treated at the Williston Regional Water Treatment Plant and groundwater treated by the R&T Water Supply Commerce Authority's Water Treatment Plant in Ray. As originally planned after the 2011 Legislative Assembly, the financial model for WAWS was to take advantage of the extensive regional growth that was taking place as a result of oil production, and fund the majority of the project by selling excess water to the energy industry. Since that time, a slow-down in oil activity caused WAWSA and the state to revisit the funding model. The passage of House Bill 1020 during the 2017 Legislative Assembly allowed for the refinancing of WAWSA debt.

2019-2021 FUNDING & PROGRESS

During the 2019-2021 biennium, WAWSA requested $39.5 million from the State Water Commission. As of late fall 2020, nearly $14.5 million had been committed to the project.

With the $14.5 million in SWC funding received for the 2019-2021 biennium, WAWSA completed final designs for eight projects and received bids for seven of those projects. The projects included a rural water expansion project for McKenzie County Water Resource District, three rural water expansion projects for Ray and Tioga Water Supply Commerce Authority (R&TWSCA), a transmission pipeline project for R&TWSCA (expanded service to Stanley), and two rural water expansion projects for Northwest Rural Water District (NWRWD). WAWSA also received funds to design and permit the next planned expansion of the Williston Water Treatment Facility.

In October 2020, WAWSA was approved for Water Commission cost-share to move forward with construction on three Phase VI projects: R&TWSCA, East White Earth Rural Distribution; R&TWSCA, West White Earth Rural Distribution; and NWRWD, North Rural Distribution. All three distribution projects are continuations or expansions of ongoing efforts in those areas to provide service where water resources are limited and generally poor in quality.

The R&TWSCA East White Earth project is a rural water service expansion in central Mountrail County, east of the White Earth River valley. The project will provide service to approximately 70 new rural users. The R&TWSCA West White Earth project is a rural water service expansion in western Mountrail County and eastern Williams County, west of the White Earth River valley. This project is expected to provide service to about 30 new rural water users. The NWRWD North Rural Distribution project will provide rural water service to approximately 50 new rural water users in central Williams County, northwest of Williston. All three of these projects are expected to be completed by the end of the 2021 construction season.

HISTORIC FUNDING DATA

STATE FUNDING

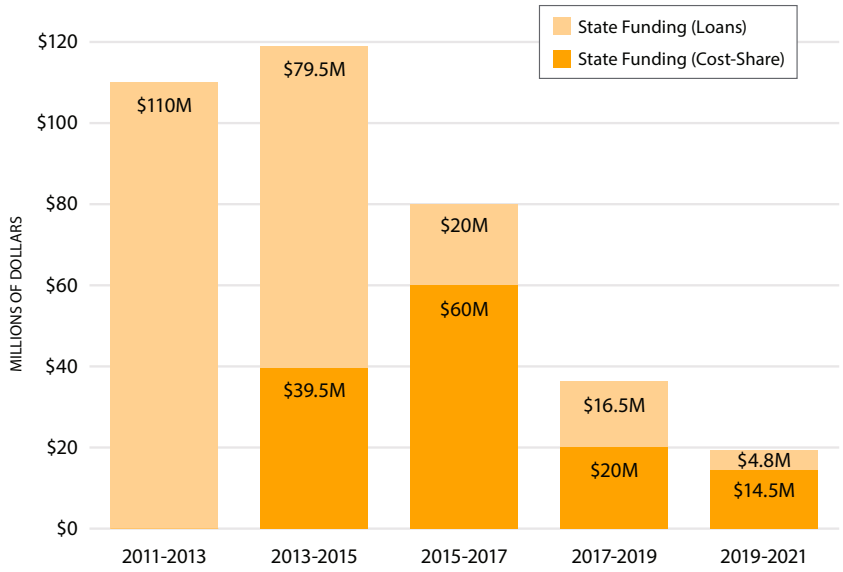
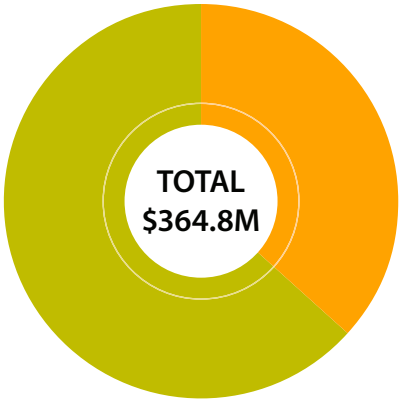


Figure 22 - Historic State Funding For WAWS.



ALL FUNDING SOURCES

63% Local, State Loans = $230.8M

37% State (Cost-Share) = $134M

Figure 23 - Historic WAWS Funding Sources.

LOOKING AHEAD

2021-2023

$36 MILLION

STATE REQUEST

TOTAL FORESEEABLE FUNDING NEEDS

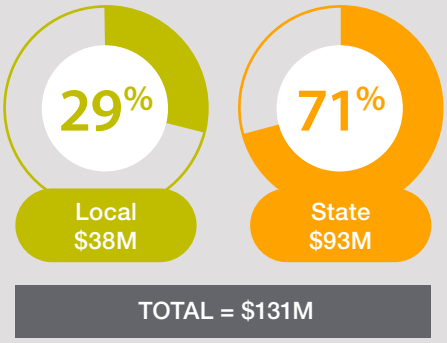


Figure 24 - WAWS Total Foreseeable Funding Needs.

WESTERN AREA WATER SUPPLY AUTHORITY

In 2011, the North Dakota Legislature created the Western Area Water Supply Authority (WAWSA) with the goal to develop the WAWS project to treat, store, and distribute water to northwestern North Dakota. WAWSA is administratively made up of a 10-member board of directors, two each from the five major water supply entities in the region: Northwest Rural Water District (formerly Williams Rural Water District), McKenzie County Water Resource District, the City of Williston, Burke-Divide-Williams (BDW) Water System Association, and Ray and Tioga (R&T) Water Supply Association.

MUNICIPAL
WATER SUPPLY PROJECTS

LOOKING AHEAD

2021-2023

$40 MILLION

STATE REQUEST

Cities in North Dakota face a wide variety of water infrastructure challenges ranging from small, rural cities struggling to create enough revenue to maintain aging infrastructure, to larger, rapidly-expanding cities that are trying to keep up with growth. With such diverse issues to consider across the state, responsible and efficient use of funding is a key focus of the State Water Commission, and is a challenging consideration for the state as a whole.

At the June 2019 Water Commission meeting, Commissioners directed staff to identify or develop a system of ranking municipal water supply projects within the agency's existing priority categories. At that time, projects were ranked as Essential, High, Moderate, or Low, with no further ranking or prioritization. Then, at the August 2019 Water Commission meeting, Commissioners approved using the Department of Environmental Quality's (DEQ) "Intended Use Plan" ranking system for the Drinking Water State Revolving Loan Fund Program as a secondary ranking system within the Water Commission's broader priority categories. Project rankings under this methodology are based on point allocations for water quality, water quantity, affordability, infrastructure adequacy, consolidation or regionalization of water supplies, and operator safety. In addition, DEQ's annual Intended Use Plan is reviewed and approved by the Water Commission.

Using this system, Commissioners focused approvals on the highest ranking priority projects through the end of 2019. Lower ranking projects were then considered starting with the February 2020 Commission meeting.

Section 1 of Senate Bill 2020 included an appropriation of $128 million for water supply projects. In addition to municipal projects, this appropriation was intended to fund regional water supply projects, which have been highlighted on previous pages. From that appropriation, several municipal water supply projects were supported and advanced.

Municipal water supply projects that received Water Commission approval during the 2019-2021 biennium, as of December 2020, are included in the Purpose Funding Summaries, Table 2.

MUNICIPAL WATER INFRASTRUCTURE SURVEY

The State Water Commission partnered with the North Dakota League of Cities in 2018 to inventory aging municipal water supply infrastructure across the state, and to forecast a longer-term outlook of future municipal funding needs. Survey results yielded a ten-year total funding needs estimate of approximately $992 million for municipal water supply infrastructure, with approximately $595 million potentially eligible for state cost-share (see page 61).

RURAL
WATER SUPPLY PROJECTS

LOOKING AHEAD

2021-2023

$65 MILLION

STATE REQUEST

In rural North Dakota, water used for domestic, municipal, and livestock needs is often of insufficient quantity or quality. And, residents of small communities and rural areas can be negatively impacted due to a lack of clean, safe water. Rather than relying on water available from private wells, rural water systems can help deliver a stable supply of quality water to cities and rural areas alike.

Today there are 29 rural water systems in North Dakota, including four Tribal systems, made up of approximately 40,000 miles of pipe. These systems provide water to parts of all 53 counties in North Dakota, supporting 75 percent of the state's incorporated cities. When incorporated cities and rural areas are combined, more than 250,000 people are served by rural water systems.

Section 1 of Senate Bill 2020 included an appropriation of $37.2 million for rural water supply projects. Rural water supply projects that received Water Commission funding during the 2019-2021 biennium, as of December 2020, are included in the Purpose Funding Summaries, Table 3.

RURAL WATER INFRASTRUCTURE SURVEY

The State Water Commission also partnered with the North Dakota Rural Water Systems Association in 2018 to inventory aging rural water supply infrastructure across the state, and to forecast potential funding needs. The survey results yielded a ten-year total funding needs estimate of approximately $350 million for rural water supply infrastructure, with approximately $262 million potentially eligible for state cost-share (see page 64).

OTHER
PROJECT UPDATES

DEVILS LAKE OUTLET OPERATIONS

During the 2019-2021 biennium, Devils Lake Basin water management continued to be a priority for the State Water Commission. As the long-term flood situation has progressed, the state has continued to implement a multi-pronged approach which includes support of infrastructure protection projects, upper-basin water management, and operation of the state's emergency outlets.

Two pumped outlets lower the risk of future flooding by gradually transferring water from Devils Lake to the Sheyenne River (See Map Appendix). The outlets have a maximum combined discharge capacity of 600 cubic feet per second and their operation is managed according to downstream water quality and quantity limitations. As of August 2020, the outlets have discharged over 1.25 million acre-feet of floodwater. Without the operation of the outlets, it is estimated that Devils Lake would be approximately five and a half feet higher than its current elevation.

Outlet operations have been made possible through a collaboration of stakeholders throughout eastern North Dakota, Minnesota, and the Canadian Province of Manitoba. Careful management of downstream impacts related to water quality and quantity in the Red and Sheyenne Rivers remains a key consideration of outlet operations.

The Water Commission has also continued to manage operational efforts associated with the Tolna Coulee Control Structure, which was constructed in 2012 to reduce the risk of a catastrophic natural overflow of Devils Lake. The control structure was developed in cooperation with the U.S. Army Corps of Engineers and is now owned and operated by the State Water Commission.

GENERAL WATER MANAGEMENT

General water management projects include recreational projects, planning efforts, irrigation, special studies, and dam repairs. This biennium, dam repair projects addressing hazards posed by a hydraulic roller effect, often called "low head" dams, were a key focus for the Commission.

Senate Bill 2020 designated $27 million for general water management projects during the 2019-2021 biennium. General water management projects and studies that were approved for Water Commission cost-share during the 2019-2021 biennium , as of December 2020, are included in the Purpose Funding Summaries, Table 5.

The estimated financial need of general water management projects from the state is about $50 million for the 2021-2023 biennium. This estimate includes all general water projects identified during the inventory process.

2019-2021 WATER COMMISSION
PURPOSE FUNDING SUMMARIES

Scan this code using your smartphone camera to stay up to date on the latest project updates.

SCAN ME

Section 1 of Senate Bill 2020 included authority for funding of water projects under four specific purposes during the 2019-2021 biennium. They include water supply, rural water supply, flood control, and general water projects. Tables 2 through 5 summarize the projects that have been supported out of each purpose funding category.

WATER SUPPLY PURPOSE FUNDING: 2019-2021 BIENNIUM	
PURPOSE FUNDING AUTHORITY	**$128,000,000**
Bismarck - Lockport Pump Station	$2,955,000
Cavalier - Water Tower Replacement	$1,022,500
Davenport - Water Improvement District	$466,000
Dickinson - North Annexation Water Supply	$856,400
Fargo - Downtown Water Tower Replacement	$2,814,000
Garrison - Water Supply and Treatment	$3,396,000
Grand Forks - Water Treatment Plant	$9,875,000
Hazen - Water Tank Replacement	$1,430,000
Killdeer - Water Main & Pump Station	$1,060,500
Kindred - Water Main Looping	$134,000
Lake Agassiz Water Authority & Garrison Diversion – Red River Valley Water Supply (Additional $4.7M From Carryover)	$11,671,606
Lakota - Water Supply Line	$618,000
Larimore - Distribution System Replacement	$4,041,500
Lincoln - Water Tank Replacement	$1,268,000
Mandan - Raw Water Intake (Additional $3.1M From Carryover)	$17,290,000
Mapleton - Water Storage Tank	$1,380,000
Minot - Southwest Elevated Water Tank	$2,855,000
Park River - Water Main Improvements	$970,000
Parshall - Water Storage	$1,323,000
Streeter - Well Installation and Tower Rehabilitation	$265,000
Sykeston - Water Tower Replacement	$587,000
Valley City - Water Main Replacement	$350,000
Valley City - Water Treatment Plant Membrane Replacement	$867,607
Watford City - Water Distribution Lines	$541,400
West Fargo - 9th Street Water Main Looping	$594,000
Western Area Water Supply Authority - Phase 6	$14,479,400
Williston - Water Mains	$1,196,000
Wyndmere - Water Main Improvements	$1,730,000
TOTAL OBLIGATED	**$86,036,913**
REMAINING AUTHORITY (DECEMBER 2020)	**$41,963,087**

Table 2 - Water Supply Purpose Funding, 2019-2021 Biennium.

RURAL WATER SUPPLY PURPOSE FUNDING: 2019-2021 BIENNIUM	
PURPOSE FUNDING AUTHORITY	**$ 37,200,000**
Agassiz Water Users - System Expansion	$2,990,000
Dakota Rural Water District - System Expansion	$4,650,000
East Central Regional Water District - Phase 4 Expansion	$4,086,000
Greater Ramsey Water District – System Expansion	$1,328,000
McLean-Sheridan Water District - Expansion Phase 1	$4,980,000
Missouri West Water System - Harmon Lake Area	$565,000
Missouri West Water System - North Mandan, Highway 25	$530,000
North Prairie Rural Water District – Benedict Distribution System	$67,500
North Prairie Rural Water District – Minot to Velva Hwy 52 Improvement	$3,249,000
Northeast Regional Water District - Devils Lake Supply Phase 2	$1,197,829
South Central Regional Water District - North Burleigh Treatment Plant	$920,000
South East Water Users - System Expansion	$225,000
Stutsman Rural Water District - Phase 7	$1,812,000
Tri-County Water District - Phase 5	$1,990,000
Walsh Rural Water District - Drayton Water Supply	$4,713,600
TOTAL OBLIGATED	**$33,303,929**
REMAINING AUTHORITY (DECEMBER 2020)	**$3,896,071**

Table 3 - Rural Water Supply Purpose Funding, 2019-2021 Biennium.

FLOOD CONTROL PURPOSE FUNDING: 2019-2021 BIENNIUM	
PURPOSE FUNDING AUTHORITY	**$197,000,000**
Bottineau County WRD - McHenry Laterals A & B	$362,492
Bottineau County WRD - Overgaard Lateral Extension	$215,969
Burleigh County WRD - Sibley Island Flood Control Pre-construction	$96,420
City of Minot - Flood Bank Stabilization Project, SWIF Action E	$823,180
Enderlin Park Board - Maple River Bank Stabilization	$132,500
FM Flood Diversion Authority – FM Area Diversion Project	$44,000,000
Grand Forks-Traill Joint WRD - Drain No. 59	$2,783,837
Grand Forks-Traill Joint WRD - Thompson Drain Improvement No. 72	$688,107
Maple River WRD - Davenport Flood Risk Reduction	$2,083,600
McLean County WRD - Fort Mandan/4-H Camp	$67,996
Mercer County WRD - Knife River Bank Stabilization	$87,831
Pembina County WRD - Drain No. 39	$210,928
Pembina County WRD - Drain No. 81	$284,982
Pembina County WRD - Drain No. 82	$1,011,666
Pembina County WRD - Tongue River Cutoff	$85,329
Pembina County WRD - Tongue River Snagging/Clearing	$98,400
Pembina County WRD - Tongue River Snagging/Clearing	$98,337
Richland County WRD - Wild Rice River Bank Stabilization	$78,644
Sargent County WRD - Drain No. 12 Improvements	$267,512
Souris River Joint WRD - Mouse River Enhanced Flood Protection	$49,500,000
Southeast Cass WRD - Cass Drain No. 40 Improvements	$192,600
Southeast Cass WRD - Sheyenne River Snagging/Clearing	$294,000
Southeast Cass WRD - Sheyenne River Snagging/Clearing	$52,332
Southeast Cass WRD - Wild Rice River Snagging/Clearing	$120,000
Southeast Cass WRD - Wild Rice River Snagging/Clearing	$18,120
State Engineer Approvals	$655,394
Traill County WRD - Camrud Drainage No. 79 Improvement	$812,925
Tri-County WRD – Drain No. 6	$738,900
Valley City - Permanent Flood Protection Project	$11,610,554
TOTAL OBLIGATED	**$117,472,555**
REMAINING AUTHORITY (DECEMBER 2020)	**$79,527,445**

Table 4 - Flood Control Purpose Funding, 2019-2021 Biennium.

Scan this code using your smartphone camera to stay up to date on the latest project updates.

SCAN ME

GENERAL WATER PURPOSE FUNDING: 2019-2021 BIENNIUM	
PURPOSE FUNDING AUTHORITY	**$27,093,776**
Assiniboine River Basin Initiative - Base Funding 2019-2021	$100,000
Atmospheric Resource Board - Operations and Research Grants	$875,722
Bank of North Dakota - AgPace Program	$150,000
Bottineau County WRD - Westhope Dam Rehabilitation	$23,764
Golden Valley WRD - Odland Dam Rehabilitation	$901,800
Logan County WRD - McKenna Lake Study Phase II	$111,876
Maple River WRD - T-180 Dam Repair	$212,216
ND Dept. of Agriculture - Wildlife Services	$125,000
ND Dept. of Environmental Quality - NPS Pollution Program	$200,000
ND Dept. of Environmental Quality - Water Sample Testing	$110,000
Pembina County WRD - Weiler Dam Gate and Catwalk Retrofit	$118,924
Red River Basin Commission - Base Funding 2019-2021	$200,000
Sargent County WRD - Silver Lake Dam Improvements	$161,918
State Engineer Approvals	$858,540
USGS - Cooperative Monitoring Program FY 2021	$557,205
USGS/Water Commission - Cooperative Hydrologic Monitoring Program	$81,149
Water Commission - Aerial Imagery Project	$790,000
TOTAL OBLIGATED	**$5,578,114**
REMAINING AUTHORITY (DECEMBER 2020)	**$21,515,667**

Table 5 - General Water Purpose Funding, 2019-2021 Biennium.

STATE WATER DEVELOPMENT PROGRAM: **WORKING WITH PROJECT SPONSORS**

This section briefly describes the inventory process used by the Water Commission to identify and estimate future water project and program funding needs. A summary of those funding needs, as provided by project sponsors, is also presented.

WATER PROJECT INVENTORY PROCESS

As part of the Water Commission's water planning efforts, the agency biennially solicits project and program information from potential project sponsors. The results provide the Commission with an updated inventory of water projects and programs that could seek state cost-share in the upcoming 2021-2023 biennium and beyond. As in the past, the product of this effort becomes the foundation that supports the State Water Commission's budget request to the Governor and Legislature.

To obtain updated and new project and program information from sponsors, the Commission invited water boards, joint water boards, the North Dakota Irrigation Association, communities, rural and regional water supply systems, and government agencies with an interest in water development projects and programs to complete an electronic project planning and information form. Information requested on the forms included general project descriptions, location, cost estimates, permit information, and identification of potential obstacles, among other basic aspects of the projects.

In addition, sponsors were asked to assign the most realistic start dates possible to projects they expected to present to the Commission for cost-share consideration - particularly during 2021-2023 and later biennia. As part of that effort, project sponsors needed to take into consideration when a funding commitment from the Commission would be needed for projects or programs to proceed.

As the electronic project information forms were received by the Commission, they were automatically placed into a water project database, helping to ensure receipt and accurate inventory of projects. This provides the Commission with updated project information for older projects and an accounting of new projects that have been identified by local sponsors since the last inventory process during the 2019-2021 biennium. Of course, circumstances change, and so do project costs over time. Therefore, the database is updated regularly leading up to the Legislative Assembly.

When the deadline for project submittal was reached, each project was reviewed by a Water Commission subcommittee with Commission staff assistance to determine if portions of the project were eligible for cost-share, and if the proposed timeframes for project advancement were reasonable and justified by supporting information.

The agency worked closely with project sponsors to maintain the most up-to-date project information possible. In addition, the Commissioner-hosted basin meetings were a useful forum for the agency and project sponsors to discuss projects and update information accordingly.

The result of this inventory process is a comprehensive list of water projects throughout North Dakota that could come forward for new or additional cost-share in future biennia. As stated earlier, this is an important tool for budget planning purposes for the Commission, the Office of Management and Budget, the Governor's Office, and the Legislature.

WATER DEVELOPMENT FUNDING NEEDS, 2021-2023 BIENNIUM

The following Water Development Funding Needs table contains projects that could move forward and request State Water Commission cost-share in the 2021-2023 biennium and beyond (Table 6). *This accounting of projects simply represents a list of needs as submitted by project sponsors. It does not guarantee, in any way, that all of the projects listed will receive funding for the amounts listed. In addition, upon further review of the projects and any notices of changes to the projects, the state's potential cost-share contribution may change based on the agency's cost-share policy and requirements for eligible items.*

In consideration of the State Water Commission Project Prioritization Guidance, projects were also identified with their priority ranking, and by major drainage basin where they are located.

The inventory is organized into eight project types: flood control, bank stabilizations drains, snagging and clearing, municipal water supply, rural water supply, regional water supply, and general water management. The total financial need to implement all of the projects in the 2021-2023 inventory is approximately $1.5 billion. The state's estimated share of that total is $645 million. However, those estimates will evolve pending closer analyses of cost-share requirements once a request for funding has been made to the Commission. The federal government and local project sponsors would be responsible for the balance.

The 2021-2023 totals do not account for projects that may receive additional funding in the current 2019-2021 biennium. It should also be noted that water development projects can be delayed as a result of local or federal funding problems, permits, or environmental issues, which can substantially influence the actual need during any given biennium. Furthermore, the unpredictability of floods, droughts, and other unforeseen events can result in new funding needs that were not documented at the time this report was developed. As a result, the actual need for the upcoming biennium has the potential to change from what is presented here.

TRIBAL NATION PROJECT FUNDING

Water projects submitted by tribal governments could be included in the inventory if partnered with eligible local sponsors per NDCC 61-02-24 and NDCC 61-02-24.1.

FLOOD CONTROL

PLEASE NOTE: This inventory of financial needs is for planning and budgeting purposes only. It does not guarantee, in any way, that projects listed will receive funding from the state. In addition, the estimated financial needs from the state may change based on further review of the projects in accordance with cost-share program eligibility requirements. Also note, the Little Missouri, Upper Heart, and Upper Cannonball River basin has been abbreviated as LM/UH/UC.

LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Burleigh County WRD	Sibley Island Flood Control	High	Lower Missouri	$-	$-	$2,508,600	$1,672,400	$4,181,000
City of Bismarck	South Bismarck Flood Protection, Phase 2	High	Lower Missouri	$-	$-	$2,100,000	$1,400,000	$3,500,000
City of Fargo	WWTP Flood Protection Plan	High	Upper Red	$3,679,793		$613,299	$613,299	$4,906,390
City of Hazen	South Side Flood Risk Reduction	High	Lower Missouri	$-	$-	$30,000	$20,000	$50,000
City of LaMoure	Flood Control	High	James	$-	$-	$2,520,000	$1,680,000	$4,200,000
City of Valley City	Permanent Flood Protection	High	Upper Red	$-	$-	$11,000,000	$2,750,000	$13,750,000
Emmons County WRD	Strasburg Slough High Water Outlet	High	Lower Missouri	$-	$-	$1,500,000	$1,000,000	$2,500,000
Lower Heart WRD, City of Mandan	Lower Heart - City of Mandan Flood Risk Reduction	High	Lower Missouri	$-	$-	$13,000,200	$8,666,800	$21,667,000
Mercer County WRD, City of Zap	Zap Flood Control	High	Lower Missouri	$-	$-	$330,000	$220,000	$550,000
Metro Flood Diversion Authority	FM Area Diversion	High	Multi-Basin	$297,000,000	$33,000,000	$66,500,000	$90,000,000	$486,500,000
Souris River Joint Board	Mouse River Enhanced Flood Protection	High	Mouse	$10,000,000	$-	$76,000,000	$28,950,000	$114,950,000
Southeast Cass WRD	Sheyenne-Maple Flood Control Improvements	High	Upper Red	$-	$-	$400,000	$400,000	$800,000
Ward County WRD	Puppy Dog Coulee Bypass Channel	High	Mouse	$-	$-	$1,800,000	$1,200,000	$3,000,000
Cass County Joint and Rush River WRDs, City of Amenia	City of Amenia Flood Protection	Moderate	Upper Red	$2,250,000	$-	$375,000	$375,000	$3,000,000
City of Neche	Levee Certification & Design	Moderate	Lower Red	$-	$-	$3,291,750	$2,194,500	$5,486,250
Nelson County WRD, City of Petersburg	Petersburg Infrastructure and Flood Mitigation	Moderate	Upper Red	$-	$-	$600,000	$400,000	$1,000,000
Cass County Joint WRD	Cass County Farmstead Ring Dikes	Low	Upper Red	$-	$-	$110,000	$80,000	$190,000

Table 6 - Water Project Funding Needs, 2021-2023 Biennium.

FLOOD CONTROL

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
City of LaMoure	Permanent Flood Protection Feasibility Study	Low	James	$-	$-	$60,000	$40,000	$100,000
Sargent County WRD	Crooked Creek Watershed Study	Low	Upper Red	$600,000	$-	$75,000	$75,000	$750,000
Traill County WRD	Goose River Watershed Study	Low	Lower Red	$600,000	$-	$75,000	$75,000	$750,000
LOW PRIORITY FLOOD CONTROL				$1,200,000	$-	$320,000	$270,000	$1,790,000
MODERATE PRIORITY FLOOD CONTROL				$2,250,000	$-	$4,266,750	$2,969,500	$9,486,250
HIGH PRIORITY FLOOD CONTROL				$310,679,793	$33,000,000	$178,302,099	$138,572,499	$660,554,390
TOTAL FLOOD CONTROL				$314,129,793	$33,000,000	$182,888,849	$141,811,999	$671,830,640

BANK STABILIZATION

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Burleigh County WRD	Missouri River Bank Stabilization - Section 32 (O&M)	Moderate	Lower Missouri	$-	$-	$250,000	$250,000	$500,000
Mercer County WRD	Spring Creek Bank Stabilization	Moderate	Lower Missouri	$-	$-	$282,500	$282,500	$565,000
Upper Sheyenne River Joint WRD	Sheyenne River Riparian Corridor Management	Moderate	Devils Lake	$1,250,000	$-	$275,000	$275,000	$1,800,000
LOW PRIORITY BANK STABILIZATION				$-	$-	$-	$-	$-
MODERATE PRIORITY BANK STABILIZATION				$1,250,000	$-	$807,500	$807,500	$2,865,000
HIGH PRIORITY BANK STABILIZATION				$-	$-	$-	$-	$-
TOTAL BANK STABILIZATION				$1,250,000	$-	$807,500	$807,500	$2,865,000

DRAINS

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Barnes County WRD	Meadow Lake - High Water Outlet	Moderate	Lower Red	$-	$-	$450,000	$550,000	$1,000,000
Barnes County WRD	10 Mile Lake Outlet Improvement	Moderate	Upper Red	$-	$-	$900,000	$1,100,000	$2,000,000
Bottineau County WRD	Brander Lateral	Moderate	Mouse	$-	$-	$168,750	$206,250	$375,000
Bottineau County WRD	Brander Lateral B	Moderate	Mouse	$-	$-	$58,500	$71,500	$130,000
Bottineau County WRD	Gardena Lateral	Moderate	Mouse	$-	$-	$135,000	$165,000	$300,000
Bottineau County WRD	Landa Drain	Moderate	Mouse	$-	$-	$976,950	$1,194,050	$2,171,000
Bottineau County WRD	Lansford Drain	Moderate	Mouse	$-	$-	$337,500	$412,500	$750,000
Bottineau County WRD	Laporte Coulee	Moderate	Mouse	$-	$-	$36,000	$44,000	$80,000
Bottineau County WRD	Norsk Drain	Moderate	Mouse	$-	$-	$168,750	$206,250	$375,000
Bottineau County WRD	Stone Creek Extension	Moderate	Mouse	$-	$-	$270,000	$330,000	$600,000
Bottineau County WRD	Stone Creek Lateral B	Moderate	Mouse	$-	$-	$144,000	$176,000	$320,000
Bottineau County WRD	Stone Creek Lateral C	Moderate	Mouse	$-	$-	$371,250	$453,750	$825,000
Bottineau County WRD	Stone Creek Lateral D	Moderate	Mouse	$-	$-	$118,125	$144,375	$262,500
Bottineau County WRD	Stone Creek Lateral E	Moderate	Mouse	$-	$-	$101,250	$123,750	$225,000
Bottineau County WRD	Zahn International Drain	Moderate	Mouse	$-	$-	$31,500	$38,500	$70,000
Dickey County WRD	Improvement District No. 4 Channel Improvement	Moderate	James	$-	$-	$900,000	$1,100,000	$2,000,000

DRAINS

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Dickey County WRD	Improvement District No. 4 Project Development	Moderate	James	$-	$-	$49,500	$60,500	$110,000
Elm River Joint WRD	Elm River Drain No. 1	Moderate	Lower Red	$-	$-	$1,350,000	$1,650,000	$3,000,000
Emmons County WRD	Rice Lake High Water Outlet	Moderate	Lower Missouri	$-	$-	$900,000	$1,100,000	$2,000,000
Emmons County WRD	Schwahn Lake High Water Outlet	Moderate	Lower Missouri	$-	$-	$450,000	$550,000	$1,000,000
Foster County WRD	Alkali Lake High Water Outlet	Moderate	Lower Red	$-	$-	$900,000	$1,100,000	$2,000,000
Griggs-Barnes-Stutsman Joint WRD	Silver Creek Drainage Improvement	Moderate	Upper Red	$-	$-	$1,350,000	$1,650,000	$3,000,000
Logan County WRD	McKenna Lake Flooding	Moderate	James	$-	$-	$270,000	$330,000	$600,000
Maple River WRD	District No. 2 (MR-2) Channel Improvement - Phase II	Moderate	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Maple River WRD	Tower Township Improvement District No. 77	Moderate	Upper Red	$-	$-	$3,465,000	$4,235,000	$7,700,000
Maple River WRD	Tower Township Improvement District No. 79	Moderate	Upper Red	$-	$-	$495,000	$605,000	$1,100,000
Maple River WRD	Cornell Township Improvement District No. 80	Moderate	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Mclean County WRD	Painted Woods Lake Flood Control	Moderate	Upper Missouri	$50,000	$-	$877,500	$1,072,500	$2,000,000
Morton County WRD	Square Butte Creek - Floodway #2	Moderate	Lower Missouri	$-	$-	$139,500	$170,500	$310,000
North Cass WRD	Drain #18 (NC-1) Extension	Moderate	Upper Red	$-	$-	$315,000	$385,000	$700,000
Pembina County WRD	Drain No. 16 Lateral	Moderate	Upper Red	$-	$-	$1,125,000	$1,375,000	$2,500,000
Pembina County WRD	Establishment of Drain No. 80	Moderate	Lower Red	$-	$-	$2,610,000	$3,190,000	$5,800,000

DRAINS

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Pembina County WRD	Establishment of Drain No. 83	Moderate	Lower Red	$-	$-	$540,000	$660,000	$1,200,000
Ransom County WRD	North Milnor Drainage Improvement District No. 1	Moderate	Upper Red	$-	$-	$202,500	$247,500	$450,000
Renville County WRD	County Assessment Drain	Moderate	Mouse	$-	$-	$2,700,000	$3,300,000	$6,000,000
Richland County WRD	Drain No. 12 Reconstruction and Lateral	Moderate	Upper Red	$-	$-	$225,000	$275,000	$500,000
Sargent County WRD	Drain No. 13	Moderate	Upper Red	$-	$-	$225,000	$275,000	$500,000
Sheridan County WRD	Flood Control District No. 1	Moderate	Lower Red	$-	$-	$675,000	$825,000	$1,500,000
Steele County WRD	Golden Lakes Improvement	Moderate	Upper Red	$-	$-	$198,000	$297,000	$495,000
Steele County WRD	New Drain Improvement District Proposed Channel	Moderate	Upper Red	$-	$-	$675,000	$825,000	$1,500,000
Stutsman County WRD	Spiritwood Lake/Alkali Lake Drainage	Moderate	James	$-	$-	$6,750,000	$8,250,000	$15,000,000
Traill County WRD	Hong Drain No. 81	Moderate	Lower Red	$-	$-	$450,000	$550,000	$1,000,000
Walsh County WRD	Oslo Area Flood Control	Moderate	Lower Red	$-	$5,000,000	$12,866,800	$21,837,200	$39,704,000
Ward County WRD	Des Lacs River Diversion Channels	Moderate	Mouse	$-	$-	$675,000	$825,000	$1,500,000
Ward County WRD	Makoti Lake Stabilization	Moderate	Mouse	$-	$-	$900,000	$1,100,000	$2,000,000
Bottineau County WRD	Kane/Tacoma Outlet Channel	Low	Mouse	$-	$-	$94,500	$115,500	$210,000
Cavalier County WRD	Rosa Lake Drain	Low	Upper Red	$-	$-	$1,080,000	$1,320,000	$2,400,000
Maple River WRD	Buffalo-Lynchburg Channel Improvement - Phase III	Low	Upper Red	$-	$-	$675,000	$825,000	$1,500,000

DRAINS

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Maple River WRD	Cass County Drain No. 46 Channel Improvement	Low	Upper Red	$-	$-	$337,500	$412,500	$750,000
Mclean County WRD	Turtle Creek Rural Flood Control	Low	Upper Missouri	$-	$-	$900,000	$1,100,000	$2,000,000
North Cass WRD	Drain No. 18 Channel Improvement (NC-1) Outlet Reach	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
North Cass WRD	Drain No. 23 Outlet Improvements	Low	Upper Red	$-	$-	$67,500	$82,500	$150,000
North Cass WRD	Drain No. 25 Outlet Improvements	Low	Upper Red	$-	$-	$67,500	$82,500	$150,000
North Cass WRD	Drain No. 26 Channel Improvement	Low	Upper Red	$-	$-	$315,000	$385,000	$700,000
North Cass WRD	Drain No. 31 Channel Improvement (NC-1)	Low	Upper Red	$-	$-	$337,500	$412,500	$750,000
North Cass WRD	Drain No. 32 Outlet Improvements	Low	Upper Red	$-	$-	$67,500	$82,500	$150,000
North Cass WRD	Drain No. 55 Channel Improvement	Low	Upper Red	$-	$-	$180,000	$220,000	$400,000
Pembina County	Drain No. 34 Reconstruction	Low	Lower Red	$-	$-	$280,770	$343,164	$623,934
Pembina County WRD	Drain No. 66-1 Supplemental Outlet	Low	Lower Red	$-	$-	$945,000	$1,155,000	$2,100,000
Pembina County	Drain No. 67A City of St Thomas Diversion	Low	Lower Red	$-	$-	$450,000	$550,000	$1,000,000
Pembina County WRD	Improvements to Tongue River Cutoff	Low	Lower Red	$-	$-	$1,800,000	$2,200,000	$4,000,000
Richland County WRD	Drain No. 1 Reconstruction Part 1	Low	Upper Red	$-	$-	$123,750	$151,250	$275,000
Richland County WRD	Drain No. 3 Reconstruction	Low	Upper Red	$-	$-	$562,500	$687,500	$1,250,000
Richland County WRD	Drain No. 14 Reconstruction Part 5	Low	Upper Red	$-	$-	$33,750	$41,250	$75,000
Richland County WRD	Drain No. 5 (37) Reconstruction	Low	Upper Red	$-	$-	$33,750	$41,250	$75,000
Richland County WRD	Drain No. 31 Reconstruction	Low	Upper Red	$-	$-	$175,050	$213,950	$389,000

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Richland County WRD	Drain No. 65 Reconstruction	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Richland County WRD	Drain No. C10318 Reconstruction	Low	Upper Red	$-	$-	$33,750	$41,250	$75,000
Richland-Sargent Joint WRD	No. 1 Reconstruction Phase 3	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Rush River WRD	Drain Nos. 2 & 12 (Lower Rush & Rush Rivers) Channel Improvements	Low	Upper Red	$-	$-	$562,500	$687,500	$1,250,000
Sargent County WRD	Drain No. 2 Extension	Low	Upper Red	$-	$-	$225,000	$275,000	$500,000
Sargent County WRD	Drain No. 7 Channel Improvement (Downstream Milnor) Phase II	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Sargent County WRD	Drain No. 7 Channel Improvement Through Milnor & East	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Sargent County WRD	Drain No. 8 Channel Improvement	Low	Upper Red	$-	$-	$270,000	$330,000	$600,000
Sargent County WRD	Drain No. 9 - Channel Improvements	Low	Upper Red	$-	$-	$675,000	$825,000	$1,500,000
Sargent County WRD	Drain No. 11 Channel Improvement Additional Phases	Low	Upper Red	$-	$-	$1,350,000	$1,650,000	$3,000,000
Sargent County WRD	Drain No. 16	Low	Upper Red	$-	$-	$900,000	$1,100,000	$2,000,000
Southeast Cass WRD	Drain No. 35 Channel Improvements	Low	Upper Red	$-	$-	$540,000	$660,000	$1,200,000
Southeast Cass WRD	Drain No. 27 Channel Improvements	Low	Upper Missouri	$-	$-	$675,000	$825,000	$1,500,000
Southeast Cass WRD	Drain No. 40 Channel Improvement - Phase 2	Low	Upper Red	$-	$-	$675,000	$825,000	$1,500,000
Southeast Cass WRD	Drain No. 47 Channel Improvement - Outlet Area	Low	Upper Red	$-	$-	$45,000	$55,000	$100,000
Steele County WRD	Drain No. 1 - Channel Improvement & New Lateral	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000

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Steele County WRD	Drain No. 2 - Channel Improvement	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Steele County WRD	Drain No. 3 - Improvement	Low	Upper Red	$-	$-	$225,000	$275,000	$500,000
Steele County WRD	Drain No. 4 - Improvement	Low	Upper Red	$-	$-	$562,500	$687,500	$1,250,000
Steele County WRD	Drain No. 6 - Channel Improvement Project	Low	Upper Red	$-	$-	$405,000	$495,000	$900,000
Steele County WRD	Drain No. 8 - Channel Improvement	Low	Upper Red	$-	$-	$405,000	$495,000	$900,000
Steele County WRD	Drain No. 11 - Channel Improvement	Low	Upper Red	$-	$-	$450,000	$550,000	$1,000,000
Steele County WRD	Drain No. 12 - Channel Improvement	Low	Upper Red	$-	$-	$405,000	$495,000	$900,000
Stutsman-Barnes-Griggs Joint WRD	Reconstruction of Silver Creek	Low	Upper Red	$-	$-	$315,000	$385,000	$700,000
Traill County WRD	Paulson Drain No. 7 - Improvement	Low	Lower Red	$-	$-	$450,000	$550,000	$1,000,000
Traill County WRD	Roseville Drain No. 19 Channel Improvement	Low	Lower Red	$-	$-	$900,000	$1,100,000	$2,000,000
Traill County WRD	Drain No. 23-40 Channel Improvement (Blanchard-Norman)	Low	Lower Red	$-	$-	$675,000	$825,000	$1,500,000
Traill County WRD	Hatton Drain No. 45 Channel Improvement	Low	Lower Red	$-	$-	$337,500	$412,500	$750,000
Traill County WRD	Morgan Drain No. 36 Channel Improvement	Low	Lower Red	$-	$-	$900,000	$1,100,000	$2,000,000
Traill County WRD	Norway Drain No. 38 - Improvement	Low	Lower Red	$-	$-	$337,500	$412,500	$750,000
Traill County WRD	Preston Floodway Improvement	Low	Lower Red	$-	$-	$562,500	$687,500	$1,250,000
Traill County WRD	Red Owl Drain No. 55 - Improvement	Low	Lower Red	$-	$-	$225,000	$275,000	$500,000
Walsh County WRD	Walsh County Drain No. 7 Improvements	Low	Lower Red	$-	$-	$212,850	$260,150	$473,000

DRAINS

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Walsh County WRD	Drain No. 31 Improvements	Low	Lower Red	$-	$-	$424,350	$518,650	$943,000
Walsh County WRD	Drain No. 48 Improvements	Low	Lower Red	$-	$-	$67,500	$82,500	$150,000
Walsh County WRD	Drain No. 50 Improvements	Low	Lower Red	$-	$-	$1,268,550	$1,550,450	$2,819,000
Walsh County WRD	Drain No. 88	Low	Lower Red	$-	$-	$540,000	$660,000	$1,200,000
Walsh County WRD	Drain No. 90	Low	Lower Red	$-	$-	$5,875,650	$7,181,350	$13,057,000
Walsh County WRD	Drain No. 90-1	Low	Lower Red	$-	$-	$1,473,300	$1,800,700	$3,274,000
Wells County WRD	Rocky Run Drain	Low	James	$-	$-	$225,000	$275,000	$500,000
			LOW PRIORITY DRAINS	$-	$-	$34,870,020	$42,618,914	$77,488,934
			MODERATE PRIORITY DRAINS	$50,000	$5,000,000	$47,446,375	$64,156,125	$116,652,500
			HIGH PRIORITY DRAINS	$-	$-	$-	$-	$-
			TOTAL DRAINS	$50,000	$5,000,000	$82,316,395	$106,775,039	$194,141,434

SNAGGING & CLEARING

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City of Jamestown	James River Tree Removal - Sections VI - XII	Moderate	James	$-	$-	$164,200	$164,200	$328,400
Pembina County WRD	Tongue River Snagging & Clearing	Moderate	Lower Red	$-	$-	$200,000	$200,000	$400,000
Walsh County WRD	Forest River Snagging & Clearing	Moderate	Lower Red	$-	$-	$200,000	$200,000	$400,000
Barnes County WRD	Sheyenne River Reaches Snagging & Clearing	Low	Upper Red	$-	$-	$150,000	$150,000	$300,000
Emmons County WRD	Beaver Creek Snagging & Clearing	Low	Lower Missouri	$-	$-	$150,000	$150,000	$300,000
Richland County WRD	Wild Rice River Snagging & Clearing	Low	Upper Red	$-	$-	$150,000	$150,000	$300,000
Richland County WRD	Sheyenne River Snagging & Clearing	Low	Upper Red	$-	$-	$75,000	$75,000	$150,000
Richland County WRD	Antelope Creek Snagging & Clearing	Low	Upper Red	$-	$-	$87,500	$87,500	$175,000
Rush River WRD	Rush River Reaches - Snagging & Clearing	Low	Upper Red	$-	$-	$225,000	$225,000	$450,000
Southeast Cass WRD	Sheyenne River Reach #1 Snagging & Clearing	Low	Upper Red	$-	$-	$225,000	$225,000	$450,000
Southeast Cass WRD	Sheyenne River Reach #2 Snagging & Clearing	Low	Upper Red	$-	$-	$225,000	$225,000	$450,000
Southeast Cass WRD	Sheyenne River Reach #3 Snagging & Clearing	Low	Upper Red	$-	$-	$225,000	$225,000	$450,000
Southeast Cass WRD	Wild Rice River Snagging & Clearing	Low	Upper Red	$-	$-	$225,000	$225,000	$450,000
Walsh County WRD	North Branch Park River Snagging & Clearing	Low	Lower Red	$-	$-	$200,000	$200,000	$400,000

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Walsh County WRD	Middle Branch Park River Snagging & Clearing	Low	Lower Red	$-	$-	$200,000	$200,000	$400,000
Walsh County WRD	South Branch Park River Snagging & Clearing	Low	Lower Red	$-	$-	$200,000	$200,000	$400,000
LOW PRIORITY SNAGGING & CLEARING				$-	$-	$2,337,500	$2,337,500	$4,675,000
MODERATE PRIORITY SNAGGING & CLEARING				$-	$-	$564,200	$564,200	$1,128,400
HIGH PRIORITY SNAGGING & CLEARING				$-	$-	$-	$-	$-
TOTAL SNAGGING & CLEARING				$-	$-	$2,901,700	$2,901,700	$5,803,400

MUNICIPAL WATER SUPPLY

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City of Bismarck	Water System Expansion	Moderate	Lower Missouri	$-	$-	$2,880,000	$1,920,000	$4,800,000
City of Killdeer	HWBL Subdivision Expansion	Moderate	LM / UH / UC	$-	$-	$393,000	$262,000	$655,000
City of Killdeer	South Water Storage Reservoir	Moderate	LM / UH / UC	$-	$-	$600,000	$400,000	$1,000,000
City of Stanley	Country Estates Water Main Extension	Moderate	Upper Missouri	$-	$-	$210,000	$140,000	$350,000
City of Watford City	12 St NE (Between HWY 23 & 17 Ave N)	Moderate	Upper Missouri	$-	$-	$428,000	$285,334	$713,334
City of Watford City	30th Ave NE Watermain Expansion	Moderate	Upper Missouri	$-	$-	$2,025,000	$1,350,000	$3,375,000
City of Watford City	17th Ave NE Watermain Expansion	Moderate	Upper Missouri	$-	$-	$435,480	$290,320	$725,800
City of Watford City	24th Ave SW Watermain Expansion	Moderate	Upper Missouri	$-	$-	$2,151,000	$1,434,000	$3,585,000
City of Wildrose	Water Extension	Moderate	Upper Missouri	$162,036	$-	$64,814	$43,210	$270,060
City of Aneta	Water System Improvements	Low	Lower Red	$1,225,800	$-	$3,350,520	$2,233,680	$6,810,000
City of Ashley	Water Treatment Plant Rehabilitation	Low	Lower Missouri	$-	$-	$1,200,000	$800,000	$2,000,000
City of Beach	South Side Transmission Loop	Low	LM / UH / UC	$-	$-	$1,320,000	$880,000	$2,200,000
City of Berthold	Water Main Replacement	Low	Mouse	$-	$-	$3,000,000	$2,000,000	$5,000,000
City of Beulah	Water Main Improvements	Low	Lower Missouri	$-	$-	$1,500,000	$1,000,000	$2,500,000
City of Bowbells	Water Tower Replacement	Low	Mouse	$-	$-	$1,080,000	$720,000	$1,800,000
City of Buffalo	Fire Hydrant and Gate Valve Replacement	Low	Upper Red	$-	$-	$132,000	$88,000	$220,000
City of Cando	Water Tower Replacement	Low	Devils Lake	$-	$-	$1,020,000	$680,000	$1,700,000
City of Casselton	Lead Water Service Replacement	Low	Upper Red	$-	$-	$300,000	$200,000	$500,000
City of Casselton	Water Main Looping – Martin's Addition and Central Cass Public School	Low	Upper Red	$-	$-	$420,000	$280,000	$700,000

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City of Casselton	Water Main Replacement (ACP) and Casselton Farms Transmission Line	Low	Upper Red	$-	$-	$4,500,000	$3,000,000	$7,500,000
City of Coleharbor	Pump House Improvements	Low	Upper Missouri	$-	$-	$390,000	$260,000	$650,000
City of Coleharbor	Water Main Replacement	Low	Upper Missouri	$-	$-	$900,000	$600,000	$1,500,000
City of Columbus	Water Main Improvements - Phase I	Low	Mouse	$-	$-	$450,288	$300,192	$750,480
City of Columbus	Water Main Improvements - Phase II	Low	Mouse	$-	$-	$472,008	$314,672	$786,680
City of Columbus	Water Main Improvements - Phase III	Low	Mouse	$-	$-	$782,670	$521,780	$1,304,450
City of Devils Lake	Water Main Replacement	Low	Devils Lake	$-	$-	$1,296,300	$864,200	$2,160,500
City of Fairmount	Water Tower Replacement and Controls Upgrades	Low	Upper Red	$-	$-	$909,600	$606,400	$1,516,000
City of Fargo	Drain 27 Conveyance Improvements - Phases 2 and 3	Low	Lower Red	$-	$-	$2,400,000	$1,600,000	$4,000,000
City of Fargo	High Service Pump Station Improvements	Low	Lower Red	$-	$-	$2,250,000	$1,500,000	$3,750,000
City of Fargo	Water Treatment Plant Facility Plan - Phase 2/Existing Facility Upgrades	Low	Lower Red	$-	$-	$2,580,000	$1,720,000	$4,300,000
City of Fargo	Water Treatment Plant Residuals Facility	Low	Lower Red	$-	$-	$4,800,000	$3,200,000	$8,000,000
City of Garrison	Garrison Intake Structure	Low	Lower Missouri	$-	$-	$1,740,000	$1,160,000	$2,900,000
City of Garrison	Water Main Replacement & Looping	Low	Upper Missouri	$-	$-	$2,700,000	$1,800,000	$4,500,000
City of Glenburn	Water Main Replacement & Looping	Low	Mouse	$-	$-	$1,950,000	$1,300,000	$3,250,000
City of Grenora	Water Tower Replacement	Low	Upper Missouri	$-	$-	$1,935,264	$1,290,176	$3,225,440
City of Harwood	Water Main Looping Study	Low	Upper Red	$-	$-	$36,000	$24,000	$60,000
City of Harwood	Water Main Looping	Low	Upper Red	$-	$-	$450,000	$300,000	$750,000

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City of Hatton	Water Tower Replacement	Low	Lower Red	$-	$-	$900,000	$600,000	$1,500,000
City of Hebron	Water Main Replacement	Low	LM / UH / UC	$-	$-	$600,000	$400,000	$1,000,000
City of Hunter	Water Tower Replacement	Low	Upper Red	$-	$-	$750,000	$500,000	$1,250,000
City of Killdeer	Water Main Replacement	Low	LM / UH / UC	$-	$-	$660,000	$440,000	$1,100,000
City of Langdon	Water Main Looping Feasibility Study	Low	Lower Red	$-	$-	$24,000	$16,000	$40,000
City of Langdon	Water Main Looping	Low	Lower Red	$-	$-	$420,000	$280,000	$700,000
City of Leeds	Lead Water Service Replacement	Low	Devils Lake	$-	$-	$390,000	$260,000	$650,000
City of Leeds	Water Main Replacement (ACP) and Looping	Low	Devils Lake	$-	$-	$1,380,000	$920,000	$2,300,000
City of Leeds	Water Well and Transmission Line Repairs	Low	Devils Lake	$-	$-	$240,000	$160,000	$400,000
City of Leeds	Water Treatment Plant Repairs	Low	Devils Lake	$-	$-	$300,000	$200,000	$500,000
City of Mandan	Memorial Highway Water Main Upgrade	Low	Lower Missouri	$-	$-	$1,260,000	$840,000	$2,100,000
City of Mandan	Collins Ave Reservoir	Low	Lower Missouri	$-	$-	$1,683,600	$1,122,400	$2,806,000
City of Mandan	Distribution System (Boundary Road PRV)	Low	Lower Missouri	$-	$-	$280,800	$187,200	$468,000
City of Mapleton	Original Townsite Water	Low	Upper Red	$-	$-	$630,000	$420,000	$1,050,000
City of Max	Water Main Improvements	Low	Lower Missouri	$-	$-	$276,000	$184,000	$460,000
City of Mayville	Water Main Replacement/Rehab	Low	Lower Red	$-	$-	$300,000	$200,000	$500,000
City of McVille	Water Treatment Plant Upgrades	Low	Lower Red	$-	$-	$360,000	$240,000	$600,000
City of Medina	Water Main Replacement	Low	Lower Missouri	$-	$-	$1,560,000	$1,040,000	$2,600,000
City of Michigan	Water Tower Rehabilitation Feasibility Study	Low	Devils Lake	$-	$-	$30,000	$20,000	$50,000
City of Michigan	Water Tower Rehabilitation	Low	Devils Lake	$-	$-	$462,000	$308,000	$770,000
City of Minot	Municipal Utility Water Main Replacement	Low	Mouse	$-	$-	$2,250,000	$1,500,000	$3,750,000

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City of Mohall	Water Main Looping	Low	Mouse	$-	$-	$256,096	$170,731	$426,827
City of Mohall	3rd Ave, 4th and 5th St NW Water and Sewer Replacement	Low	Mouse	$-	$-	$359,916	$850,702	$1,210,618
City of New England	Water Main Extension and Looping	Low	LM / UH / UC	$-	$-	$600,000	$400,000	$1,000,000
City of New Town	Water Tank	Low	Upper Missouri	$-	$-	$2,818,800	$1,879,200	$4,698,000
City of Noonan	Water Main Replacement	Low	Mouse	$-	$-	$322,602	$215,068	$537,670
City of Oriska	Pump House Rehabilitation	Low	Upper Red	$191,250	$100,000	$685,250	$523,500	$1,500,000
City of Portland	Water System Improvements & Water Tower Replacement	Low	Lower Red	$-	$-	$900,000	$600,000	$1,500,000
City of Rolette/ Turtle Mountain Public Utilities / Rolette County	TMBC Water System Improvements - Belcourt Water and Sewer Phase II	Low	Mouse	$-	$-	$2,700,000	$1,800,000	$4,500,000
City of Rugby	Phase III Plant Improvements	Low	Mouse	$-	$-	$150,000	$100,000	$250,000
City of Sawyer	Water Main Replacement	Low	Mouse	$-	$-	$450,000	$300,000	$750,000
City of Sherwood	Water Supply Improvements	Low	Mouse	$-	$-	$376,800	$251,200	$628,000
City of Tioga	Water Main Replacement	Low	Upper Missouri	$-	$-	$510,000	$340,000	$850,000
City of Towner	Water Quality Improvement	Low	Mouse	$-	$-	$300,000	$200,000	$500,000
City of Valley City	Water Main Improvements (NW & NE Quadrants)	Low	Upper Red	$-	$-	$1,200,000	$800,000	$2,000,000
City of Valley City	Water Main Improvement Distict No. 100	Low	Upper Red	$-	$-	$350,000	$233,333	$583,333
City of Velva	Goldade LS Rehabilitation, 2nd Ave W & 4th St W Water, Sanitary Sewer, & Street Replacement	Low	Mouse	$-	$-	$720,000	$480,000	$1,200,000
City of Wahpeton	New Well Field	Low	Upper Red	$-	$-	$3,992,526	$2,661,684	$6,654,210

MUNICIPAL WATER SUPPLY

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
City of Watford City	Existing System Looping & Replacement	Low	Upper Missouri	$-	$-	$1,242,600	$828,400	$2,071,000
City of Westhope	Water Main Improvements	Low	Mouse	$-	$-	$360,000	$240,000	$600,000
City of Williston	47th Street Water Main	Low	Upper Missouri	$-	$-	$414,000	$276,000	$690,000
City of Williston	Front Street & Reiger Drive Water Main	Low	Upper Missouri	$-	$-	$869,400	$579,600	$1,449,000
City of Williston	Borsheim Addition	Low	Upper Missouri	$-	$-	$1,320,000	$880,000	$2,200,000
City of Williston	Hi-Land Heights Water Supply	Low	Upper Missouri	$-	$-	$2,948,400	$1,965,600	$4,914,000
City of Williston	Williston Square 33rd St & 9th Ave Water Mains	Low	Upper Missouri	$-	$-	$886,000	$591,000	$1,477,000
City of Williston	1st Avenue W Reconstruction	Low	Upper Missouri	$-	$-	$385,000	$256,667	$641,667
City of Wing	Water Main Replacement	Low	Lower Missouri	$-	$-	$840,000	$560,000	$1,400,000
LOW PRIORITY MUNICIPAL WATER SUPPLY				$1,417,050	$100,000	$84,578,440	$57,063,385	$143,158,875
MODERATE PRIORITY MUNICIPAL WATER SUPPLY				$162,036	$-	$9,187,295	$6,124,863	$15,474,194
HIGH PRIORITY MUNICIPAL WATER SUPPLY				$-	$-	$-	$-	$-
TOTAL MUNICIPAL WATER SUPPLY				$1,579,086	$100,000	$93,765,735	$63,188,248	$158,633,069

RURAL WATER SUPPLY

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Northeast Regional Water District	Expansion to City of Adams/Walsh RWD	High	Lower Red	$-	$-	$525,164	$175,055	$700,218
South Central Regional Water District	Service to Ashley	High	Lower Missouri	$-	$-	$3,031,425	$1,010,475	$4,041,900
Stutsman Rural Water District	Service to Streeter	High	LM / UH / UC	$-	$-	$415,500	$138,500	$554,000
Agassiz Water Users District	User & Transmission Expansion Phase II	Moderate	Lower Red	$-	$-	$3,178,227	$1,059,409	$4,237,636
All Seasons Water Users District	System 1 Expansion	Moderate	Mouse	$-	$-	$5,409,000	$1,803,000	$7,212,000
Dakota Rural Water District	Service to Hannaford	Moderate	Lower Red	$-	$-	$1,637,805	$545,935	$2,183,740
Dakota Rural Water District	User Expansion Phase II	Moderate	Lower Red	$-	$-	$1,748,205	$582,735	$2,330,940
East Central Regional Water District	Wellfield & WTP Expansion	Moderate	Lower Red	$-	$-	$5,833,290	$1,944,430	$7,777,720
McLean-Sheridan Rural Water District	Phase II Rural System Expansion and Improvements	Moderate	Lower Missouri	$-	$-	$8,534,594	$2,844,865	$11,379,459
Missouri West Water System	Highway 1806 and Highway 6 - Huff and Fort Rice Expansion	Moderate	Lower Missouri	$-	$-	$1,125,000	$375,000	$1,500,000
Northeast Regional Water District	User Expansion Phase II	Moderate	Lower Red	$-	$-	$663,890	$221,297	$885,186
Turtle Mountain Public Utilities / Rolette County	Highway 43 Corridor, Phase III	Moderate	Multi-Basin	$250,000	$-	$2,000,000	$750,000	$3,000,000

RURAL WATER SUPPLY

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Turtle Mountain Public Utilities / Rolette County	Membrane Treatment Expansion	Moderate	Mouse	$562,500	$-	$1,500,000	$687,500	$2,750,000
Turtle Mountain Public Utilities / Rolette County	Highway 43 Corridor, Phase IV	Moderate	Lower Red	$500,000	$-	$1,750,000	$750,000	$3,000,000
Turtle Mountain Public Utilities / Rolette County	Thorne Reservoir, Pump Station and Well Modifications	Moderate	Mouse	$-	$-	$1,875,000	$625,000	$2,500,000
Upper Souris Rural Water District	2021 System Improvements	Moderate	Mouse	$-	$-	$3,056,250	$1,018,750	$4,075,000
Walsh Rural Water District	Service to Drayton Phase 2	Moderate	Lower Red	$-	$-	$3,262,410	$1,087,470	$4,349,880
Cass Rural Water District	System Wide Distribution Improvements	Low	Upper Red	$-	$-	$2,300,000	$766,667	$3,066,667
McLean-Sheridan Rural Water District	Service to Blue Flint Ethanol Plant	Low	Lower Missouri	$-	$-	$9,314,250	$3,104,750	$12,419,000
McLean-Sheridan Rural Water District with City of McClusky	New Water Tower & Transmission Line	Low	Lower Missouri	$-	$-	$2,550,000	$850,000	$3,400,000
Northeast Regional Water District	Individual Service to Milton	Low	Lower Red	$-	$-	$669,289	$223,096	$892,385
Southeast Water Users District	Regionalization of Southeast Water Users District - West System Water Treatment Plant	Low	James	$-	$-	$9,000,000	$3,000,000	$12,000,000
Southeast Water Users District	Automatic Meter Reading Improvements	Low	Multi-Basin	$-	$-	$2,242,500	$747,500	$2,990,000

RURAL WATER SUPPLY

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Southeast Water Users District	Replacement of Existing 1.5" Glued Pipe	Low	Upper Red	$-	$-	$1,237,500	$412,500	$1,650,000
Walsh Rural Water District	Interconnect With NRWD	Low	Lower Red	$-	$-	$676,450	$225,483	$901,933
West River Water District	Water Service Replacement	Low	Mouse	$-	$-	$492,000	$164,000	$656,000
LOW PRIORITY RURAL WATER SUPPLY				$-	$-	$28,481,989	$9,493,996	$37,975,985
MODERATE PRIORITY RURAL WATER SUPPLY				$1,312,500	$-	$41,573,671	$14,295,390	$57,181,561
HIGH PRIORITY RURAL WATER SUPPLY				$-	$-	$3,972,089	$1,324,030	$5,296,118
TOTAL RURAL WATER SUPPLY				$1,312,500	$-	$74,027,748	$25,113,416	$100,453,664

REGIONAL WATER SUPPLY

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
GDCD & LAWA	Red River Valley Water Supply	High	Multi-Basin	$-	$-	$50,000,000	$16,666,667	$66,666,667
ND SWC and SWA	Southwest Pipeline Project	High	Multi-Basin	$-	$-	$32,500,000	$-	$32,500,000
ND SWC, City of Minot, GDCD, NAWS Advisory Committee, and US BOR	Northwest Area Water Supply	High	Mouse	$30,000,000	$-	$41,500,000	$5,900,000	$77,400,000
Western Area Water Supply Authority	Western Area Water Supply - 2021-2023 Improvements/ Expansion	High	Upper Missouri	$-	$-	$35,953,500	$11,984,500	$47,938,000
LOW PRIORITY REGIONAL WATER SUPPLY				$-	$-	$-	$-	$-
MODERATE PRIORITY REGIONAL WATER SUPPLY				$-	$-	$-	$-	$-
HIGH PRIORITY REGIONAL WATER SUPPLY				$30,000,000	$-	$159,953,500	$34,551,167	$224,504,667
TOTAL REGIONAL WATER SUPPLY				$30,000,000	$-	$159,953,500	$34,551,167	$224,504,667

GENERAL WATER MANAGEMENT

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Barnes County WRD	Little Dam Repurposing	Moderate	Upper Red	$-	$-	$975,000	$325,000	$1,300,000
Barnes County WRD	Brown Dam Repurposing/Repair	Moderate	Upper Red	$-	$-	$75,000	$25,000	$100,000
Barnes County WRD	Eckelson Lake Outlet Improvement	Moderate	Upper Red	$-	$-	$1,500,000	$1,000,000	$2,500,000
Cass County Joint WRD	Upper Maple River Watershed Detention - Site #1	Moderate	Upper Red	$6,250,000	$-	$3,125,000	$3,125,000	$12,500,000
Cass County Joint WRD	Upper Maple River Watershed Detention - Site #2	Moderate	Upper Red	$3,125,000	$-	$1,562,500	$1,562,500	$6,250,000
City of Dickinson	East Broadway Dam	Moderate	LM / UH / UC	$-	$500,000	$850,000	$450,000	$1,800,000
City of McVille & Nelson County WRD	McVille Dam Spillway Improvements	Moderate	LM / UH / UC	$-	$-	$600,000	$400,000	$1,000,000
City of Minot	Minot Water Supply Low Head Dam Remediation	Moderate	Mouse	$-	$-	$750,000	$250,000	$1,000,000
City of Mott	Mott City Dam Rehabilitation	Moderate	Lower Missouri	$-	$180,000	$315,000	$165,000	$660,000
City of Pembina	Pembina City Dam Renovations	Moderate	Lower Red	$150,000	$50,000	$587,500	$212,500	$1,000,000
City of Valley City	Mill Dam Rehabilitation	Moderate	Upper Red	$200,000	$150,100	$1,012,775	$387,625	$1,750,500
Elm River Joint WRD	Elm River Dam No. 1 - Improvement	Moderate	Lower Red	$-	$-	$1,200,000	$800,000	$2,000,000
Elm River Joint WRD	Elm River Dam No. 2 - Improvement	Moderate	Lower Red	$-	$-	$1,200,000	$800,000	$2,000,000
Emmons County WRD	Emmons County Dam Improvements - Feasibility	Moderate	Lower Missouri	$-	$-	$75,000	$50,000	$125,000
Emmons County WRD	Emmons County Dam Improvement - Final Design/Construction	Moderate	Lower Missouri	$-	$-	$600,000	$400,000	$1,000,000
Foster County WRD	Rosehill Township Dam Improvement	Moderate	James	$-	$-	$60,000	$40,000	$100,000
Garrison Diversion Conservancy District	McClusky Canal Irrigation	Moderate	Lower Missouri	$-	$-	$2,500,000	$2,500,000	$5,000,000

GENERAL WATER MANAGEMENT

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Grand Forks County WRD	Larimore Dam Rehabilitation	Moderate	Lower Red	$8,168,500	$-	$4,901,100	$3,267,400	$16,337,000
Mclean County WRD	Katz Dam Improvement	Moderate	Upper Missouri	$100,000	$200,000	$1,200,000	$500,000	$2,000,000
McLean County WRD	Lost Lake Dam Improvement	Moderate	Upper Missouri	$-	$-	$750,000	$250,000	$1,000,000
North Dakota Game & Fish	Camels Hump Dam	Moderate	LM / UH / UC	$-	$125,000	$175,000	$200,000	$500,000
North Dakota Game & Fish	McGregor Dam	Moderate	Upper Missouri	$-	$500,000	$700,000	$800,000	$2,000,000
Park River Joint WRD	North Branch Park River NRCS Watershed Plan	Moderate	Lower Red	$8,100,000	$-	$950,000	$950,000	$10,000,000
Pembina County WRD	Senator Young Dam Safety Improvements	Moderate	Lower Red	$5,921,500	$-	$1,913,100	$1,275,400	$9,110,000
Pembina County WRD	Bourbanis Dam Safety Improvements	Moderate	Lower Red	$5,148,000	$-	$1,663,200	$1,108,800	$7,920,000
Pembina County WRD	Olson Dam Safety Improvements	Moderate	Lower Red	$4,569,500	$-	$1,476,300	$984,200	$7,030,000
Pembina County WRD	Tongue River Watershed Dams Safety Improvements	Moderate	Lower Red	$-	$-	$150,000	$100,000	$250,000
Pembina County WRD	Tongue River NRCS Watershed Plan	Moderate	Lower Red	$2,250,000	$-	$375,000	$375,000	$3,000,000
Ransom County WRD	Fort Ransom Dam Low Head Dam Improvements	Moderate	Upper Red	$-	$-	$225,000	$75,000	$300,000
Richland County WRD	Red River Watershed Retention Project - NRCS RCPP	Moderate	Upper Red	$250,000	$-	$125,000	$125,000	$500,000
Richland County WRD	Mantador Dam - Wild Rice River	Moderate	Upper Red	$-	$-	$300,000	$200,000	$500,000
Sargent County WRD	Nelson Dam Improvement	Moderate	Upper Red	$-	$-	$210,000	$140,000	$350,000
Sargent County WRD	Sargent County - Shortfoot Creek Detention	Moderate	Upper Red	$-	$-	$5,400,000	$3,600,000	$9,000,000

GENERAL WATER MANAGEMENT

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LOCAL SPONSOR	PROJECT NAME	PRIORITY	BASIN	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Steele County WRD	Lake Tobiason Improvement	Moderate	Upper Red	$-	$-	$90,000	$60,000	$150,000
Walsh County WRD	Bylin Dam Safety Improvements	Moderate	Lower Red	$4,875,000	$-	$1,575,000	$1,050,000	$7,500,000
Walsh County WRD	Fordville Dam Safety Improvements	Moderate	Lower Red	$5,200,000	$-	$1,680,000	$1,120,000	$8,000,000
Walsh County WRD	Matejcek Dam Safety Improvements	Moderate	Lower Red	$19,743,750	$-	$6,378,750	$4,252,500	$30,375,000
Ward County WRD	Ward County Low Head Dam Remediation	Moderate	Mouse	$-	$-	$750,000	$250,000	$1,000,000
Ward County WRD	Puppy Dog Coulee Detention	Moderate	Mouse	$-	$-	$720,000	$480,000	$1,200,000
Wells County WRD	Sykeston Dam	Moderate	James	$-	$-	$60,000	$40,000	$100,000
Wells County WRD	Harvey Dam	Moderate	Lower Red	$-	$-	$240,000	$160,000	$400,000
Assiniboine River Basin Initiative	Assiniboine River Basin Initiative: Framework for Water Stewardship Phase 2	Low	Mouse	$-	$-	$100,000	$50,000	$150,000
Burleigh County WRD	McDowell Dam Supplimental Water Supply	Low	Lower Missouri	$-	$-	$490,400	$735,600	$1,226,000
Red River Basin Commission	Red River Basin Commission Operations	Low	Multi-Basin	$-	$-	$200,000	$200,000	$400,000
LOW PRIORITY GENERAL WATER SUPPLY				$-	$-	$790,400	$985,600	$1,776,000
MODERATE PRIORITY GENERAL WATER SUPPLY				$74,051,250	$1,705,100	$48,995,225	$33,855,925	$158,607,500
HIGH PRIORITY GENERAL WATER SUPPLY				$-	$-	$-	$-	$-
TOTAL GENERAL WATER SUPPLY				$74,051,250	$1,705,100	$49,785,625	$34,841,525	$160,383,500

SUMMARY OF WATER DEVELOPMENT NEEDS					
PROJECT PURPOSE	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
Flood Control Total	$314,129,793	$33,000,000	$182,888,849	$141,811,999	$671,830,640
Conveyance Total (Bank Stabilization, Drains, Snagging & Clearing)	$1,300,000	$5,000,000	$86,025,595	$110,484,239	$202,809,834
Municipal Water Supply Total	$1,579,086	$100,000	$93,765,735	$63,188,248	$158,633,069
Rural Water Supply Total	$1,312,500	$0	$74,027,748	$25,113,416	$100,453,664
Regional Water Supply Total	$30,000,000	$0	$159,953,500	$34,551,167	$224,504,667
General Water Management Total	$74,051,250	$1,705,100	$49,785,625	$34,841,525	$160,383,500
TOTAL	$422,372,629	$39,805,100	$646,447,052	$409,990,593	$1,518,615,374

Table 7 - Summary of Water Development Needs.

PROJECT TOTALS BY PRIORITY

	FEDERAL FUNDING 2021-2023	OTHER FUNDING 2021-2023	POTENTIAL SWC COST-SHARE 2021-2023	LOCAL FUNDING 2021-2023	TOTAL 2021-2023
LOW PRIORITY TOTAL	$2,617,050	$100,000	$1151,378,349	$112,769,395	$266,864,794
MODERATE PRIORITY TOTAL	$79,075,786	$6,705,100	$152,841,016	$122,773,503	$361,395,405
HIGH PRIORITY TOTAL	$340,679,793	$33,000,000	$342,227,687	$174,447,695	$890,355,175
ALL PROJECT TOTAL	$422,372,629	$39,805,100	$646,447,052	$409,990,593	$1,518,615,374

Table 8 - Project Totals by Priority.

LONG-TERM WATER DEVELOPMENT INFRASTRUCTURE FUNDING NEED ESTIMATES

Many of North Dakota's largest water projects cannot be completed in one or even two biennia, and therefore, require longer-term planning. In addition, North Dakota, along with most other states, has existing water supply infrastructure that has been aging for decades. This is presenting a greater financial challenge at the local and state level as that infrastructure reaches, or in many cases has already exceeded, its useful life. With multi-biennial projects and aging infrastructure in mind, it is worthwhile to plan now for future biennium commitments that may be needed to develop and sustain critical water infrastructure.

Therefore, in addition to the detailed project funding needs that have been outlined for the 2021-2023 biennium, longer-term funding needs have also been estimated by the State Water Commission for a 10-year planning horizon for all project types. Fifty-year estimates for major water supply infrastructure repairs, rehabilitations, and new projects in municipal and rural systems are also presented – addressing questions about the nature and extent of aging infrastructure in those systems.

Table 9 estimates and summarizes North Dakota's potential 10-year funding needs for water development. It also provides a projection of potential project budget shortfalls over the next decade, based on multiple revenue ranges. The following sections outline the basis for these estimates, including close cooperation with project sponsors, the water project inventory, and municipal and rural water supply system infrastructure survey results.

10-YEAR ESTIMATES

The Water Commission worked closely with the state's largest water development project sponsors to identify their estimated long-term funding needs. Those projects include some that have been in existence for several years and are expanding/improving, like Southwest Pipeline Project and Western Area Water Supply; and others that are in beginning, or more recent stages of development – like the Fargo-Moorhead Area Diversion, Mouse River Enhanced Flood Protection, Northwest Area Water Supply, Red River Valley Water Supply, and Sheyenne River Flood Control.

The long-term funding need estimates for these projects were provided by the project sponsors. In many cases, they represent remaining costs to complete all known planned project components. It is possible with adequate funding that all of the foreseeable costs for these projects could be completed over the course of the next ten years, as outlined in Table 9. However, because of the potential uncertainties associated with water project development (i.e. funding, permitting, environmental compliance), it will be challenging for all projects to be completed within a 10-year timeframe.

ESTIMATED 10-YEAR WATER PROJECT FUNDING NEEDS (2021-2031) & REVENUE COMPARISONS				
PROJECT	STATE	LOCAL	FEDERAL	TOTAL 10-YEAR COST
Agency Operations	$265,000,000	$-	$-	$265,000,000
Water Supply	$2,029,100,000	$781,800,000	$30,000,000	$2,840,900,000
Southwest Pipeline Project	$206,000,000	$-	$-	$206,000,000
Red River Valley Water Supply Project	$892,000,000	$298,000,000	$-	$1,190,000,000
Western Area Water Supply	$93,000,000	$38,000,000	$-	$131,000,000
Northwest Area Water Supply*	$71,000,000	$11,000,000	30,000,000	$112,000,000
Municipal Water	$537,400,000	$358,200,000	$-	$895,600,000
Rural Water	$229,700,000	$76,600,000	$-	$306,300,000
Flood Control	$952,400,000	$929,000,000	$737,000,000	$2,618,400,000
Mouse River Enhanced Flood Protection	$418,000,000	$216,400,000	$40,000,000	$674,400,000
Valley City	$66,400,000	$16,900,000	$-	$83,300,000
Fargo-Moorhead Area Diversion Project	$455,000,000	$687,000,000	$697,000,000	$1,839,000,000
Lower Heart (Mandan) Flood Risk Reduction	$13,000,000	$8,700,000	$-	$21,700,000
Other Flood Control & Conveyance	$98,300,000	$121,800,000	$8,000,000	$228,100,000
General Water	$50,000,000	$35,000,000	$74,000,000	$159,000,000
TOTAL	$3,394,800,000	$1,867,600,000	$849,000,000	$6,111,400,000

* A portion of the state share is anticipated to be reimbursed by the federal government.

At **$200** Million Per Biennium	
Resources Trust Fund	$1,000,000,000
STATE SHORTFALL	$(2,394,800,000)

At **$300** Million Per Biennium	
Resources Trust Fund	$1,500,000,000
STATE SHORTFALL	$(1,894,800,000)

At **$400** Million Per Biennium	
Resources Trust Fund	$2,000,000,000
STATE SHORTFALL	$(1,394,800,000)

Table 9 - Estimated 10-Year Water Project Funding Needs (2021-2031) & Revenue Comparisons

WATER SUPPLY INFRASTRUCTURE NEEDS

In spring 2018, a survey was initiated through a cooperative effort involving the North Dakota League of Cities, North Dakota Rural Water Systems Association, and the State Water Commission. The purpose of the survey was to gain a better understanding of North Dakota's existing and future water supply infrastructure needs. More specifically, water system managers were asked to provide water supply replacement, rehabilitation, and new infrastructure information related to their: storage, distribution/supply lines, wells and intakes, and water treatment plants – over the course of the next 50 years.

MUNICIPAL WATER SUPPLY INFRASTRUCTURE

Of the state's 357 cities, 105 responded to the survey. However, in terms of making statewide estimates based on sample size, the number of responding cities is less important than the population represented within those communities. Using population of the cities responding appropriately resulted in a much larger representative sample size. Percentages of the state's total municipal population represented in the responses ranged from 79 percent to 66 percent, depending on the type of infrastructure.

In addition, it is also important to recognize that the amount and type of infrastructure will vary, depending on the size of a community. For that reason, cities were separated into three population categories for the sake of making statewide estimates. The three population breaks included in the analysis were cities with: populations greater than 5,000, populations between 4,999 and 1,000, and populations less than 1,000.

To provide statewide estimates, the percentage of the population represented in the surveys was then used to establish a multiplier, which then was applied to the sample to make estimates for all municipalities across the state by infrastructure type, and city size range.

Tables 10 through 14 summarize the results of the municipal infrastructure survey, based on type of infrastructure, and city size.

STORAGE INFRASTRUCTURE SUMMARY FOR CITIES

CITIES WITH POPULATION > 5,000	POPULATION REPRESENTED	AVERAGE AGE STORAGE (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	86%	40	$74	$83	$205
State of ND Estimate			$86	$97	$238

CITIES WITH POPULATION 4,999 - 1,000	POPULATION REPRESENTED	AVERAGE AGE STORAGE (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	73%	37	$30	$35	$79
State of ND Estimate			$41	$48	$108

CITIES WITH POPULATION < 1,000	POPULATION REPRESENTED	AVERAGE AGE STORAGE (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	33%	54	$41	$59	$80
State of ND Estimate			$124	$179	$242
EST. ND TOTALS	79%		$251	$324	$588

Table 10 - Municipal Water Supply Storage Infrastructure Needs.

WATER LINE INFRASTRUCTURE SUMMARY FOR CITIES

CITIES WITH POPULATION > 5,000	POPULATION REPRESENTED	LINEAR FEET NEEDS			FUNDING NEEDS (MIL. $)		
		10 YEAR	20 YEAR	50+ YEAR	10 YEAR	20 YEAR	50+ YEAR
Responding Cities	85%	533,371	1,552,533	4,090,491	$83	$241	$718
State of ND Estimate		627,495	1,826,509	4,812,342	$98	$284	$844

CITIES WITH POPULATION 4,999 - 1,000	POPULATION REPRESENTED	LINEAR FEET NEEDS			FUNDING NEEDS (MIL. $)		
		10 YEAR	20 YEAR	50+ YEAR	10 YEAR	20 YEAR	50+ YEAR
Responding Cities	68%	308,311	427,599	1,330,648	$57	$68	$239
State of ND Estimate		453,398	628,822	1,956,835	$84	$100	$351

CITIES WITH POPULATION < 1,000	POPULATION REPRESENTED	LINEAR FEET NEEDS			FUNDING NEEDS (MIL. $)		
		10 YEAR	20 YEAR	50+ YEAR	10 YEAR	20 YEAR	50+ YEAR
Responding Cities	30%	223,711	452,590	1,015,358	$69	$126	$229
State of ND Estimate		745,703	1,508,633	3,384,526	$230	$420	$763
EST. ND TOTALS	76%	1,826,596	3,963,964	10,153,703	$412	$804	$1,958

Table 11 - Municipal Water Line Infrastructure Needs.

WELL/INTAKE INFRASTRUCTURE SUMMARY FOR CITIES

CITIES WITH POPULATION > 5,000	POPULATION REPRESENTED	AVERAGE AGE WELL/INTAKE (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	78%	40	$36	$57	$108
State of ND Estimate			$46	$73	$138

CITIES WITH POPULATION 4,999 - 1,000	POPULATION REPRESENTED	AVERAGE AGE WELL/INTAKE (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	39%	35	$5	$5	$7
State of ND Estimate			$13	$13	$18

CITIES WITH POPULATION < 1,000	POPULATION REPRESENTED	AVERAGE AGE WELL/INTAKE (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	11%	30	$3	$4	$9
State of ND Estimate			$27	$36	$82
EST. ND TOTALS	66%		$86	$122	$238

Table 12 - Municipal Water Intake/Well Infrastructure Needs.

WATER TREATMENT INFRASTRUCTURE (WTI) SUMMARY FOR CITIES

CITIES WITH POPULATION > 5,000	POPULATION REPRESENTED	AVERAGE AGE WTI (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	87%	33	$137	$195	$524
State of ND Estimate			$157	$224	$602

CITIES WITH POPULATION 4,999 - 1,000	POPULATION REPRESENTED	AVERAGE AGE WTI (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	55%	24	$15	$33	$67
State of ND Estimate			$27	$60	$122

CITIES WITH POPULATION < 1,000	POPULATION REPRESENTED	AVERAGE AGE WTI (YEARS)	FUNDING NEEDS (MIL. $)		
			10 YEAR	20 YEAR	50+ YEAR
Responding Cities	24%	28	$14	$19	$35
State of ND Estimate			$58	$79	$146
EST. ND TOTALS	75%		$243	$363	$870

Table 13 - Municipal Water Treatment Plant Infrastructure Needs.

MUNICIPAL WATER SUPPLY INFRASTRUCTURE NEED SUMMARY			
STATE OF NORTH DAKOTA			
	FUNDING NEEDS (MIL. $)		
	10 YEAR	**20 YEAR**	**50+ YEAR**
Storage Infrastructure	$251	$324	$588
Water Line Infrastructure	$412	$804	$1,958
Water Intake/Well Infrastructure	$86	$122	$238
Treatment Plant Infrastructure	$243	$363	$870
ESTIMATED ND TOTALS *	$992	$1,613	$3,654

Table 14 - Municipal Water Supply Infrastructure Need Summary.

* An estimated $96 million as of November 2020 was invested in municipal water supply projects during the 2019-2021 biennium.

RURAL WATER SUPPLY INFRASTRUCTURE

Of the state's 25 rural water systems (not counting the state's four large regional systems), 16 responded to the survey. In terms of percentages of the state's total rural water users represented in the responses, they ranged from 76 percent to 67 percent, depending on the type of infrastructure.

To provide statewide estimates, the percentage of the state's rural water users represented in the surveys was then used to establish a multiplier, which then was used to make estimates for all of the rural water systems in the state – by infrastructure type. However, it is important to note that in some cases, rural systems will count a single farmstead as a "water user," while also counting a city of 500 people that receives bulk service as a "water user." Therefore, the statewide estimates for all rural water systems based on the number of users in the survey sample should be used with some caution. But, based on available data, and without participation in the survey by all rural water systems, this is considered a reasonable approach.

Tables 15 through 20 summarize the results of the rural water system infrastructure survey, based on type of infrastructure.

STORAGE INFRASTRUCTURE SUMMARY FOR RURAL SYSTEMS					
RURAL SYSTEMS					
	RESPONDING/ REPRESENTED	**AVERAGE AGE STORAGE (YEARS)**	**FUNDING NEEDS (MIL. $)**		
			10 YEAR	**20 YEAR**	**50+ YEAR**
Responding Systems	16 of 27	29	$17	$38	$134
Users Represented	76%				
EST. ND TOTALS			$23	$50	$176

Table 15 - Rural Water Supply Storage Infrastructure Needs.

WATER SUPPLY LINE INFRASTRUCTURE SUMMARY FOR RURAL SYSTEMS							
RURAL SYSTEMS							
	RESPONDING/ REPRESENTED	**MILES OF WATER LINE NEEDS**			**FUNDING NEEDS (MIL. $)**		
		10 YEAR	**20 YEAR**	**50+ YEAR**	**10 YEAR**	**20 YEAR**	**50+ YEAR**
Responding Systems	15 of 27	3,291	6,039	14,693	$184	$290	$703
Users Represented	69%						
EST. ND TOTALS		4,770	8,753	21,294	$267	$420	$1,019

Table 16 - Rural Water Supply Line Infrastructure Needs.

WATER WELL/INTAKE INFRASTRUCTURE SUMMARY FOR RURAL SYSTEMS					
RURAL SYSTEMS					
	RESPONDING/ REPRESENTED	**AVERAGE AGE WELL/INTAKE (YEARS)**	**FUNDING NEEDS (MIL. $)**		
			10 YEAR	**20 YEAR**	**50+ YEAR**
Responding Systems	12 of 27	27	$9	$11	$13
Users Represented	74%				
EST. ND TOTALS			$12	$15	$18

Table 17 - Rural Water Supply Intake/Well Infrastructure Needs.

WATER TREATMENT INFRASTRUCTURE SUMMARY FOR RURAL SYSTEMS					
RURAL SYSTEMS					
	RESPONDING/ REPRESENTED	**AVERAGE AGE WTI (YEARS)**	**FUNDING NEEDS (MIL. $)**		
			10 YEAR	**20 YEAR**	**50+ YEAR**
Responding Systems	14 of 21*	25	$32	$88	$152
Users Represented	67%				
EST. ND TOTALS			$48	$131	$227

Table 18 - Rural Water Supply Treatment Plant Infrastructure Needs.

*21 systems with their own WTP

RURAL WATER SUPPLY SYSTEMS INFRASTRUCTURE NEED SUMMARY

RESPONDING RURAL WATER SUPPLY SYSTEMS

INFRASTRUCTURE	SYSTEMS REPRESENTED	FUNDING NEEDS (MIL. $)		
		10 YEAR	20 YEAR	50+ YEAR
Storage	16 of 27	$17	$38	$134
Water Lines	15 of 27	$184	$290	$703
Wells & Intakes	12 of 27	$9	$11	$13
Treatment*	13 of 21	$32	$88	$152
RESPONDING SYSTEMS TOTAL		$242	$427	$1,002

Table 19 - Summary Of Responding Rural Water Supply Systems Infrastructure Needs.

*21 Systems With Their Own WTP

STATE OF ND RURAL WATER SUPPLY SYSTEMS

INFRASTRUCTURE	SYSTEMS REPRESENTED	FUNDING NEEDS (MIL. $)		
		10 YEAR	20 YEAR	50+ YEAR
Storage	State of ND Estimate	$23	$50	$176
Water Lines	State of ND Estimate	$267	$420	$1,019
Wells & Intakes	State of ND Estimate	$12	$15	$18
Treatment*	State of ND Estimate	$48	$131	$227
EST. ND TOTAL **		$350	$616	$1,440

Table 20 - Summary Of Rural Water Supply Systems Infrastructure Needs (Statewide).

* 21 Systems with their own WTP
** An estimated $44 million as of November 2020 was invested in rural water supply projects during the 2019-2021 biennium.

WATER PROJECT FUNDING, ECONOMIC & LIFE CYCLE COST ANALYSIS

North Dakota funds a majority of its water projects through the State Water Commission. State funding that is provided through the Commission for water development has historically come from several sources including the General Fund, Resources Trust Fund, and Water Development Trust Fund.

Federal contributions for water supply projects have primarily been appropriated through the Dakota Water Resources Act - Municipal, Rural, and Industrial (MR&I) Water Supply Program. Substantial federal contributions have also been provided to support large scale flood damage reduction projects through agencies such as the U.S. Army Corps of Engineers.

In addition to these sources, the Commission is also authorized to issue revenue bonds for water projects up to $2 million and has shared control of the Drinking Water State Revolving Fund. There are also other federal funding sources that will be briefly discussed.

RESOURCES TRUST FUND

Section 57-51.1-07.1 (2) of North Dakota Century Code requires that every legislative bill appropriating monies from the Resources Trust Fund (RTF), pursuant to subsection one, must be accompanied by a State Water Commission report. This 2021 Water Development Plan satisfies that requirement for requesting funding from the RTF for the 2021-2023 budget cycle.

The RTF is funded with 20.5 percent of the revenues from the oil extraction tax. A percentage of the RTF has been designated by the Legislature to be used for water-related projects and energy conservation. The Water Commission budgets for cost-share based on a forecast of oil extraction tax revenue for the biennium, which is provided by the Office of Management and Budget.

Revenues into the RTF for the 2019-2021 biennium were expected to total $433 million at the close of the 2019 Legislative Assembly. The revised revenue forecast decreased this to $306 million. This was due to market declines in oil prices and production.

Because revenues from the oil extraction tax are highly dependent on oil prices and production, it is very difficult to predict future funding levels (Figure 25). With that in mind, the December 2020 forecast includes $255 million for the 2021-2023 biennium from oil extraction.

NORTH DAKOTA OIL PRODUCTION & RESOURCES TRUST FUND REVENUES

JULY 1999 - OCTOBER 2020

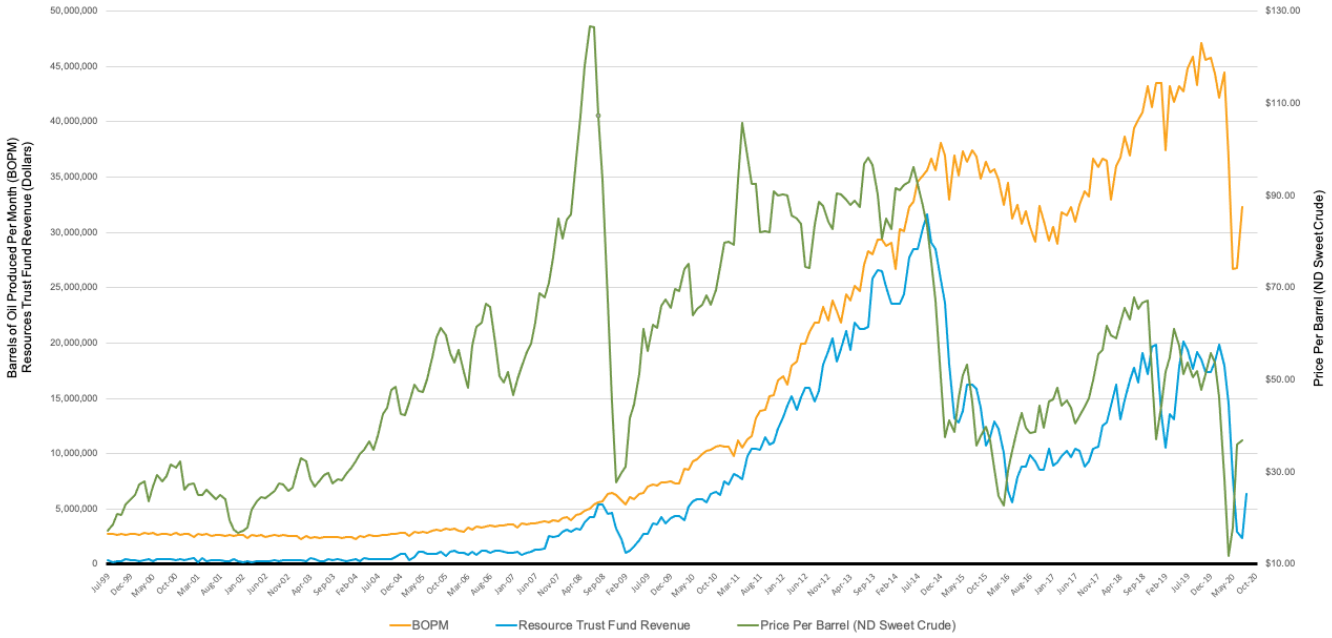


Figure 25 - North Dakota Oil Production And Resources Trust Fund Revenues.

RESOURCES TRUST FUND REVENUES

1997-2021

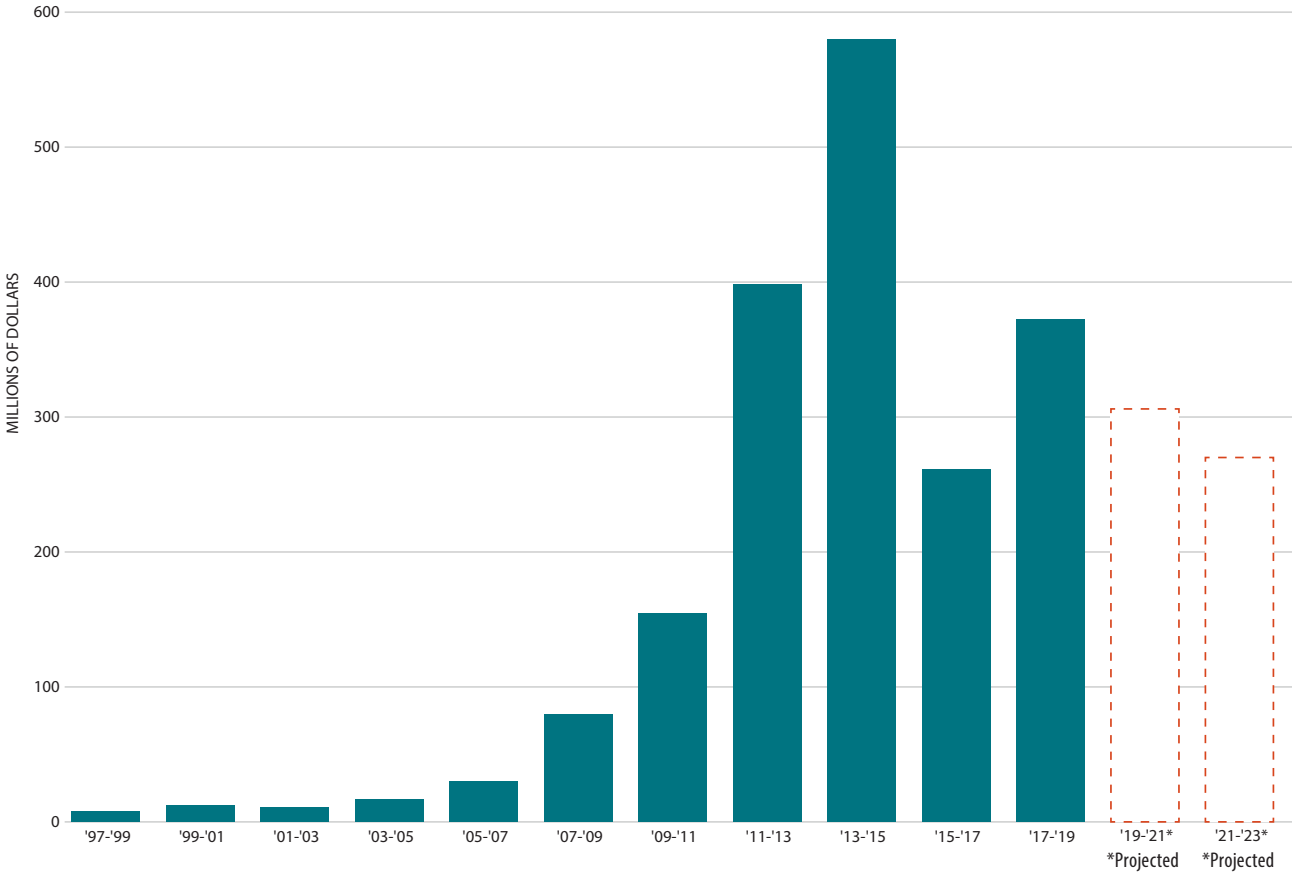


Figure 26 - Resources Trust Fund Revenues, 1997-2021.

Additional revenue into the RTF will come from Southwest Pipeline Project reimbursements, State Water Commission water supply program loan repayments, interest earnings, and oil royalties. These are estimated to total an additional $15 million. Historic and estimated RTF revenues are outlined in Figure 26.

BONDING

The Water Commission has bonding authority (NDCC 61-02- 46) to issue revenue bonds of up to $2 million per project. The Legislature must authorize revenue bond authority beyond that amount. In 1991, the Legislature authorized full revenue bond authority for the Northwest Area Water Supply project, in 1997 it authorized $15 million of revenue bonds for the Southwest Pipeline, and in 2001 it raised the Southwest Pipeline authority to $25 million. The Water Commission has no outstanding bonds at this time.

INFRASTRUCTURE REVOLVING LOAN FUND

An Infrastructure Revolving Loan Fund (IRLF) was established during the 2013 Legislative Assembly. NDCC 61-02-78 requires that a fund be established as of January 1, 2015, within the RTF to provide loans for water supply, flood protection, or other water development and management projects. Funding for the IRLF comes from ten percent of oil extraction revenue deposited in the RTF.

During the 2019 session, the Legislature included a cap on the Infrastructure Revolving Loan Fund, stating that any oil extraction moneys exceeding $26 million will be deposited into the Resources Trust Fund. Western Area Water Supply, North Prairie Rural Water, Northeast Regional Water District, Walsh Rural Water, Barnes Rural Water, North Central Rural Water, Stutsman Rural Water, Golden Valley County Water Resource District, and the cities of Beulah, Lisbon, Valley City, and Grafton all secured loans from this funding source as of December 2020.

The Water Commission approves projects and loans from the IRLF, and the Bank of North Dakota manages and administers the loans. Specific requirements and terms are established and approved by the Water Commission for each loan.

DRINKING WATER STATE REVOLVING FUND

An additional source of funding for water supply projects is the Drinking Water State Revolving Fund (DWSRF). Funding is distributed in the form of a loan program through the Environmental Protection Agency and administered by the North Dakota Department of Environmental Quality (DEQ). The DWSRF provides loans to public water systems for capital improvements aimed at increasing public health protection and compliance under the federal Safe Drinking Water Act.

The Water Commission's involvement with the DWSRF is twofold. First, DEQ must administer and disburse funds with the approval of the Commission. Second, DEQ must establish assistance priorities and expend grant funds pursuant to the priority list for the DWSRF, after consulting with, and obtaining Commission approval.

The process of prioritizing new or modified projects is completed on an annual basis. Each year, DEQ provides an Intended Use Plan, which contains a comprehensive project priority list and a fundable project list. The 2021 comprehensive project priority list includes 267 projects, with a cumulative total project funding need of $637 million.

FEDERAL MUNICIPAL, RURAL, & INDUSTRIAL (MR&I) WATER SUPPLY PROGRAM

A major source of grant funding for water supply development in North Dakota in previous biennia has been through the federal MR&I Water Supply Program. Funding of this program was authorized by Congress though the 1986 Garrison Diversion Unit Reformulation Act, and it is jointly administered by the Garrison Diversion Conservancy District and Water Commission.

The 1986 Garrison Reformulation Act authorized a federal MR&I grant program of $200 million. All of that funding has been expended. Additional federal funding authorization for the MR&I program resulted from the passage of the Dakota Water Resources Act of 2000. An additional $600 million, indexed for inflation, was authorized; which includes a $200 million grant for state MR&I, a $200 million grant for North Dakota Tribal MR&I, and a $200 million loan for a Red River Valley Water Supply Project. The act provides resources for general MR&I projects, the Northwest Area Water Supply Project, the Southwest Pipeline Project, and a project to address water supply issues in the Red River Valley.

Annual MR&I funding is dependent upon U.S. Congressional appropriation. As of September 2020, $410.8 million in federal funds have been approved for North Dakota's MR&I program, with $14.8 million and $15.6 million for federal fiscal years 2019 and 2020, respectively (Figure 27).

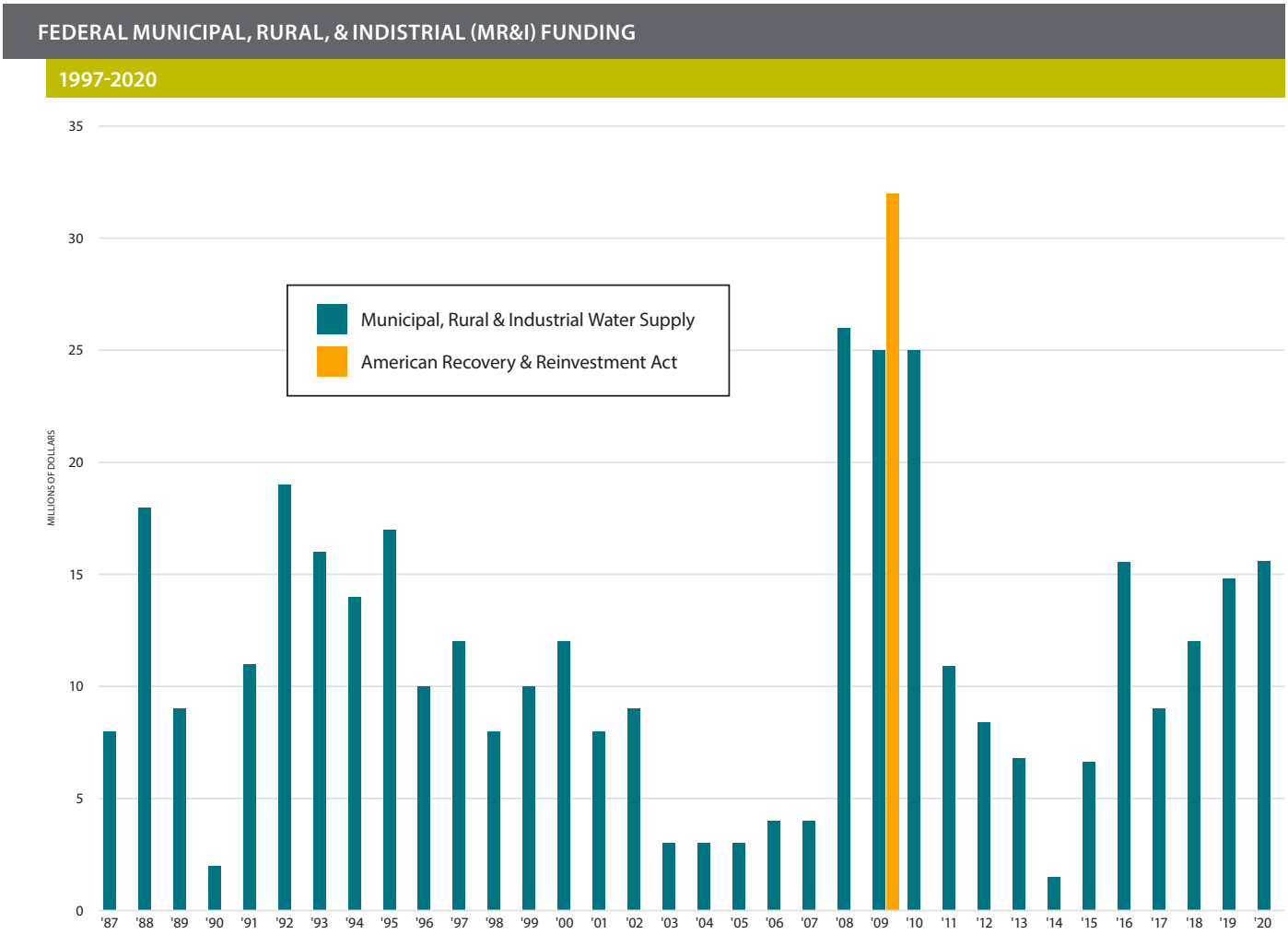


Figure 27 - Federal Municipal, Rural, and Industrial (MR&I) Funding, 1987-2020.

OTHER FEDERAL FUNDING

With regard to other federal funding, the U.S. Army Corps of Engineers provides significant assistance to North Dakota for flood control and water supply projects. The Environmental Protection Agency, U.S. Bureau of Reclamation, U.S. Geological Survey, and the Natural Resources Conservation Service also contribute to the state's water development efforts in many different ways, including studies, project design, and construction.

LIFE CYCLE COST ANALYSIS & ECONOMIC ANALYSIS

In 2017, the North Dakota Legislature directed the State Engineer to: "develop an economic analysis process for water conveyance projects and flood-related projects expected to cost more than one million dollars, and a life cycle cost analysis process for municipal water supply projects. When the State Water Commission is considering whether to fund a water conveyance project, flood-related project, or water supply project, the State Engineer shall review the economic analysis or life cycle analysis, and inform the State Water Commission of the findings from the analysis and review."

In response to the Legislative directive, the State Water Commission contracted with HDR Inc. to develop Life Cycle Cost Analysis (LCCA) and Economic Analysis (EA) guidance documents that are meant to provide a process for conducting both types of analyses. Fillable models were also developed to reduce time, effort, and costs for local sponsors. In addition, the SWC hired a full-time economist to oversee the analyses, and to work with local sponsors and consultants throughout the process.

Both the EA and LCCA were implemented in the 2019-2021 biennium. Implementation of the LCCA and EA will help to ensure the state is making better informed decisions about financial return on investment when the state is being asked to participate as a cost-share partner.

STATE WATER COMMISSION
WATER DEVELOPMENT PRIORITIES & RECOMMENDATIONS

In the past, the Water Commission has published a Water Development Plan with recommendations for funding of projects, or purposes, at a specific level – based on the most up-to-date revenue projections. However, in today's volatile economy in which the agency's revenue stream is becoming increasingly unpredictable, a more flexible and strategic approach is appropriate.

WATER DEVELOPMENT PRIORITIES

After numerous process improvements brought about by Legislation and agency initiatives, the Water Commission is now uniquely positioned to support projects more strategically through the implementation of the Project Prioritization Guidance (PPG), Economic Analysis (EA), and Life Cycle Cost Analysis (LCCA). For that reason, priorities will be outlined by purpose – with the expectation that the agency will fund the state and Commission's highest priorities first, within the confines of what is appropriated for water development by the Legislature. Then, at the onset of the 2021-2023 budget cycle, the Commission will use PPG, EA, and LCCA to prioritize cost-share approvals.

With that in mind, the following Water Commission project priority summary can serve as a guide to lawmakers as they use the most current revenue forecasts during the 2021 Legislative Assembly to outline funding levels for various water development purposes. The data used in the following summary (Figure 28) comes from the project inventory effort, which includes direct input from project sponsors.

PROJECT FINANCIAL NEEDS (STATE FUNDING) SUMMARY, WITH PRIORITY TOTALS BY PURPOSE: 2021-2023 BIENNIUM

PROJECT PURPOSES (MILLIONS $)	WDP INVENTORY PROJECT NEEDS (STATE FUNDING MILLIONS $)			DESCRIPTION OF FINANCIAL NEED: 2021-2023
	HIGH PRIORITY	MODERATE PRIORITY	LOW PRIORITY	
Flood Control (Total = $268.8)	$178.3	$53.1	$37.4	F-M Area Diversion, Heart River Flood Control (Mandan), Mouse River Enhanced Flood Control, other flood control, Valley City Permanent Flood Protection, and water conveyance.
F-M Area Diversion	$66.5	-	-	Wild Rice River inlet structure, diversion inlet and control structure, property acquisitions, and agriculture mitigation measures.
Heart River - Mandan	$13.0	-	-	Floodwall replacement, levee raises, and interior drainage improvements.
Mouse River Enhanced Flood Control	$76.0	-	-	In Minot - Pump station, tieback levee, road and bridge work. Outside of Minot - Burlington flood protection, and bridge construction in Ward, McHenry, and Renville Counties.
Other Flood Control	$11.8	$4.3	$0.3	Community flood protection projects, levee certifications, closed-basin high water outlets, watershed flood reduction studies, and rural ring dikes.
Valley City	$11.0	-	-	Phase 5 - Permanent concrete flood walls, removable flood walls, clay levees, storm water pump stations, and bioengineered stream bank restorations.
Water Conveyance	$0.0	$48.8	$37.1	New drainage, drainage improvements, bank stabilizations, and snagging and clearing.
General Water (Total = $49.7)	$0.0	$48.9	$0.8	Dam remediations, repurposing, rehabilitations, and repairs; irrigation; watershed plans; and water retention and detention.
Rural Water Supply (Total = $74)	$3.9	$41.6	$28.5	Community regionalizations, system expansions, storage improvements, transmission line installations, and water treatment plant improvements.
Water Supply (Total = $252.5)	$160.0	$9.2	$84.6	Municipal water supply expansions and improvements, Northwest Area Water Supply, Red River Valley Water Supply, Southwest Pipeline Project, and Western Area Water Supply.
Municipal	$0.0	$9.2	$84.6	Water distribution and storage expansions, improvements, and replacements.
Northwest Area Water Supply	$41.5	-	-	Snake Creek Pumping Plant intake modifications, South Prairie Reservoir, Souris and Bottineau reservoirs and booster stations, project operations and management, and Minot Water Treatment Plant Phase III design.
Red River Valley Water Supply	$50.0	-	-	Missouri River intake, biota water treatment plant design, Sheyenne River discharge structure, acquisitions, and pipeline work.
Southwest Pipeline Project	$32.5	-	-	Intake pump station, hydraulic improvements, and rural distribution upgrades.
Western Area Water Supply	$36.0	-	-	Expansion of rural water service in areas served by Northwest Rural Water District, McKenzie Water Resource District, and R & T Water District.
TOTAL ($646)	**$342**	**$153**	**$151**	

Figure 28 - Project financial needs (state funding) summary, with priority totals by purpose: 2021-2023 Biennium

WATER DEVELOPMENT RECOMMENDATIONS

As the State of North Dakota looks toward the future of water development, a longer-term, multi-pronged methodology to project planning, budgeting, and funding is the best approach for success. The 2019-2021 biennium demonstrated how the unpredictable nature of oil revenues can cause delay and uncertainty for water managers. Concurrently, through the 2021 Water Development Plan process, it has been demonstrated that funding shortfalls are likely under current cost-share program policies for the next two years, and through 2031 – under multiple revenue scenarios.

In addition, a more robust system of prioritization may also be warranted to offer the most objective means of funding the state and Commission's highest water development priorities under increasing competition for resources. With all of this in mind, the Commission offers the following water development recommendations where attention will be focused during the 2021-2023 biennium.

RECOMMENDATION 1

Consideration should be given to more reliable, and cost-effective sources of revenue, such as bonding.

RECOMMENDATION 2

Consideration should be given to reevaluation of the Commission's Project Funding Policy, Procedure, and General Requirements.

RECOMMENDATION 3

Consideration should be given to a reevaluation of the Commission's Project Prioritization Guidance.

RECOMMENDATION 4

Promote the full spectrum of water development priorities outlined in the 2021 Water Development Plan to increase understanding of overall financial needs.

RECOMMENDATION 5

Utilize the Commission's Project Prioritization Guidance, Economic Analysis, and Life Cycle Cost Analysis processes to ensure the most efficient use of state resources that have been appropriated to the agency during the 2021 Legislative Assembly.

APPENDIX

SWC
COST-SHARE PROGRAM

The State Water Commission's Cost-Share Policy, Procedure, and General Requirements (Policy) was adopted to support local sponsors in development of sustainable water-related projects in North Dakota. The policy reflects the agency's cost-share priorities and provides the basic requirements for all projects considered for prioritization during the agency's budgeting process. Projects and studies that receive cost-share funding from the agency's appropriated funds are consistent with the public interest.

The State Water Commission values and relies on local sponsors and their participation to assure on-the-ground support for projects and prudent expenditure of funding for evaluations and project construction. It is the policy of the State Water Commission that only the items described in the policy are eligible for cost-share upon approval by the State Water Commission, unless specifically authorized by State Water Commission action. The full policy can be downloaded and reviewed at the State Water Commission's website: swc.nd.gov.

SWC PROJECT PRIORITIZATION GUIDANCE

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

ESSENTIAL PROJECTS *(No Priority Ranking)*

Agency operational expenses.

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

Existing agency debt obligations.

SWC project mitigation.

HIGH PRIORITY PROJECTS

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

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

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

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

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

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

MODERATE PRIORITY PROJECTS

Dam safety repairs and emergency action plans.

Expansion of an existing water supply system.

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

Irrigation system construction.

New rural flood control projects.

Bank stabilization.

Snagging and clearing in population centers.

LOW PRIORITY PROJECTS

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

Improvement or extraordinary maintenance of a water supply system.

Improvement or extraordinary maintenance of rural flood control projects.

Recreation projects.

Individual rural and farmstead ring dike constructions.

Snagging and clearing in sparsely populated areas.

Footnotes

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

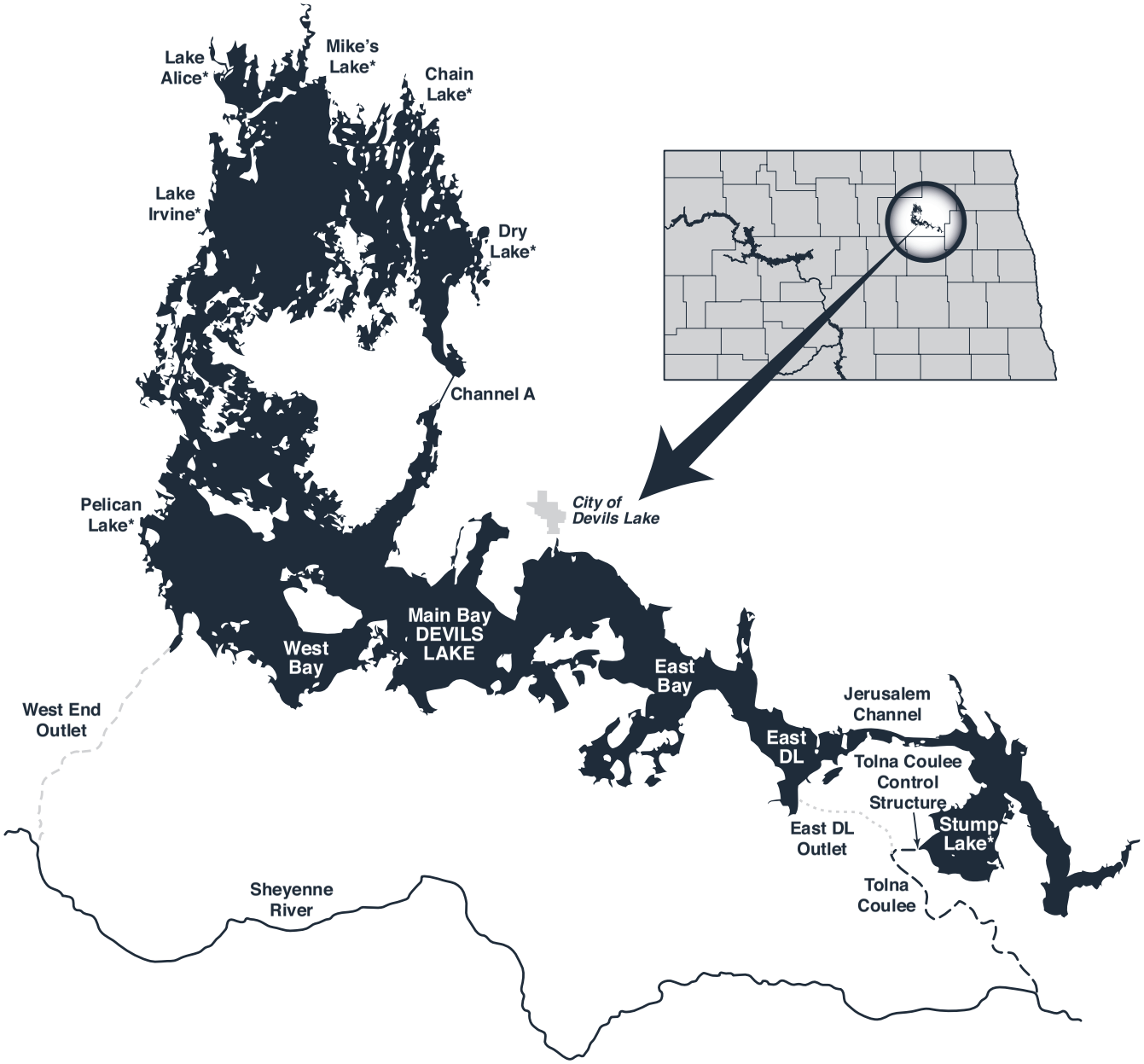
II. May be considered as a higher priority if the related project is of higher priority.

Disclaimer

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

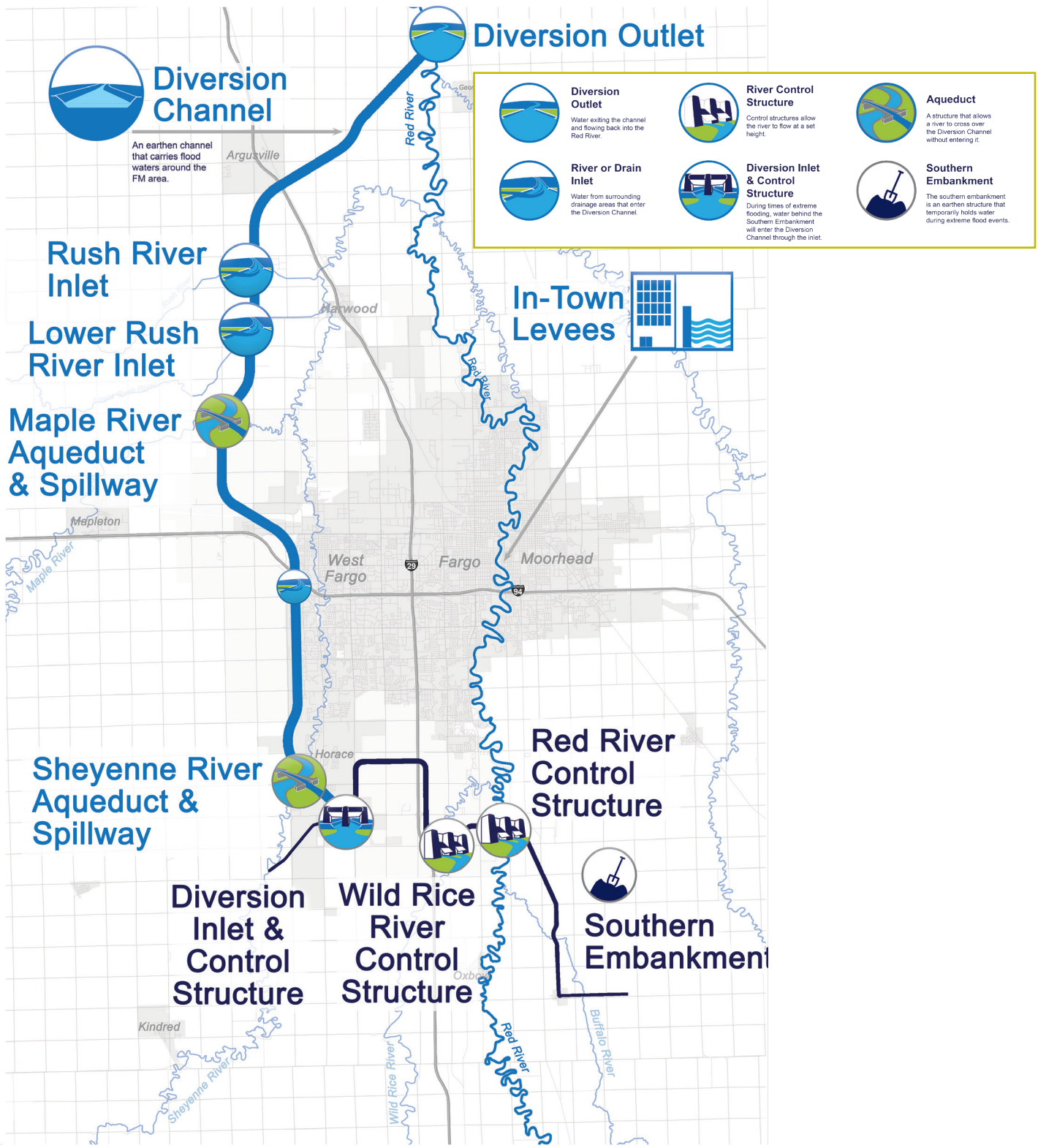
MAP APPENDIX

DEVILS LAKE OUTLETS



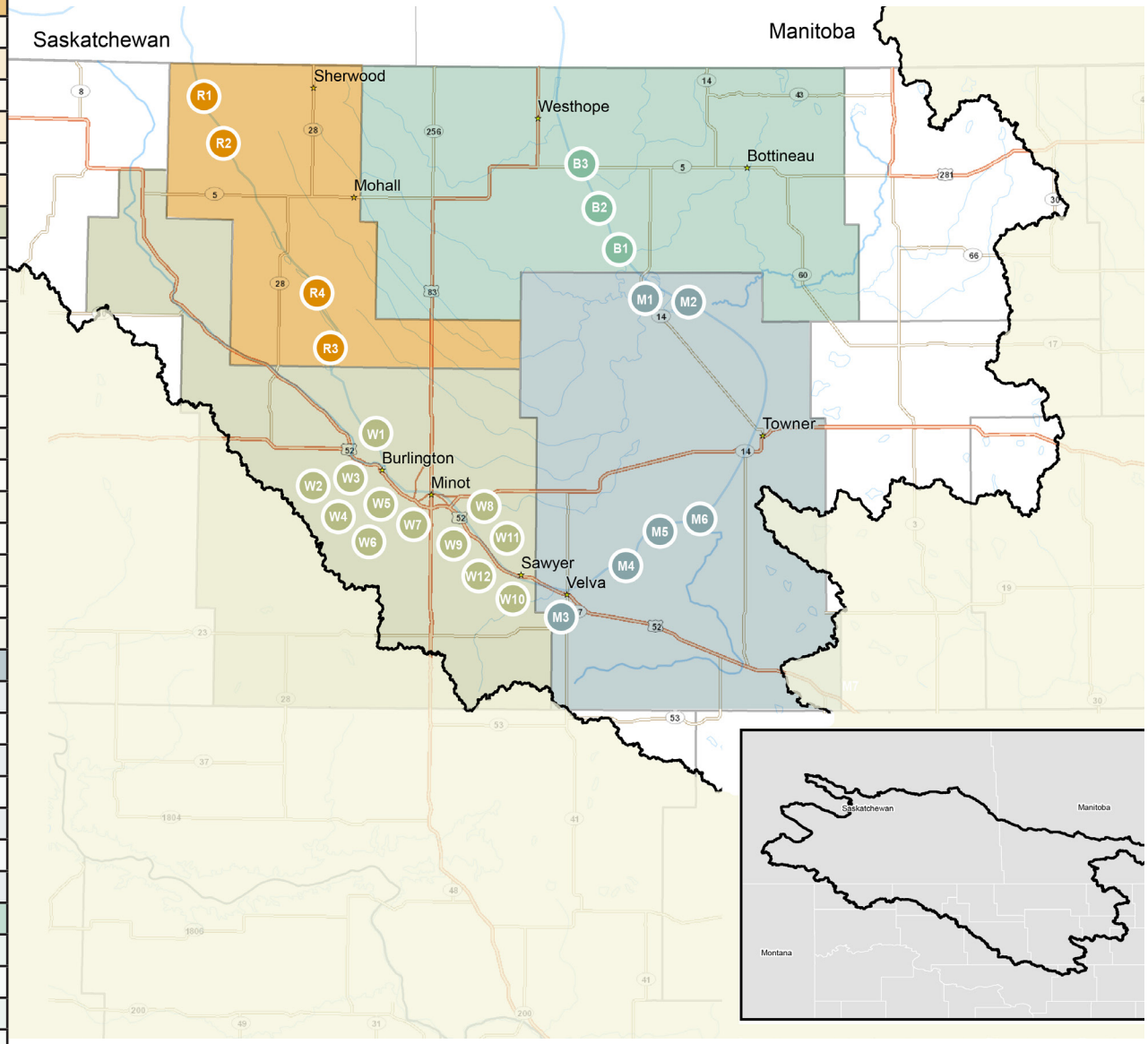
*As the Lake has risen, a series of smaller lakes have been absorbed by Devils Lake.

FARGO-MOORHEAD AREA FLOOD PROTECTION

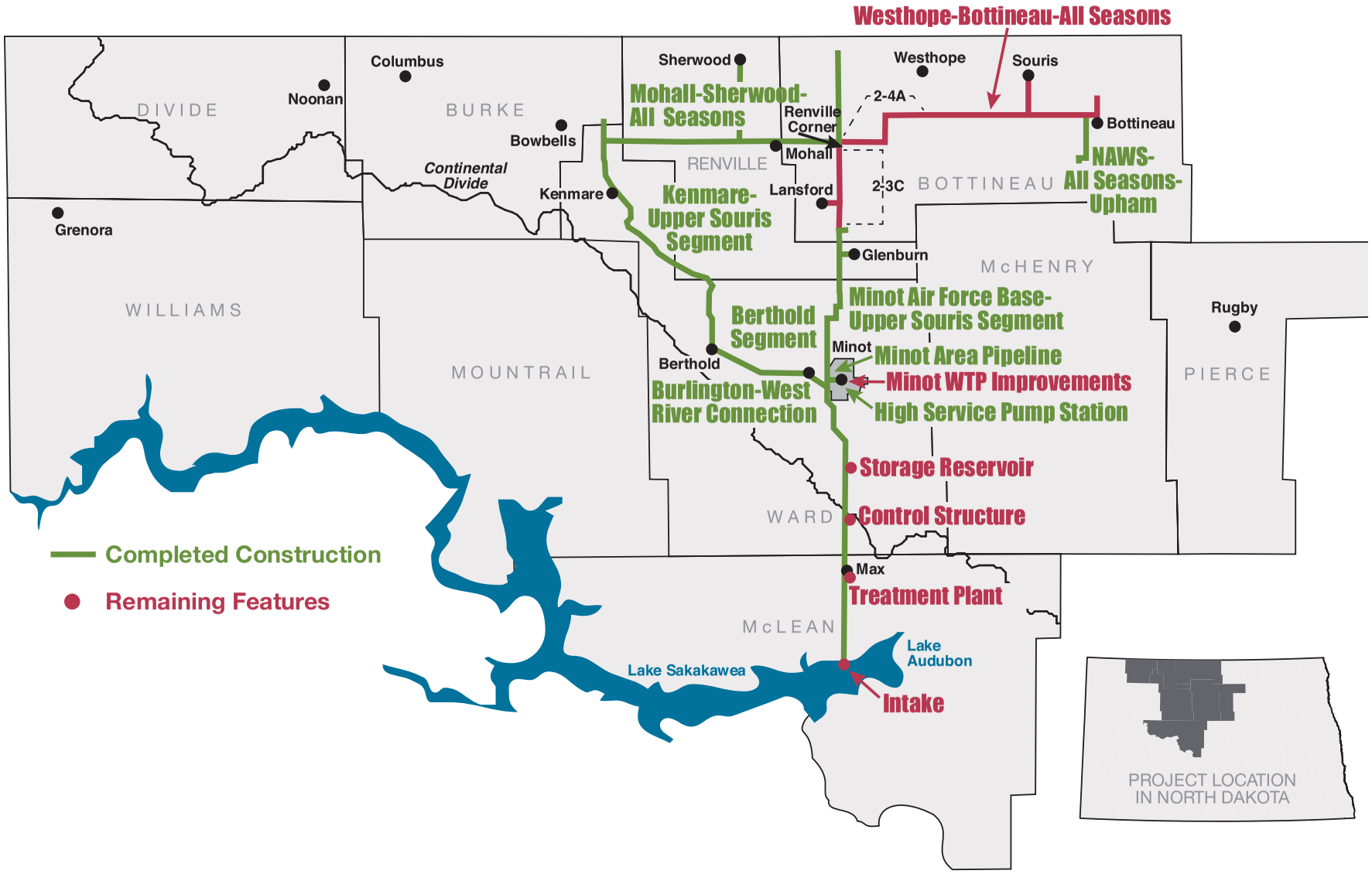


MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT

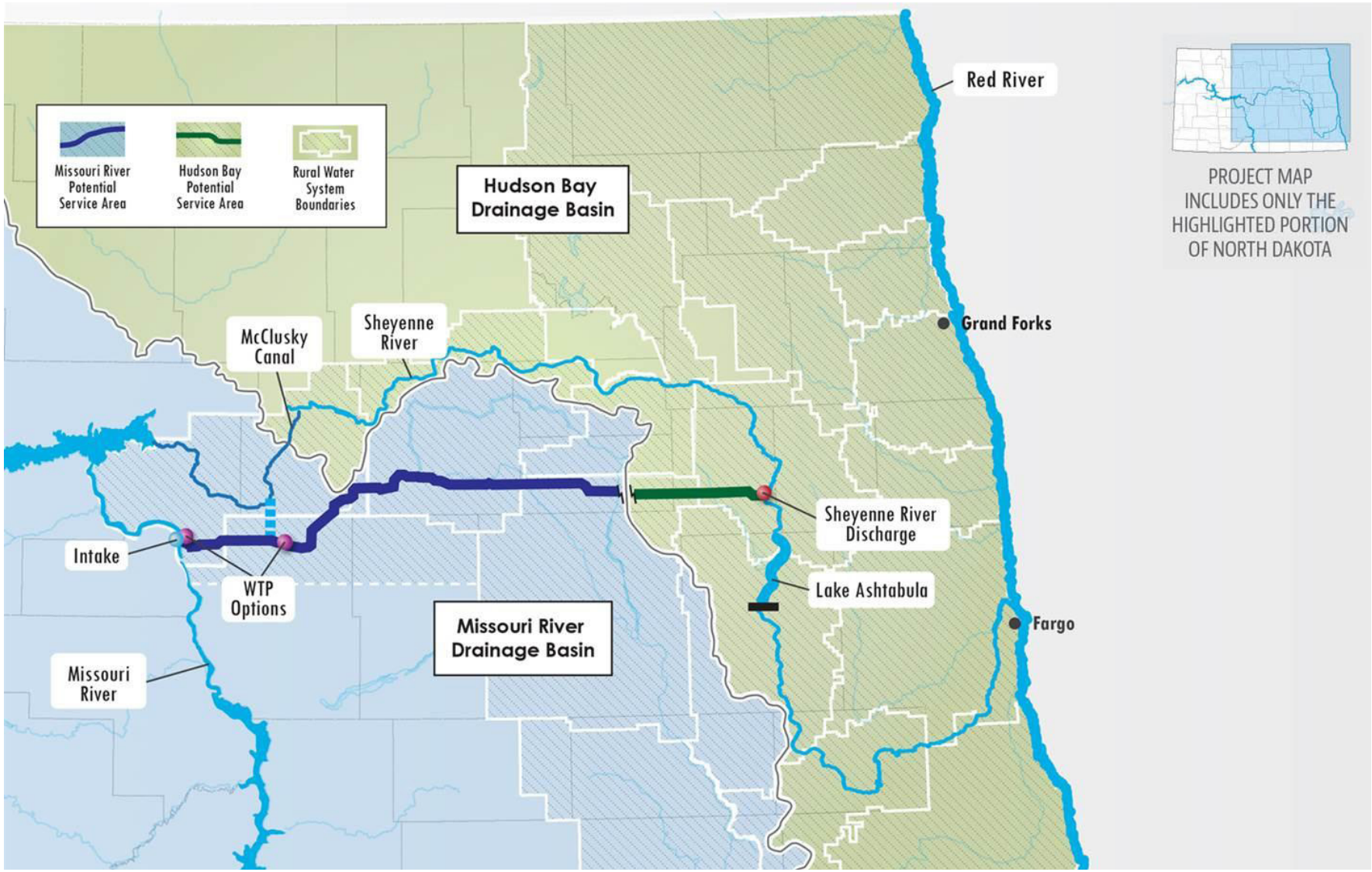
Renville County Projects (Thru 2039)	
Rural Structure Acquisition, Relocation or Ring Dike	$2 M
Mouse River Park Levee Improvements	$21 M
Lake Darling Dam Operational Modifications	$3 M
Rural Bridge / Road Modifications	$13 M
Remove Trapped Water	$1 M
Renville County Subtotal	$40 M
Ward County Projects (Thru 2039)	
Rural Structure Acquisition, Relocation or Ring Dike	$25 M
Burlington Levee System	$36 M
Robinwood / Brooks Addition Levee System	$59 M
Talbott's Levee System	$7 M
King's Court Levee System	$17 M
Tierracita Vallejo Levee System	$17 M
Minot Levee System	$564 M
Apple Grove Levee System	$25 M
Eastside Estates Levee System	$13 M
Sawyer Levee System	$28 M
Rural Bridge / Road Modifications	$40 M
Remove Trapped Water	$1 M
Ward County Subtotal	$832 M
McHenry County Projects (Thru 2039)	
J. Clark Salyer Structure Modifications	$21 M
Rural Structure Acquisition, Relocation or Ring Dike	$5 M
Velva Levee System	$21 M
Rural Channel Modifications	$15 M
Rural Bridge / Road Modifications	$21 M
Remove Trapped Water	$3 M
McHenry County Subtotal	$86 M
Bottineau County Projects (Thru 2039)	
J. Clark Salyer Structure Modifications	$32 M
Rural Channel Modifications	$17 M
Rural Bridge / Road Modifications	$21 M
Bottineau County Subtotal	$70 M



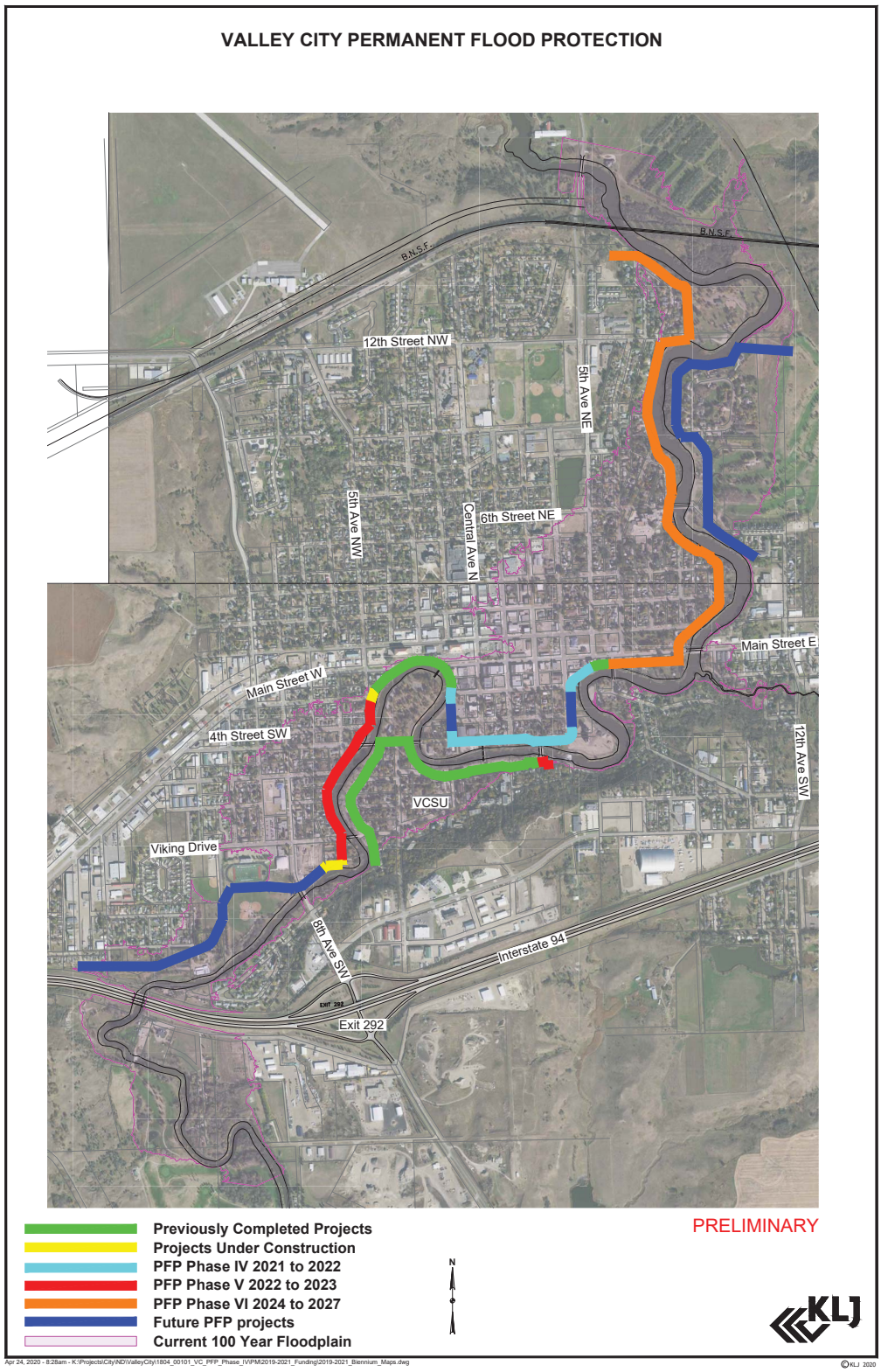
NORTHWEST AREA WATER SUPPLY



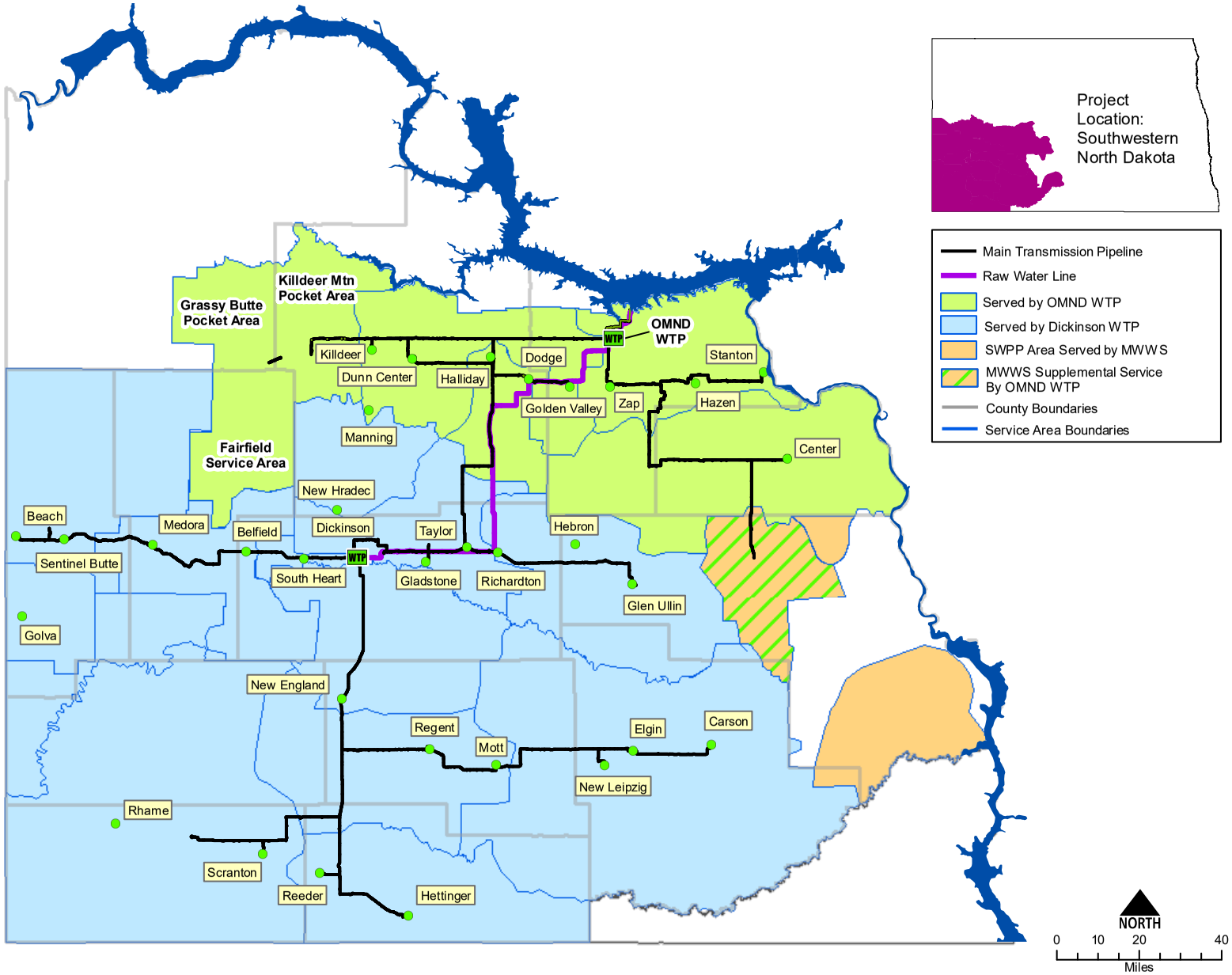
RED RIVER VALLEY WATER SUPPLY



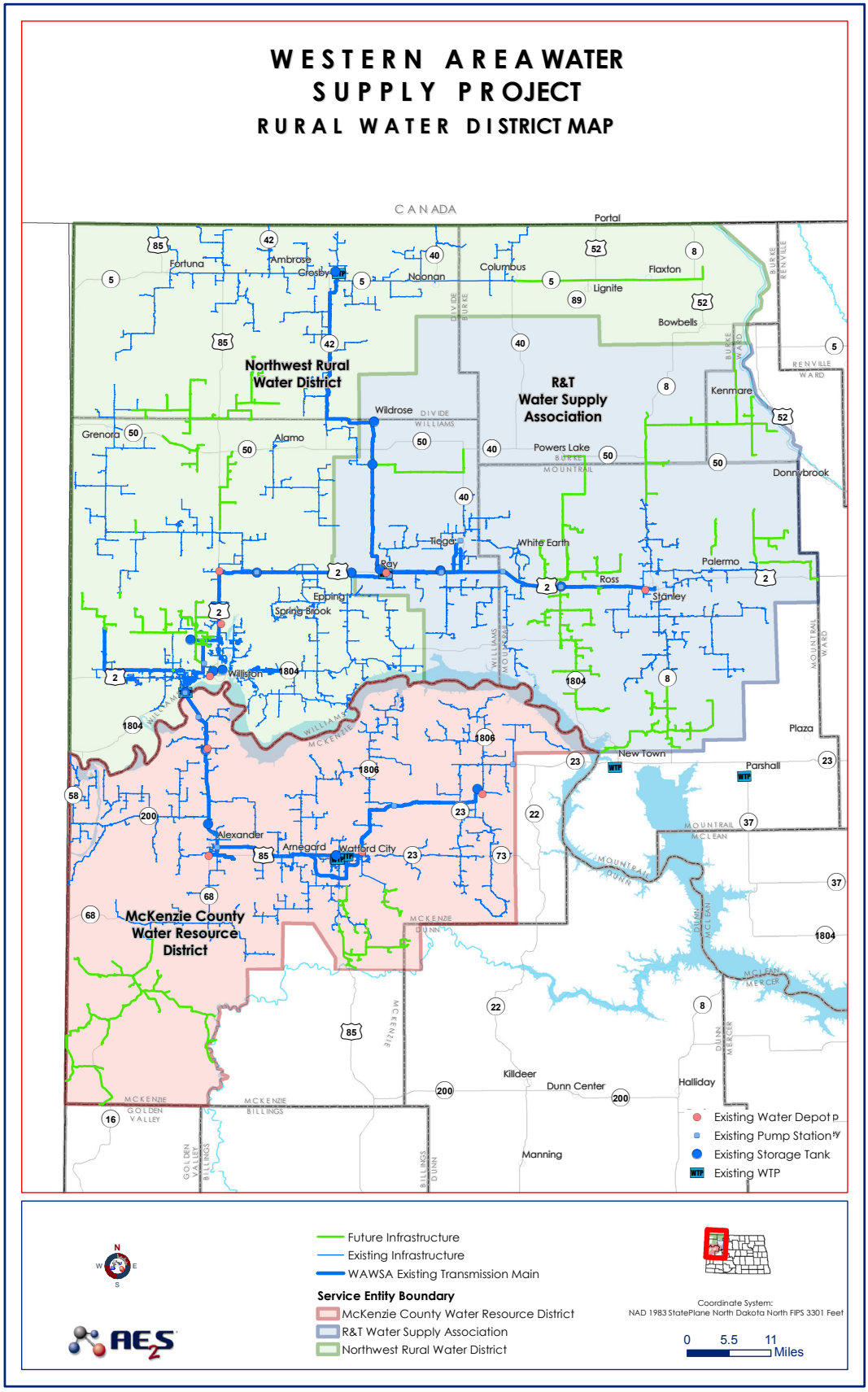
SHEYENNE RIVER FLOOD PROTECTION (VALLEY CITY)



SOUTHWEST PIPELINE PROJECT



WESTERN AREA WATER SUPPLY



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Be Legendary.

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2021