LAKE AGASSIZ WATER AUTHORITY

BOARD OF DIRECTORS

Fargo Commission Chambers
September 28, 2020

A meeting of the Lake Agassiz Water Authority (LAWA) board of directors was held at the Fargo Commission Chambers on September 28, 2020. The meeting was called to order by Chair Mahoney at 1 p.m.

MEMBERS PARTICIPATING

Chair Timothy Mahoney
Vice Chair Ken Vein
Director LaVonne Althoff
Director Dave Carlsrud
Director Tom Erdmann
Director Mark Johnson
Director Jim Schmaltz
Director Travis Schmidt
Alternate Brian Rielly for Director Keith Nilson
Alternate Jeremy Schuler for Director Rick Bigwood
Secretary Duane DeKrey

MEMBERS ABSENT

Director Bill Bohnsack
Associate Member Steven Dale
Associate Member Dick Johnson
Associate Member Carol Siegert

A registration sheet is attached to these minutes as Annex I.

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

INTRODUCTIONS

Chair Mahoney introduced the newest LAWA board member, Travis Schmidt, representing Moorhead. He is participating by video conference today.

APPROVAL OF AGENDA

Motion by Director Althoff to approve the board agenda. Second by Director Schmaltz. Upon voice vote, motion carried.

CONSIDERATION OF MINUTES

Motion by Director Schmaltz to approve the June 29, 2020, Lake Agassiz Water Authority Board minutes as distributed. Second by Director Johnson. Upon voice vote, motion carried.

OFFICER REPORT

Vice Chair Vein did not have a report.

COMMITTEE REPORTS

Water Topics Overview Committee Report - - Merri Mooridian, Deputy Program Manager, RRVWSP Administration, provided a PowerPoint presentation showing the presentation given at the Water Topics Overview Committee meeting on September 24. This included an update of the Red River Valley Water Supply Project (RRVWSP) accomplishments and recent developments.

Lake Agassiz Water Authority Technical Advisory Committee

Early-Out Plans and Specifications

Al Grasser, Chair, LAWA Technical Advisory Committee (TAC), reported the TAC met on September 25. At that time, the committee reviewed and discussed the changes made to the front-end documents as well as recommendations from the insurance advisor, Aon, regarding the amounts of coverage and liability limits for small, medium and large project contracts.

Chair Grasser said the committee approved a recommendation to eliminate pollution liability coverage in the insurance documents, adding the coverage is very expensive, and in North Dakota, pollution policies are not usually carried or required on fresh water projects. This recommendation is for consideration by the LAWA board today.

Chair Grasser explained the technical changes and updates to the plans and specifications on the early-out construction projects including the pumping station wet well design, pipeline design and the Sheyenne River outfall design. He added that pipe manufacturer comments were received, and many have been incorporated into the plans and specifications.

Chair Grasser stated the committee approved all other components in the RRVWSP front-end documents and recommends the LAWA board approve the final plans and specifications for the RRVWSP early-out construction projects.

Motion by Alternate Reilly to approve the final plans and specifications for the RRVWSP early-out construction projects, including elimination of pollution liability coverage in the insurance contracts. Second by Director Althoff. Upon roll call vote, the following directors voted aye: Althoff, Carlsrud, Erdmann, Johnson, Mahoney, Schmaltz, Schmidt and Vein. Alternates voting aye: Reilly and Schuler. Absent and not voting: Bohnsack. Motion carried.

Kip Kovar, Deputy Program Manager, RRVWSP Engineering, stated if LAWA and Garrison Diversion decide to move forward with construction of the early-out projects, advertisement for bids could take place in late October, with bid opening in December and awarding of bids in January 2021. He added that bid opening is more of a financial decision so perhaps the boards should make the determination in regard to awarding of bids.

Missouri River Intake Design Task Order

Mr. Grasser reported the other item reviewed and discussed by the TAC was the RRVWSP Task Order for Missouri River Intake (MRI) Screen Structure and Tunnel Final Design and Bidding Services, which is included in today's meeting materials. This task order is for completion of design on the MRI screen structure, tunnel, and shaft liner allowing bidding on the plans and specifications to begin. The TAC recommends approval of this task order in the amount of $1,884,000.

Motion by Alternate Reilly to approve the Missouri River Intake Screen Structure and Tunnel Final Design and Bidding Services Task Order in the amount of $1,884,000. Second by Director Althoff. Upon roll call vote, the following directors voted aye: Althoff, Carlsrud, Erdmann, Johnson, Mahoney, Schmaltz, Schmidt and Vein. Alternates voting aye: Reilly and Schuler. Absent and not voting: Bohnsack. Motion carried.

RRVWSP UPDATE

Senate Bill 2020 Conditions - - Ms. Mooridian referred to the printed material titled RRVWSP Plan SB2020 Requirements. The document was prepared to show the criteria required in SB2020 and has been completed. A copy of the document is attached to these minutes as Annex II.

Program Schedule - - Ms. Mooridian referred to the program schedule dated September 1, 2020. This is a Gantt chart displaying the status of the contingencies that were to be met in SB2020 while working toward early-out construction on the RRVWSP.

Ms. Mooridian commented that items 24 through 27 on the chart will now be updated following recent approvals received from the State Engineer, State Water Commission and legislature. Work will now begin on the bidding process for the early-out construction projects.

Planning Level Budget - - Ms. Mooridian also referred to and reviewed the two graphics showing the RRVWSP Planning Level Budget dated August 31, 2020, copies which are attached to these minutes as Annex III.

Ms. Mooridian said the bar chart illustrates the cumulative project expenses at $28.8 million. Final phased design is 88 percent complete, with actual expenses totaling $13.3 million. Outstanding expenses on final phased design are $1.8 million. No funds have been expended on construction.

The bottom table shows $15.1 million has been spent out of the 2017/2019 appropriations, with $1.8 million committed.

Ms. Mooridian added once additional State Water Commission funding approval is received, the budget will be updated to include those dollar amounts.

2019-2021 Revised Draft Budget - - Ms. Mooridian referred to the Revised Draft Budget for 2019-2021 of $7.5 million. The highlighted portions are the task orders currently approved by LAWA. The 25% local cost share for those task orders is $1.84 million. A copy of the revised budget is attached to these minutes as Annex IV.

Ms. Mooridian stated the column on the right shows the early-out construction totaling $14.44 million, of which the 10% local cost share would be $1.44 million.

RRVWSP Work Plan Update - - Mr. Kovar shared a video and pictures of the land borings that recently took place along the Missouri River and explained the drilling/boring/sampling process of the intake marine geotechnical investigation completed for the RRVWSP.

Mr. Kovar referred to the RRVWSP Work Plan Update dated September 2, 2020, provided for the board's referral. A copy of the update is attached to these minutes as Annex V.

Mr. Kovar stated plans and specifications are complete, and as soon as final approval is received from all parties, bid advertising will begin on the early-out construction projects.

Eastern North Dakota Alternate Water Supply (ENDAWS) - - Mr. Kovar reported that approval was received to move forward with the Environmental Impact Statement (EIS) regarding Garrison Diversion's request for evaluation of additional water from the McClusky Canal, which would serve as an alternate water supply for the state RRVWSP. This keeps Reclamation on track for release of a final EIS in October 2020, which still puts them on path for possibly signing the Record of Decision (ROD) in November.

Central ND Water Supply – State of Missouri Lawsuit - - Tami Norgard, Vogel Law, updated the board on the status of Missouri's lawsuit regarding the Central North Dakota Water Supply Project, informing the board that Missouri has filed a motion adding a new claim to the lawsuit which involves the Water Supply Act.

Ms. Norgard stated the administrative record was filed last week. The State of Missouri now has until November 24 to file its preliminary briefing. North Dakota's briefs are due in January 2021. The final briefing deadline is in April. Hearings could take place by May with a decision hopefully in June.

FINANCIAL REPORT

2020 Budget Analysis Statement - - Ms. Mooridian referred to and reviewed the Budget Analysis statement for the period of January 1 to August 31, 2020, a copy which is attached to these minutes as Annex VI.

Total income received through August is $30,864. Expenses are $49,424. The total bank balance at the end of August is $694,008.

Motion by Director Althoff to approve the Budget Analysis Statement for the period of January 1 through August 31, 2020. Second by Director Schmaltz. Upon roll call vote, the following directors voted aye: Althoff, Carlsrud, Erdmann, Johnson, Mahoney, Schmaltz, Schmidt and Vein. Alternates voting aye: Reilly and Schuler. Absent and not voting: Bohnsack. Motion carried.

2020 Bills Paid

Bills paid since the June meeting are $4,525 to Ohnstad Twichell, $501 to Insure Forward and $25,625 to Garrison Diversion for LAWA's share to Brownstein, Hyatt Farber Schreck for national legal counsel expenses.

Motion by Director Johnson to approve the bills paid. Second by Director Althoff. Upon roll call vote, the following directors voted aye: Althoff, Carlsrud, Erdmann, Johnson, Mahoney, Schmaltz, Schmidt and Vein. Alternates voting aye: Reilly and Schuler. Absent and not voting: Bohnsack. Motion carried.

Membership Dues

Summary of Dues and Cost Share Payments

Ms. Mooridian referred to the table showing LAWA membership dues collected for 2020. The amount collected totals $30,700. This is provided for the board's information.

UNFINISHED BUSINESS

LAWA/GDCD Interim Finance Agreement - - Ms. Norgard said LAWA and Garrison Diversion will be moving forward to ask for funding from the State Water Commission on October 8. Once funding is approved, a local cost share agreement needs to be completed. There is a draft prepared that she believes is in signable form as of today.

Ms. Norgard also informed the board that the cities of Fargo and Grand Forks are agreeing to pay the total local cost share. If the smaller systems do sign up, Fargo and Grand Forks could be reimbursed.

Ms. Norgard said there will be two interim finance agreements, one is for the 10% local cost share (Series A) and the other is for the 25% local cost share (Series B).

John Shockley, Ohnstad Twichell, said final approval from Fargo and Grand Forks is still needed. If the LAWA board would like to give contingent approval to the two interim finance agreements, they certainly could.

Bruce Grubb, City Administrator, Fargo, stated the city of Fargo has budgeted its share of the interim finance agreements. He would like to see the LAWA board approve the agreements today contingent upon approval by Fargo and Grand Forks.

Motion by Vice Chair Vein to approve the two RRVWSP Interim Finance Agreements, Series A and Series B, between Lake Agassiz Water Authority, Garrison Diversion, City of Fargo and City of Grand Forks contingent upon approval by the cities of Fargo

and Grand Forks. Second by Director Althoff. Upon roll call vote, the following directors voted aye: Althoff, Carlsrud, Erdmann, Johnson, Mahoney, Schmaltz, Schmidt and Vein. Alternates voting aye: Reilly and Schuler. Absent and not voting: Bohnsack. Motion carried.

Vice Chair Vein asked if approval for advertising and setting a bid date is needed at this time.

Mr. Kovar said he believes the bidding process will need to wait until the State Water Commission meets on October 8 to determine if funding is provided and, if so, how much. Bidding dates could be looked at assuming there will be some funding approved.

Motion by Director Erdmann to approve bid advertising for early-out construction projects for the RRVWSP contingent upon State Water Commission funding. Second by Director Carlsrud. Upon roll call vote, the following directors voted aye: Althoff, Carlsrud, Erdmann, Mahoney, Schmaltz, Schmidt and Vein. Alternates voting aye: Reilly and Schuler. Absent and not voting: Bohnsack and Johnson. Motion carried.

NEW BUSINESS

There being no further business, Chair Mahoney adjourned the meeting at 2:35 p.m.

Timothy Mahoney, Chair

Duane DeKrey, Secretary

Annex I
20-61

REGISTRATION

LAWA Board Meeting
Fargo Commission Chambers
September 28, 2020

NAME	ADDRESS
Lisa Schafer	GDCD
Kimberly Cook	GDCD
Steve Burian	Burian + Associates, LLC
[illegible]	ACES
Dave Piepkorn	City of Fargo
Joe Zaremba	AECOM
Roger Fenstad	GDCD - Cass County
Corey Bischoff	GDCD - Barnes Cty
Geneva Kaiser	GDCD Stutsman Co.
Allen M. Walker	GDCD - Ward Co.
Bruce [illegible]	City of Fargo
Al Grasser	City of Grand Forks
Tami Norgard	Vogel Law Firm
Kip Kovar	GDCD
Tim McAllister	City of Fargo
John Shockley	Ohnstad Twichell Law Firm
Jim Schaad PE	East Central Reg
Jay Paul Anderson	GDCD - Ransom - LRWSP Chair

Annex II
20-62

RED RIVER VALLEY
WATER SUPPLY PROJECT

Serving the Water Supply Needs of Central North Dakota and the Red River Valley

GARRISON DIVERSION

Lake Agassiz
Water Authority

September 2020

RRVWSP PLAN
SB2020 REQUIREMENTS

The North Dakota State Water Commission's (SWC) budget for the 2019-2021 biennium included $30 million for the Red River Valley Water Supply Project (RRVWSP) and a cost-share requirement of 75 percent state and 25 percent local. The SWC budget, also known as SB2020, also includes $13 million in carryover funds from the 2017-2019 biennium for the RRVWSP. In addition to outlining funding for the RRVWSP, Section 14 of SB2020 outlines the requirements of the RRVWSP to be completed during the 2019-2021 biennium prior to requesting approval of construction funding. An overview of these requirements and the completion status of each requirement are outlined in the table below, followed by more detailed information on the following pages.

RRVWSP PROJECT STATUS OVERVIEW

MOVING THE PROJECT FORWARD - SB2020 STATUS

SECTION	PROJECT COMPONENT	STATUS	DETAIL	PAGE
14.1a	Alternative Selection	COMPLETED	Missouri River to Sheyenne River	2
14.1a	Water Supply Needs	COMPLETED	165 cfs	4
14.1a	Projected Project Costs	COMPLETED	$1.19 Billion	7
14.1a	Easement Acquisitions	COMPLETED	100% of Easements Secured for Phase 1 Construction	8
14.1a	Environmental Regulation Compliance - NDPDES Permit	COMPLETED	Working with Department of Environmental Quality (DEQ)	9
14.1a	Acquisition of State and Federal Permits	COMPLETED	Intake Permit (USACE), Sovereign Lands Permit (SWC), Water Permit (SWC), Highway Permit (NDDOT)	10
14.1b	Ensure Adequate Water Source	COMPLETED	Missouri River and/or McClusky Canal Conventional Intake	11
14.1c	Prioritized Phase 1 Construction Features	COMPLETED	Intake, Trenchless Crossings, and Discharge Structure	12
14.1d	Funding Options Recommendation	COMPLETED	Completed Financial Model in Partnership with State and Local Users; Need to Narrow Inputs	13
14.2	Litigation Review	IN PROGRESS	State Engineer and State Water Commission Shall Review Appeals or Litigation before Releasing Funds to Project	16
14.3	Phase 1 Construction Funding Approval	IN PROGRESS	State Engineer and State Water Commission Certify Section 1 Completed and Budget Section Approval	18
14.4	Quarterly Progress Reports to Water Topics Committee	ONGOING	August 1, 2019; December 10, 2019; June 4, 2020	19

SB2020 SECTION 14.1A REQUIREMENTS

Any funding received by the Garrison Diversion Conservancy District from the state water commission for the Red River valley water supply project during the 2017-19 biennium and the biennium beginning July 1, 2019, and ending June 30, 2021, is subject to the following requirements:

1. Any funding received for the completion of the planning and permitting process of the Red River valley water supply project must result in the following accomplishments:

a. The completed Red River valley water supply plan document, which will be the basis and justification for project construction, must include alternative selection, water supply needs, projected project costs, easement acquisitions, environmental regulation compliance to include issuance of a final national pollutant discharge elimination system permit, and acquisition of all other state and federal permits required for the construction of any project features intended to be constructed with funding provided during the 2017-19 biennium and the 2019-21 biennium;

SECTION 14.1A | ALTERNATIVE SELECTION

STATUS

COMPLETED

DETAILS

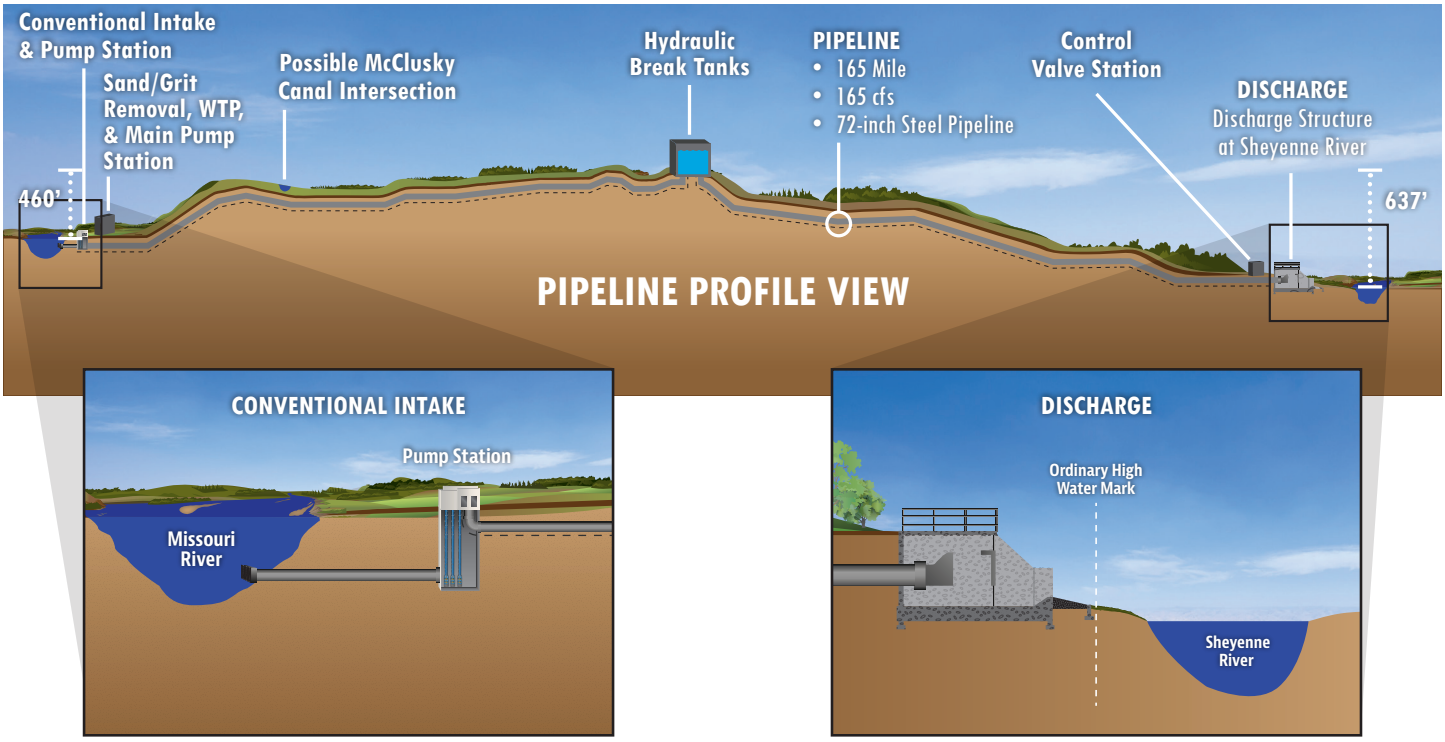
- Missouri River to Sheyenne River

After completing multiple studies, the route from Washburn to the Sheyenne River emerged as the most viable route for the RRVWSP, due to lower estimated costs, lower projected pumping costs and a less congested corridor when compared to multiple alternatives. In addition, rights-of-way options were already secured for approximately 50% of the pipeline route. The Washburn to Sheyenne River alternative was adopted as the official project route by the Garrison Diversion Conservancy District and the Lake Agassiz Water Authority.

The RRVWSP will begin at the Missouri River and extend approximately 167 miles to the Sheyenne River. The 72-inch buried pipeline will have a capacity of 165 cubic feet per second (cfs).

The project will begin with a Conventional Intake located in the Missouri River six miles southeast of the City of Washburn. The buried pipeline will then run east from the Missouri River Intake Pumping Station to the proposed water treatment plant (WTP) site east of US Highway 83 in McLean County.

From the proposed WTP site, the pipeline will again run east for approximately 50 miles through McLean and Burleigh Counties to the Hydraulic Break Tanks. From that point, water will flow via gravity as the pipeline runs an additional 113 miles through southern Sheridan, Wells, Foster and Griggs Counties. The alignment generally runs east within a couple miles north or south of ND Highway 200 where it ends at a Discharge Structure adjacent to the Sheyenne River in Griggs County, 6.7 miles southeast of Cooperstown.



PROJECT COMPONENTS

CONVENTIONAL INTAKE: Draws water from the water source into the pipe. Utilizes a concrete wet well with an intake pipeline extended to protected barrell screens on the bottom of the surface water source.

PUMP STATION: Will pump water from the intake to the sand/grit removal building at the water treatment plant site.

GRIT REMOVAL BUILDING: At the sand/grit removal building, fine particles (silt, sand, etc.) will be removed to protect downstream pumps and other mechanical equipment in the Main Pumping Station (MPS) and to prevent material from settling out into the pipeline. Larger biota will also be removed by the sand/grit removal process.

WATER TREATMENT PLANT: The water treatment plant is a facility where water will be treated prior to crossing the Continental Divide. The water will be treated to standards determined by the ND Department of Environmental Quality (DEQ) as part of obtaining the North Dakota Pollutant Discharge Elimination System (NDPDES) permit.

MAIN PUMPING STATION: The MPS will transfer water from the water treatment plant site to the Hydraulic Break Tanks, with flows ranging from 4 to 165 cfs, depending on demands.

HYDRAULIC BREAK TANKS: The Hydraulic Break Tanks are a hydraulic control point separating the pipeline hydraulic grade line between the west side (pumped) and the east side (gravity). Downstream of the Hydraulic Break Tanks, the pipeline will be designed to flow by gravity to the Sheyenne River and other end users along the alignment.

CONTROL VALVE STRUCTURE: Will reduce pressure and regulate flows coming from the upstream Hydraulic Break Tanks to the Sheyenne River.

DISCHARGE STRUCTURE: The Discharge Structure is a gravity-type structure designed to dissipate excess energy and reduce velocity to mitigate scour conditions at the point of discharge adjacent to the Sheyenne River. The Discharge Structure will receive flow from the control valve structure upstream.

SECTION 14.1A | WATER SUPPLY NEEDS

STATUS

COMPLETED

DETAILS

- 165 cfs

During a drought, central and eastern North Dakota have few options for supplying water to large municipal, rural, and industrial users. The large systems depend almost entirely on surface water supplies, which are limited and unreliable under drought conditions. Additionally, the limited available groundwater resources are nearly fully appropriated and industrial water supply availability is inadequate across central and eastern North Dakota.

With continued growth and industrial development in the region, the RRVWSP is needed to mitigate against drought conditions, as present water supplies would be woefully inadequate. For example, in 1934, there were nearly five consecutive months of zero flow in the Red River at Fargo. If a similar shortage were experienced today, it would take 1,500 truckloads of water per day to supply Fargo's basic indoor household water needs. Recovery would take months, even years, of above-average precipitation.

To update the RRVWSP demand projections (from Reclamation's 2005 studies), Garrison Diversion set out to secure nominations during the summer and fall of 2016 from potential water users in central and eastern North Dakota. Garrison Diversion and prospective users updated the planning horizon from 2050 to 2075. Over 100 meetings were held with representatives from municipalities and rural water districts, and RRVWSP water nominations were obtained from 35 users in central and eastern North Dakota. These nominations were obtained from users who were part of the previous federal RRVWSP, central North Dakota users, and users who were previously independent but could now obtain state RRVWSP as a result of a mandate from the North Dakota State Legislature to be as inclusive as possible.

Reclamation's previous 2050 population projections in the 2005 Final Needs and Options report were extrapolated to 2075, and a range of population projections were obtained. Each of these population projections were multiplied by each user's recent (generally the average from 2010 to the present) gallons per capita per day water use to predict a range of 2075 average day water demands. Municipal and rural nominations obtained in 2016 were based on these 2075 projected average day water demands. Future industrial demand estimates were based on projected growth within each user's region.

Additional details about the RRVWSP water nominations are as follows:

DOMESTIC NOMINATIONS WERE QUANTIFIED ACCORDING TO THE USER'S WATER SOURCE:

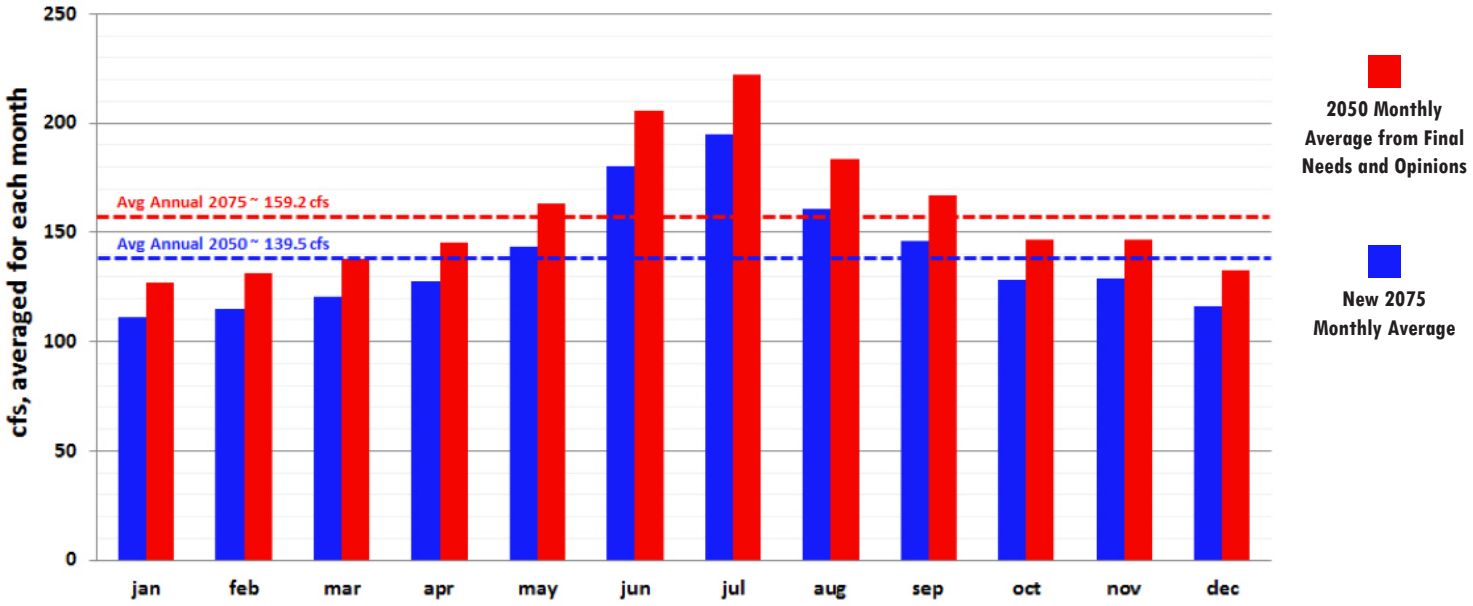
- Users currently served with groundwater generally identified their 2075 domestic water needs from the proposed project as the difference between their 2075 average day projected water demand and their current groundwater permit allocation(s).
- Users currently served by surface water (Sheyenne River, Red River of the North, or Red Lake River) generally nominated for their entire 2075 average day projected water demand from the RRVWSP because these rivers are highly susceptible to drought conditions.

INDUSTRIAL NOMINATIONS WERE GENERALLY QUANTIFIED ACCORDING TO CURRENT INDUSTRIAL WATER USE AND THE LEVEL OF ANTICIPATED FUTURE INDUSTRIAL GROWTH IN EACH REGION OF THE PROJECT SERVICE AREA COMPARED TO EXISTING WATER SUPPLIES ACTUALLY AVAILABLE FOR INDUSTRIAL USE:

- Given the projected industrial water uses often dwarfed the entire permitted allocation(s) of many of the rural water districts in the project service area, many users served by groundwater considered their 2075 average day projected domestic demand as a guide and nominated for an industrial flow that matched it to guard against the possibility that their current water sources would become unavailable. Therefore, the industrial nomination, although limited, could also be used as a domestic backup.
- Many other users also considered a specific industrial demand base on: cropping, livestock production, and past industrial development; historical interest in industrial development; and industrial development in similar regions across the state and country. These considerations included a wide array of industries, varying ranges of production sizes, and average water usage per production unit. Users were able to anticipate future industrial water demands on the basis of existing industrial development, industrial growth of industries currently in the region, and anticipation of specific future industry.

USER COMMITMENTS

The updated total average annual 2075 water demand of 159.23 cfs, which was based on recent water nominations, was distributed on a monthly basis using the same weightings as Reclamation's monthly distribution of 139.5 cfs, as shown in the graph below. ***A table of RRVWSP user commitments is located on page 6.***



The 2075 average monthly demands use the same methodology for converting annual demands to variable monthly demands as Reclamation's original methodology for projecting maximum monthly annual average demands.

In many cases, the locations of communities nominating for water has changed since the Final Environmental Impact Statement.

RRVWSP USER NOMINATIONS

	TOTAL	DOMESTIC (CFS)	INDUSTRIAL (CFS)
Fargo	73.70	58.30	15.40
Grand Forks	26.00	12.20	13.80
Stutsman Rural Water / Jamestown	15.00		15.00
Cass Rural Water Users District	10.00	8.00	2.00
Wahpeton	4.50	1.50	3.00
Grand Forks - Traill Water District	3.00		3.00
Northeast Regional Water District	3.00		3.00
Carrington / Carrington JDA	2.50		2.50
Southeast Water Users District	2.50	0.50	2.00
East Grand Forks	2.10	1.60	0.50
Grafton	2.00	0.90	1.10
Richland County JPA	2.00		2.00
Valley City	1.50	1.00	0.50
Traill Rural Water District	1.10		1.10
Agassiz Water District	1.00	1.00	
Devils Lake	1.00		1.00
Greater Ramsey Rural Water	1.00		1.00
Tri-County Water District	1.00	0.50	0.50
Walsh Rural Water District	1.00		1.00
Dakota Rural Water District	0.70		0.70
Central Plains Water District	0.60		0.60
Barnes Rural Water District	0.50		0.50
Hillsboro	0.50		0.50
Mayville	0.50		0.50
South Central Regional Water District	0.50		0.50
McLean-Sheridan Water District	0.42		0.42
Park River	0.40		0.40
Lisbon	0.33		0.33
Larimore	0.30		0.30
Cooperstown	0.20		0.20
Langdon	0.20		0.20
McVille	0.10		0.10
Hannaford	0.05		0.05
Tuttle	0.02		0.02
Forman	0.01		0.01
TOTAL	**159.23**	**85.50**	**73.73**

SECTION 14.1A | PROJECTED PROJECT COSTS

STATUS

COMPLETED

DETAILS

- $1.19 Billion (2019 dollars)

The RRVWSP construction cost estimate was developed in general accordance with guidelines established by the Association for the Advancement of Cost Estimating International (AACEI) and is most accurately described as a Class 4 estimate to form the basis for budget authorization, appropriation and/or funding. Class 4 estimates are typically used for project screening, determination of feasibility, concept evaluation, and preliminary budget approval.

PROBABLE CONSTRUCTION COSTS

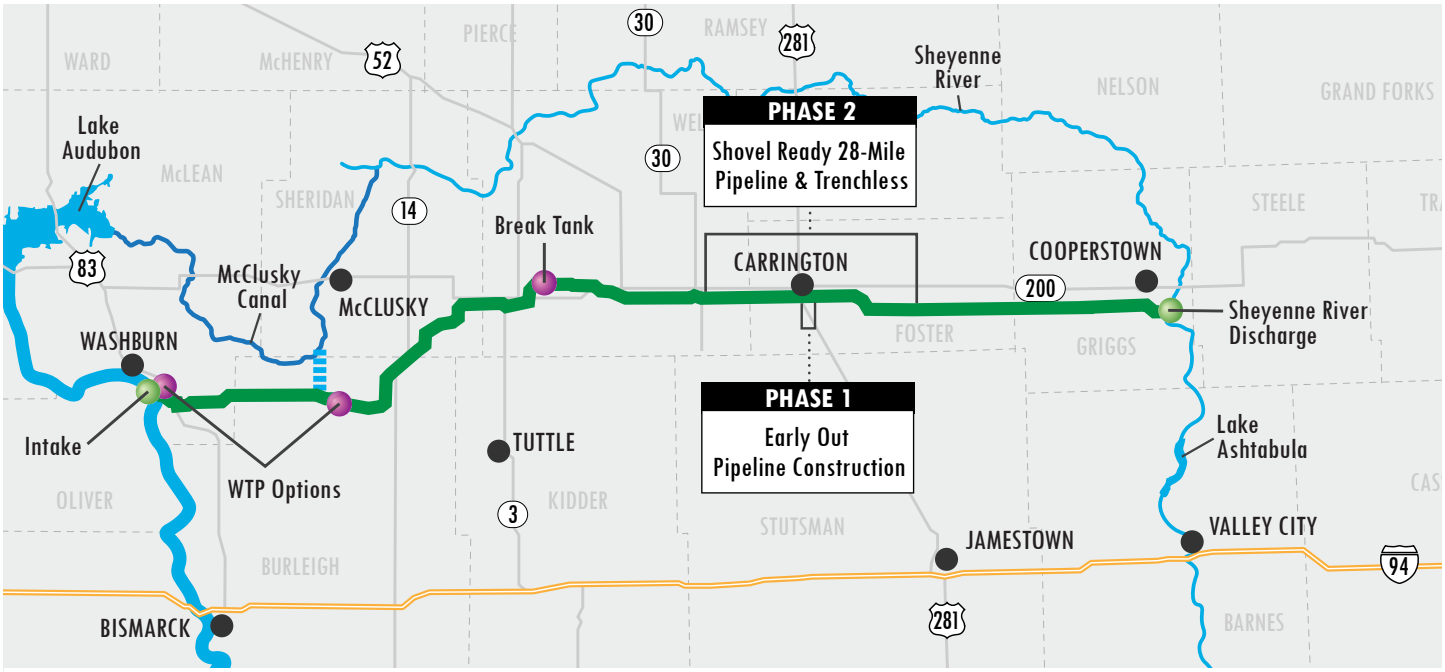
PROGRAM COMPONENTS	ENGINEER'S OPINIONS OF PROBABLE CONSTRUCTION COSTS
Missouri River Intake & Pumping Station	$55,000,000
Treatment Facilities	$45,000,000
Main Pumping Station	$39,000,000
Hydraulic Break Tank	$16,000,000
Control Valve Structure	$5,000,000
Discharge Structure	$2,000,000
Transmission Pipeline	$814,000,000
Commissioning Contract	$3,000,000
Total	**$979,000,000**

Note: Costs are presented in 2019 dollars.

PROGRAM DEVELOPMENT COSTS

PROGRAM COMPONENTS	ESTIMATED COSTS
Administration & Management	$51,200,000
Engineering	$82,800,000
Land Services	$12,800,000
Utilities & Railroad Extensions	$7,800,000
Construction Management	$50,900,000
Commissioning	$1,500,000
Total	**$207,000,000**

Note: Costs are presented in 2019 dollars.



SECTION 14.1A | EASEMENT ACQUISITIONS

STATUS

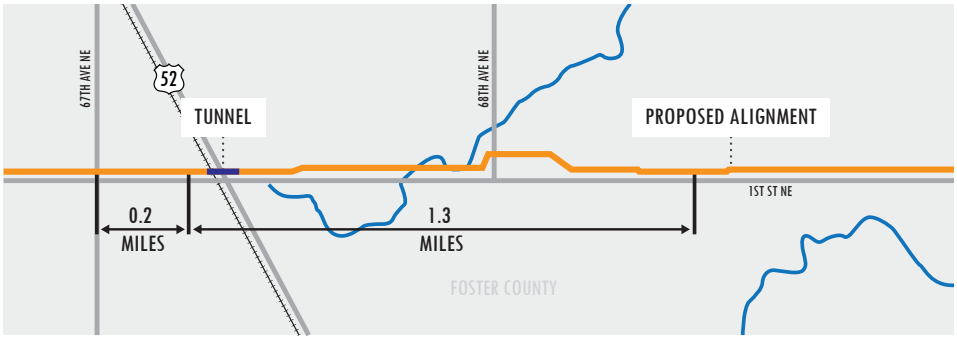
COMPLETED

DETAILS

- 100% of Easements Secured for Phase 1 Construction

Garrison Diversion has secured 100% of the easements for Phase 1 construction. Easements or options have been secured on 99% of needed properties for Phase 2 construction, which is the initial 28-mile pipeline segment to be constructed. Overall, approximately 50% of easement options are secured on the entire pipeline corridor. Garrison Diversion is in the process of obtaining the remaining easements and options for the entire pipeline route.

PHASE 1 | "EARLY-OUT" PIPELINE CONSTRUCTION



SECTION 14.1A | ENVIRONMENTAL REGULATION COMPLIANCE
NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STATUS

COMPLETED

DETAILS

- Worked with Department of Environmental Quality (DEQ) to Obtain NDPDES Permit

FINAL NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM (NDPDES) DISCHARGE PERMIT TO SHEYENNE RIVER:

The ND Department of Environmental Quality (DEQ) issues North Dakota Pollutant Discharge Elimination System (NDPDES) Permits. Garrison Diversion secured NDPDES permit for discharge into the Sheyenne River.

The initial application for the permit was submitted in July 2018. After several revisions and resubmissions, a draft permit was received on March 23, 2020. Following a public comment period, the final permit was received on August 28, 2020. Garrison Diversion is authorized to discharge Missouri River water from the RRVWSP to the Sheyenne River provided conditions are met.

SECTION 14.1A | ACQUISITION OF STATE & FEDERAL PERMITS

STATUS

COMPLETED

DETAILS

- ✓ Intake Permit (USACE)
- ✓ Sovereign Lands Permit (SWC)
- ✓ Water Permit (SWC)
- ✓ Highway Permit (NDDOT)

Garrison Diversion must acquire all state and federal permits required for the construction of any project features intended to be constructed with funding provided during the 2017-19 biennium and the 2019-21 biennium.

INTAKE PERMIT:

Garrison Diversion has worked closely with the U.S. Army Corps of Engineers (USACE) on an Intake Permit for the Missouri River. On September 7, 2018, Garrison Diversion obtained coverage from the USACE under Nationwide Permit 12.

SOVEREIGN LANDS PERMIT:

The Office of State Engineer manages, operates, and supervises sovereign lands (beds and islands, lying below the ordinary high water marks (OHWM) of navigable lakes and streams) throughout North Dakota. Any project constructed on sovereign lands must receive SWC authorization before construction or operation. The permit was received June 2019.

WATER APPROPRIATIONS PERMIT:

The Office of State Engineer and Water Appropriations Division are responsible for managing the use of the State's waters and state law requires that all water uses greater than 12.5 acre-feet per year apply for a water permit before putting water to beneficial use. After discussion with the State Engineer and Water Appropriations staff, it was decided to submit an application for Water Permit 1416A. The permit was approved on April 18, 2019.

HIGHWAY PERMIT:

Highway permit received May 7, 2020.

SECTION 14.1B | ENSURE ADEQUATE WATER SOURCE

SB2020 SECTION 14.1B REQUIREMENTS

1. Any funding received for the completion of the planning and permitting process of the Red River valley water supply project must result in the following accomplishments:

b. A signed bureau of reclamation water service contract agreeing to a minimum of one hundred sixty-five cubic feet per second over a minimum of forty years or equivalent to ensure an adequate water source for the project's needs.

STATUS

COMPLETED

DETAILS

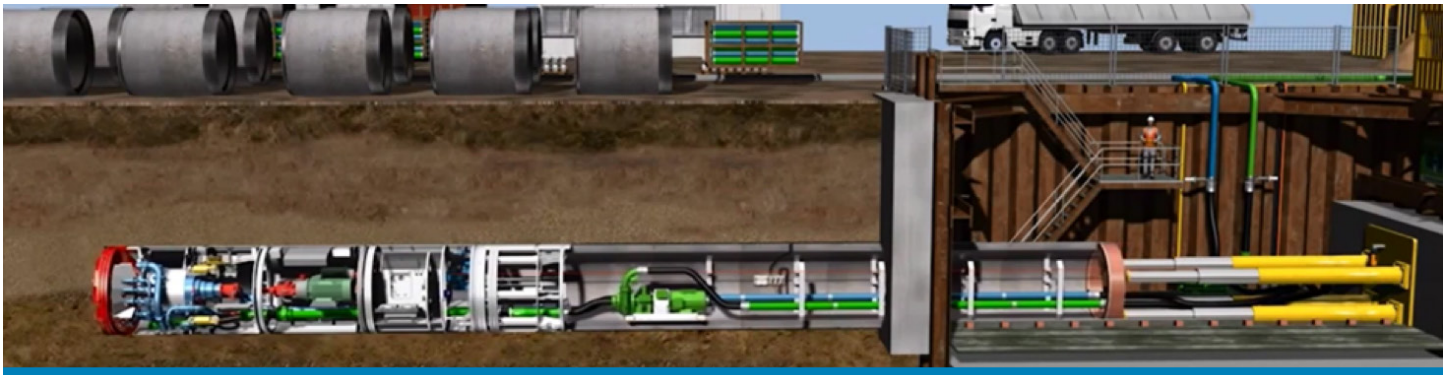
- Missouri River Conventional Intake and/or McClusky Canal

On September 7, 2018, a Nationwide 12 permit was issued by the U.S. Army Corps of Engineers for a conventional intake on the Missouri River.

WATER APPROPRIATIONS PERMIT:

The State Engineer and Water Appropriations Division are responsible for managing the use of the State's waters and state law requires that all water uses greater than 12.5 acre-feet per year apply for a water permit before putting water to beneficial use. After discussion with the State Engineer and Water Appropriations staff, it was decided to submit an application for Water Permit 1416A. The permit was approved on April 18, 2019.

Garrison Diversion is working through the process with Reclamation to determine whether the RRVWSP will be approved to access water from the McClusky Canal as an additional option.



SECTION 14.1C | PRIORITIZE PHASE 1 CONSTRUCTION FEATURES

SB2020 SECTION 14.1C REQUIREMENTS

1. Any funding received for the completion of the planning and permitting process of the Red River valley water supply project must result in the following accomplishments:

c. Prioritized project features for phase one construction.

STATUS

COMPLETED

DETAILS

- Intake Wet Well, Pipeline, and Discharge Structure

Project engineers are completing the final design on critical components of the RRVWSP that are prioritized for Phase 1 (early out construction). These features include parts of the intake, pipeline, and discharge. The intent is to put these projects out for bid in 2020.

Feature Details:

INTAKE WETWELL:

The engineering team is working on designs for the intake (wetwell, pump station, tunnel and screens) and getting the wetwell plans and specifications bid ready. The concrete wetwell will be the first piece to be constructed. The pump station sits on top of the wetwell, and the tunnel connects the wetwell to the screens. The wetwell budget is $4 million (construction cost estimate).

PIPELINE CONSTRUCTION:

A recommendation from the Value Engineering study completed in 2018 was to construct a small portion of pipeline as a demonstration project in order to fine tune the process and improve future pipeline contracts. A demonstration project can help to understand all costs involved, learn about soil restoration, and improve the landowner relations process. The engineering team has completed the final design for a portion of the pipeline construction, and is preparing the plans and specifications for bidding. The construction will include a 1.5 mile pipeline segment, which includes one trenchless crossing under a major highway and railroad. The pipeline construction budget is $7 million (construction cost estimate).

DISCHARGE:

The engineering team has completed the final design for the energy dissipation structure and outfall apron, and is preparing the plans and specifications for bidding. The structure releases water from the pipeline to the Sheyenne River. The discharge budget is $2 million (construction cost estimate).

SECTION 14.1D | FUNDING OPTIONS RECOMMENDED

SB2020 SECTION 14.1D REQUIREMENTS

1. Any funding received for the completion of the planning and permitting process of the Red River valley water supply project must result in the following accomplishments:

d. A recommendation of funding options for all phases of the Red River valley water supply project.

STATUS

COMPLETED

DETAILS

- Completed Financial Model in Partnership With State and Local Users

A recommended Comprehensive Financial Plan for the project based on the affordability thresholds of the State and the RRVWSP's End Users, which include communities and water systems from the central to eastern parts of North Dakota, is outlined in the following four sections:

1. Cost Components: Detailed project & construction cost estimates.
2. Construction Schedule: Most cost-efficient timeline.
3. State and Local Funding Plan: Preferred debt financing approach and State & local cost-share.
4. User Impacts and Increases to Monthly Water Bills: Impacts of the funding plan to the end users.

1. COST COMPONENTS

Through the development of the Comprehensive Financial Plan, project construction cost estimates have been developed to show the long-term financial impacts to the users. The five cost components within the financial plan include:

1. Core Pipeline: Costs to construct the main transmission pipeline, pumping stations, and ancillary facilities.
2. Baseline Operating: Day to day costs to keep the Core Pipeline in working condition.
3. Drought Operating: Additional costs above the Baseline Operating needed to run the Core Pipeline during drought to meet user demands.
4. Rehab and Renewal (R&R): Costs to develop a dedicated fund to support long-term system R&R and ensure the project lasts for its entire useful life.
5. Branch Pipelines: Costs to construct additional pipeline and ancillary facilities to deliver water to users that are not on the river systems downstream of Core Pipeline discharges. Note, the branch pipelines are intended to be built as needed.

2. CONSTRUCTION SCHEDULE

Construction cost escalation associated with deferring the start of construction and extending the construction schedule is a significant risk to the RRVWSP. In order to comprehensively review the impacts of the construction schedule, information was gathered from several large national contractors. These discussions resulted in an array of feedback regarding schedule feasibility and financial impacts.

Based on the noted research and project team analysis, the minimum preferred construction timeline would be six to seven years. Any shorter timeline would increase costs. Conversely, a 17-year construction schedule would cause construction costs to balloon significantly. A 17-year schedule is projected to escalate the Core Pipeline cost nearly 150% from $1.19B to $1.65B. Additional concerns regarding a longer construction schedule include the potential for large interest rate hikes, risk of stranded assets, and stakeholder support concerns.

As a result, a prudent 10-year spend schedule was developed to reduce the long-lead construction cost risks.

The State is being asked to fund the State share of the project on a 10-year schedule in order to significantly reduce risks and financial impacts for the End Users and the State.

3. STATE AND LOCAL FUNDING PLAN

Affordable and predictable financing is needed for the project. Without prudent and predictable financing terms for the local share of the project, total borrowing costs could nearly triple if End Users are subject to traditional market interest rates and interest rate escalation risk over the 10 to 12-year construction schedule as demonstrated in Table 1.

The preferred financing approach is to reduce financing risks through a 40-year, 2% interest loan from the State.

The State cost-share on capital costs, which include both Core and Branch Pipeline costs, was evaluated at 75, 80, and 85 percent as noted in Table 1. Considering that the RRVWSP is supplemental in nature, as all participating water systems will still have their primary supply and treatment systems to own and operate, a greater than typical cost-share percentage is being requested.

A State cost-share of 80 percent is requested to ensure local water rates remain affordable and sustainable for residents, businesses, and industry that will be served by the project.

TABLE 1. LOCAL COST-SHARE COMPARISON BETWEEN VARIOUS STATE COST-SHARE PERCENTAGES AND LOCAL LOAN TERMS

STATE/LOCAL COST-SHARE[1]	ANNUALIZED LOCAL COSTS UPON CONSTRUCTION COMPLETION (2030 DOLLARS)[2]	
	STATE LOAN (40 YEARS AT 2%)	MARKET LOAN (30 YEAR AT MARKET RATES)
75/25	$26.87M	$48.30M
80/20	$23.81M	$40.48M
85/15	$20.76M	$32.66M

[1] For this analysis, State cost-share is only applied to Core Pipeline and Branch Pipeline costs components.

[2] Annualized Local Costs include amortized local cost-share of Core Pipeline and Branch Pipeline costs and the local users fully fund the other three costs (O&M, Drought Operations, and R&R) components noted above.

4. USER IMPACTS AND INCREASES TO MONTHLY WATER BILLS

The preferred 80 /20 cost-share funding scenarios were tested against projected user monthly water bills for affordability. This approach assumes each water system's annual costs are directly passed onto consumers' monthly water bills. A representative large community, small community, and rural water district were chosen to show typical bill impacts. The costs shown include: capital costs, baseline and drought operations and renewal and rehab. Costs are based on a 10-year construction schedule.

TABLE 2. COMPARISON OF USER BILL IMPACTS AT 80/20 COST-SHARE AND BETWEEN STATE VS. MARKET ISSUED LOANS (2030 DOLLARS)[1]

Example Water System	STATE LOAN (40 YEAR AT 2%)			MARKET LOAN (30 YEAR AT MARKET RATES)		
	Annualized Local Costs	Monthly Bill Increase ($)	Monthly Bill Increase (%)	Annualized Local Cost-share	Monthly Bill Increase ($)	Monthly Bill Increase (%)
Fargo, West Fargo, and Cass Rural	$14.97M	$16.54	47.1%	$24.60M	$27.19	77.3%
Grafton	$302.7K	$13.64	26.1%	$500.9K	$22.57	43.1%
Tri-County Water District	$120.4K	$10.57	11.7%	$269.6K	$23.68	26.3%
Total	$15.39M			$25.37M		

[1] Assumes a State / Local cost-share of 80 / 20 for Core Pipeline and Branch Pipeline costs and the users fully fund the additional three cost components noted above.

[2] Calculated average bill impacts amongst all additional nominated water system.

One of the most significant and unpredictable costs to the users for the Project is the cost of operations in the time of drought (currently estimated at ~$15M annually). Considering the shared economic benefit at the State and local level of mitigating this form of a natural disaster for nearly half of the State's population, LAWA member systems are requesting to share at some level with the State in the funding of project drought operations. This would be similar to mitigating the natural disaster of the rise of Devils Lakes, where the State of ND pays 100% of the operation of the Devils Lake Outlets to reduce the lake level.

A drought mitigation cost-share of 50 percent State and 50 percent local is being requested.

CONCLUSION

Based on the RRVWSP's cost estimates, construction schedule, state and local funding plan, as well as the cost impacts to the project's End Users, the preferred funding plan includes the following:

- ***State of North Dakota funds the State share of the RRVWSP on a 10-year schedule in order to significantly reduce risks and financial impacts.***
- ***State reduces financing risks by approving a 40-year, 2% interest loan for End Users.***
- ***State cost-share of 80 % to ensure local water rates remain affordable and sustainable for residents, businesses, and industry that will be served by the project.***
- ***The State of North Dakota participates in funding a "disaster mitigation fund," where the funds will be used to help lower the operational costs during a major drought.***

SECTION 14.2 | LITIGATION REVIEW

SB2020 SECTION 14.2 REQUIREMENTS

Any funding received by the Garrison Diversion Conservancy District from the state water commission for the Red River valley water supply project during the 2017-19 biennium and the biennium beginning July 1, 2019, and ending June 30, 2021, is subject to the following requirements:

1. The state water commission shall review any associated appeals or litigation before releasing any funds for the project.

STATUS

IN PROGRESS

DETAILS

- Missouri lawsuit against the federal Central North Dakota Water Supply Project

The State Water Commission shall review appeals or litigation before releasing funds to the project.

The State of Missouri initiated a lawsuit affecting the Central North Dakota Water Supply Project (CNDWSP), a Reclamation controlled project, on February 4, 2020.

CENTRAL NORTH DAKOTA WATER SUPPLY PROJECT:

In 2018, Garrison Diversion and stakeholders identified a potential cost saving measure, utilizing the McClusky Canal as a water source for some or all of the water supply needed for the State RRVWSP. Using the McClusky Canal, which is controlled by Reclamation and is part of the federal Garrison Diversion Unit project, would save the state and local users millions of dollars in capital and operational costs. Given the potential cost savings, Garrison Diversion made a formal request to Reclamation for a 20 cfs water supply contract utilizing the McClusky Canal as an optional water source for the State Project.

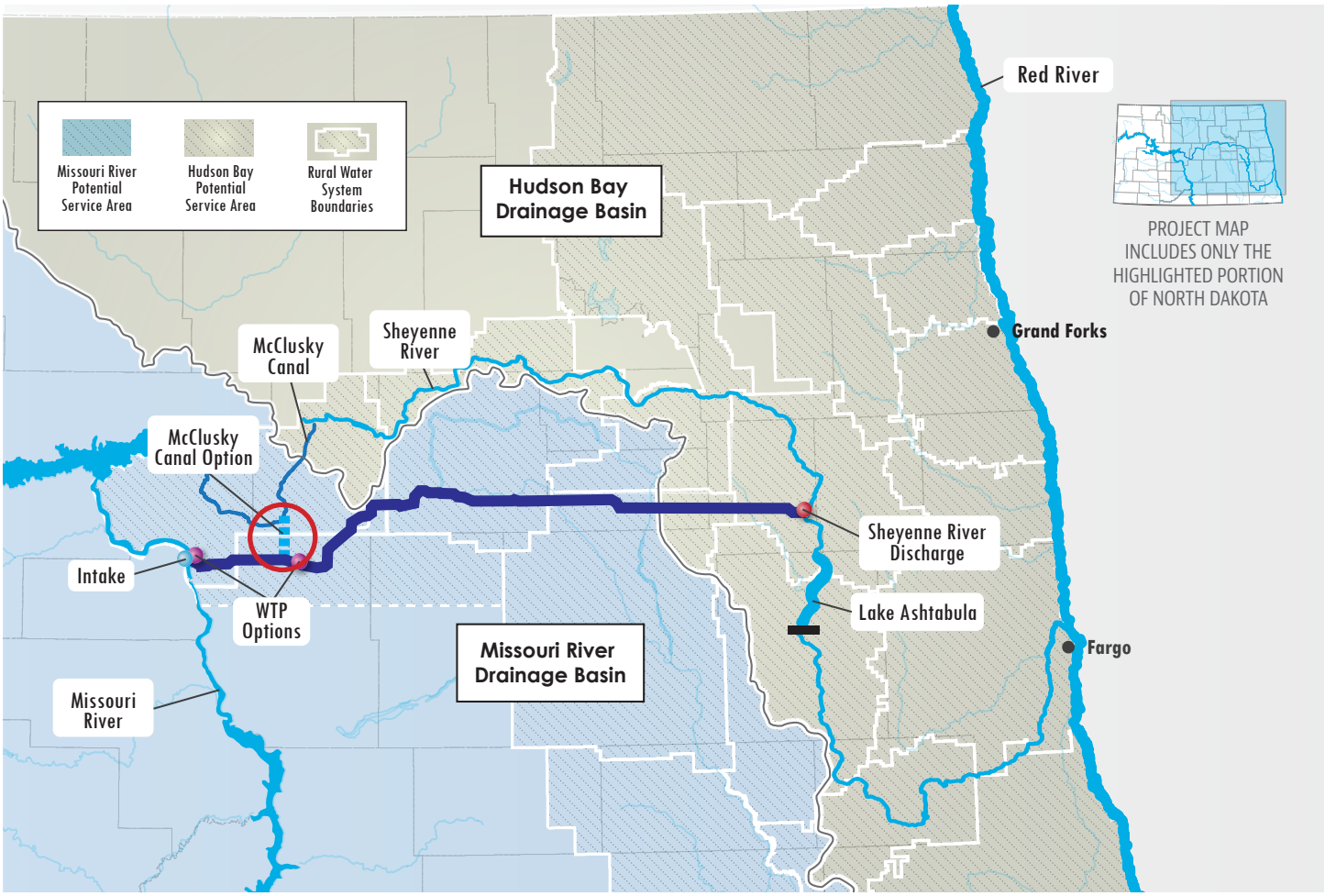
The option includes an intake into the McClusky Canal and six miles of pipeline to the point where it meets up with the State RRVWSP, which lies within the Missouri River Basin. Reclamation, a federal agency under the Department of Interior, must comply with the National Environmental Policy Act (NEPA) when making federal contracting decisions, and, accordingly, conducted an environmental review on what Reclamation termed the CNDWSP. After completing environmental review, Reclamation issued a Finding of No Significant Impact (FONSI), meaning the CNDWSP causes no significant environmental impacts. As such, Reclamation agreed to negotiate a contract with Garrison Diversion for the 20 cfs from the McClusky Canal.

MISSOURI LAWSUIT CHALLENGES BUREAU OF RECLAMATION:

The State of Missouri recently sued Reclamation, the U.S. Army Corps of Engineers (USACE), and Garrison Diversion, along with various political officials in their official capacity, alleging Reclamation and the USACE, a cooperating agency under NEPA, failed to consider impacts to the State of Missouri during Reclamation's environmental review and subsequent FONSI for the CNDWSP.

While Missouri's complaint references the State Project, it is important to note that this is a challenge of the Federal government's decision that the CNDWSP has no significant impacts. Since CNDWSP is simply an optional water source for part of the State Project, the litigation over this optional intake into the McClusky Canal will not halt or impact the State Project. ***If Missouri were successful in the lawsuit, it may delay or eliminate the opportunity to use the McClusky Canal as a water source, but it would not otherwise impact the State Project.***

PROJECT MAP WITH CENTRAL NORTH DAKOTA WATER SUPPLY EXTENSION CIRCLED IN RED:



SECTION 14.3 | PHASE 1 CONSTRUCTION FUNDING APPROVAL

SB2020 SECTION 14.3 REQUIREMENTS

Any funding received by the Garrison Diversion Conservancy District from the state water commission for the Red River valley water supply project during the 2017-19 biennium and the biennium beginning July 1, 2019, and ending June 30, 2021, is subject to the following requirements:

3. Any funding received to initiate construction of phase one prioritized project features identified in subsection 1 may be spent and construction of phase one may begin only after the budget section receives and approves certification from the state water commission and the state engineer that all items listed in subsection 1 have been accomplished.

STATUS

IN PROGRESS

DETAILS

- State Engineer and State Water Commission Certify Section 1 Completed and Budget Section Approval

The design of Phase 1 construction features are complete. The North Dakota State Engineer and North Dakota State Water Commission need to certify that all sections in Subsection 1 are completed as shown in this document.

Once certification is complete, the budget section must approve the certification.

SECTION 14.4 | QUARTERLY PROGRESS REPORTS TO WATER TOPICS OVERVIEW COMMITTEE

SB2020 SECTION 14.4 REQUIREMENTS

Any funding received by the Garrison Diversion Conservancy District from the state water commission for the Red River valley water supply project during the 2017-19 biennium and the biennium beginning July 1, 2019, and ending June 30, 2021, is subject to the following requirements:

4. Quarterly progress reports on the Red River valley water supply project from the Garrison Diversion Conservancy District to the water topics overview committee of the legislative management, during the 2019-21 interim.

STATUS

ONGOING

DETAILS

- Aug. 1, 2019
- Dec. 10, 2019
- Jun. 4, 2020

Members of the RRVWSP team have provided quarterly progress reports to the Water Topics Overview Committee, as required in SB2020. Recent presentations to the committee were given on the following dates: August 1, 2019; December 10, 2019; June 4, 2020.

Reports to the Water Topics Overview Committee will continue.

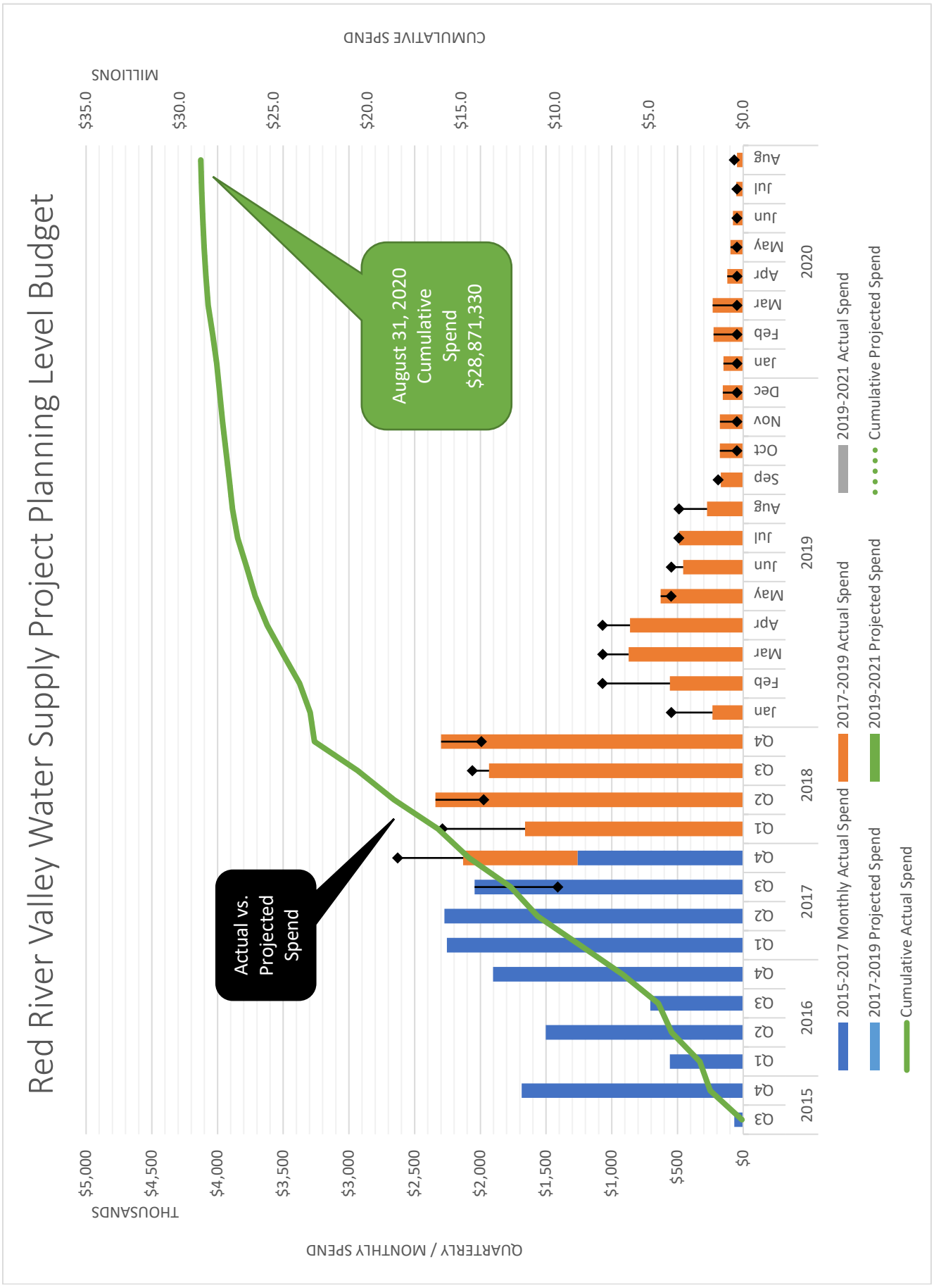
Red River Valley Water Supply Project
Planning Level Budget

August 31, 2020	Percent Complete	Current Estimate	Actual Expenses	Outstanding Expenses
Conceptual Design Subtotal	100%	$ 5,302,130	$ 5,302,130	$ 0
Preliminary Design Subtotal	100%	$ 10,217,606	$ 10,217,606	$ 0
Final Design				
Engineering				
Pipeline Final Design - 28 miles	100%	$ 3,320,000	$ 3,320,000	$ (0)
Trenchless Final Design	100%	$ 452,000	$ 452,000	$ (0)
Discharge Final Design	100%	$ 508,000	$ 507,556	$ 444
Land Services - Segments 1, 2a, 2b, 4	79%	$ 1,602,285	$ 1,262,718	$ 339,567
Geotechnical	99%	$ 544,000	$ 536,095	$ 7,905
Sediment Transport	98%	$ 396,000	$ 386,493	$ 9,507
Missouri River Intake Final Design	99%	$ 2,035,000	$ 2,012,713	$ 22,287
Upper Sheyenne Discharge Analysis *	93%	$ 111,723	$ 104,289	$ *7,434*
Unmanned Aircraft System Services	100%	$ 71,443	$ 71,443	$ (0)
Value Engineering	100%	$ 191,173	$ 191,173	$ 0
NDPDES Permit Application Supplement	100%	$ 395,000	$ 395,000	$ 0
Field Verification of PDR Pipeline Alignment	94%	$ 114,000	$ 106,801	$ 7,199
Construction Phase Engineering	*Upcoming*		$ -	$ -
Land Acquistion				
Acquire Options	99%	$ 60,000	$ 59,316	$ 684
Acquire Easements	101%	$ 1,295,889	$ 1,306,699	$ (10,810)
Acquire Real Estate	4%	$ 200,000	$ 7,413	$ 192,587
Financial, Administration, Legal, Etc.				
Financial Modeling/Cost Allocation	73%	$ 1,521,047	$ 1,108,187	$ 412,860
Program Management Set Up	104%	$ 553,000	$ 576,612	$ (23,612)
Program Management Information System	18%	$ 293,100	$ 53,955	$ 239,145
Administration (communications, LAWA)	90%	$ 550,000	$ 493,677	$ 56,323
Stakeholder Support	24%	$ 398,830	$ 95,869	$ 302,961
Legal	51%	$ 600,000	$ 303,585	$ 296,415
Undesignated	*0%*	$ -	$ -	$ -
Final Design, Easement & Administration Subtotal	**88%**	**$ 15,212,490**	**$ 13,351,594**	**$ 1,860,896**
Construction				
Pipeline Trenchless Construction	*Upcoming*		$ -	$ -
Discharge Construction	*Upcoming*		$ -	$ -
Intake Construction	*Upcoming*		$ -	$ -
Construction Subtotal	**0%**	**$ -**	**$ -**	**$ -**
Total Program Budget	**94%**	**$ 30,732,226**	**$ 28,871,330**	**$ 1,860,896**

2015/2017 State Appropriation $12,359,000	$ 12,359,000
2015/2017 LAWA Cost Share $1,373,225	$ 1,373,225
2015/2017 total	$ 13,732,225
2017/2019 State Appropriation**	$ 17,000,000
RRVWSP Program Budget	**$ 30,732,225**
2017/2019 Appropriation Spent to Date	**$ 15,139,105**
2017/2019 Committed Outstanding	**$ 1,860,897**
2017/2019 Not Committed	**$ -**

** not subject to local cost share*

*** not including $13 million for early out construction*


Red River Valley Water Supply Project Planning Level Budget
August 31, 2020 Cumulative Spend $28,871,330
Actual vs. Projected Spend
QUARTERLY / MONTHLY SPEND
THOUSANDS
$5,000
$4,500
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
CUMULATIVE SPEND
MILLIONS
$35.0
$30.0
$25.0
$20.0
$15.0
$10.0
$5.0
$0.0
2015
Q3
Q4
2016
Q1
Q2
Q3
Q4
2017
Q1
Q2
Q3
Q4
2018
Q1
Q2
Q3
Q4
2019
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2020
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
2015-2017 Monthly Actual Spend
2017-2019 Actual Spend
2019-2021 Actual Spend
2017-2019 Projected Spend
2019-2021 Projected Spend
Cumulative Actual Spend
Cumulative Projected Spend

RED RIVER VALLEY WATER SUPPLY PROJECT

2019 to 2021 Biennium Budget

(Early-Out Projects with Minimum Additional Spend)

June 9, 2020

No.	Scope of Work	Feature	Task Orders Auth	19/21 Biennium Project Development Budget (mil $)			Construction Budget per Biennia (mil $)[1,2,3]				
							19/21 Biennium				
				Total	State 75%	Local 25%	Total	State 90%	Local 10%	21/23	Future
1.	**Financial, Administration, Legal, Insurance, Etc.** Scope: Administration, legal, and financial modeling/planning Need: Annual Garrison Diversion budget for program admin	Administration of program, including financial, legal, public communication, administrative, insurance advising, etc. expenditures	Apr-20 Jan-21	$ 0.70 $ 0.70	$ 0.53 $ 0.53	$ 0.17 $ 0.17	$ -	$ -	$ -	$ -	*TBD*
2.	**Early-Out Missouri River Intake Pumping Station Wetwell** Scope: Bidding assistance and construction of intake wetwell Need: Early-out project to meet legislative intent	40' diameter x 65' deep concrete wetwell and initial site development for a 165-cfs pumping station at the Missouri River near Washburn, ND	Mar-20 Jun-20	$ 0.06	$ 0.04	$ 0.02	$ 3.97	$ 3.58	$ 0.39	$ -	$ -
3.	**Early-Out Transmission Pipeline East - Contract 5a** Scope: Bidding assistance, const mgmt, inspection, & constr Need: Early-out project to meet legislative intent	1.5± miles of 72" open-cut pipeline, including 96" diameter tunnel under RRV&W Railroad and U.S. Highway 281 south of Carrington, ND	Mar-20 Jul-20	$ 0.09	$ 0.07	$ 0.02	$ 8.58	$ 7.72	$ 0.86	$ -	$ -
4.	**Early-Out Discharge Structure on the Sheyenne River** Scope: Bidding assistance and construction of disch structure Need: Early-out project to meet legislative intent	145-cfs energy dissipation structure and outfall channel to Sheyenne River near Cooperstown, ND, including initial site development	Mar-20 Jun-20	$ 0.06	$ 0.05	$ 0.01	$ 1.89	$ 1.70	$ 0.19	$ -	$ -
5.	**Missouri River Intake Crib and Tunnel** Scope: Marine borings, final design services, and bidding assist Need: Design facility so it can be built by permit deadline	Marine geotechnical investigation; design of 8, 48" dia T-screens and crib in Missouri River and a 1,600' long 72" diameter tunnel from crib to wetwell	Mar-20 Jul-20 Jan-21	$ 0.61 $ 2.10 $ 0.12	$ 0.46 $ 1.58 $ 0.09	$ 0.15 $ 0.52 $ 0.03	$ -	$ -	$ -	$ 26	$ 49
6.	**Biota Water Plant and Main Pumping Station** Scope: NDPDES discharge permitting support services Need: On-call services for permit acquisition support	165-cfs water treatment facility; 165-cfs main pumping station and associated surge control building	Oct-20	$ 0.25	$ 0.19	$ 0.06	$ -	$ -	$ -	$ -	$ 111
7.	**Land Services**[4] Scope: Easement and intake/discharge real estate acquisition Need: Convert remaining Segment 2 options to easements	Conversion of expiring options to easements; and intake and discharge real estate costs and legal support	Mar-20 Jan-21	$ 0.20 $ 0.45	$ 0.15 $ 0.34	$ 0.05 $ 0.11	$ -	$ -	$ -	$ -	*$ 10*
8.	**Environmental Consulting** Scope: Assistance with wetlands and other permitting issues Need: Identify and address environmental issues as they arise	Provide on-call consulting for wetlands, environmental, cultural, and archeological aspects during the biennium	Jan-21	$ 0.10	$ 0.08	$ 0.02	$ -	$ -	$ -	$ -	$ -
9.	**Transmission Pipeline East - Contract 5b** Scope: Design wrap-up and bidding assistance Need: Keep program on track for 2029 completion	26.5± miles of 72" open-cut pipeline, including associated 96" diameter tunnels under wetlands, highways, railroads, etc.	Oct-20 Jan-21	$ 0.38 $ 0.10	$ 0.29 $ 0.08	$ 0.09 $ 0.02	$ -	$ -	$ -	$ 163	$ -
10.	**Program Management** Scope: Overall program management, planning, and support Need: Consulting services not covered by individual task orders	Overall project planning, mgmt, admin, scheduling, coordination, meeting prep/attendance, regulatory interface, etc. not included in individual TOs	20-May	$ 0.44	$ 0.33	$ 0.11	$ -	$ -	$ -	$ -	$ -
11.	**Reserve for Expected but Yet Undefined Projects** Scope: Reserve budget to accommodate work plan changes Need: Prudent reserve	A reserve providing flexibility to adapt to work plan changes during the biennium and for dealing with construction change orders	TBD	$ 1.14	$ 0.85	$ 0.29	$ -	$ -	$ -	$ -	$ -
TOTAL PROGRAM BUDGET				**$ 7.50**	**$ 5.66**	**$ 1.84**	**$ 14.44**	**$ 13.00**	**$ 1.44**	**$ 189**	**$ 170**

Notes:

1. Construction costs include management, engineering services during construction, inspection, field quality control, and construction.
2. Projects indicated for construction funding in a given biennium will be shovel ready for construction at the start of the biennium.
3. Future capital costs are escalated to an anticipated midpoint of construction at 3 percent per annum for the respective component with the RRVWSP expected to be finished by 2029. All future RRVWSP construction projects and costs are not shown.
4. Future land services costs are the amount likely to be paid to land owners for real estate, easements, crop damage and field obstructions. Costs for Segment 3 (McClusky Canal to Break Tanks) option to easement conversions and easements from scratch are not included in the estimates.

RRVWSP Work Plan Update
September 2, 2020

Goal

Spring 2016	Completed Conceptual Design and Cost Estimate
Summer 2017	Completed Preliminary Design and Cost Estimate for pipeline and pump station(s)
2017 - 2019	Complete Phased Final Design and Cost Estimates
2019 - 2027	Phased Bidding and Construction

Total draft budget to complete Conceptual, Preliminary and Final designs is $66 million. The ND legislature appropriated $12.359 million for the RRVWSP for the 2015-2017 biennium. The conceptual design phase has been completed; therefore, no further updates will be included in this report. The ND legislature appropriated $30 million for the RRVWSP for the 2017-2019 biennium. The ND legislature appropriated $30 million for the RRVWSP for the 2019-2021 biennium.

Preliminary Design

The conceptual design was released in September 2016. The majority of the preliminary design has been completed; of the $10 million cost estimate, approximately $15,000 remains to be expended on the task orders. Moving forward with limited funds, it is cost effective to start project phasing. The Implementation Plan will provide a road map to move forward with items that must be completed first, which includes permit phasing, design phasing and construction phasing.

Final Design

The draft preliminary design was released early October 2017. Moving forward with limited funds, it is cost effective to start project phasing. Priority items to move forward first with final design and construction are discharge structure, 1.5 miles of pipeline and portions of the intake.

1) Pipeline segment 28 miles – This task order will begin final design on a portion of the RRVWSP and is the first of several pipeline design task orders that will be executed to complete the project. Given the current level of state and local funding allocated for the project's design and construction, the length of the initial segment selected for final design and preparation of construction contract documents is approximately 28 miles. The general location of the 28-mile pipeline segment is in Foster and Wells Counties. The alignment and limits of the pipeline being designed under this task order are identified on the RRVWSP route overview map. This task order will deliver bid ready documents for this 28-mile segment. Estimated cost is $3,840,000.

> Status – A 1.5-mile pipeline segment draft final design has been submitted for review. The NDDOT issued a permit for crossing Highway 52/281 on May 7, 2020.

2) Geotechnical – This task order will allow engineers to drill supplemental borings along the Preliminary Design Report (PDR) pipeline alignment and discharge site and to complete laboratory testing of soil samples collected. These supplemental borings are necessary to characterize subsurface soil conditions not covered by the 2008 investigation. Relevant existing

soils data from the 2008 investigation will be used to the maximum extent practical to support activities. Estimated cost is $544,000.

Status – All borings and soil resistivity tests are complete. A draft Geotechnical Baseline Report and Corrosion Protection Design Guide has been developed.

3) Sediment Transport Analysis – This task order will provide information as requested by the North Dakota State Water Commission (SWC) to evaluate the Sovereign Lands Permit for the Missouri River intake, as well as support the overall design of the intake screens. Estimated cost is $396,000.

Status – All field work was completed prior to the river freezing. A request was made to USACE for a river analysis model HEC-RAS. Developed 1D and 3D models and completed geomorphic analyses. The final Sediment Transport Report has been sent to and approved by the SWC.

4) Trenchless Crossings – This task order is for final design of tunneled or trenchless crossings in the first 28**-**mile section of pipeline selected for final design. The general outcome of this task order will be the preparation of construction contract documents. Estimated cost is $452,000.

Status – The 90% plans and specifications were ready February 2019.

5) Discharge Site Structure – This task order is for final design of the discharge structure**.** The general outcome of this task order will be the preparation of construction contract documents. Estimated cost is $508,000.

Status – The 99% designs are available for review.

6) Land Services – This task order is for survey support services, easement and option acquisition for RRVWSP parcels**.** The RRVWSP pipeline is separated into segment 1, 2a, 2b, 3 and 4. Authorization has been approved to move forward with only segment 1. Estimated cost for segment 1 is $556,446. A second authorization was approved for segment 2a, 2b and 4. Estimated cost is $1,232,839.

Status – Pipeline Segment 1 status; 99% easements signed. All letters to landowners asking for converting options to easements and asking for options have been sent. The appraisal reports for the intake and discharge land have been received.

7) Drone Aerial Coverage – This task order is for unmanned aircraft system services for the initial 28-mile pipeline corridor, discharge site and intake site. Oblique view videos will be captured and incorporated into the GIS database. Estimated cost is $71,443.

Status – The intake, discharge and pipeline segment 1 have been completed.

8) Missouri River Intake – This task order is for preliminary design of the Missouri River intake including a submerged crib, a tunnel from the crib to a pumping station on the river bank, and a pumping station, including utility extensions necessary and site civil design in order to develop the site. To support early out construction, final designs will be performed for the wet well, access road for construction vehicles and site drainage. Estimated cost is $1,985,000.

Status – USACE has issued Nation Wide (NW) 12 permit for the intake. The Missouri River Intake Pump Station physical modeling is complete. The intake design passed all Hydraulic Institute tests. The 99% design for the wet well is ready for review. Received USACE coverage under NW 6 and 33 for the marine boring investigations.

9) NDPDES Permit Application Supplement – This task order provides support documentation on how the proposed RRVWSP water treatment plant meets the established requirements of the Boundary Waters Treaty Act. Estimated cost is $195,000.

Status – The NDPDES permit application was submitted to NDDOH on July 31, 2018. Received draft permit March 23, 2020, which has a 60-day comment period. The final NDPDES permit was issued August 28, 2020.

10) Value Engineering – HDR was selected to complete a value engineering study on the RRVWSP. Estimated cost is $198,539.

Status – The value engineering study workshop was held September 10-14, 2018. The draft report was issued on September 28, 2018, and the final report was submitted January 1, 2019.

11) Value Engineering Assistance – This task order provides Black and Veatch support services to the value engineering process. Estimated cost is $64,000.

12) StateMod Amendment No. 3 – This task order provides support to respond to GDCD, LAWA, stakeholder and SWC requests for additional analysis. Estimated cost is $193,428.

13) Field Verification of PDR Pipeline Alignment - This task order provides support services to field verify 139 miles of the PDR alignment not currently under design. Estimated cost is $164,000.

14) Transmission Pipeline-East Bidding Assistance – This task order allows engineer to assist Garrison Diversion with public advertisement and bidding for construction of an early out pipeline project named Contract 5a falling under the Transmission Pipeline-East segment of the 167-mile RRVWSP. Estimated cost is $86,000.

15) Discharge Structure & Site Development Bidding Assistance – This task order allows engineer to assist Garrison Diversion with public advertisement and bidding for construction of an early out discharge structure on the bank of the Sheyenne River. Estimated cost is $56,000.

16) Missouri River Intake Pumping Station Wet Well & Site Development Bidding Assistance - This task order allows engineer to assist Garrison Diversion with public advertisement and bidding for site development and construction of a pumping station wet well near the Missouri River. Estimated cost is 56,000.

17) Missouri River Intake Geotechnical Investigation and Reporting – This task order includes the planned tunnel borings along the tunnel alignment from the pump station to the crib in the Missouri River. Estimated cost is $608,000.

Status – Field work started August 24, five river borings and three land borings were completed on August 31.

Financial Modeling & Stakeholder Outreach

1) Municipal Advisor – Ernst & Young Infrastructure Advisors (EYIA) provide municipal advisory services for the RRVWSP. The overall objective is to develop a robust financial plan to finance the RRVWSP. The model will include construction schedule alternatives, capital debt structure options and ongoing operational and renewal costs. Estimated cost is $508,872.

Status – EYIA has refined the financial models based on effective construction schedules and debt financing approaches. The financial model includes quantified market risks and various cost-share alternatives. This work is on hold until further direction is received from stakeholders/policymakers. EYIA's work is jointly occurring and being incorporated into modeling being completed by AE2S Nexus and Black & Veatch. The models are reviewed by the LAWA Financial Advisory Committee.

2) Financial Modeling/Cost Allocation – The task order is for AE2S Nexus to assist EYIA in development of the overall financial plan and use that plan as the basis for the cost allocation model for each participating system. Estimated cost is $512,175.

Status – The cost allocation model was refined to include a tiered allocation structure, which considers how project users will benefit from the project by assessing water supply needs, as well as access to project water. Feasibility and ability to pay studies are being conducted for roughly ten systems - both large and small. This work is in conjunction with the work being completed by EYIA.

3) Stakeholder Re-engagement – This task order will provide support in meeting with each of the 35 systems that signed development agreements. The objective of each meeting is to obtain a signed Project Participation Agreement and Water Service Contract. Estimated cost is $398,830.

Status – Reevaluating financial modeling and outreach.

Program

1) Program Management – The overall RRVWSP is expected to spend $21.94 million in the 2019-2021 biennium and potentially $180 million or more the next biennium. The objective of this task order will support the development and maintenance of a variety of program management support tools to help successfully execute the project. The tools and processes are expected to be developed and implemented during this biennium and be ready to support a significantly increased program size in the following biennium. Estimated cost is $491,000.

Status – Program management meeting #1 focused on all aspects of PM, PM #2 focused on the schedule, and other meetings were held developing PM tools and gaining knowledge about program delivery models. Draft Program Management Plan, Construction Management Plan and Design Guidance Manual have been submitted for review. A risk management was held focusing on short term risk to the project.

2) Program Management Information System – This task order will assist GDCD in making initial contact with vendors and to solicit formal submittals from those vendors to provide hardware, software and services. Estimated cost is $43,100.

3) Program Management 2019 to 2021 – This task order allows the engineer to assist Garrison Diversion in developing the RRVWSP program. Included items are ongoing calls and meetings to facilitate and support communication and coordination between Garrison Diversion staff and external stakeholders and continue to use previously developed tools to guide the program. Estimated cost is $436,000.

LAKE AGASSIZ
WATER AUTHORITY

2020 Budget Analysis
For the period of January 1, 2020- August 31, 2020

Income	2020 Budget	Actual as 08/31/2020	Balance of Budget
Dues Income	$ 31,500.00	$ 30,700.00	$ 800.00
Interest Income	$ 75.00	$ 47.94	$ 27.06
Miscellaneous	$ -	$ 117.00	$ (117.00)
Cost Share/Development Agr.	$ -	$ -	$ -
Total Income	$ 31,575.00	$ 30,864.94	$ 710.06
Expenses			
Dues Expenses	$ 1,290.00	$ 1,000.00	$ 290.00
Accounting	$ 9,000.00	$ 6,109.42	$ 2,890.58
Directors Expense	$ 500.00	$ -	$ 500.00
Insurance	$ 550.00	$ 501.00	$ 49.00
Service Fees	$ -	$ -	$ -
Engineering	$ -	$ -	$ -
Adm/Legal/Financial	$ 111,500.00	$ 41,813.88	$ 69,686.12
Total Expenses	$ 122,840.00	$ 49,424.30	$ 73,415.70
Net Income (Loss)	$ (91,265.00)	$ (18,559.36)	$ (72,705.64)

Account Activity		
Beg. Bank Balance 1-1-2020		$ 712,567.63
Income Received		$ 30,864.94
Total Funds Available		**$ 743,432.57**
#1159 ND Water Coalition	$ 1,000.00	
#1160 Ohnstad Twichell P.C	$ 2,747.50	
Deluxe-Bank Deposit Slips	$ 109.42	
#1161 Ohnstad Twichell P.C	$ 5,720.00	
#1162 Ohnstad Twichell P.C	$ 3,196.38	
#1163 Eide Bailly	$ 6,000.00	
#1164 Ohnstad Twichell P.C	$ 4,232.50	
#1165 Garrison Diversion	$ 25,625.00	
#1166 Ohnstad Twichell P.C	$ 292.50	
#1167 Insure Forward	$ 501.00	
Total Expenses	**$ 49,424.30**	
Ending Bank Balance		**$ 694,008.27**