

Sustainability and Resiliency Committee Meeting

November 21, 2023 – 1:00pm

City Commission Chambers

Agenda

- 1. Roll Call**
- 2. Approval of Agenda**
- 3. Approval of Minutes from August 8, 2023, Meeting**
- 4. Food and Water Resiliency Initiatives**
 - a. Great Plains Food Bank – Pantry Locations on MAT Bus Routes (Zoe Absey)
 - b. Lake Agassiz Water Authority - ENDAWS Presentation (Bruce Grubb)
- 5. Sustainability Work Plan Update - HDR (Colin Rohlfing)**
- 6. SRC Bus Wrap Update – Youth Initiative (Bruce Grubb and Abhijna Kavasseri)**
- 7. Public Comment**
- 8. Next Meeting**
 - February 13, 2023 (tentative)

**Sustainability and Resiliency Committee
City Commission Chambers
August 8, 2023
3:00 p.m.**

The meeting of the Sustainability and Resiliency Committee was held in the City Commission Chambers at Fargo City Hall at 3:00 p.m., Tuesday, August 8, 2023.

Present:

John Strand (chair), City Commissioner
Bruce Grubb, City Administration
Mark Williams, Assistant Planning Director
Brenda Derrig, Assistant City Administrator
Ben Dow, Public Works Director
Becki Majerus, Director of Facilities Management
Shawn Ouradnik, Inspections Director
Julie Bommelman, Transit Director
Abhinjuna Kavasseri, Youth Initiative Representative
Greta Gramig, At-Large Member of the Public
Mike Williams, At-Large Member of the Public (via video conference)
Shawn Paschke - Xcel Energy Representative (Ex-officio)
James Hand, Fargo School District Representative (Ex-officio)
Tim Mahoney, Mayor (present at 3:30 p.m.)

Absent:

Jennifer Sweatman, At-Large Member of the Public
Casey Steele, At-Large Member of the Public
Zoe Absey, At-Large Member of the Public
Paul Matthys, Cass County Electric Cooperative Representative (Ex-officio)

Chair Strand called the meeting to order.

Approval of Agenda

Ms. Gramig moved, second by Mr. Dow that the agenda be approved as read. There was unanimous approval.

June 13, 2023 Minutes Approved

Mr. Grubb moved, second by Ms. Bommelman that the minutes from the June 13, 2023 meeting be approved as read. There was unanimous approval by all the members present.

North Dakota Clean Cities Presentation

Heather Betts, Manager of North Dakota Clean Cities, said the group serves as a forum for local stakeholders to connect and collaborate on saving energy and using affordable alternative fuels. She said the group also provides support and resources on new transportation technologies and infrastructure development as well as helping stakeholders identify cost-effective solutions. Clean Cities has a 30-year history of facilitating change, she stated, and started with six coalitions in 1993 and has grown to

more than 75. She said the creation of Clean Cities coalitions is rooted in legislation, including the 1975 Energy Policy and Conservation Act, the Alternative Motor Fuels Act of 1988 and the Clean Air Act Amendments of 1990 and the Energy Policy Act of 1992. Participation in Clean Cities is voluntary, she said, and coalitions draw local stakeholders from the public and private sectors. Clean Cities has nearly 18,000 stakeholders, including 39 percent from the private sector and 61 percent from the public sector. An active network of government agencies, industry representatives, community organizations and businesses work through Clean Cities to exchange information and resources, she said. North Dakota Clean Cities is managed by the American Lung Association, she said, and is supported by diverse stakeholders, including fuel and equipment providers, fleet managers, public utilities, technical experts, non-profit organizations, automakers and private citizens. She said the NDCC helps its industry partners raise awareness of clean air choice fuels among consumers and fleet operators. She said one of the projects the NDCC is involved in now is an the Upper Midwest Inter-Tribal EV Charging Community Network called Electric Nation, a project to ensure all 23 Native nations in North Dakota, South Dakota and Minnesota have at least one Level 2 charging station. Another current project is Empower, she stated, which engages with employers in North Dakota to promote workplace charging, provide EV charging education and advisory support and connect workplaces to local businesses and utilities for planning and installation of EV charging stations. She said there are 244 public stations in North Dakota with alternative fuels, including 190 EV charging ports, 38 ethanol pumps and 16 propane locations. She then shared information on EV and other types of alternative fuel vehicles registered in North Dakota, including in 2021, there were 400 electric vehicles registered in North Dakota, along with 5,400 hybrid electric, 16,000 biodiesel and 100 compressed natural gas.

In response to a question from Commissioner Strand asking about alternative fuel vehicles used by the City, Mr. Dow said biodiesel vehicles were tried about 12 years ago; however, there were issues with filters. He said the refinement process for biodiesel is better now so he is looking at biodiesel again. He said the City has tried other hybrid vehicles over the years, some with good success and some not so good. He said there is no funding in 2024 for hybrid vehicles; however, when it comes time to replace the Solid Waste facility, that will definitely come with a lot of electrical infrastructure and hopefully some electric vehicles. Fleets that do a lot of starting and stopping in a steady route every day are good candidates for the future of large-scale electric vehicles.

Mr. Grubb said several years ago, hybrid buses were tried and Ms. Bommelman said in 2011 two diesel/electric hybrid buses were purchased and Transit now has eight diesel electric hybrids and they do get better mileage. She said once the engine hits 25 to 30 miles an hour, it starts using diesel and prior to that it uses electricity, so you regenerate energy through the braking system. She said moving forward Transit is looking more towards propane in the future.

Mike Williams said battery technology has not evolved much in the last 20 or so years and now solid-state batteries have a lot more resilience, they can last twice as long on a charge and can charge faster and have less a propensity of fire. He said that it is exciting.

In response to a question from Commissioner Strand asking if cities have to become members of the Clean Cities group in order to get services, Ms. Betts said membership is not required.

Mr. Grubb said with the new Police station, idle times and the associated emissions have been reduced due to the fact that squad cars are now kept indoors.

Sustainability Work Plan Update:

Mr. Grubb said this will be a reoccurring topic on the agenda and there has not been much progress yet on a sustainability work plan; however, one of the other items discussed was the formation of a working group subcommittee to assist in some of the working sessions.

Colin Rohlifing, Sustainable Development Director with HDR (Henningson, Durham & Richardson, Inc.) said getting information from departments within the City will help HDR provide better content for the City for decarbonization planning. He said what needs to be put in place is how is this plan funded and how to put together a work plan for procurement. He said a number of different categories for decarbonization were looked at, including buildings, utilities, fleet vehicles, landfill and waste water and it was determined the main focus in Phase One will be buildings and utilities. He said he is not going to ignore fleet vehicles or waste water and there have already been some great things done so far; however, some ideas and strategies are needed to get things moving with regards to operational emissions. He said another priority is an action timeline for procurement, grants and funding. There will be a lot of analysis for peer review from cities that have done some of the things similar to Fargo, he stated, and for the first phase, those from the student committee should be involved, anyone who has detailed information about building facilities and utilities, the grid reliability, design standards, as well as anyone who has gone after funding or grants.

Commissioner Strand said if anyone wants to participate, this is a chance to roll up their sleeves and start aiming the Committee in a direction that is going to have traction. He said energy up front will really have an impact.

Mr. Grubb said he will check everyone's availability and the initial meeting would be about three hours. He said the biggest impact will be a key facilities list and utility information for these facilities. A few years of data will be helpful and if it is not available, there is still a way to move forward by using industry-wide standards, calculations and approximations. He said another thing that would be helpful would be any past energy master plans, retrofits, upgrades, any future renovations or building plans, upcoming deferred maintenance and capital improvement plans. A list of fleet vehicle makes and models will be helpful along with waste water plant specifications, past disaster impact reports, and what it costs the City to clean up after floods or other natural disasters such as droughts and wildfires. He said participants will include Brenda Derrig, Nicole Crutchfield, Sean Ouradnik, Public Works and Julie Bommelman.

SRC Bus Wrap – Youth Initiative and Arts and Culture Commission:

Mr. Grubb said Abhinjuna Kavasseri has been working on a draft for seeking submissions for art for a bus wrap. He said he wanted to discuss this further with the Arts and Culture Commission; however, that group's next meeting was cancelled and will not meet now until mid-November. He said he would like to schedule the next SRC meeting sometime in November to coincide with the next Arts and Culture Commission meeting, and to combine the October and December SRC meetings into a meeting in November. He said Ms. Kavasseri will reach out to the high school art teachers in early September to submit ideas by early October so the Arts and Culture Commission can review the artwork and have a recommendation at its November meeting. They then could give a recommendation to the SRC at the October/December meeting in

November, which will help keep this project on track to get it to the City Commission for approval on November 27th.

In response to a question from Mr. Grubb asking what kind of reaction is she getting from students when she lets them know about the bus wrap project, Ms. Kavasseri said she reached out to some students at the end of the school year in May and did not get any feedback; however, she got some student names and sent it to them directly and they thought it was a cool idea. She said it would be best to send this out after school starts when students are more settled in.

Mr. Grubb said another idea is to offer some prize money, maybe \$500.00, and perhaps try to get a company to sponsor the stipend, such as Gate City Bank.

Next Meeting

The tentative date for the next meeting is November 21, 2024.

The meeting adjourned at 4:05 o'clock p.m.

4, a.

ROUTE 20

STOPS

1. 21st Ave. S.
2. 22nd St. S.
3. West Fargo High School
4. West Fargo City Hall
5. West Fargo High School
6. West Fargo Senior Center
7. West Fargo
8. Center St.
9. Cass County Jail
10. South East Human Services
11. Central Business Center

Church of God's Word
 Tuesday call for appointment
 401 Washington St. S.
 Thursday/Friday call for appointment
 Full Services and Sacraments of the
 church: (701) 232-7972
 207 W. Main Ave., West Fargo

West Fargo Rate
 Free on other M.T.W. call area at
 701-232-0394
 1842 20th St. S. West End

Salvation Army
 Meals served M-F & Sat at 7:45
 am & 11:15 am-12:30 pm
 701-232-5565
 304 Roberts St. Fargo

New Life Center
 Meals served all week from
 12pm-12:30pm and 5pm-6:30pm
 701-235-4453
 1902 3rd Ave N. Fargo

Emergency Food Pantry
 Available for each household
 once a month. Open M-F 10:
 15:30 am and 1:30-3:30 pm
 701-232-6227
 1315 South 20th St. Fargo

Tri-City Habitat Mission
 Open Monday: 6:00 pm
 6:00 pm. Available weekly:
 701-235-0115
 1428 27th St. S. Fargo

ROUTE 33

STOPS

1. NDSU Transit Hub
2. Family Farm
3. Kilar Hall
4. University Village
5. S&M&C
6. Commercial District

New Life Center
 Meals served all week from
 12pm-12:30pm and 5pm-6:30pm
 701-235-4453
 1902 3rd Ave N. Fargo

House of Judah Ministry
 Available every other Saturday:
 3pm-5 pm
 917-212-2244
 307 Main St. Suite B

Emergency Food Pantry
 Available for each household once a
 month. Open M-F, 10:15-11:30 am and
 1:30-3:30 pm
 701-232-6227
 1315 South 20th St. Fargo

Salvation Army
 Meals served M-F & Sat at 7:45
 am & 11:15 am-12:30 pm
 701-232-5565
 304 Roberts St. Fargo

Peace Lutheran Church
 Open Thursday from 3:00pm-4:00pm
 701-232-7188. 1811 12th Ave N. Fargo

SCAN HERE to GET HELP NOW



This FREE guide is here for all in need of food support.

Each Route has its designated stops marked with a black/blue pinpoint.

Colored flags represent the food pantries/ meal sites that are within 10-15 minutes walking distance.

CONTACT US

FARGO
 1720 3rd Ave N
 Fargo, ND 58102
 (701) 232-6219

BISMARCK
 1315 South 20th Street
 Bismarck, ND 58504
 (701) 751-6188

info@greatplainsfoodbank.org



In partnership with



ROUTE 1

STOPS

1. LTC
2. Main Ave/4th St S
3. Community (200 St)
4. Higgins Elementary
5. Market
6. Brookstone West
7. Community (7th St)
8. Mountain Public Library

Place for Home
Open: Tuesday - Friday 11 am - 2 pm
110 1st Ave SW
216-244-6100

House of Judah Ministry
Available every other Saturday
1 pm - 2 pm
617-218-2244
817 Main Ave Suite B

Emergency Day Road Patrol
Open Monday - Thursday
12:00 pm - 4:00 pm
216-244-7029
1208 Main Ave - Mountain

Mobile Library
Hours: Tuesday 11 - 12:30 pm, Wednesday 12:30 - 2:00 pm, Thursday 2:00 - 3:30 pm
888-333-2244
817 Main Ave Suite B

ROUTE 2

STOPS

1. LTC
2. Main Ave/6th St S
3. HomeAche's
4. MDCUN (11th St)
5. Mountain Elementary
6. Market
7. MDCUN (4th St)
8. Mountain Glass

House of Judah Ministry
Available every other Saturday
1 pm - 2 pm
917-218-2244
817 Main Ave Suite B

Emergency Day Road Patrol
Open Monday - Thursday
12:00 pm - 4:00 pm
216-244-7029
1208 Main Ave - Mountain

ROUTE 3

STOPS

1. Market
2. 12 Ave SW/12th St S
3. Cash West
4. Target
5. Mountain High School
6. 20th St/12th Ave
7. 24 Ave SW/14th St

Place for Home
Open: Tuesday - Friday 11 am - 2 pm
216-244-6100
2419 12th Ave N - Mountain

House of Judah Ministry
Available every other Saturday
1 pm - 2 pm
917-218-2244
817 Main Ave Suite B

Emergency Day Road Patrol
Open Monday - Thursday
12:00 pm - 4:00 pm
216-244-7029
1208 Main Ave - Mountain

ROUTE 4

STOPS

1. LTC
2. US Bank
3. 14th St/15th Ave
4. Clay County Courthouse
5. Churches United
6. Walmart
7. Cash West
8. 8th Ave NW/4th St
9. 20th St NW/7th Ave
10. Mountain Home
11. 14th St/1st
12. Mountain High School
13. Mountain Center Mall
14. Parkview Terrace

Emergency Day Road Patrol
Open Monday - Thursday
12:00 pm - 4:00 pm
216-244-7029
1208 Main Ave - Mountain

Mobile Library
Hours: Tuesday 11 - 12:30 pm, Wednesday 12:30 - 2:00 pm, Thursday 2:00 - 3:30 pm
888-333-2244
817 Main Ave Suite B

ROUTE 14

STOPS

1. LTC
2. Pine Pine Plaza
3. Mountain Center
4. School
5. Agency 4
6. Mountain Hospital
7. Agency 1
8. Mountain College
9. West Acres
10. YMCA
11. Lion's
12. Mountain's
13. Community

YMCA
Open M-F, Appointment only, call 24 hours ahead. Inclusive ministry.
702-232-3448
1115 South University Dr - Fargo

Mountain Center
Available the third Monday of every month, 6:30 pm - 8:00 pm
702-232-3448
1115 South University Dr - Fargo

Emergency Day Road Patrol
Open: Wednesday - Friday, Saturday, Sunday
12:00 pm - 4:00 pm (inclusive ministry)
216-244-7029
1208 Main Ave - Mountain

ROUTE 15

STOPS

1. LTC
2. Phillips Gas Station
3. T & M
4. Target
5. West Acres Mall
6. Target
7. T & M
8. T & M
9. Walmart
10. Job Service
11. Cash County Court

Emergency Day Road Patrol
Available the third Monday of every month, 6:30 pm - 8:00 pm
216-244-7029
1208 Main Ave - Mountain

Mobile Library
Hours: Tuesday 11 - 12:30 pm, Wednesday 12:30 - 2:00 pm, Thursday 2:00 - 3:30 pm
888-333-2244
817 Main Ave Suite B

ROUTE 16

STOPS

1. LTC
2. Fargo High School
3. Underwood Park
4. Eschbach Clinic
5. South High
6. Cash West (week)
7. West Acres

Mountain Home
Hours: Monday - Friday 10 am - 5 pm, Saturday 10 am - 12 pm, Sunday 12 pm - 4 pm
702-232-3448
817 Main Ave Suite B

House of Judah Ministry
Available the third Monday of every month, 6:30 pm - 8:00 pm
702-232-3448
817 Main Ave Suite B

ROUTE 17

STOPS

1. LTC
2. Mountain Elementary
3. YMCA
4. Mountain Carriage
5. New Life Center
6. Center, Inc.
7. University Manor

Emergency Day Road Patrol
Available the third Monday of every month, 6:30 pm - 8:00 pm
216-244-7029
1208 Main Ave - Mountain

Mobile Library
Hours: Tuesday 11 - 12:30 pm, Wednesday 12:30 - 2:00 pm, Thursday 2:00 - 3:30 pm
888-333-2244
817 Main Ave Suite B


ROUTE 18

STOPS

1. LTC
2. Hody
3. Bernheim
4. OSHA
5. Eschbach High School
6. Post Office
7. Mountain
8. Walmart

House of Judah Ministry
Available every other Saturday
1 pm - 2 pm
917-218-2244
817 Main Ave Suite B

Emergency Day Road Patrol
Open Monday - Thursday
12:00 pm - 4:00 pm
216-244-7029
1208 Main Ave - Mountain





**RED RIVER VALLEY
WATER SUPPLY PROJECT**

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

LAKE AGASSIZ WATER AUTHORITY SPECIAL BOARD MEETING

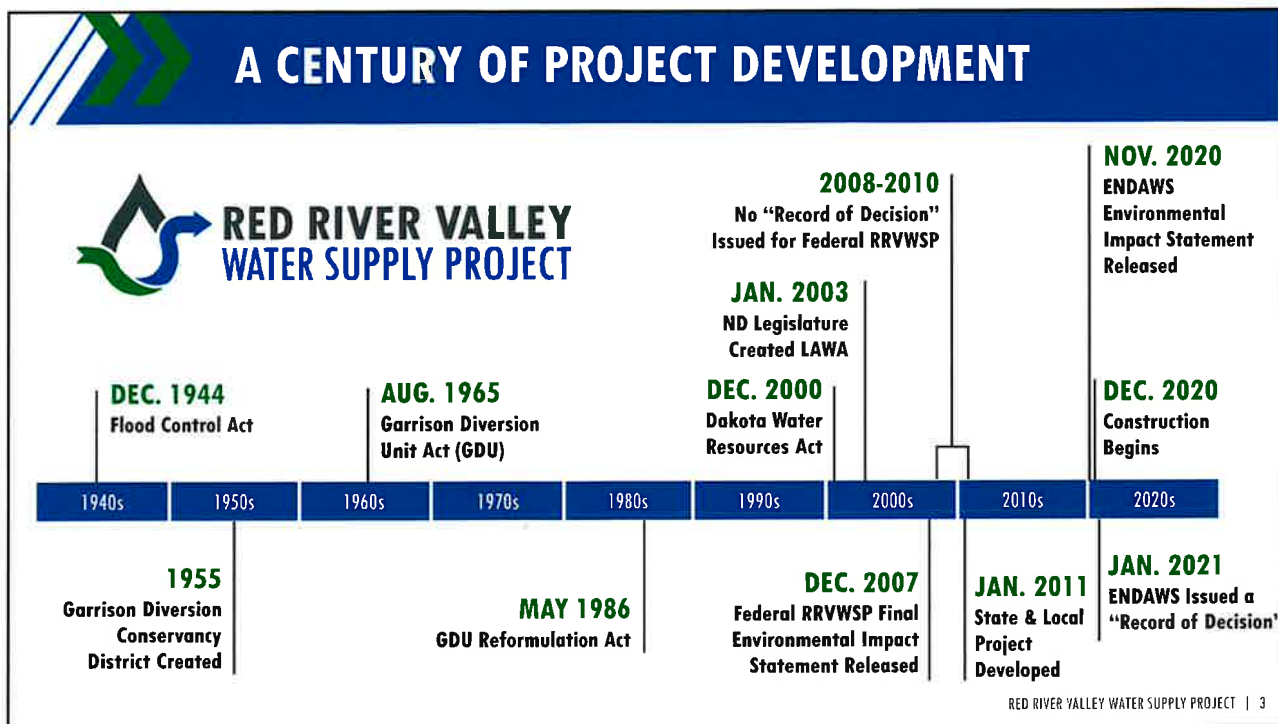
With: Senator Hoeven, Deputy Secretary of the Interior Tommy Beaudreau, and
Bureau of Reclamation Commissioner Camilla Touton

OCTOBER 11, 2023



PRESENTATION OVERVIEW

- History & Need
- Project Overview
- Financial Overview
- Construction Progress



FEDERAL, STATE AND LOCAL PARTNERSHIP

GARRISON DIVERSION CONSERVANCY DISTRICT

Represents the State of ND

ND CENTURY CODE CH. 61-24-01

To study and provide for the water needs of eastern North Dakota communities and water districts and western Minnesota communities through a Red River Valley Water Supply Project.

ND STATE WATER COMMISSION & WATER TOPICS OVERVIEW COMMITTEE

LAKE AGASSIZ WATER AUTHORITY

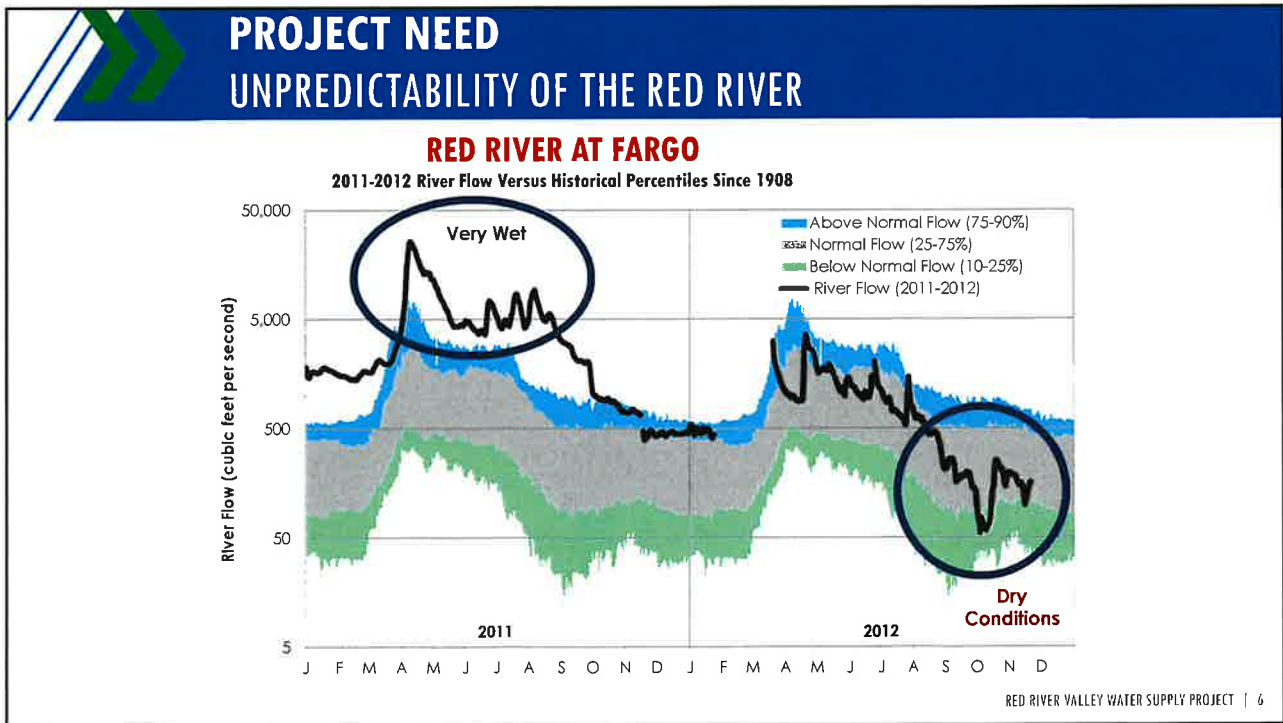
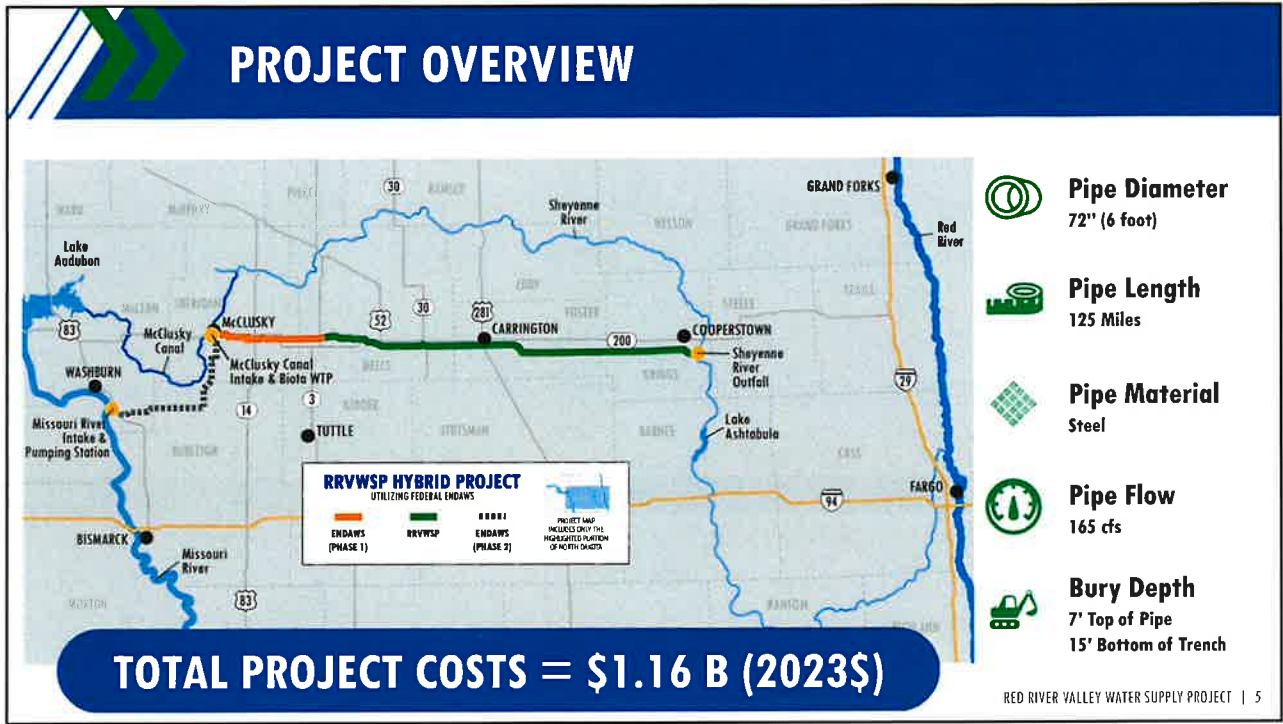
Represents Local Users

ND CENTURY CODE CH 61-39-04.1

The Lake Agassiz Water Authority and the Garrison Diversion Conservancy District shall continue studying, planning, developing, and constructing a nonfederal project to meet the water supply needs of eastern and central North Dakota.


FEDERAL GOVERNMENT

RED RIVER VALLEY WATER SUPPLY PROJECT | 4

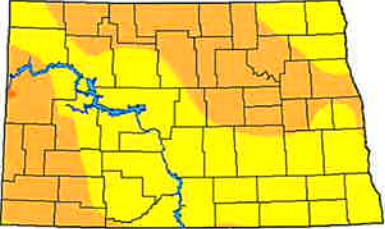


CLIMATE RESILIENCY | 18-MONTH CYCLE

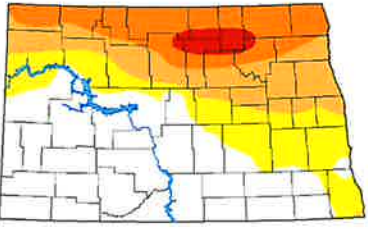
JULY 12, 2022



MARCH 21, 2023



SEPTEMBER 7, 2023



“We live in this highly dynamic, changing climate. In 1975, the Red River in Fargo went up to the highest point it’s ever gone in the summer. The next year the Red River was dry. That’s the reality of where we live.”

DARYL RITCHISON
 Director of the North Dakota Agricultural Weather Network (NDAWN)

- Abnormally Dry
- Moderate Drought
- Severe Drought
- Extreme Drought
- Exceptional Drought


RED RIVER VALLEY WATER SUPPLY PROJECT | 7

RED RIVER VALLEY WATER SUPPLY PROJECT

EXTREME WATER SUPPLY SHORTAGES EXIST FOR THE DROUGHT FROM 1930 TO 1940

▼

Models Indicate the Project will Operate More Extensively than Previously Anticipated During MODERATE Drought Periods such as those Seen in the 1950s, 1960s, 1970s, 1980s, 1990s, 2000s

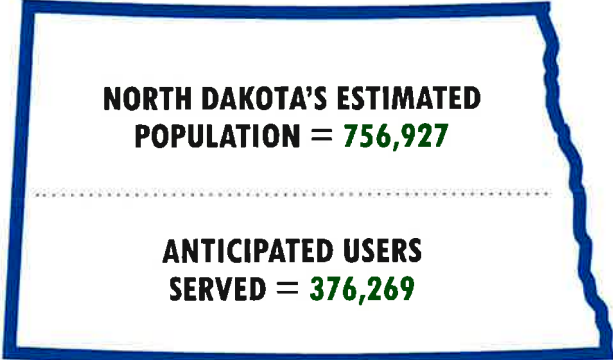


RED RIVER IN 2021

RED RIVER VALLEY WATER SUPPLY PROJECT | 8

CURRENT & FUTURE POTENTIAL POPULATION SERVED

THE PROJECT IS AN EMERGENCY WATER SUPPLY FOR APPROXIMATELY 50% OF NORTH DAKOTA'S POPULATION



NORTH DAKOTA'S ESTIMATED POPULATION = 756,927

ANTICIPATED USERS SERVED = 376,269


2075 Anticipated Users Served = 500,000+
(300,000+ in Fargo & West Fargo)

50% of State's Taxable Sales are located within the project's service area


RED RIVER VALLEY WATER SUPPLY PROJECT | 9

FEDERAL BENEFITS


CURRENTLY UTILIZING ONLY 3% CAPACITY OF GDU FACILITIES



End users will pay for the federal water service, so ENDAWS will provide a steady revenue stream for the Federal government



End users will pay a portion of O&M of facilities, which is currently borne by Federal government



McClusky Canal will be utilized for one of its intended purposes

RED RIVER VALLEY WATER SUPPLY PROJECT | 10

EASTERN ND ALTERNATE WATER SUPPLY

WILL SAVE MILLIONS FOR STATE & LOCAL SPONSORS!

LOWER CONSTRUCTION COSTS

Approximately **\$200 million** in savings in **initial phase** of construction

O&M SAVINGS

Expected to exceed **\$8 million** annually due to less elevation lift and shorter pumping distance

RED RIVER VALLEY WATER SUPPLY PROJECT | 11

BOUNDARY WATERS TREATY COMPLIANCE

BUREAU OF RECLAMATION

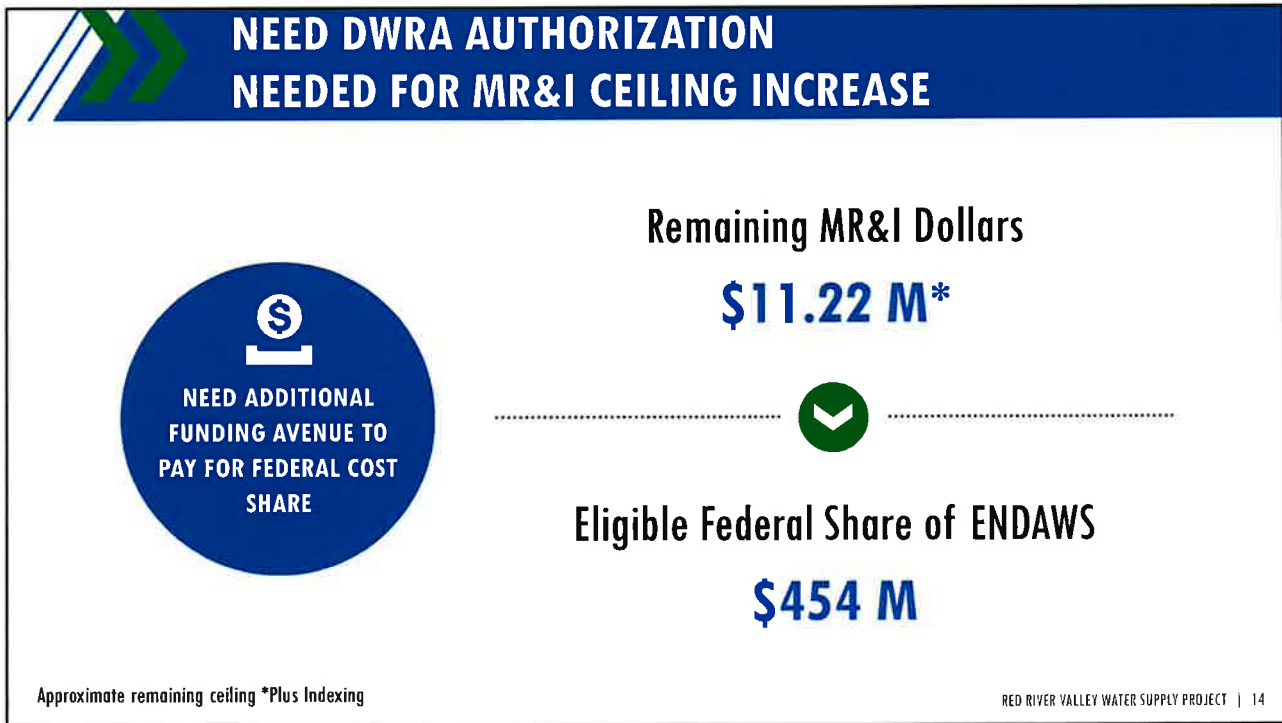
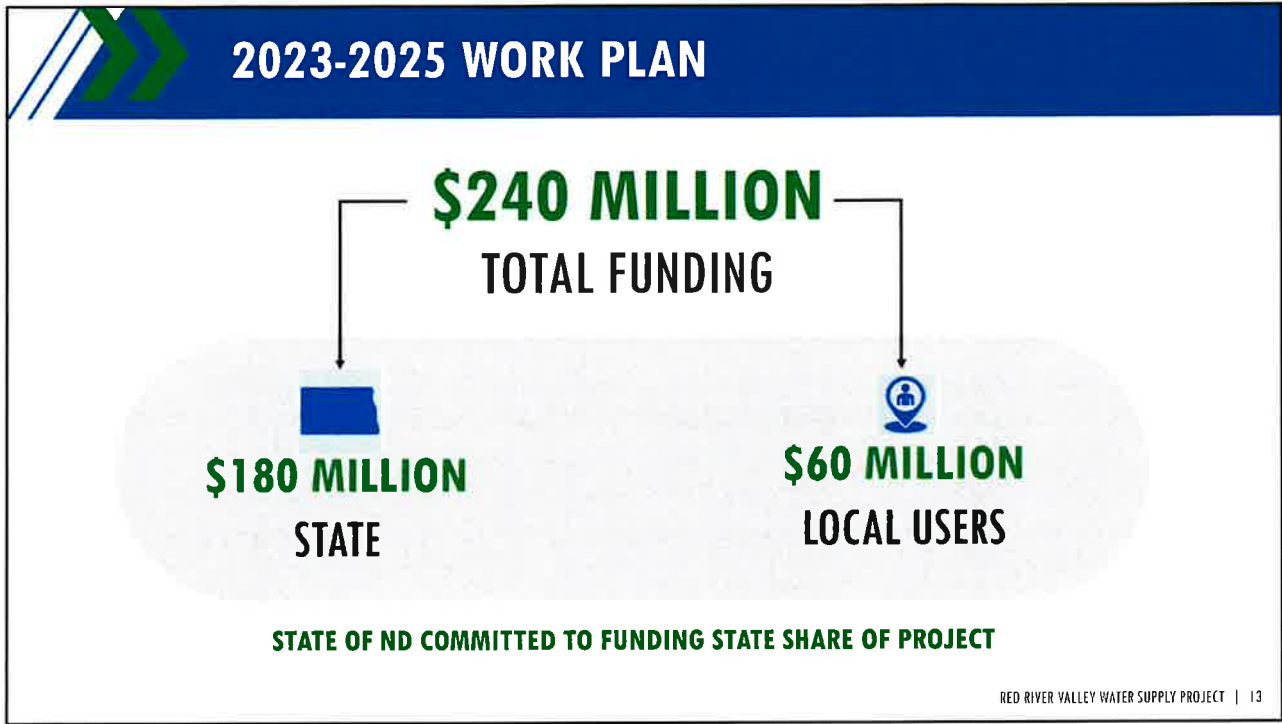
Record of Decision
Eastern North Dakota Alternate Water Supply Project

Environmental Impact Statement Completed

The Record of Decision for ENDAWS approves delivery of Missouri River water into the Hudson Bay Basin, subject to the provisions of the Dakota Water Resources Act.

U.S. Department of the Interior January 2021

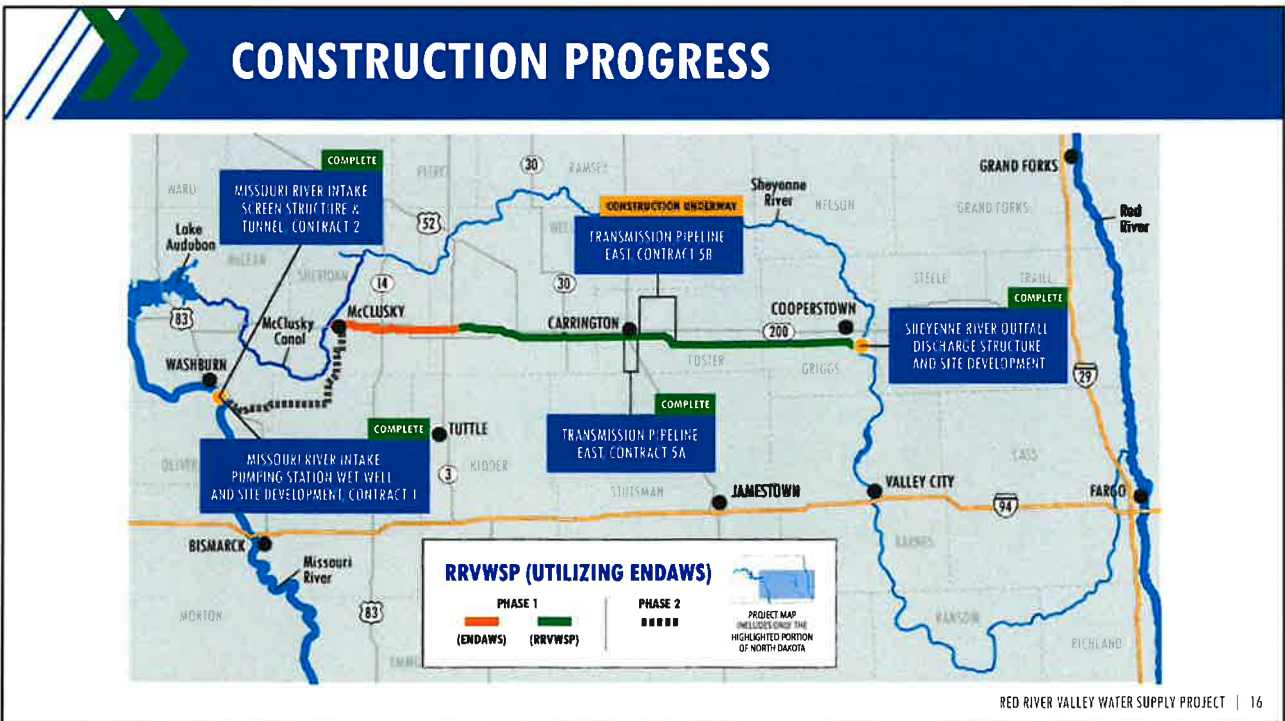
RED RIVER VALLEY WATER SUPPLY PROJECT | 12



ENDAWS FUNDING NEEDS TOTAL BY YEAR OF COMMITMENT (NOMINAL DOLLARS)

YEAR OF COMMITMENT	FUNDING AMOUNT (\$M)	FEDERAL REQUEST (75%)	ENDAWS PROJECT FEATURES
2023 - 2025	\$129.53	\$97.15	Pipeline Contract 1, 2, 3 Design; Contract 3 Construction, Biota WTP Design
2026-2027	\$186.76	\$140.07	Pipeline Contract 1 and 2 Construction; McClusky Intake and PS Design; Hydraulic Break Tanks Design
2028-2030	\$279.09*	\$217.22*	Biota WTP Construction* (Includes 100% of increase in cost for UV Treatment); McClusky Intake and PS Construction, Hydraulic Break Tanks Construction
TOTAL	\$595.37	\$454.43	

RED RIVER VALLEY WATER SUPPLY PROJECT | 15



TRANSMISSION PIPELINE



RED RIVER VALLEY WATER SUPPLY PROJECT | 17

TRANSMISSION PIPELINE



EASEMENT CORRIDOR – 150 FEET



RESTORATION OF EASEMENT CORRIDOR

RED RIVER VALLEY WATER SUPPLY PROJECT | 18

INTAKE & DISCHARGE STRUCTURES



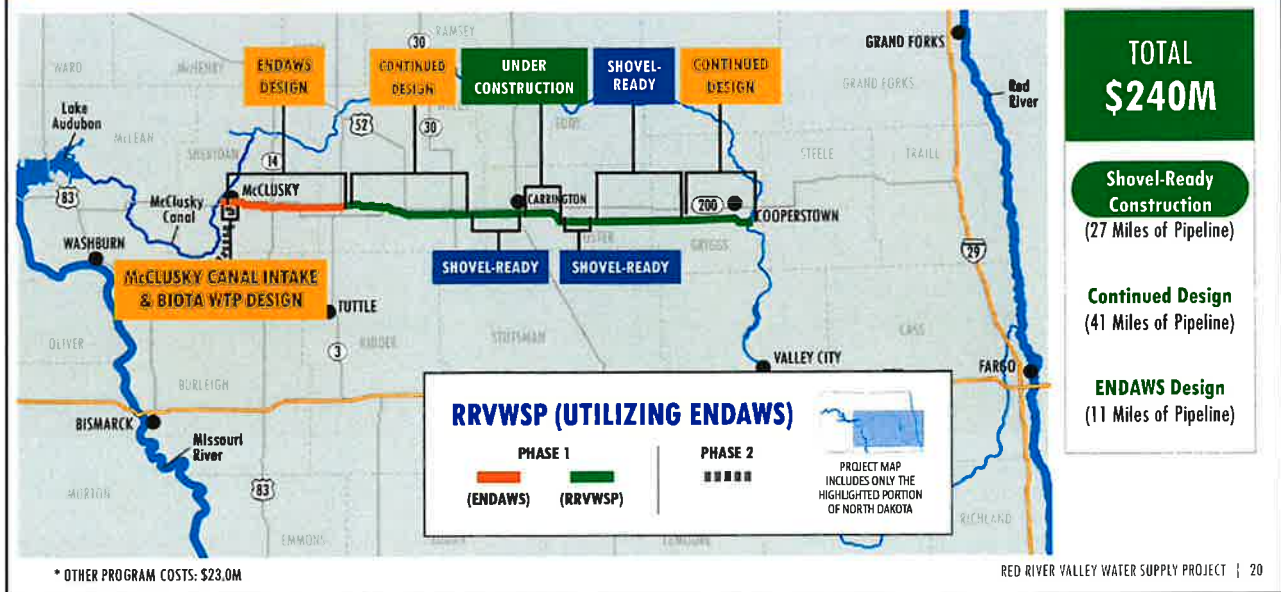
COMPLETED MISSOURI RIVER INTAKE



COMPLETED SHEYENNE RIVER DISCHARGE

RED RIVER VALLEY WATER SUPPLY PROJECT | 19

2023-2025 WORK PLAN



SUMMARY

-  **\$454M ELIGIBLE FEDERAL SHARE OF ENDAWS**
-  **\$90M ENDAWS SHOVEL READY**
-  **INCREASE DWRA MR&I AUTHORIZATION**



RED RIVER VALLEY WATER SUPPLY PROJECT | 21

THANK YOU!



 **RED RIVER VALLEY WATER SUPPLY PROJECT**
Serving the Water Supply Needs of Central North Dakota and the Red River Valley

www.rrvwsp.com

 [@RRVWSP](https://twitter.com/RRVWSP)

 facebook.com/RRVWSP

Sustainability Work Plan Update

- 1. Present Determined Scope of Work from On-site work-session**
 - a. Priority List of Deliverables
- 2. Fargo Action Timeline DRAFT Review**
 - a. Executive Summary
 - b. Example of detailed Task Review
- 3. Prioritization Exercise**
 - a. Comments / Edits / Enhancements to the Pathway DRAFT report
- 4. Next Step Deliverables**

Colin Rohlfing, Assoc. AIA, LEED AP BD+C
Director of Sustainable Development

HDR

M 314.223.7591

colin.rohlfing@hdrinc.com

hdrinc.com/follow-us

Retro-commissioning

1.0 Description:

Retro-commissioning (RCx) is the process of assessing a building's energy performance in order to identify opportunities for system adjustments, repairs, replacements, and upgrades that improve an existing building's energy performance.

2.0 Value:

2.1 GHG Reduction *(Describe value of Retro-Commissioning vs when it's not done)*

When retro-commissioning is conducted, a set of facility recommendations are made. Executing each recommendation will result in a decrease in energy consumption. A decrease in energy consumption is accompanied by a decrease in greenhouse gas emissions, particularly now while the electric grid and natural gas resources have high CO₂e emissions.

2.2 Financial *(Describe value of Retro-Commissioning vs when it's not done)*

Over time, the performance of a facility slips below what it initially was at the time of construction. This is due to several factors, some of which have a compounding affect. Since building performance is directly correlated with energy consumption, re-establishing or improving a facilities performance through measures identified by retro-commissioning will immediately yield savings on energy utilities.

3.0 Assumptions:

4.0 Timing:

Retro-commissioning should begin once baseline information has been compiled. This baseline information will help prioritize certain facilities for retro-commissioning activities. Ideally, an RCx agent will be hired to conduct RCx on each facility. As RCx is being conducted, findings will be addressed in facilities as resources allow, while others may go into further disrepair. Once all facilities have been retro-commissioned, an RCx agent should circle back and go through all of the facilities again.

5.0 Prior Links:

5.1 Investigations/Studies:

A full inventory of each facilities energy usage should be performed. It is currently recommended that Xcel Energy's Portfolio Manager be utilized to obtain this data. Once the energy usage baseline has been established, facilities can be prioritized for retro-commissioning.

5.2 Funding:

\$175k in Energy Efficiency and Conservation Block Grant funds are presently available. Some or all of these funds could be spent contracting a retro-commissioning agent to begin conducting RCx activities on certain facilities. As this stock of funds is depleted, alternative funding mechanisms should be sought in order to support on-going retro-commissioning of existing facilities.

5.3 Actions:

No actions should precede the commencement of retro-commissioning. However, results of retro-commissioning will lead to actions being taken to help decarbonize the existing building stock. Each measure taken, should eventually undergo commissioning and retro-commissioning to verify proper installation, and expected performance over several years.

6.0 Dependent Links

6.1 Investigations/Studies:

No additional Investigations or studies are anticipated as a result of retro-commissioning efforts.

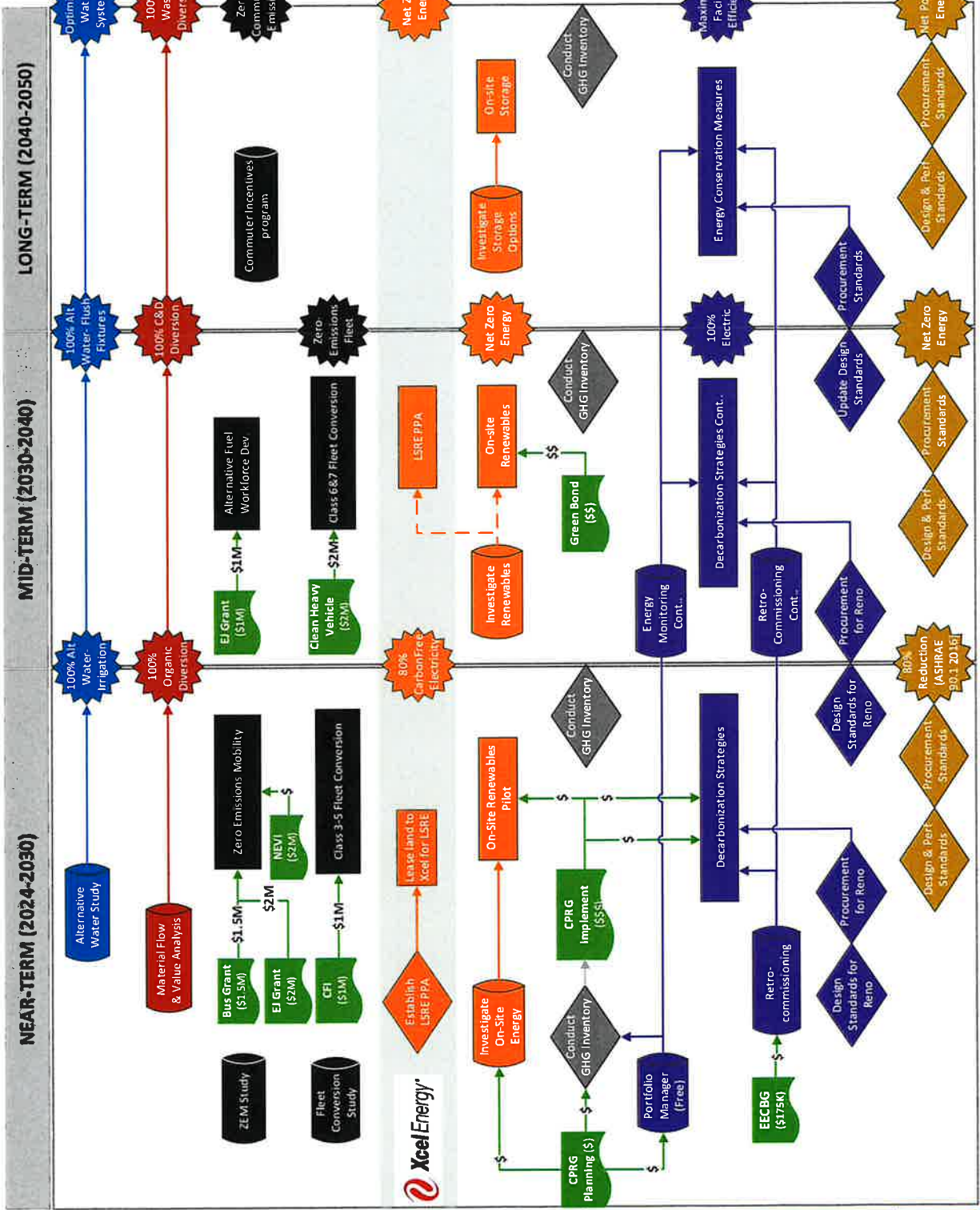
6.2 Funding:

Retro-commissioning is not anticipated to unlock additional funding resources.

6.3 Actions Decarbonization Strategies for Existing Facilities

- Improving energy efficiency
 1. Schedule AHU for Space
 2. Duct Static Pressure Reduce/Reset
 3. Economizer and Outdoor Air Control
 4. Supply air temperature reset
 5. Optimum Start for AHU
- Equipment upgrades
- Electrification

7.0 Appendices



INFRASTRUCTURE	FACILITIES
Water	Existing
Waste	New
Transit	
Energy	

Bus Wrap Project Date Outline

(Original Timeline)

August 8: SRC Meeting

August 16: Arts and Culture Meeting

- Discuss subcommittee to review artwork

August 30:

- Send flier out to art teachers to reintroduce to students

September 28:

- Submission deadline

October 2-6:

- Arts and Culture subcommittee art review meeting

October 10: SRC Meeting

- Review chosen artwork

October 16: Fargo City Commision Meeting

- Approve art to be on bus

October 18:

- Start the process to get the bus wrapped!