

Legal Update: Red River Valley Water Supply Project (RRVWSP) and Thompson-Acker Water Rights

City Council Update, June 23, 2025

Brian Nazarenius

Nazarenius Stack & Wombacher



Reintroduction: Brian Nazarenius

- Practiced Water Law and related Environmental Law for almost forty years
- Practiced in Colorado and other Western States: AZ, NM, CA, WYO, OK
- Engaged by Grand Forks last fall to provide legal assistance regarding the Red River Valley Water Supply Project

Legal work undertaken to-date

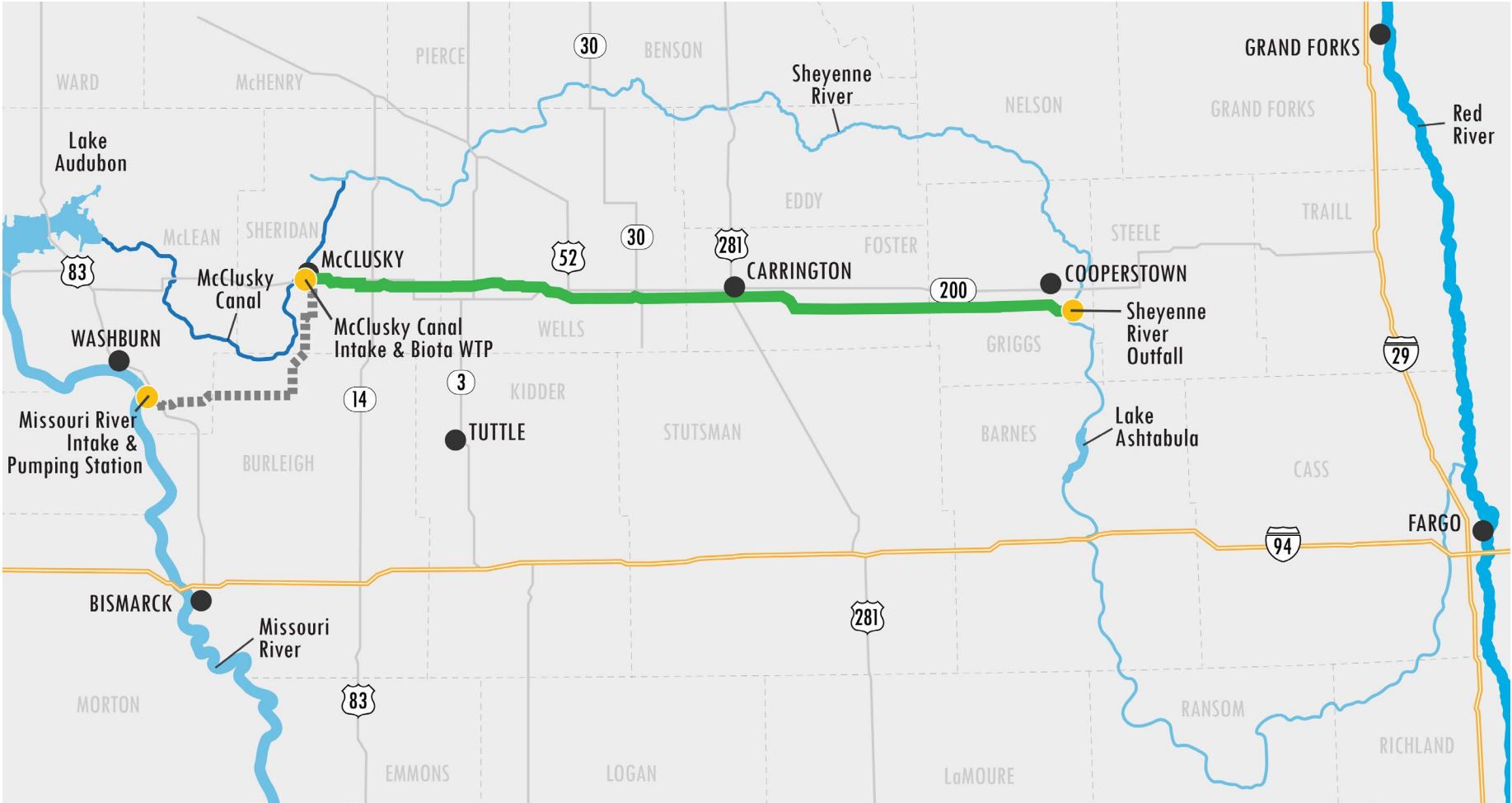
- Reviewed and analyzed draft Project Participation Agreement (“PPA”) from Garrison Diversion Conservancy District (“Garrison Diversion”)
- Investigated and analyzed legal status of Grand Forks’ Lake Ashtabula Thompson-Acker water rights and formulated a strategy to protect those rights
- Interacted with Fargo’s water attorney to help develop and further a unified Grand Forks-Fargo approach on these matters
- Advised Mayor Bochenski, Todd Feland, and Dan Gaustad about these matters and assisted them in developing strategies for interactions with Garrison Diversion, Lake Agassiz Water Authority (“LAWA”), the U.S. Army Corps of Engineers, and the North Dakota Division of Water Resources
- Assisted and provided feedback to Precision Water Resources Engineering

Two major topics to discuss with you today

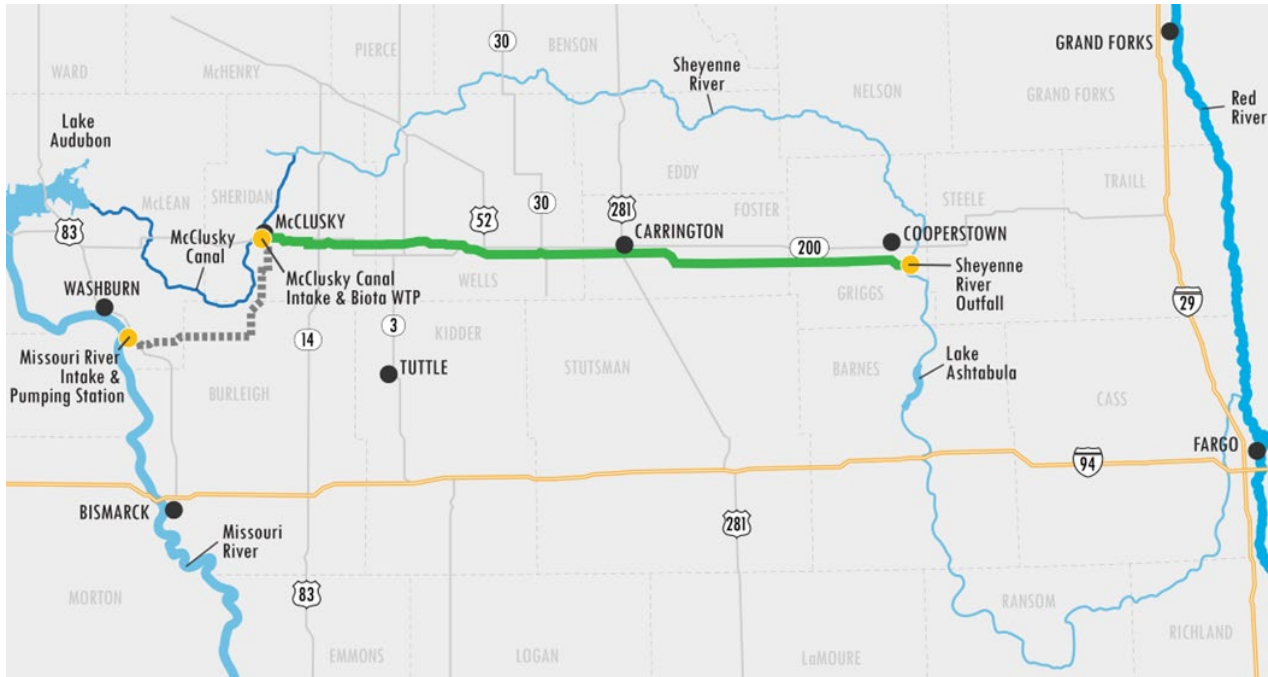
The RRVWSP “Local Control” issue

Lake Ashtabula
Thompson-Acker
water rights

1st Major Topic: RRVWSP “Local Control”



RRVWSP “Local Control” (cont’d)



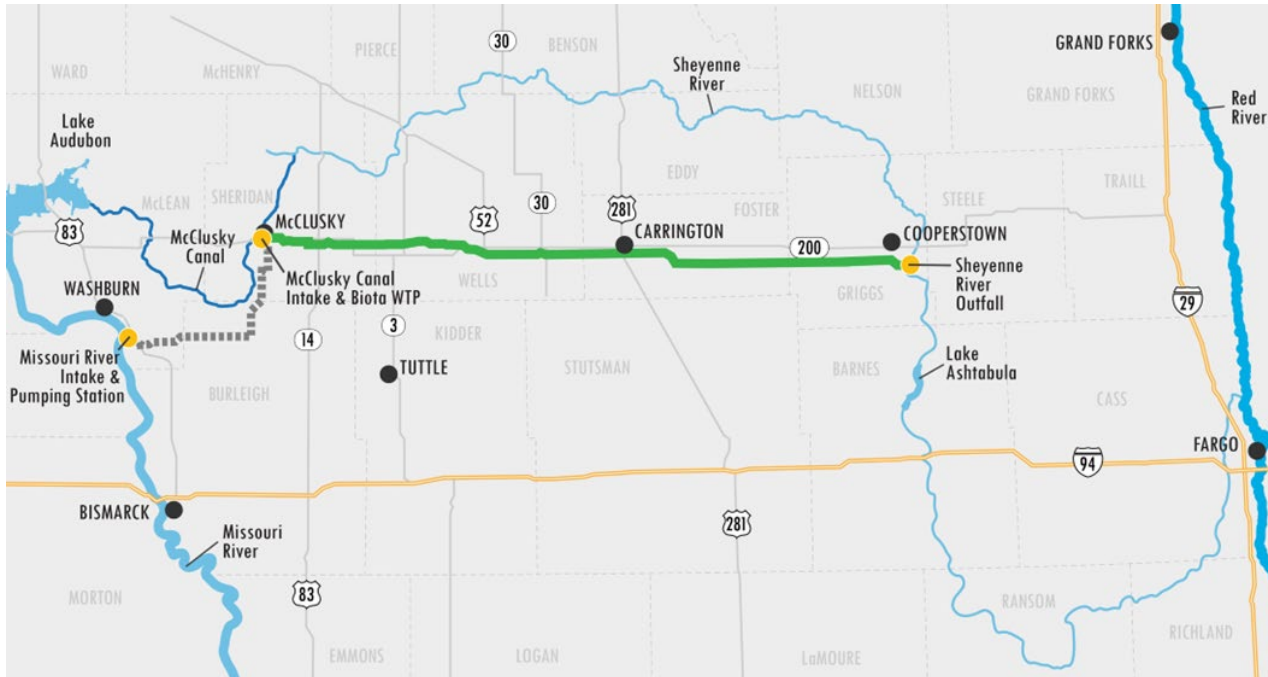
Garrison Diversion was originally established in 1940s to deal with the Bureau of Reclamation for Missouri River basin project

Largely controlled by irrigation interests in Western North Dakota

Over the decades the “Pick-Sloan Project” evolved from a predominately irrigation project to a project to provide municipal and industrial water to Eastern North Dakota

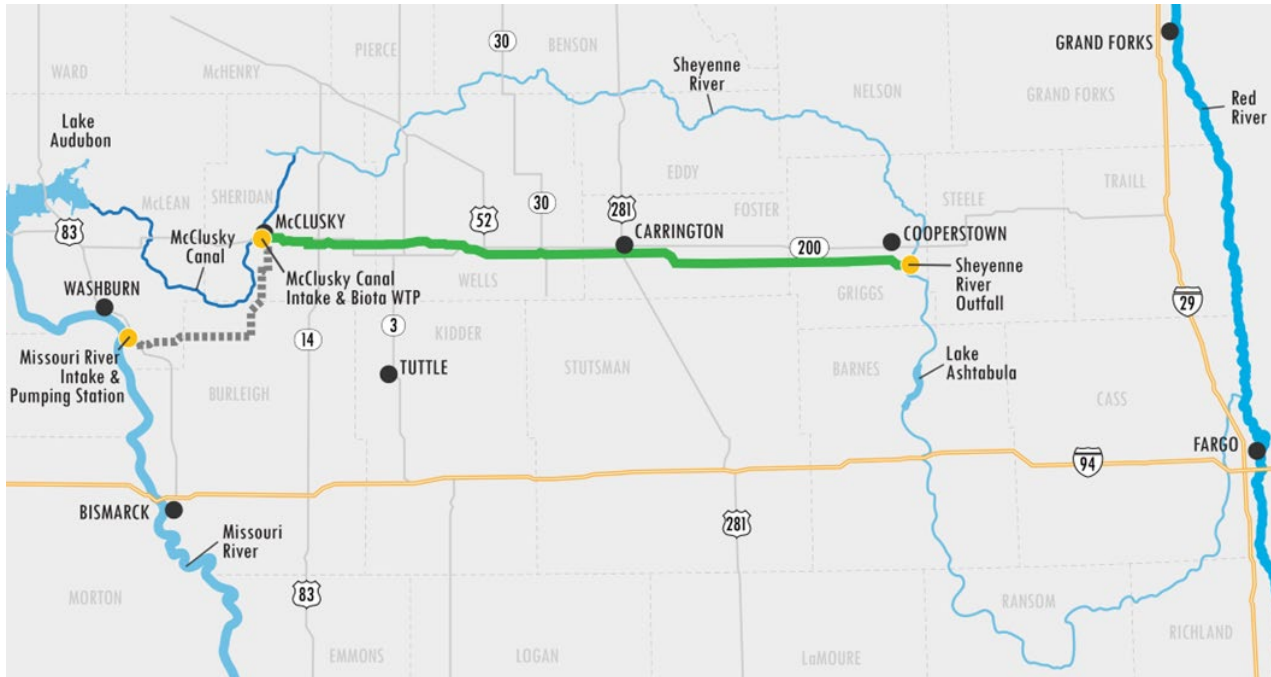
LAWA and its users should control water supply operations and deliveries from/after the RRVWSP pipeline.

RRVWSP “Local Control” (cont’d)



- In fact, LAWA was created by the ND Legislature to distribute project water to Eastern North Dakota users
- Grand Forks, Fargo and other LAWA users have seats on the LAWA Board of Directors and voting procedures to protect their interests are being implemented

RRVWSP “Local Control” (cont’d)



The emerging solution:

- Garrison Diversion will be responsible for Missouri River operations, operating the intra-state pipeline, and delivering project water to the discharge point/outfall on the Sheyenne River
- LAWA will be responsible for delivering project water to users in the Sheyenne and Red River Basins, including Grand Forks and Fargo
- LAWA will also be responsible for storing project water in Lake Ashtabula

2nd Major Topic: Lake Ashtabula

Thompson-Acker Water Rights

PERMIT HOLDER	PERCENTAGE OF LAKE ASHTABULA	ORIGINAL PERMIT STORAGE (ACRE-FEET)
UNALLOCATED	8.03%	5,584
LISBON	0.54%	373
VALLEY CITY	9.62%	6,686
FARGO	51.63%	35,880
WEST FARGO	1.37%	954
GRAND FORKS	28.81%	20,023



Lake Ashtabula/Thompson Acker: Key Points

- Lake Ashtabula is a U.S. Army Corps of Engineers reservoir.
- When Congress authorized the construction of Lake Ashtabula (a.k.a., Baldhill Dam) in 1944, it required local interests to contribute to the funding of the project.
- In the early 1950's, Grand Forks, Fargo, and other North Dakota potential water users in the Sheyenne and Red River basins contributed to the funding for Lake Ashtabula.
- In the 1960's, the State of North Dakota awarded water right permits to most of the contributing entities.
- Grand Forks was awarded the senior storage priority in the amount of 20,023 acre-feet of water
- This storage is filled with native flow of the Sheyenne River, not RRVWSP water

Lake Ashtabula/Thompson Acker: Key Points

- Unfortunately:
 - The U.S. Army Corps of Engineers has never issued a water storage contract, as required by federal law, for the storage of Thompson Acker water rights in Lake Ashtabula
 - The State of North Dakota has never established how it will administer and shepherd deliveries of water from Lake Ashtabula to the holders of Thompson Acker water rights.
 - The Thompson-Acker account holders have never reached an agreement between themselves on how the accounts would be administered.
- In addition, there is the need to determine how to store RRVWSP project water in Lake Ashtabula in a manner that does not interfere with Thompson-Acker water rights.
- Grand Forks and Fargo are working together, and engaging the North Dakota Department of Water Resources and other Thompson Acker water rights holders, to address these issues.

Conclusion

As a foundational matter, it is in Grand Forks' best interests that as part of its due diligence for the RRVWSP:

- LAWA is given control over operation of the RRVWSP after the discharge point on the Sheyenne River, including operations on the Sheyenne River and Red River and the storage of project water in Lake Ashtabula.
- Acceptable agreement is reached with the Corps of Engineers, the North Dakota Department of Water Resources, and other Thompson-Acker users regarding the storage, administration, and deliver of Thompson Acker water rights.

Technical Update: Thompson Acker Water and RRVWSP

PWRE City Council Update, June 23, 2025

Patrick Noe, P.E.

Water Resources Engineer

Shane Coors, P.E.

Principal



PRECISION
WATER RESOURCES ENGINEERING



Introduction to Precision

Precision Water Resources Engineering

“Stewardship through Technology”

- Develop state-of-the-art water management tools for large water systems throughout western United States
- Hired by Grand Forks for technical review of the Project Participation Agreement (PPA) of the Red River Valley Water Supply Project (RRVWSP)



<https://www.scenicusa.net/102812.html>

Presentation Purpose

Purpose

Update City Council on the work completed to review Grand Forks' *nomination* for the RRVWSP.



Nomination is the amount of water that Grand Forks elects to be supplied to the City by the RRVWSP. This determines the City's financial commitment to the project.

Presentation Overview

- I. RRVWSP Nomination Determination
 - I. How to Determine Nomination
 - II. Future City Demands
 - III. Grand Forks' Current Water Supply Sources
 - IV. Assessing Grand Forks Nomination
 - V. Uncertainty in Firm Yield of Sources
- II. Other Work Completed by Precision
- III. Conclusions



RRVWSP Nomination Determination

How to Determine Nomination

Two questions must be answered to determine a nomination.

Question 1

Future City Demand

What will Grand Forks' water demand be in the future (2075)?

Question 2

Firm Yield of Sources

What do Grand Forks' current water supply sources yield?

$$\text{Nomination} = \text{Future City Demand} - \text{Firm Yield of Sources}$$

RRVWSP Nomination Determination

Grand Forks Current Water Supply Sources

$$\textit{Nomination} = \textit{Future City Demand} - \textit{Firm Yield of Sources}$$

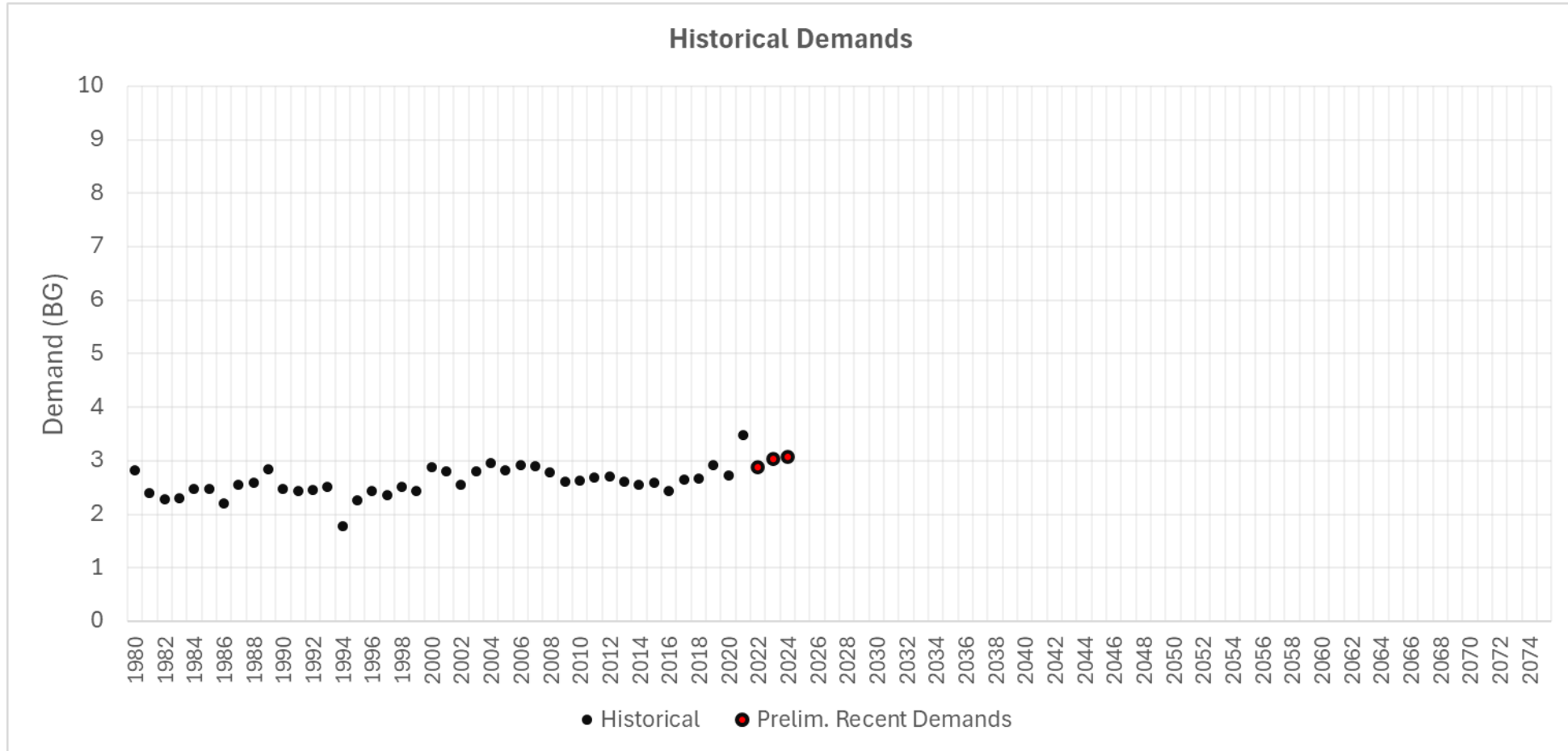
RRVWSP Nomination Determination

Future City Demand

- Current City Demand
 - ~ 3.1 Billion Gallons Per Year (BGY)
- Two main factors influence future demand:
 1. Population Growth – More people, more water use
 - Current Population ~ 60,000 people
 2. Industrial Growth – Industrial water users tend to have higher rates of use of water.
 - Agristo Industrial User is estimated to use between .6 and 1.2 BGY (20% - 38% of current demand) by 2030

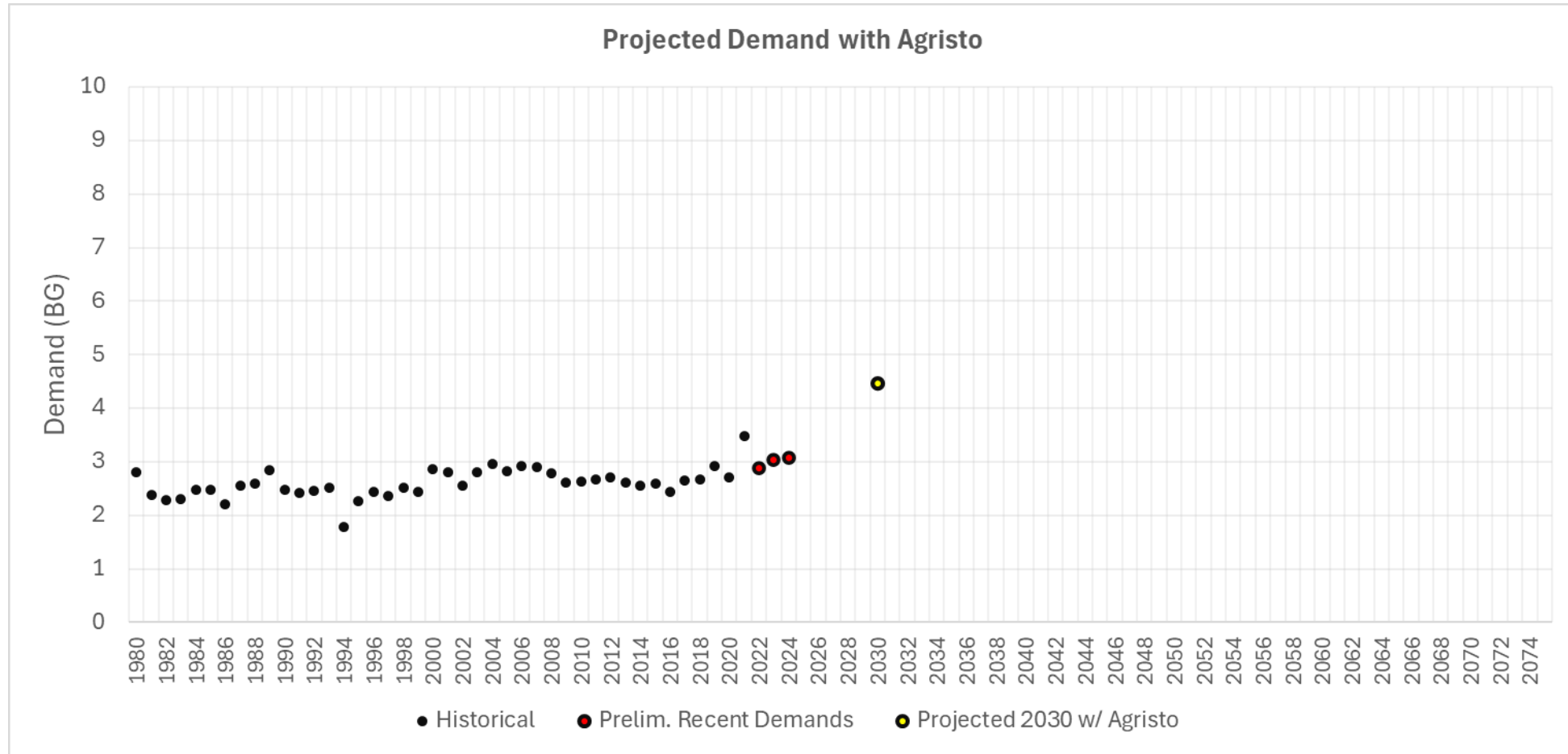
RRVWSP Nomination Determination

Future City Demand



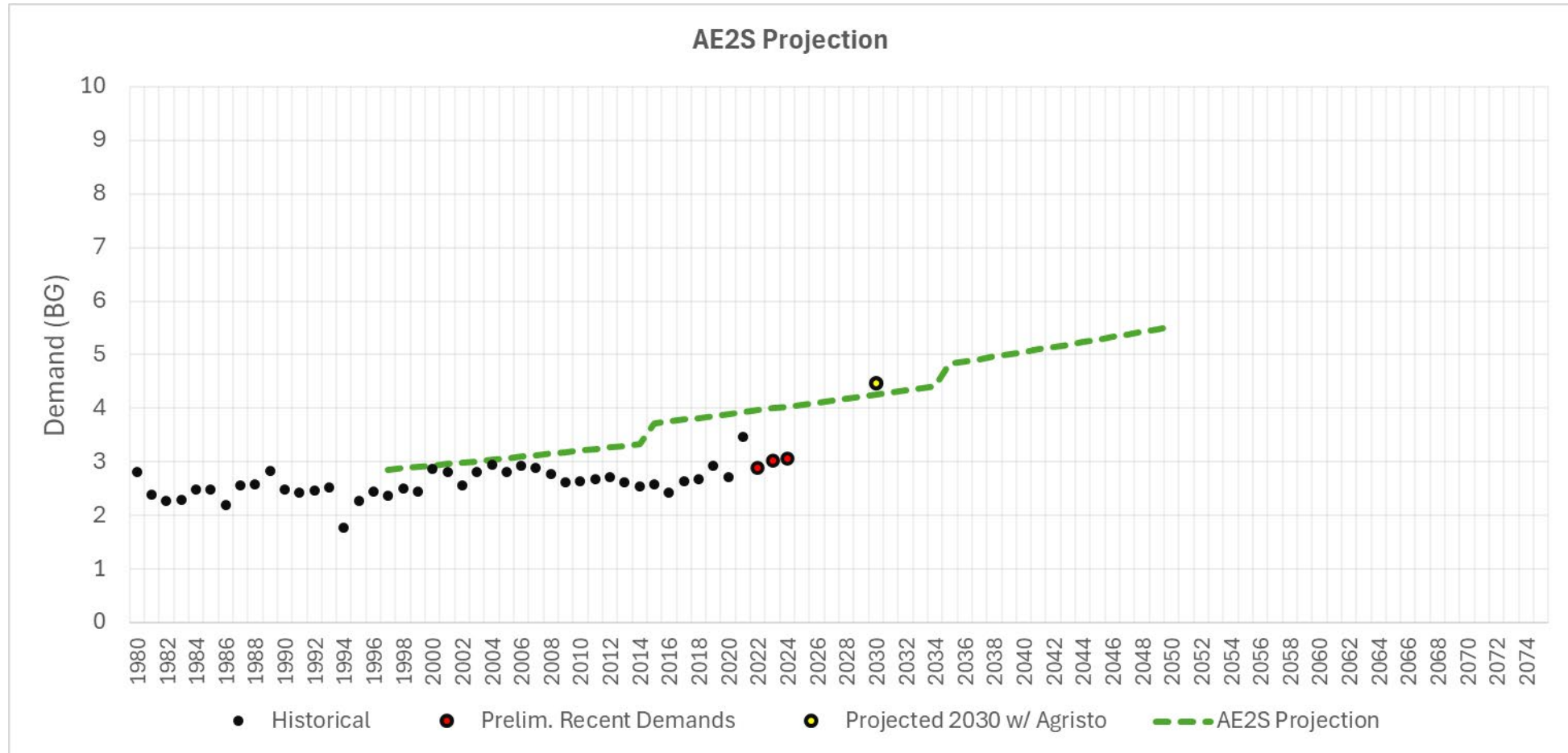
RRVWSP Nomination Determination

Future City Demand



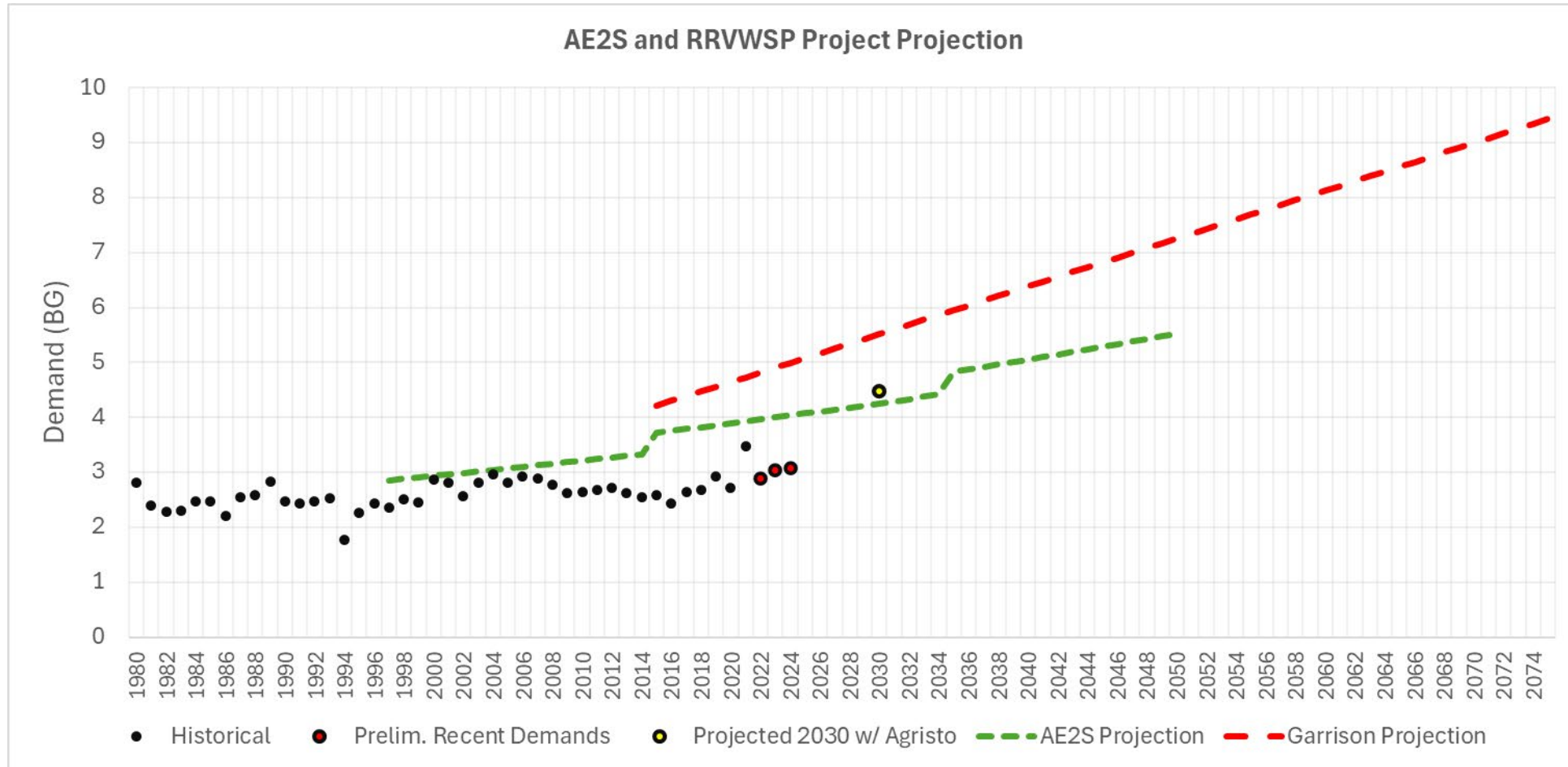
RRVWSP Nomination Determination

Future City Demand



RRVWSP Nomination Determination

Future City Demand



RRVWSP Nomination Determination

Future City Demand

Comparable Demand Projections

City	Population	Projection Start Year	Starting Demand (BGY)	50 Year Projected Demand (BGY)	Demand Growth Multiple
Rapid City, SD	79,000	2025	3.47	6.28	1.81
Bloomington, IL	78,500	2017	3.80	5.01	1.32
Lincoln, NE	295,000	2020	14.97	22.72	1.52
Sioux Falls, SD	206,000	2020	8.03	15.12	1.88

AE2S Demand Projection

RRVWSP Demand Projection

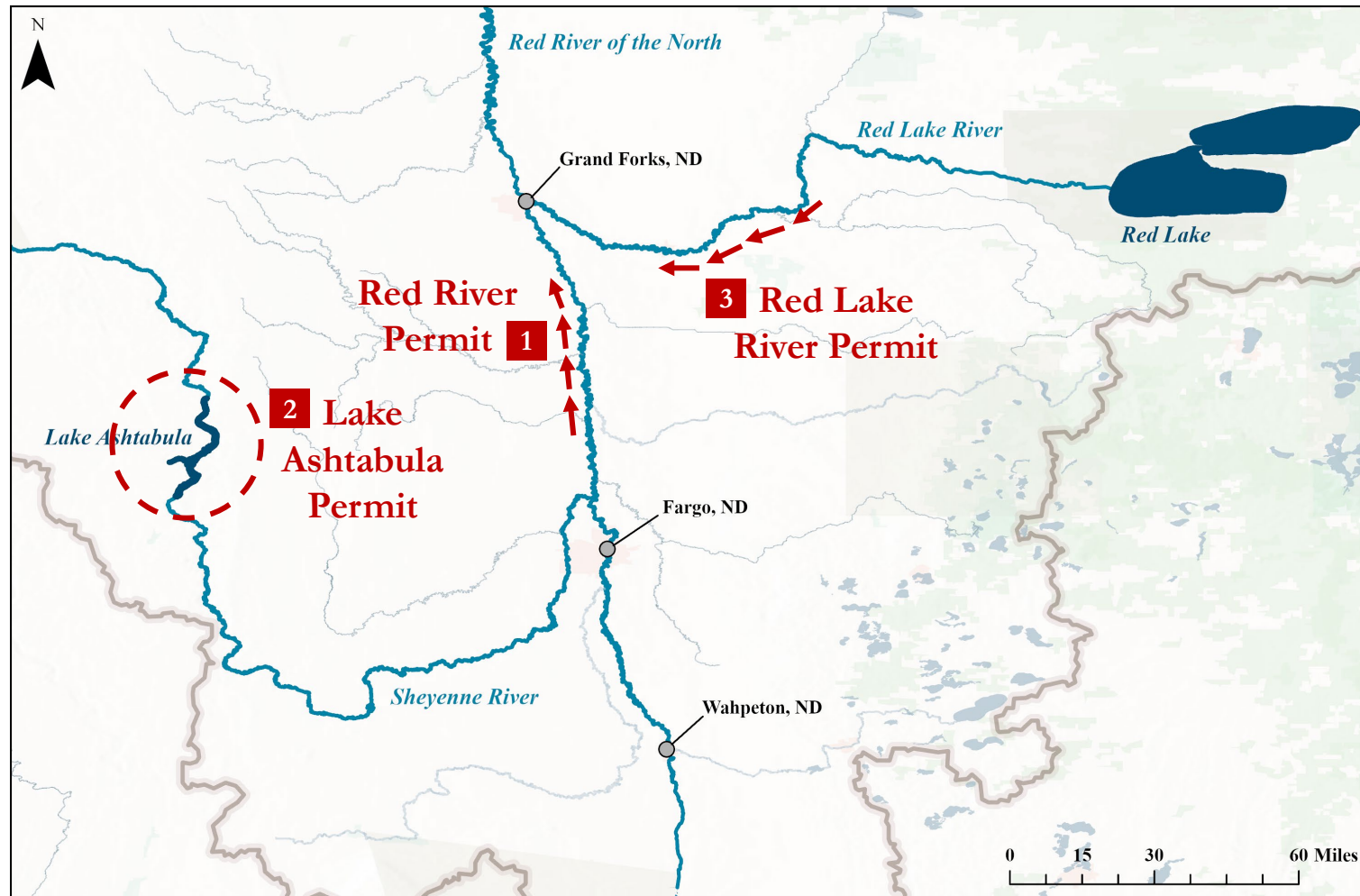
RRVWSP Nomination Determination

Grand Forks Current Water Supply Sources

$$\textit{Nomination} = \textit{Future City Demand} - \textit{Firm Yield of Sources}$$

RRVWSP Nomination Determination

Grand Forks Current Water Supply Sources



RRVWSP Nomination Determination

Grand Forks Current Water Supply Sources

Permit Number	Water Source	Permitted Volume (BGY)
835	Red River of the North	10.9
835A	Lake Ashtabula	6.5
63-449	Red Lake River	3.5
Total		21.0

Water Permits specify a maximum annual volume that can be used to meet the city demand

RRVWSP Nomination Determination

Grand Forks Current Water Supply Sources

Permit Number	Water Source	Permitted Volume (BGY)	Firm Yield (BGY)
835	Red River of the North	10.9	???
835A	Lake Ashtabula	6.5	???
63-449	Red Lake River	3.5	???
Total		21.0	???

What each permit *yields* varies year to year due to many factors like hydrology and basin administrative/operational criteria.

Firm Yield is defined as the annual volume a permit could meet in the most stressing year in the historical record.

RRVWSP Nomination Determination

Assessing Grand Forks Nomination

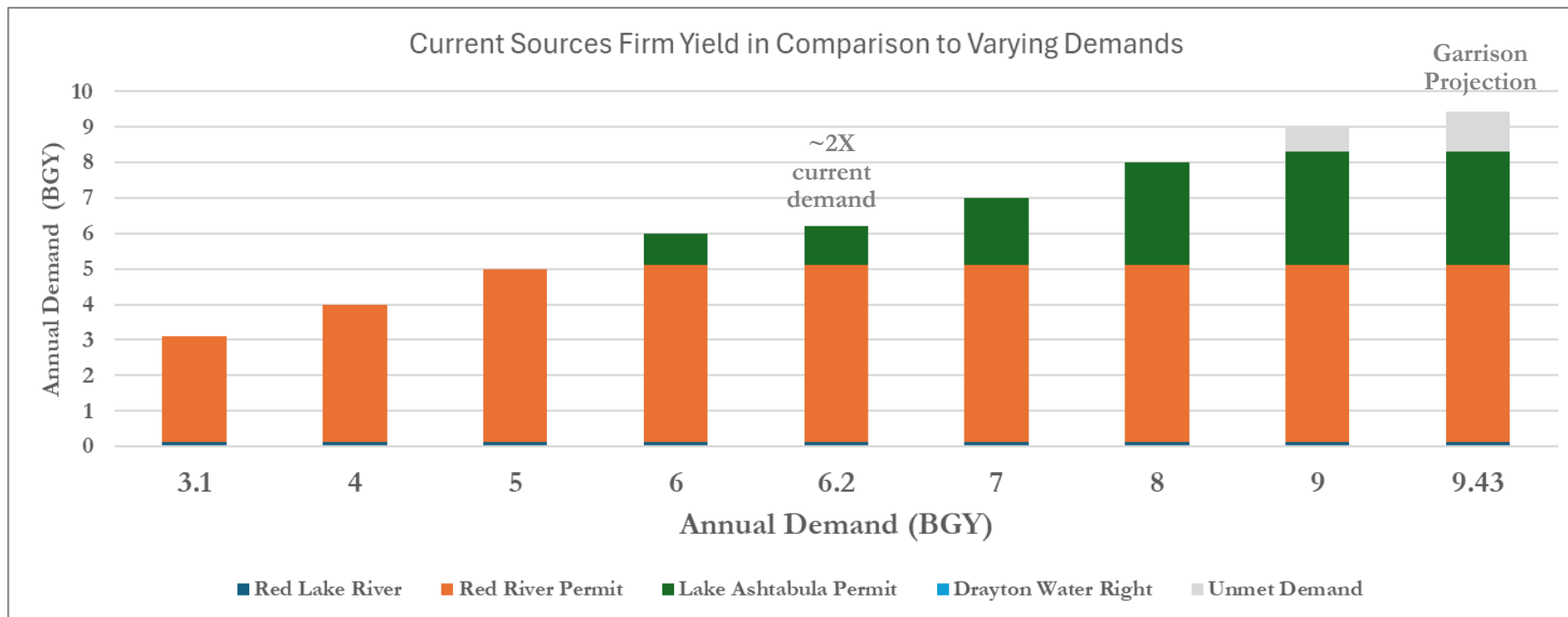
$$\text{Nomination} = \text{Future City Demand} - \text{Firm Yield of Sources}$$

RRVWSP Nomination Determination

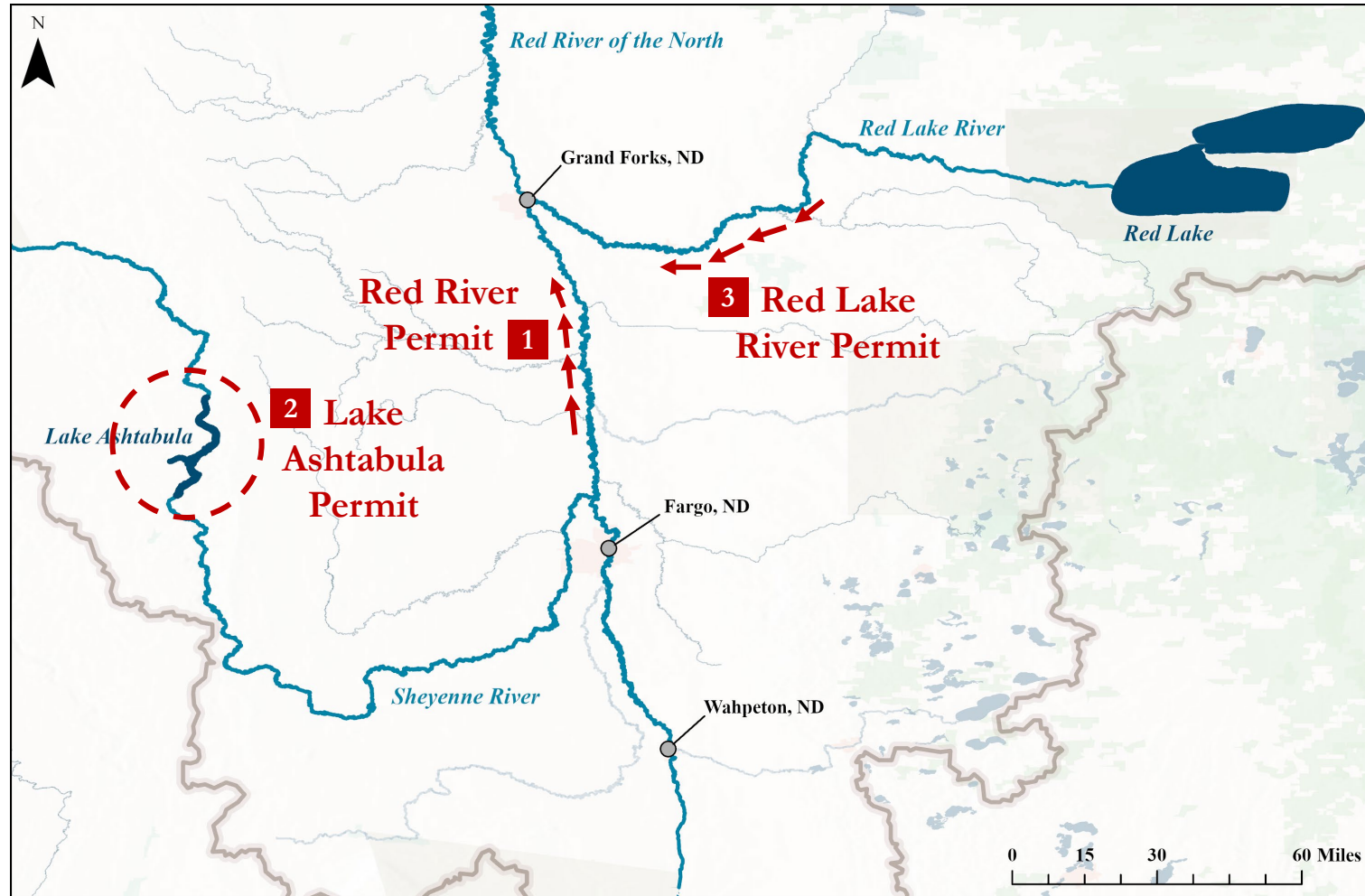
Assessing Grand Forks Nomination

Water Source	Permitted Volume (BGY)	Preliminary Firm Yield Estimate (BGY)
Red River Permit	10.9	5.0
Red Lake River Permit	3.5	0.1
Lake Ashtabula Permit	6.5	3.2
Total	21.0	8.3

Firm Yield estimates are highly uncertain and preliminary.



RRVWSP Nomination Determination



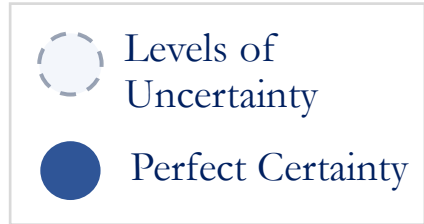
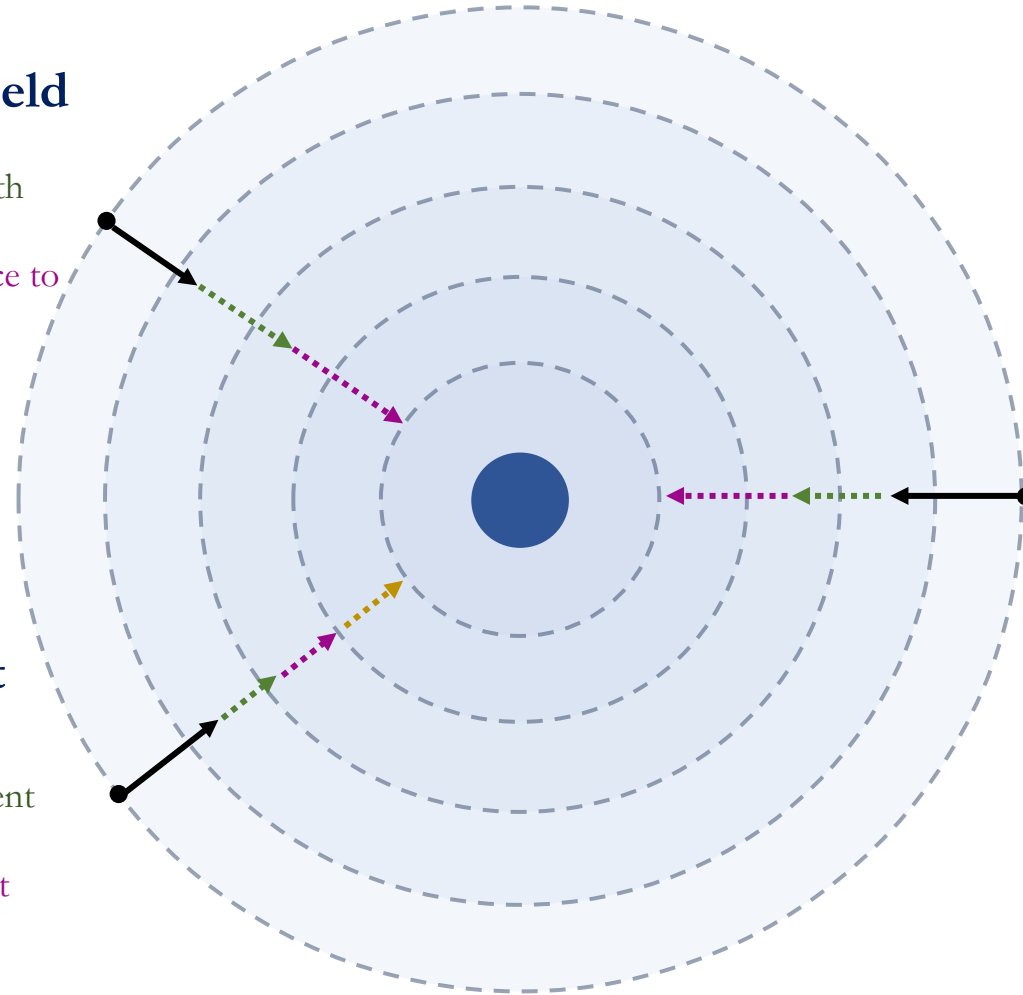
Uncertainty in Firm Yield of Sources

Red River Permit Firm Yield

- Analyze and agree upon min Bypass/return flow requirements with Fargo
- NDDWR measures must be in place to adequately administer WRs

Red Lake River Permit Firm Yield

- Accurately assess of yield of current permit
- Explore augmenting annual permit volume
- Engage USACE in WCM Update Process



Lake Ashtabula Permit Firm Yield

- Engage NDDWR on prioritization of Thompson Acker Accounts
- Engage USACE in WCM Update

Proposed Technical Support – Next Steps

- Going forward we see Precision providing continued service and value to the City in two ways
 - Continued technical analysis of the supply-demand nexus to better define the appropriate nomination for the City in the RRVWSP
 - Technical support to the City and its attorneys as they engage federal and state water administration agencies in ongoing legal/administrative processes
 - USACE Ashatabula Reservoir Water Control Manual revisions
 - ND DWR administration of TA Account waters in Lake Ashtabula
 - USACE Red Lakes Water Control Manual revisions

Other Work Completed By Precision

- Review of RRVWSP Operational Plan
 - Key Finding - Current Operational Plan lacks the level of detail and specificity required to operate/administer a project of this size and complexity
- Review of RRVWSP Exhibit F, StateMod Model
 - Key Finding – Key assumptions made in the modeling not well substantiated
 - Grand Forks’ 2075 Demand
 - the omission of the Red Lakes from the analysis.

Conclusions

- Original demand used to determine preliminary nomination may be too large
- Administrative actions *and* technical analysis necessary to accurately determine firm yield of permits.
- Uncertainty in firm yield of current water supply sources should be reduced to determine accurate nomination for RRVWSP

Questions



Thank you to Mayor Bochenski, Todd Feland, and the City of Grand Forks for their support in this work. It has been a pleasure for Precision to partner with you!