

March 2, 2023



DWR OVERVIEW AGENCY & BUDGET

House Appropriations Committee | Eng. Senate Bill 2020 | 68th Legislative Assembly

NORTH
Dakota | Water Resources
Be Legendary.



Divisions Within DWR Remain
The Same Including:

- Administration
- Atmospheric Resources
- Planning & Education
- Regulatory
- Water Appropriation
- Water Development

ND CENTURY CODE TITLE 61

DEPARTMENT OF WATER RESOURCES

2021 LEGISLATIVE SESSION - HB 1353 RESTRUCTURED THE AGENCY AS THE DWR,
APPOINTED A DIRECTOR, & MADE THE AGENCY A MEMBER OF THE GOVERNOR'S CABINET

MISSION, VISION, & VALUES

5-YEAR STRATEGIC PLAN



MISSION

To responsibly manage North Dakota's water needs and risks for the people's benefit.



VISION

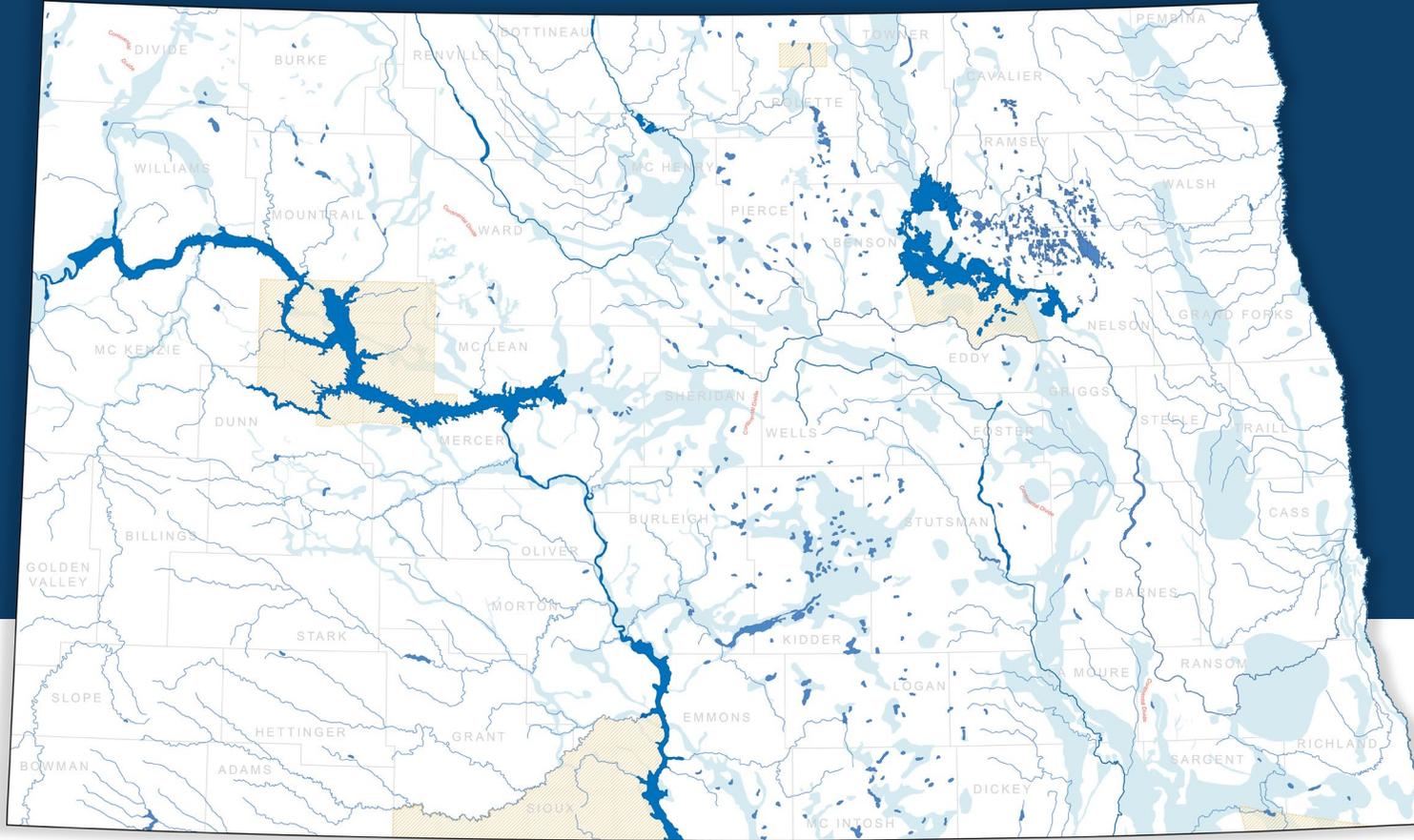
The Department of Water Resources will sustainably manage and develop North Dakota's water resources for the health, safety, and prosperity of its people, businesses, agriculture, energy, industry, recreation, and natural resources.



VALUES

The Department of Water Resources values fairness, objectivity, accountability, responsiveness, engagement, and credibility. We pledge to use professional and scientific methods to maintain the highest of standards in our delivery of services.

MANAGING NORTH DAKOTA'S WATER RESOURCES



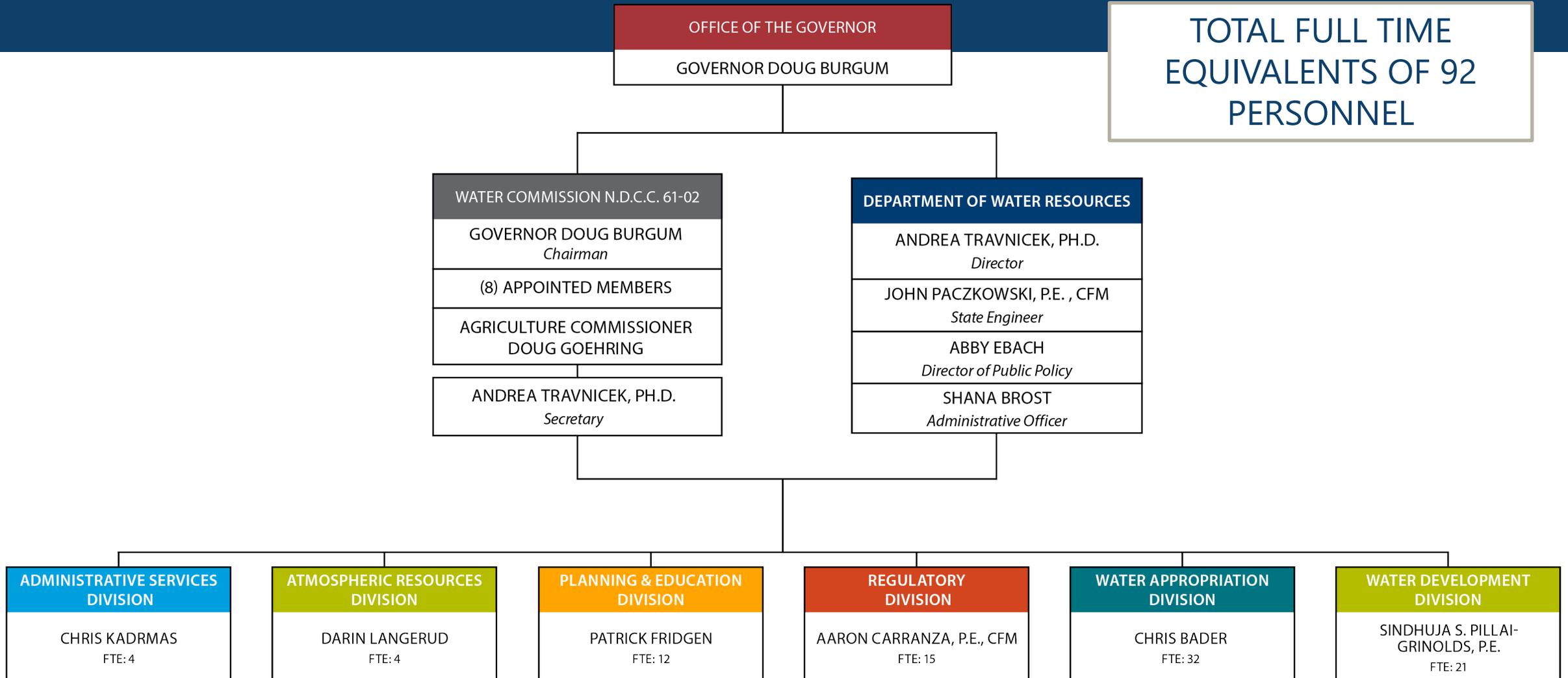
60 Million Acre-Feet Of Water Is Stored In Major Aquifers In ND

Over 7,000 River Miles Are In The State, Including Major Rivers & Tributaries

Seven Of NDs Largest Lakes & Reservoirs Cover **863,000** Acres

DWR ORGANIZATIONAL CHART

TOTAL FULL TIME
EQUIVALENTS OF 92
PERSONNEL





TEAM DWR

WORKFORCE

Asked For 3 FTE

Approved By Emergency Commission

2 FTE + 1 Temp Approved By Budget Section
(March 2022)

Water Appropriation | Regulatory | PRESENS

- Continued Challenges With Salary Equity
- **22.6% Turnover** In 2022 (2 Retirements)
- **20 New Team Members Hired In 2022**
- Cooperating With NDSU & Others To Guide Course & Curriculum Focus

WATER COMMISSION



SWC Chair
Governor Burgum



Ag. Comm.
Goehring



Gene Veeder
Upper Missouri River Basin



Jason Zimmerman
Mouse River Basin



Richard Johnson
Devils Lake Basin



Michael Anderson
Lower Red River Basin



James Odermann
Little Missouri, Upper
Heart, & Upper
Cannonball River Basins



Jay Volk
Lower Missouri River Basin



Connie Ova
James River Basin



April Walker
Upper Red River Basin

DWR DIRECTOR & STATE ENGINEER



DWR DIRECTOR

Andrea Travnicek, Ph.D., Director
atravnicek@nd.gov | 701-328-4942

The Director is appointed by the Governor, serves as a Cabinet member, provides overall leadership and decision-making, oversees the State Engineer and DWR team members, and serves as Secretary to the State Water Commission.



STATE ENGINEER

John Paczkowski, P.E., State Engineer
jpaczkowski@nd.gov | 701-328-4940

ND's State Engineer is responsible for several regulatory functions and responsibilities, including allocation of the state's waters, dam safety, and drainage.

DWR DIVISIONS



ADMINISTRATIVE SERVICES

Chris Kadrmas, Director
ckadrmass@nd.gov | 701-328-1956

General support, budget development, records management, human resources, State Water Commission meeting preparation, and accounting.



ATMOSPHERIC RESOURCES

Darin Langerud, Director
dlangerud@nd.gov | 701-328-4751

Cloud Modification Program, atmospheric research, data collection, pilot intern program, licenses and permits, and radar operations.

DWR DIVISIONS



PLANNING & EDUCATION

Patrick Fridgen, Director
pfridgen@nd.gov | 701-328-4964

Water Development Plan, media relations, public outreach and education, Drought Livestock Water Supply Program, Environmental Reviews, Cost-Share Program, and MR&I Program.



REGULATORY

Aaron Carranza, P.E., Director
acarranza@nd.gov | 701-328-4813

Construction and drainage permits, sovereign lands, dam safety, floodplain management, water resource district support, and Silver Jackets Program.

DWR DIVISIONS



WATER APPROPRIATION

Chris Bader, Director
cbader@nd.gov | 701-328-4771

Water rights permitting, ground and surface water management, subsurface exploration, PRESENS, data management, and water resource investigations.



WATER DEVELOPMENT

Sindhuja S. Pillai-Grinolds, Director
spillai@nd.gov | 701-328-4954

Investigations and surveying, construction operations, flood response and recovery, Southwest Pipeline, Northwest Area Water Supply, Red River office, and Devils Lake outlet operations.

DWR FUNCTIONS & RESPONSIBILITIES

Allocation Of The State's Waters

Cost-Share Funding

Dam Safety

Drainage & Construction Permits

Drone Initiatives

Drought Livestock Program

Floodplain Management

Investigations & Surveys

LiDAR Collections

Map Services

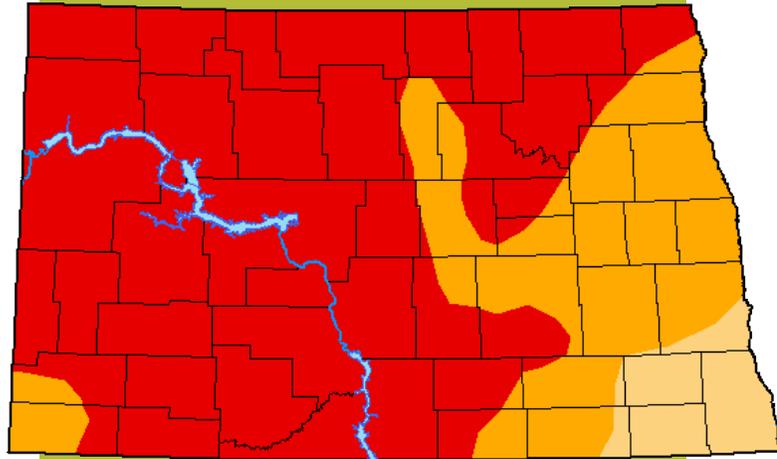
North Dakota Cloud Modification Project

PRESENS

Sovereign Land Management

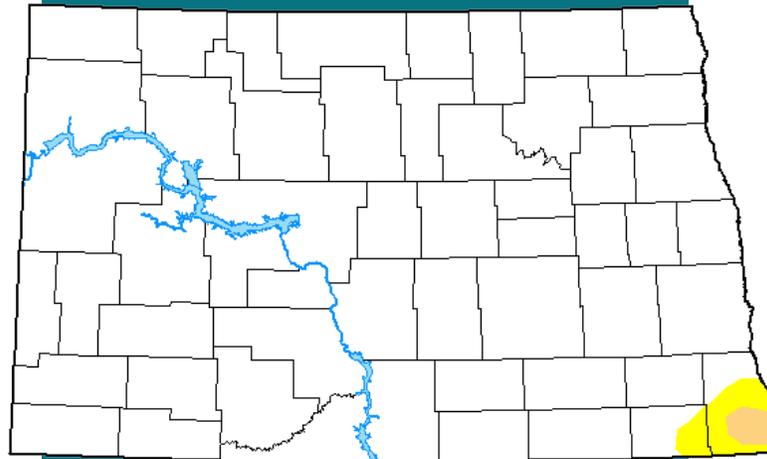
Water Project Development

ACTIVATION



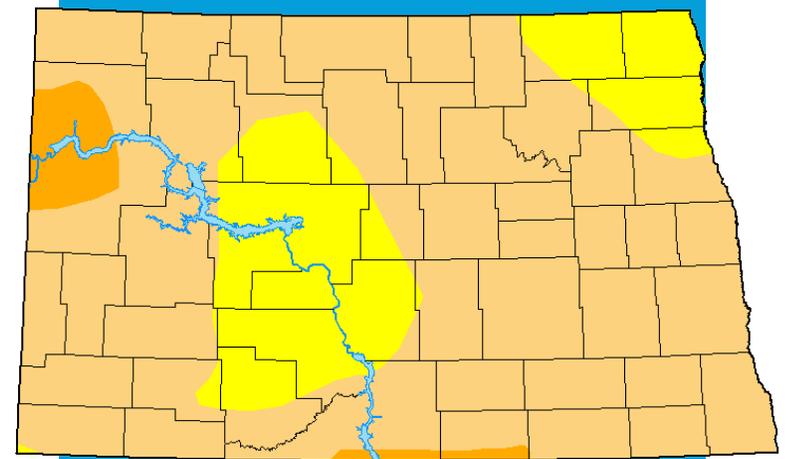
April 2021

DEACTIVATION



September 2022

CURRENT



February 2023

None

D0 (Abnormally Dry)

D1 (Moderate Drought)

D2 (Severe Drought)

D3 (Extreme Drought)

D4 (Exceptional Drought)

**DROUGHT DISASTER
LIVESTOCK WATER SUPPLY
ASSISTANCE PROGRAM**

NAWS UPDATE

UNDER CONTRACT

- Minot WTP Phase II
- Biota WTP Phase I
- South Prairie Reservoir & Hydraulic Control Structure

2023-2025 REQUEST: \$36M

Recently Completed

Service To Bottineau

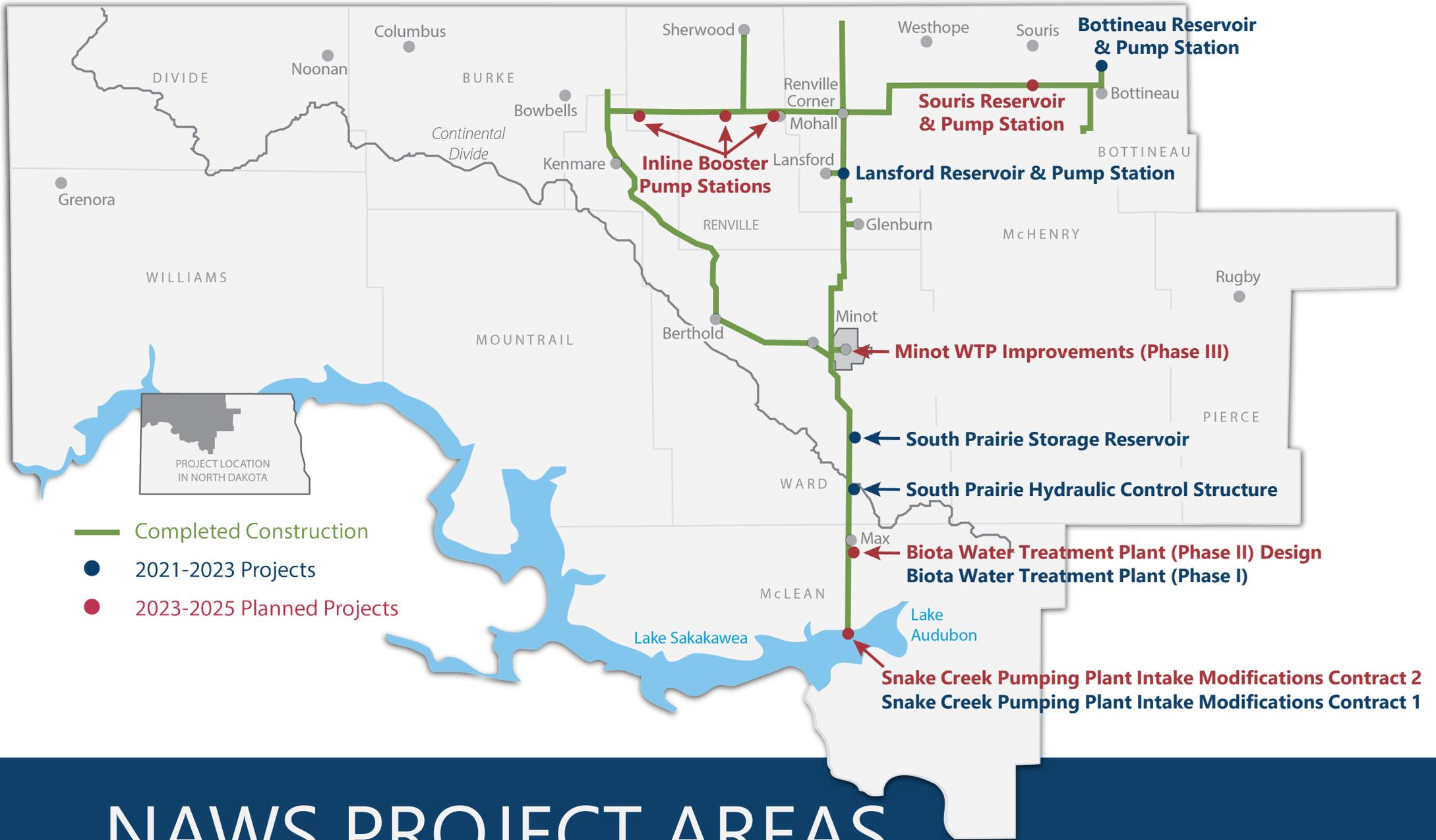
Lansford Reservoir & Pump Station

Snake Creek Intake Modifications

Permitting & Awarded Contracts

Goal

Deliver Missouri Water - End Of 2024



NAWS PROJECT AREAS

SOUTHWEST PIPELINE PROJECT UPDATE

UNDER CONTRACT

- Elevated Tank In City Of Taylor (Substantially Complete)
- Main Transmission Line Parallel Piping (Substantially Complete)
- Supplementary Intake
- Strategic Hydraulic Improvements

2023-2025 REQUEST: \$131.6M



Future Projects

- Strategic Hydraulic Improvements
- Water Treatment Plant Expansion
- Burt & Hebron Service Area Expansion
- West Zone Transmission Upgrades

DEVILS LAKE OUTLETS UPDATE

OUTLETS | PUMPS | STRUCTURE

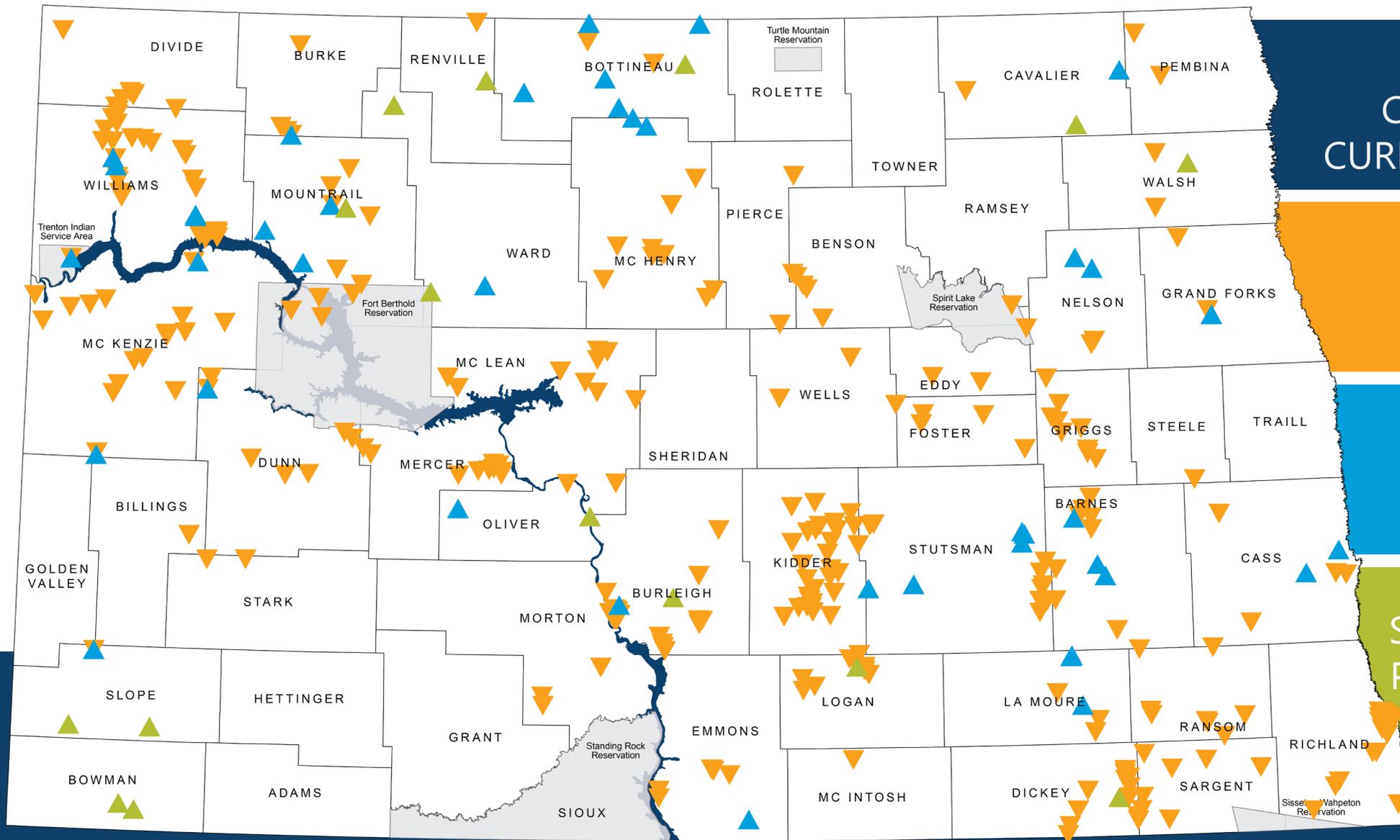
- Approx. 60K Acre-Feet Pumped In 2022
- Repairs Made To The West End Outlet
 - Terminal Structure
 - Drainpipe (Round Lake Pump #3)
 - Electrical Outage (Round Lake Pump #4)
- Outlet Capital Improvement Plan





- **Constantly Collecting Valuable Water Resource Data** - Publicly Accessible On Agency's Map Services
- **Collect** Water Levels, Precipitation, Soil Moisture, Soil Temperature, Barometric Pressure, Air Temperature
- **368 Locations** Measured Using PRESENS
- **287 Units** Currently Operating
 - Surface Units Are Removed In Winter To Prevent Damage
- **15 Units** Currently Have Rain Gauge & Soil Moisture Sensors
- **Goal Is 680 Units By 2025**
- 2023-2025 REQUEST: **\$1,572,800 (ONGOING)**

PUSHING REMOTE SENSORS (PRESENS)



368 DATA
COLLECTION SITES
CURRENT & HISTORIC

GROUND WATER
SITES (313)

SURFACE WATER
SITES (42)

SOIL MOISTURE &
PRECIP SITES (15)*

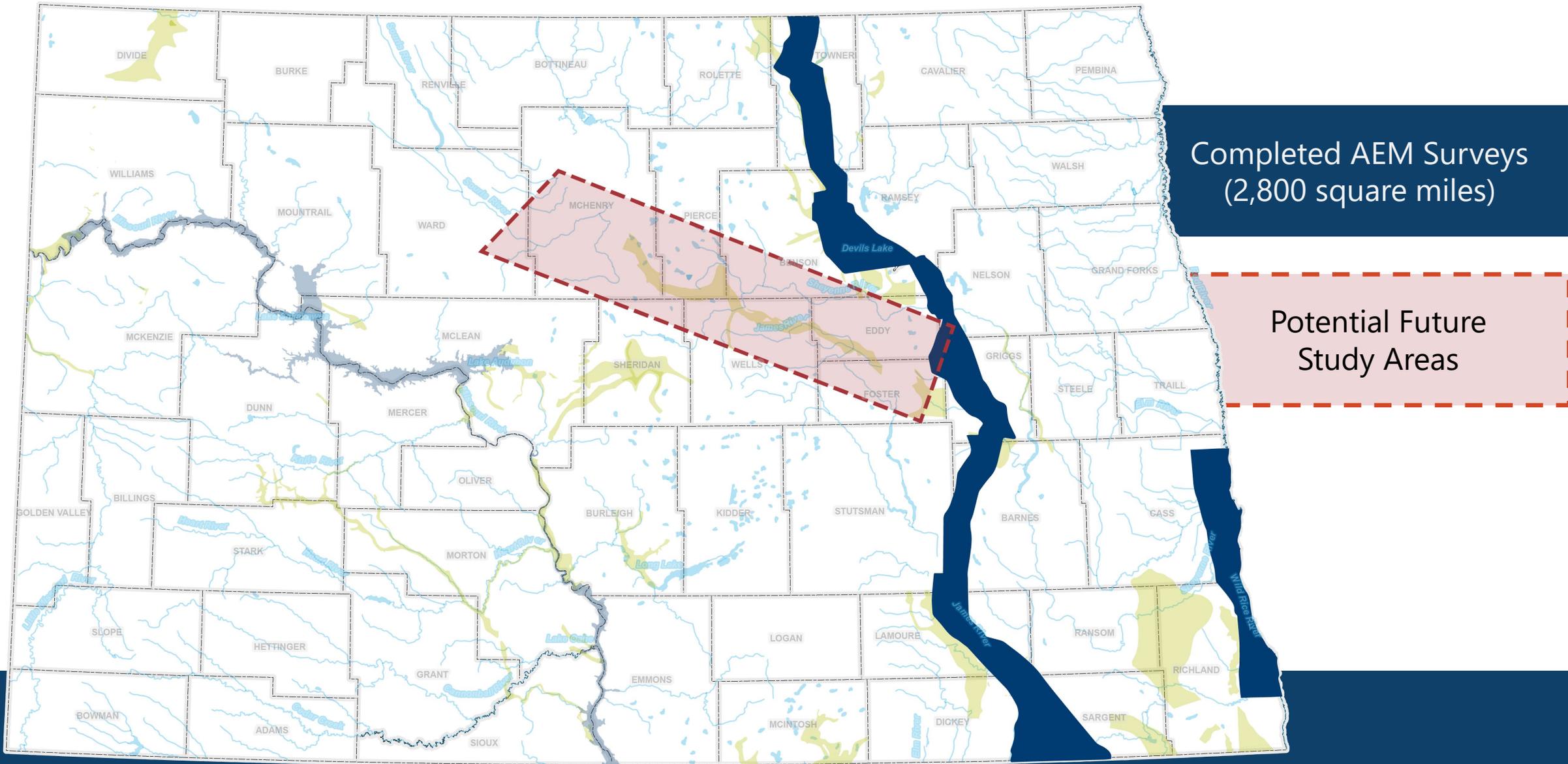
PRESENTS LOCATIONS

*Two soil moisture & precip sites are co-located with ground water sites.



AIRBORNE ELECTROMAGNETIC SURVEYS (AEM)

- Provide **High-Resolution Maps** Of Aquifers That Help Water Managers Identify & Optimize Local Sources Of Available Groundwater
- **2,800 Sq. Miles Completed** - With Plans To Expand Data Collection
- 2023-2025 REQUEST: **\$750,000 (ONE-TIME)**



Completed AEM Surveys
(2,800 square miles)

Potential Future
Study Areas

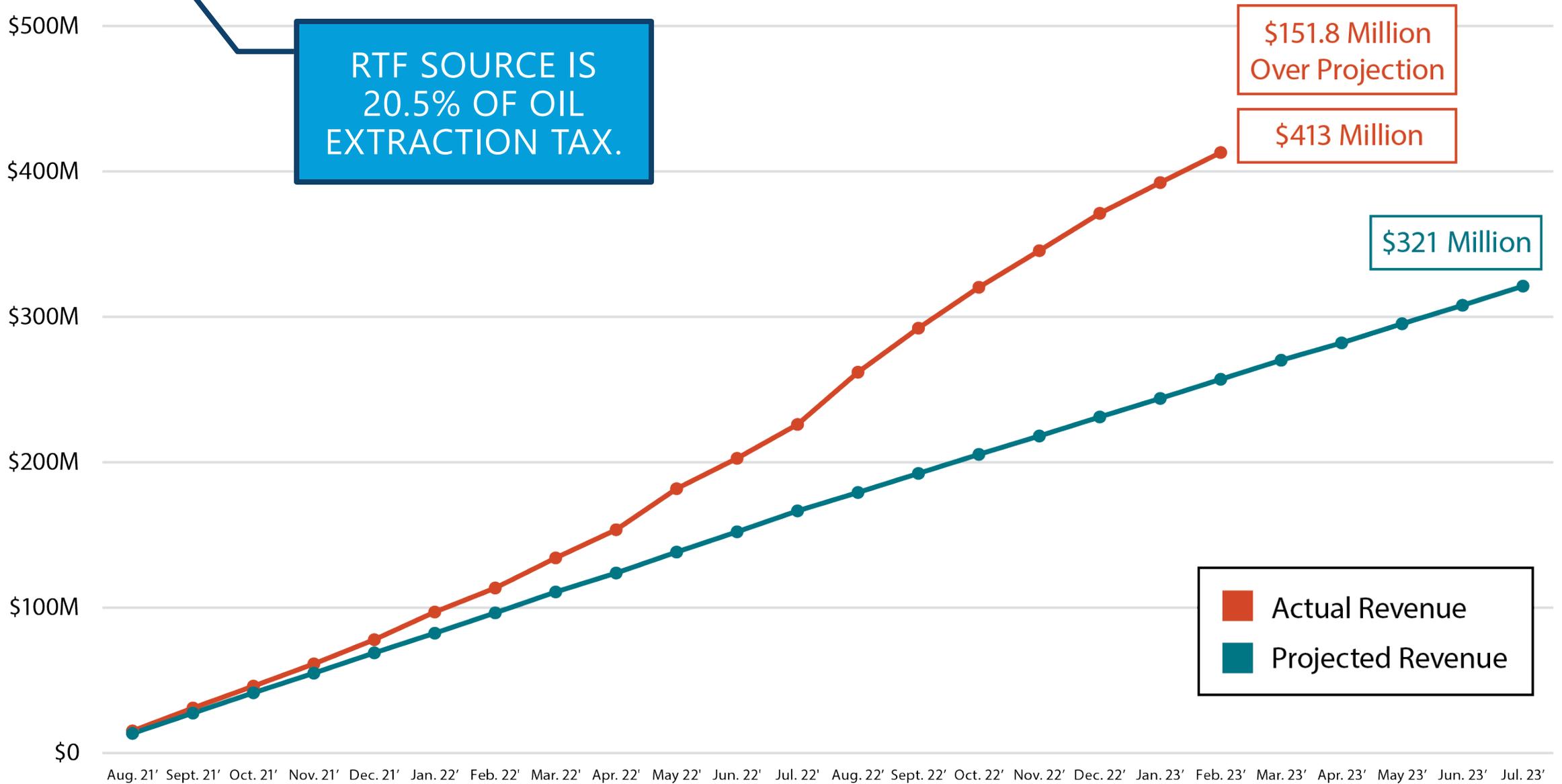
AIRBORNE ELECTROMAGNETIC (AEM) SURVEYS

OTHER DWR HIGHLIGHTS

- **Cost-Share Program Policy Update Completed**
2023-2025 Implementation
- 2021-2023 Cost-Share Program (State Funding)
 - **\$322M** Total Approvals To Date
 - **\$216M** For Water Supply Projects In 28 Cities & 20 Rural/Regional Systems
 - **\$106M** For 105 Different Flood Protection, Water Conveyance, & General Water Projects
- Secured Almost **\$5M** In FEMA Grant Funding For LiDAR Data To Improve & Modernize Modeling & Engineering Design Data Inputs
- Launched A One-Stop-Shop Online Portal Through **WebGrants** For Water Project Sponsors Seeking Grant Funding Or Loans



RESOURCES TRUST FUND REVENUE



WATER PROJECTS STABILIZATION FUND



- Created By SB 2345 During 2021 Special Session
- Funded With Resources Trust Fund Revenues That Surpass Budget Projections
- Transfers To WPSF Ended February 2023
- Eng. SB 2020 Includes **\$150M**
 - **\$120M** Red River Valley Water Supply Project
 - **\$30M** Western Area Water Supply Project (Loan Payoff)

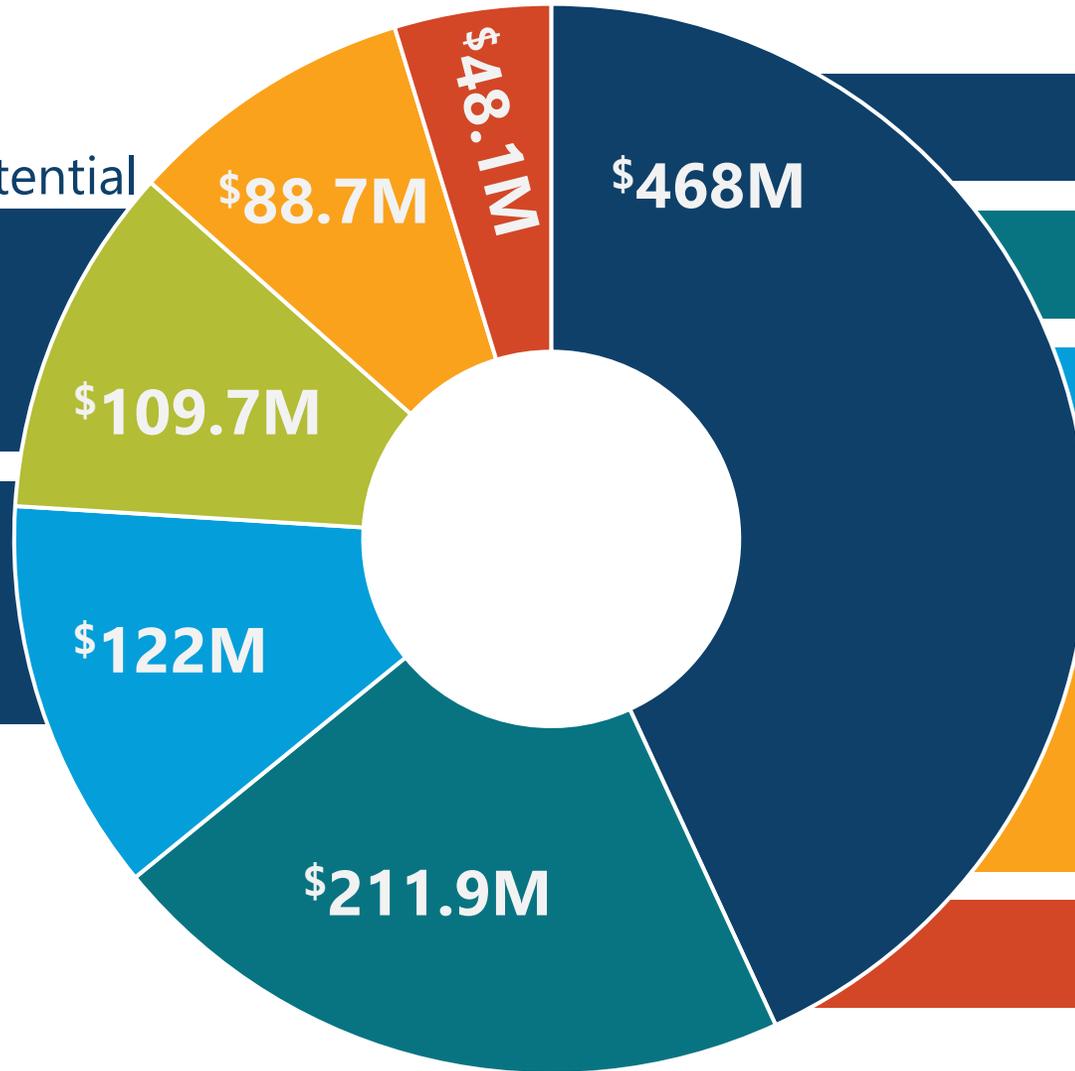
DWR Cost-Share Potential

2023-2025

\$1.05B

2021-2023

\$0.64B



REGIONAL WATER SUPPLY

MUNICIPAL WATER SUPPLY

FLOOD CONTROL

RURAL WATER SUPPLY

CONVEYANCE
(Bank Stabilization,
Snag & Clear, & Drains)

GENERAL WATER

WATER DEVELOPMENT PLAN INVENTORY

2023-2025 PROJECT & PURPOSE FINANCIAL NEEDS SUMMARY

ESTIMATED DWR SHARE BY PRIORITY

Project Purposes	WDP INVENTORY PROJECT NEEDS		
	High Priority	Moderate Priority	Low Priority
Flood Control (Total = \$210M)	\$121.10	\$47.20	\$42.40
F-M Area Diversion	-	-	-
Mandan Flood Risk Reduction	\$12.30	-	-
Mouse River Enhanced Flood Protection	\$76.10	-	-
Other Flood Control	\$19.50	\$0.70	\$0.20
Valley City Permanent Flood Protection	\$13.20	-	-
Water Conveyance	\$0.00	\$46.50	\$42.20
General Water Management (Total = \$48.1M)	\$2.50	\$42.40	\$3.20
Rural Water Supply (Total = \$109.7M)	\$13.70	\$18.80	\$77.20
Water Supply (Total = \$679.9M)	\$467.90	\$1.60	\$210.40
Municipal Water Supply	\$0.00	\$1.60	\$210.40
Northwest Area Water Supply	\$36.00	-	-
Red River Valley Water Supply	\$254.30	-	-
Southwest Pipeline Project	\$131.60	-	-
Western Area Water Supply	\$46.00	-	-
TOTAL (\$1.05B)	\$605	\$110	\$333

WATER DEVELOPMENT PLAN & DASHBOARD



Web-Based
Version

**Launched &
Operational**



Dashboard
Includes

**Interactive
Charts**



Changing
Conditions

Information Can Be
Updated By Staff



Access
Any Time

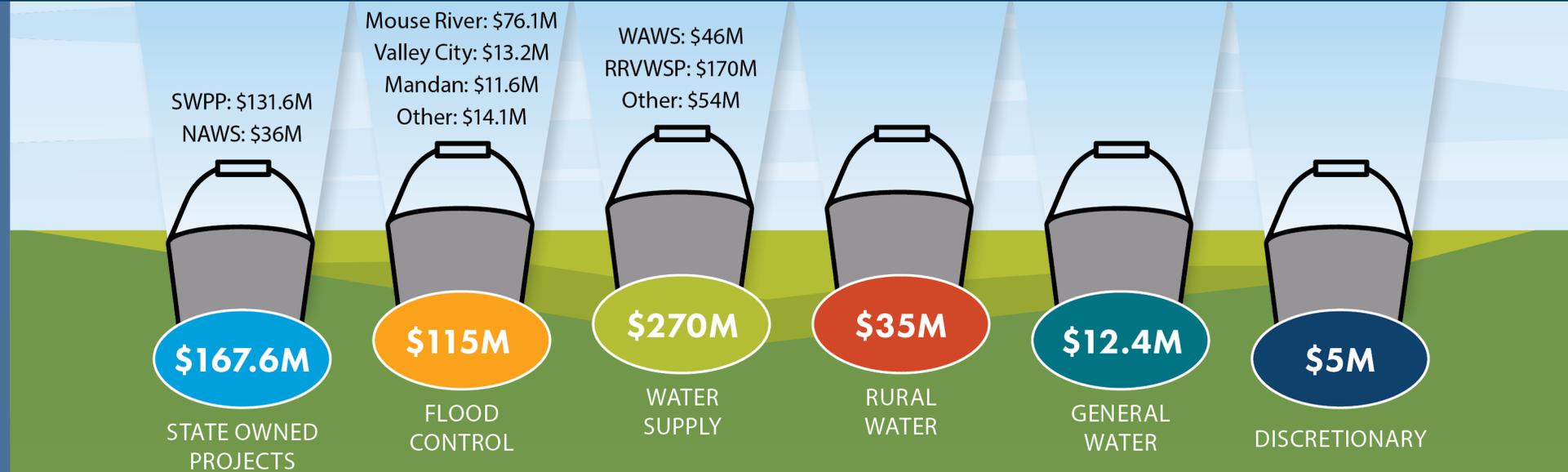
**Phones &
Computers**



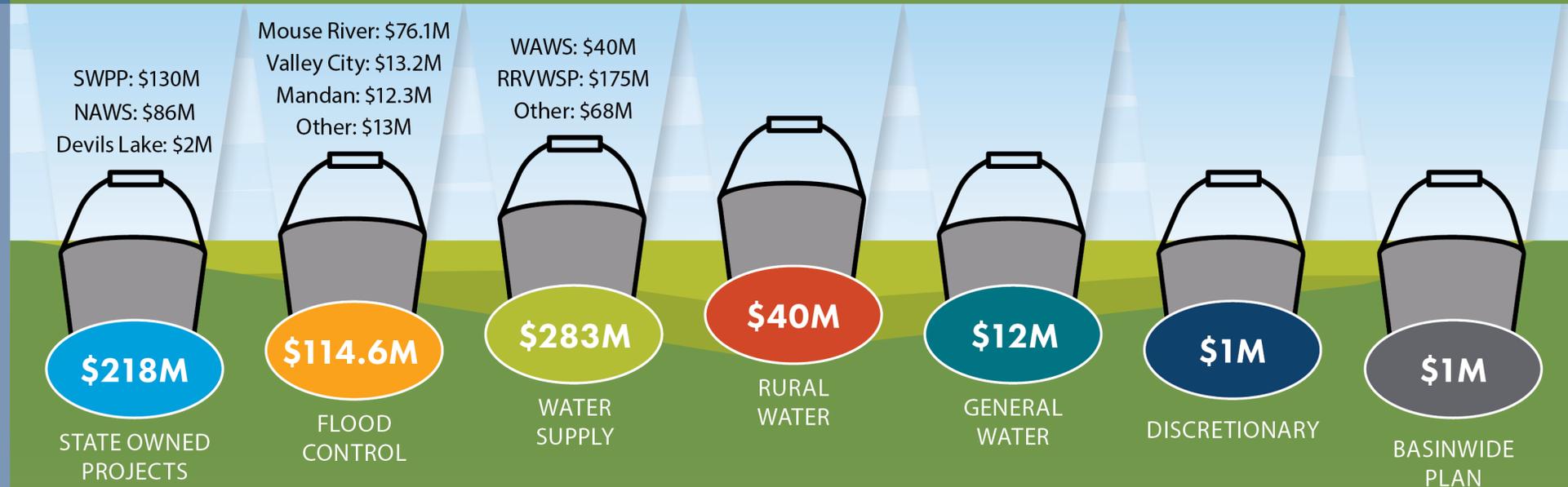
2023-2025 EXECUTIVE RECOMMENDATIONS

2023-2025 PURPOSE FUNDING

Executive
Rec.



Eng.
SB 2020



SB 2020: DWR BUDGET SUMMARY

	2021-2023 Base Level	2023-2025 Executive Rec.	Engrossed SB 2020
Salaries & Wages	\$20,537,867	\$23,809,878	\$23,465,326
Operating Expenses	\$43,366,550	\$59,479,068	\$59,479,068
Capital Assets	\$98,467,437	\$172,396,344	\$300,383,950
Water Supply Projects	\$125,000,000	\$270,000,000	\$283,000,000
Rural Water Supply	\$59,600,000	\$35,000,000	\$40,000,000
Flood Control Projects	\$48,000,000	\$115,000,000	\$114,600,000
General Water Projects	\$14,227,275	\$14,233,275	\$12,000,000
Discretionary Projects	-	\$5,000,000	\$1,000,000
Basinwide Plan	-	\$0	\$1,000,000
TOTAL	\$409,199,129	\$694,918,565	\$834,928,344
Full Time Equivalents (FTE)	90	93	93

DWR OPTIONAL REQUESTS

3 FTE (\$19,320 equipment and \$2,000 travel)
1 Full Time Temp - NAWS
Motor Pool Rate Increase
IT Standardization, Applications, & Security
PRESENS Installations & Temp Salaries
Drilling Supply Cost Increases
Navigability Study
AEM Survey Technology
Groundwater Modeling/Analysis Software
Professional Development
Full Time Temp - FTE Conversion
Bowman Radar Replacement
New Drilling Rig
Office Modifications
<i>RiskMAP - *Federal Funding Spending Authority</i>

TOTAL OPTIONAL REQUESTS

EXECUTIVE RECOMMENDATIONS

\$773,062
\$170,000
\$118,180
\$5,615,764
\$1,572,800
\$180,000
\$180,000
\$750,000
\$94,665
\$80,000
\$61,609
\$1,800,000
\$1,800,000
\$200,000
\$100,000*

\$13,496,080

ENGROSSED SB 2020

\$724,718
\$170,000
\$118,180
\$5,615,764
\$1,572,800
\$180,000
\$180,000
\$750,000
\$94,665
\$80,000
\$61,609
\$1,800,000
\$1,800,000
\$200,000
\$100,000*

\$13,447,736

DWR BUDGET: OTHER CHANGES

OTHER CHANGES	ENGROSSED SB 2020
Line of Credit Included In Capital Assets	\$100,000,000
Incr. Federal Funds For NAWS In Capital Assets	\$47,847,238
Discretionary Funding	\$1,000,000
Basinwide Plan Implementation	\$1,000,000
TOTAL OTHER CHANGES	\$149,847,238

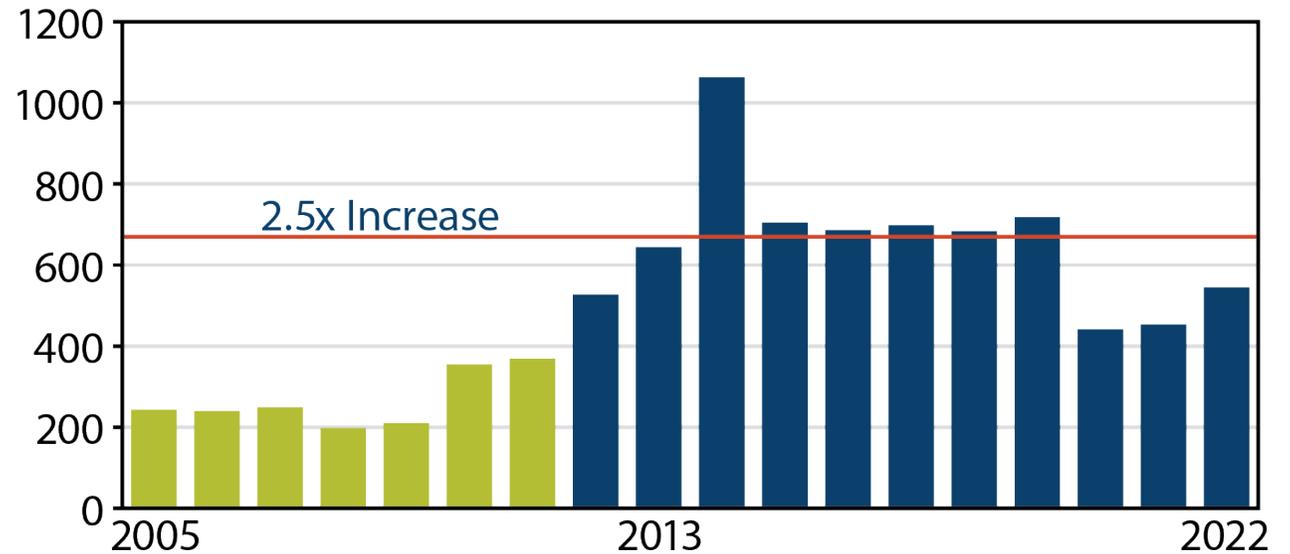
REQUEST FOR 3 FTE

2023-2025 REQUEST:
\$773,062

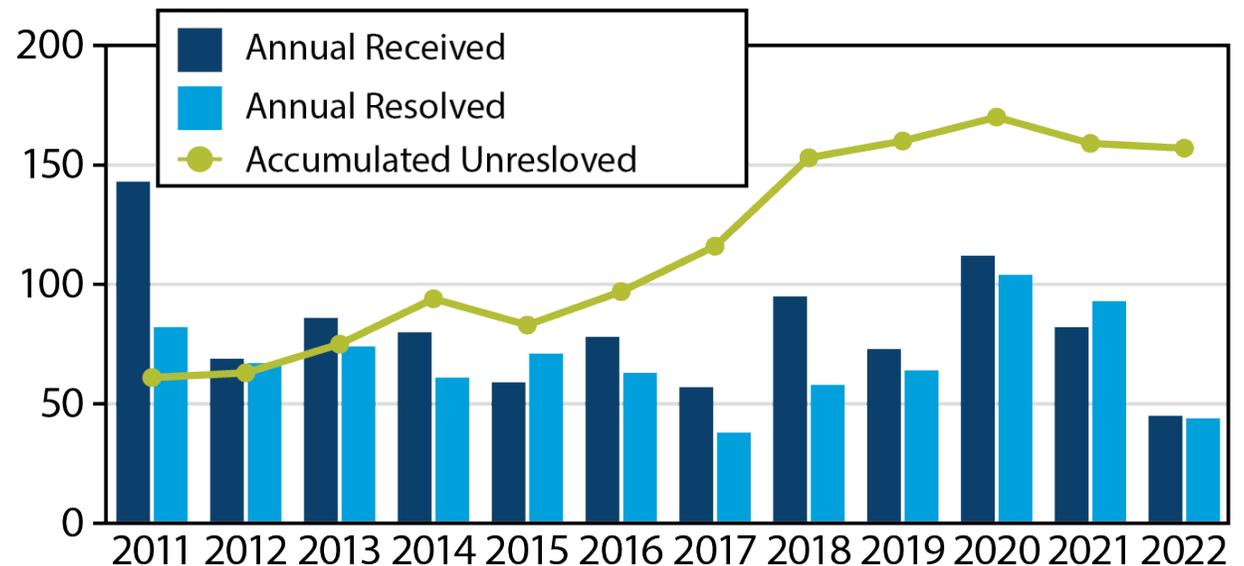
Includes One For The Regulatory Division To Assist With Permitting & Two For The Water Appropriation Division That Would Work On Water Appropriation & PRESENS System Support

Assist With Significantly Reducing Delays So Constituents Receive Permits In A Timelier Manner

TEMPORARY WATER PERMIT APPLICATIONS (ANNUAL)



TRENDS IN REGULATORY APPLICATIONS & REVIEWS



IT STANDARDIZATION, APPLICATIONS & SECURITY



To Consolidate & Standardize IT Services Under One Umbrella Through NDIR:

- File Services
- Computational Infrastructure For Scientific Applications
- Big Data Development/Production For Various Data Types
- Big Data Administrative Costs
- Costs Associated With Additional FTE For NDIR
- Business Analysis
- Project Management
- Project Oversight

**2023-2025 Request:
\$5,615,764**

ADDRESSING SALARY CHALLENGES FOR OUR TEAM MEMBERS

EXECUTIVE REQUEST

\$645K

Recommended To Address Internal Equity & External Market Factors That Affect Existing Team Members. This Would Assist With Reducing Turn-over & Would Support Competitive Pay & Compression Adjustments.

DWR SUPPORTS SENATE BILL 2015

Example:
Hydrologist Positions Are
Well Below Private Sector.

HYDROLOGIST
POSITIONS

22%

OTHER ENG. SB 2020 SECTIONS



SECTION 3

- Additional Income Appropriation Section For Additional Amounts In The Resources Trust Fund For Defraying The Expenses Of The Department, Excluding Operating Expenses & Salaries & Wages.

SECTION 5

- A Section Identifying The Purpose Of The Discretionary Funds Which May Be Used As Necessary Except For Salaries & Wages.

SECTION 8

- A Section Authorizing A \$100 Million Line Of Credit From The Bank Of North Dakota For NAWS (\$50 Million) & SWPP (\$50 Million). SB 2196 Also Includes A Line Of Credit For NAWS That Should Be Removed.

OTHER ENG. SB 2020 SECTIONS



SECTIONS 10, 11, & 12

- Intent Related To Red River Valley Water Supply (\$175M 2023-2025 With \$953M Total Remaining), Mouse River Flood Control (\$76.1M 2023-2025 With \$380.5M Total Remaining), & Southwest Pipeline Project (\$40M Through 2025-2027).

SECTION 13

- A Section Providing Authority For Line-Item Transfers Up To \$13,292,362 Between The Operating & Capital Assets Line Items.

SECTION 14

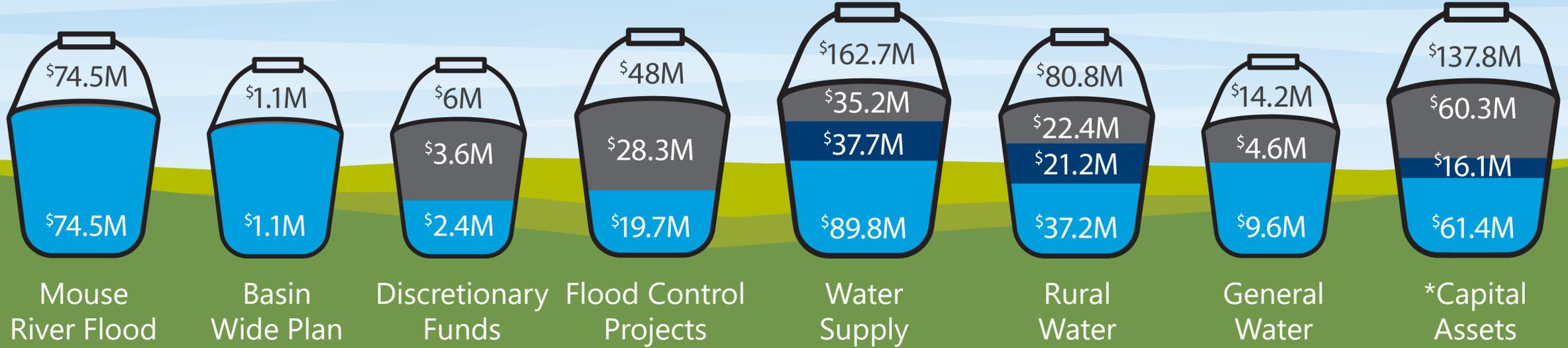
- Exemption Section Providing Authority To Carryover \$405 Million Of Unexpended Obligated & Unobligated Funding Related To Water Projects.

SECTION 15

- A Section Declaring SB 2020 To Be An Emergency Measure.

2021-2023 PURPOSE FUNDING

FEBRUARY 28, 2023



UNOBLIGATED

APPROVED

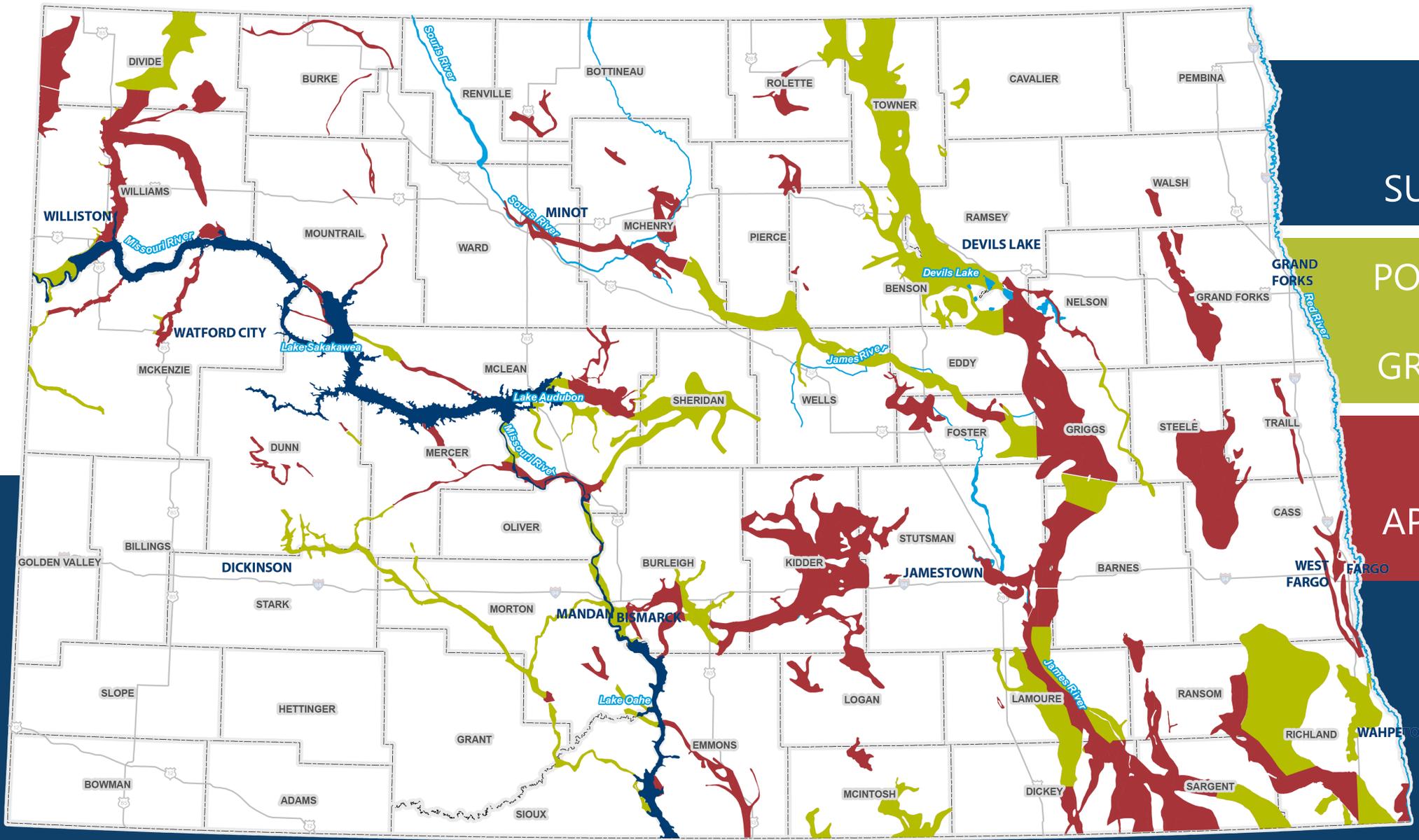
ESTIMATED CARRYOVER
\$405M



Federal Funds-State
Fiscal Recovery Funds -
SB 2345

Spent or Obligated

*Capital Assets bucket includes \$45.6M line of credit.



GOOD WITH
LIMITATIONS /
SURFACE WATER

POTENTIAL WITH
LIMITATIONS /
GROUND WATER

NEAR FULL
APPROPRIATION

WATER AVAILABILITY POTENTIAL FOR ECONOMIC DEVELOPMENT



OBJECTIVES

5-YEAR STRATEGIC PLAN

OBJECTIVE 1

Effectively communicate with the public and stakeholders with a primary focus on collaboration and building partnerships.

OBJECTIVE 2

Develop world-class, sustainable, and resilient water development and management practices.

OBJECTIVE 3

Support beneficial use of Missouri River system water and other available water supply sources.

OBJECTIVE 4

Implement innovative ideas, technology, and grow analytic capabilities to improve efficiencies in water management and development.

OBJECTIVE 5

Improve the department's internal resilience and promote a positive culture.

Multiple Goals & Tactics Associated With Each Objective.

THIS BUDGET SUPPORTS...



- Agency Responsiveness & Efficiencies
- Advancement Of Innovative Ideas & Technology
- Critical Water Infrastructure
- Workforce Enhancement, Retention Of Talent, Recruiting & Mentoring



NORTH
Dakota | Water Resources
Be Legendary.

THANK YOU



701.328.2750



dwr@nd.gov



dwr.nd.gov



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