



# RED RIVER VALLEY WATER SUPPLY PROJECT

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

## 2021 USER UPDATE MEETING



November 15, 2021



# DISCUSSION OVERVIEW



## OVERVIEW OF PROJECT

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## PAST USER ENGAGEMENT

.....



## PROJECT NEED

.....



## PROJECT PROGRESS AND LEGISLATIVE ASKS

.....



## INTERIM AGREEMENTS

.....



## CURRENT USER PARTICIPATION ACTIVITIES

# RED RIVER VALLEY WATER SUPPLY PROJECT

RRVWSP is an **economic development initiative** and a **long-term emergency water supply**





# RRVWSP WORKPLAN UNDERWAY



**CONTINUE PHASED FINAL DESIGN**

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**FINANCIAL MODELING**

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**CONSTRUCTION OF INTAKE, DISCHARGE, AND PIPELINE**

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**LAND & EASEMENTS**

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**ON-GOING PROGRAM DEVELOPMENT**

# PROJECT GROUNDBREAKING



# RED RIVER VALLEY WATER SUPPLY PROJECT



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**GARRISON DIVERSION  
CONSERVANCY DISTRICT**

**Represents the State of ND**

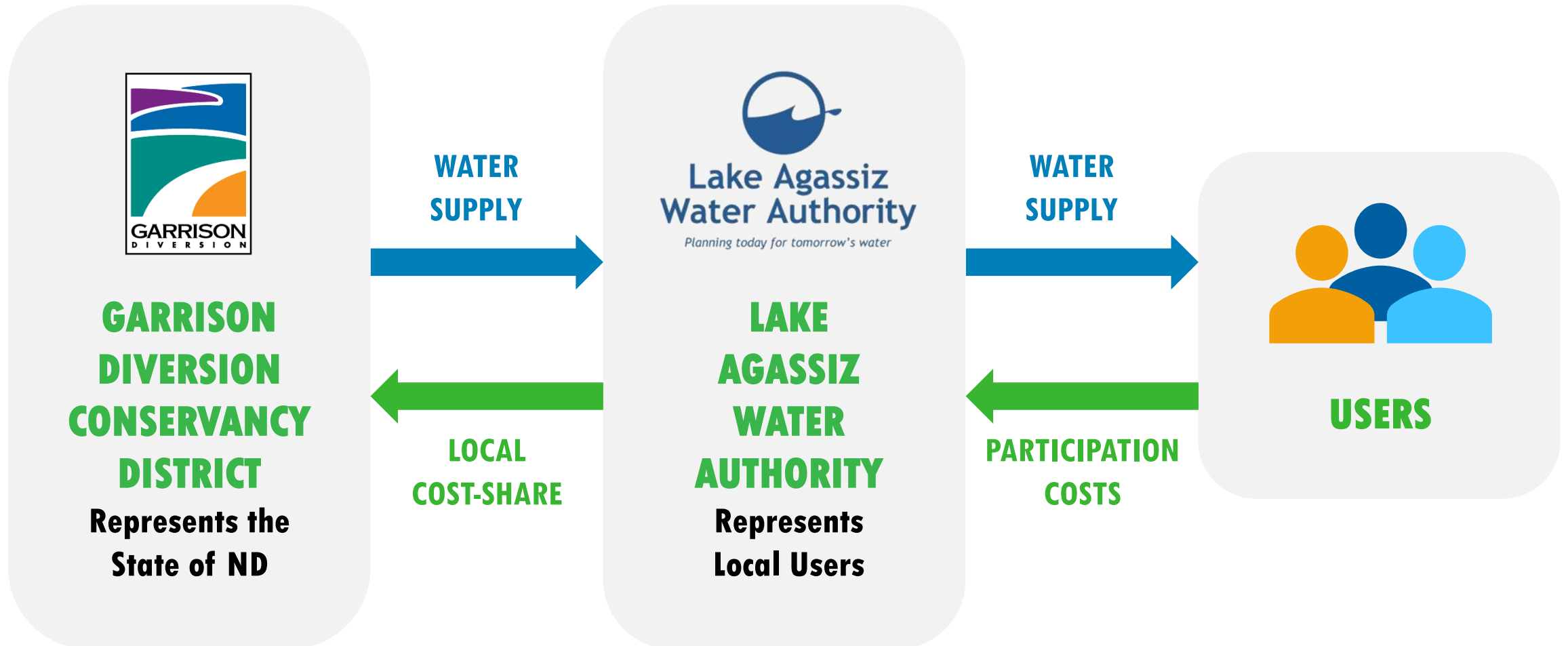


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**LAKE AGASSIZ  
WATER AUTHORITY**

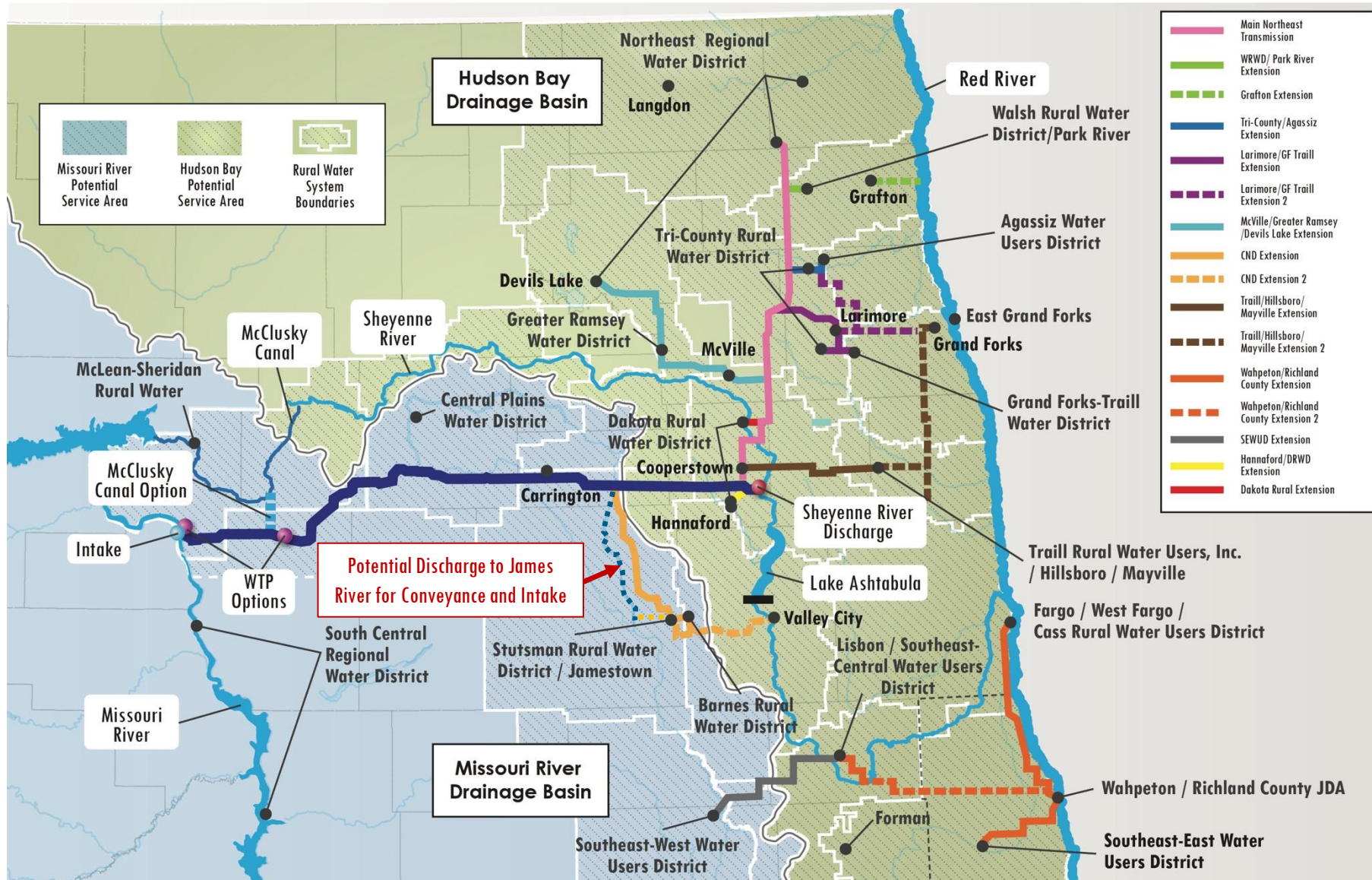
**Represents Local Users**

# RED RIVER VALLEY WATER SUPPLY PROJECT



# RRWSP DEVELOPMENT PHASE

## 35 CITIES & WATER SYSTEMS





# RRWSP PROJECT OVERVIEW

DEVELOPMENT PHASE [35 CITIES & WATER SYSTEMS]



## Pipe Diameter

72" (6 foot)



## Pipe Length

165 Miles



## Pipe Material

Steel



## Pipe Flow

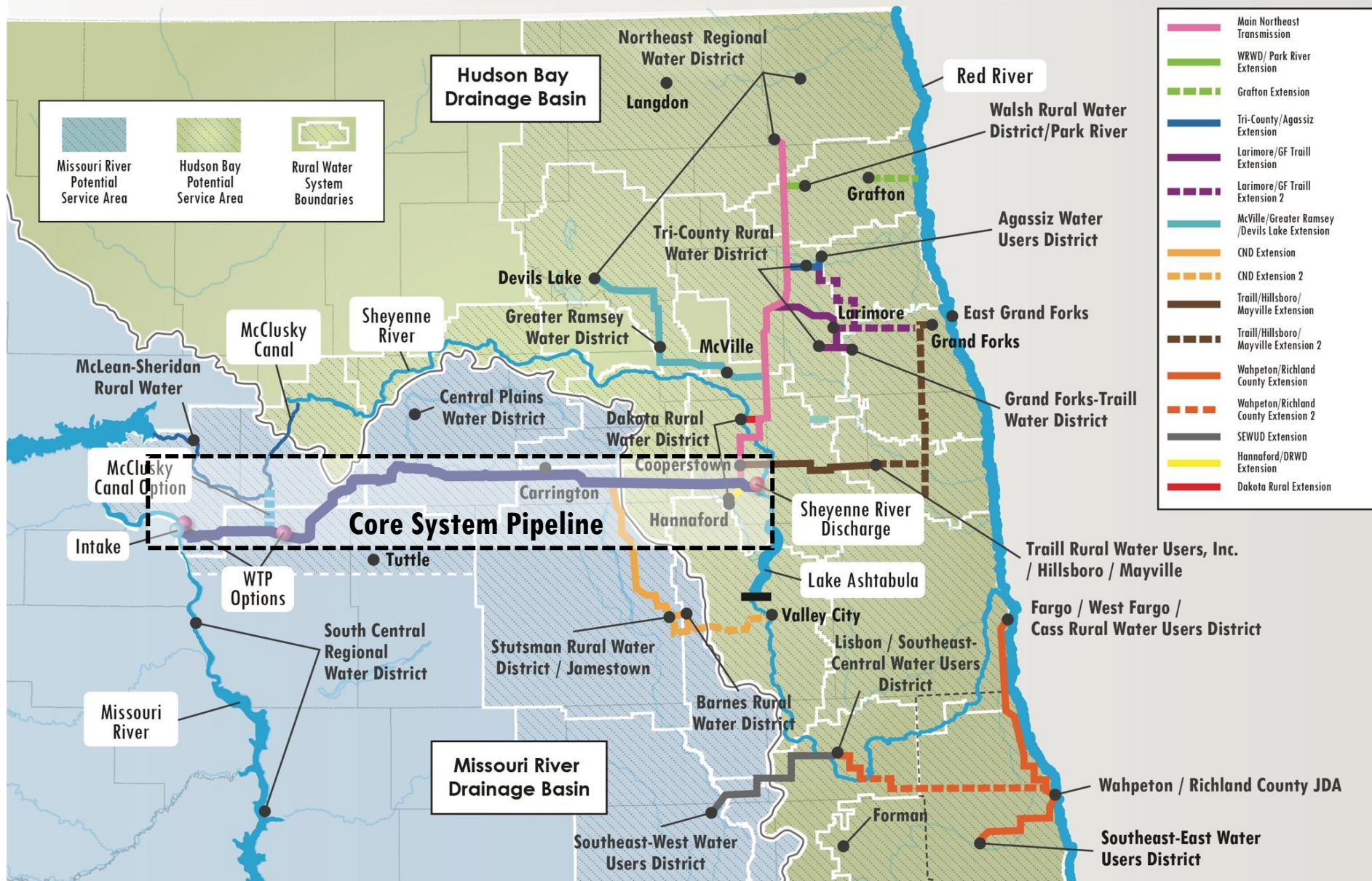
165 cfs



## Bury Depth

7' Top of Pipe

15' Bottom of Trench

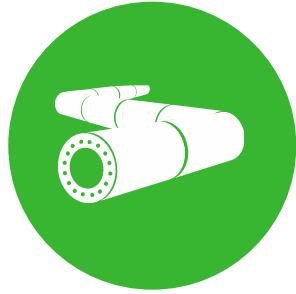


# ESTIMATED TOTAL PROJECT COST (2021\$)



**\$70.3 M**

**Conventional Intake, Intake Pumps & Supply Cost**



**\$1.01 B**

**Transmission Pipeline Costs (including ROW)**



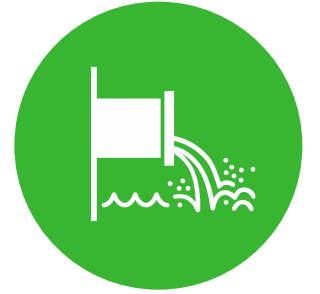
**\$71.4 M**

**Pump Stations, Break Tank & Hydraulic Structures**



**\$66.3 M**

**Practical Treatment – WTP Costs**



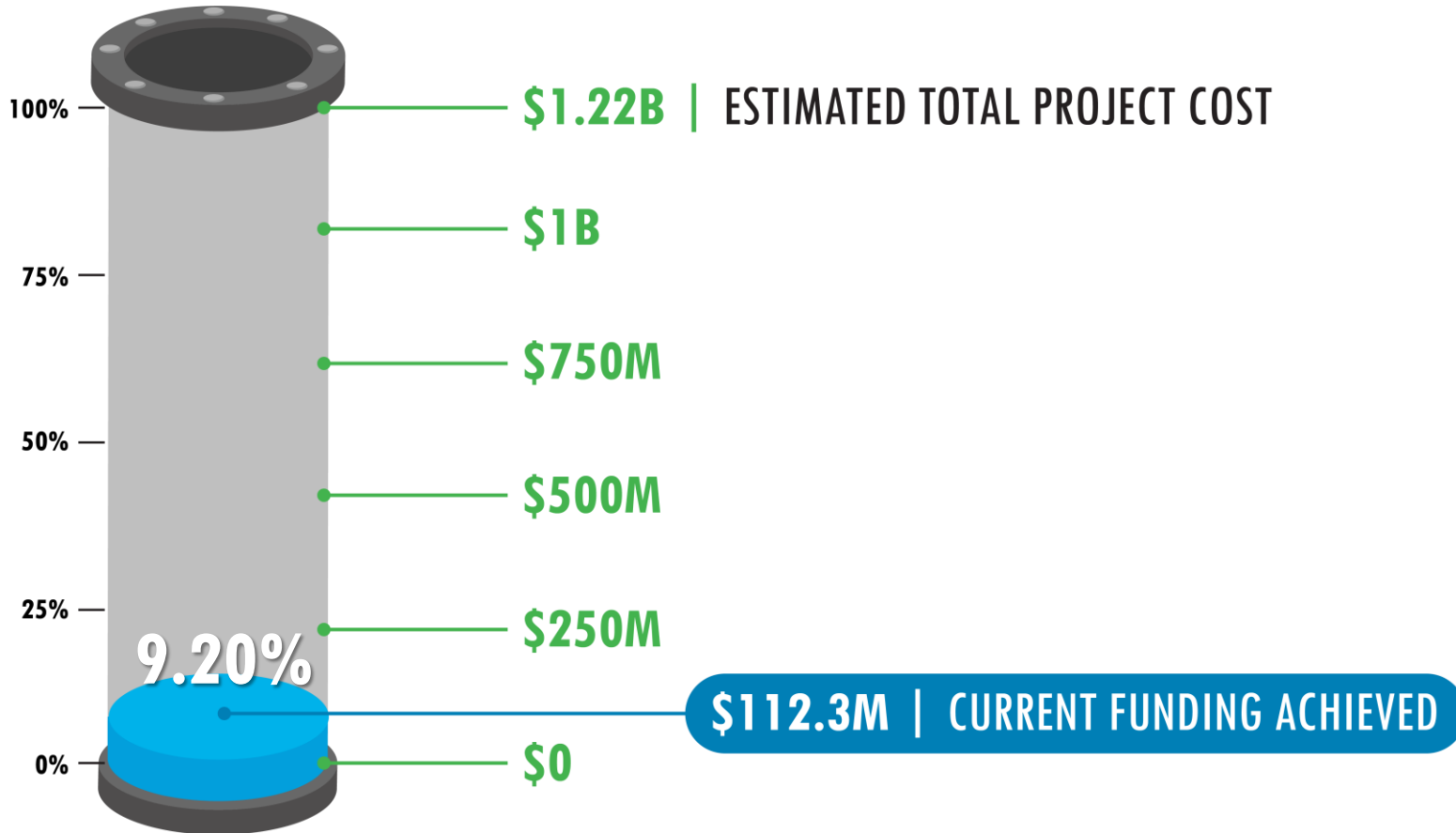
**\$10.0 M**

**Discharge Structure Costs**

**TOTAL PROJECT COSTS = \$1.22 B**

\*Excludes Pipeline Extensions/Includes Admin, Engineering, Legal, and Real Estate | All Project Costs shown in October 2021 Dollars

# TOTAL FUNDING PROGRESS



\*Total funding achieved including legislative appropriations (2017-2023) and approved local interim agreements

# PAST USER ENGAGEMENT

## INITIAL OUTREACH



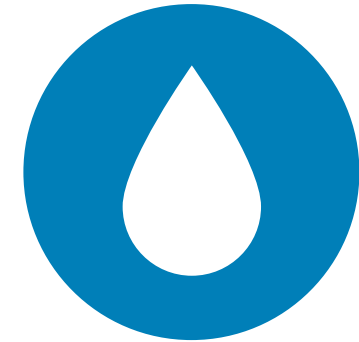
**100+ MEETINGS** IN 2016  
WITH POTENTIAL USERS  
THROUGHOUT CENTRAL  
AND EASTERN NORTH  
DAKOTA

## DEVELOPMENT AGREEMENT



**35 USERS** SIGNED THE  
DEVELOPMENT AGREEMENT,  
INCLUDING 20 MUNICIPALITIES  
AND ALL 15 RURAL WATER  
DISTRICTS

## WATER NOMINATIONS



**159.23 CFS** OF WATER  
NOMINATIONS,  
INCLUDING 86.00 CFS  
DOMESTIC AND 73.23  
CFS INDUSTRIAL

# WATER NOMINATIONS

## STUTSMAN RURAL WATER DISTRICT WATER NOMINATION

- Domestic — 0.00 cfs
- Industrial — 4.00 cfs
- **Total Nomination — 4.00 cfs**



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## JAMESTOWN WATER NOMINATION

- Domestic — 0.00 cfs
- Industrial — 11.00 cfs
- **Total Nomination — 11.00 cfs**



# RED RIVER VALLEY WATER SUPPLY PROJECT

## USER COMMITMENTS

| SIGNED USERS  |                  |
|---|------------------|
| User  | Nomination (cfs) |
| <b>Fargo/West Fargo/Cass Rural Water District</b>       | <b>83.70</b>     |
| <b>Grand Forks / East Grand Forks</b>                   | <b>28.10</b>     |
| <b>Stutsman Rural Water District/Jamestown</b>          | <b>15.00</b>     |
| Wahpeton  | 4.50             |
| <b>East Central Water District</b>                      | <b>4.30</b>      |
| <b>Northeast Regional Water District (with Langdon)</b> | <b>3.20</b>      |
| Carrington  | 2.50             |
| Southeast Water Users District                          | 2.50             |
| Richland County JDA                                     | 2.00             |
| Grafton   | 2.00             |
| Valley City   | 1.50             |

| SIGNED USERS (CONTINUED)        |                  |
|---------------------------------|------------------|
| User                            | Nomination (cfs) |
| Agassiz Water Users District    | 1.00             |
| Devils Lake                     | 1.00             |
| Greater Ramsey Water District   | 1.00             |
| Tri-County Rural Water District | 1.00             |
| Walsh Rural Water District      | 1.00             |
| Dakota Rural Water District     | 0.70             |
| Central Plains Water District   | 0.60             |
| Barnes Rural Water District     | 0.50             |
| Hillsboro                       | 0.50             |
| Mayville                        | 0.50             |

| SIGNED USERS (CONTINUED)              |                  |
|---------------------------------------|------------------|
| User                                  | Nomination (cfs) |
| South Central Regional Water District | 0.50             |
| McLean-Sheridan Rural Water           | 0.42             |
| Park River                            | 0.40             |
| Lisbon                                | 0.33             |
| Cooperstown                           | 0.20             |
| McVile                                | 0.10             |
| Hannaford                             | 0.05             |
| Tuttle                                | 0.02             |
| Forman                                | 0.01             |

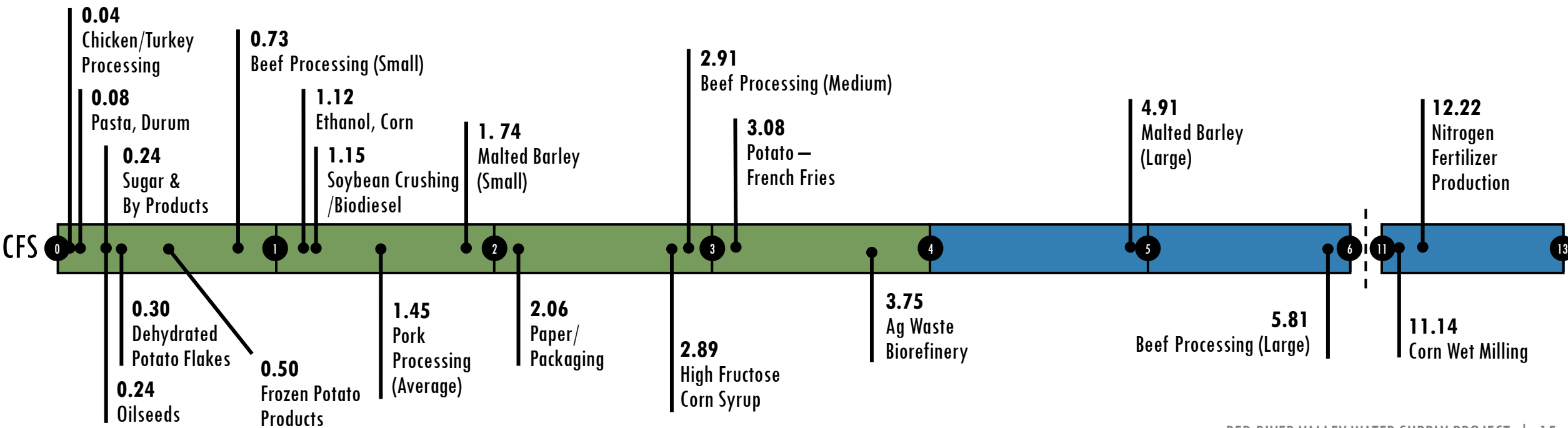
**TOTAL = 159.23 cfs**

**REGIONALIZATION LOWERED ORIGINAL 35 USERS TO 30 USERS**

# INDUSTRIAL WATER NOMINATION CAPABILITIES



| Stutsman Rural Water District | Jamestown        | Total Available (cfs) |
|-------------------------------|------------------|-----------------------|
| Nomination (cfs)              | Nomination (cfs) |                       |
| 4.00                          | 11.00            | 15.00                 |



# JAMESTOWN/SRWD GROUND WATER PERMIT SUMMARY

| Permit Holder                              | Permit No. | Status                 | Type       | Approved (CFS) | Total Permit | Recent Usage | Current Unutilized |
|--|------------|------------------------|------------|----------------|--------------|--------------|--------------------|
| <b>Cargill (ADM*)</b>                      | 2105       | Perfected              | Industrial | 2.32           | 4.73         | TBD          | TBD                |
|  | 3933       |                        |            | 0.35           |              |              |                    |
|  | 5448       |                        |            | 0.69           |              |              |                    |
|  | 5584       |                        |            | 1.38           |              |              |                    |
| <b>Jamestown</b>                           | 1120       | Perfected              | Municipal  | 10.56          | 10.56        | 5.14         | 4.72               |
|  | 6597**     | Conditionally Approved | Industrial |                |              | 0.70         |                    |
| <b>Stutsman RWD</b>                        | 5690       | Perfected              | Rural      | 0.45           | 5.24         | 0.42         | 3.73               |
|  | 3774       | Perfected              | Rural      | 0.45           |              | 0.42         |                    |
|  | 6609A      | Conditionally Approved | Rural      | 0.53           |              | 0.00         |                    |
|  | 6454       | Held in Abeyance       | Industrial | 2.23           |              | 0.68         |                    |
|  | 6609       | Conditionally Approved | Industrial | 1.59           |              | 0.00         |                    |
| <b>Total for Jamestown and SRWD --&gt;</b> |            |                        |            |                | <b>15.80</b> | <b>7.35</b>  | <b>8.45</b>        |

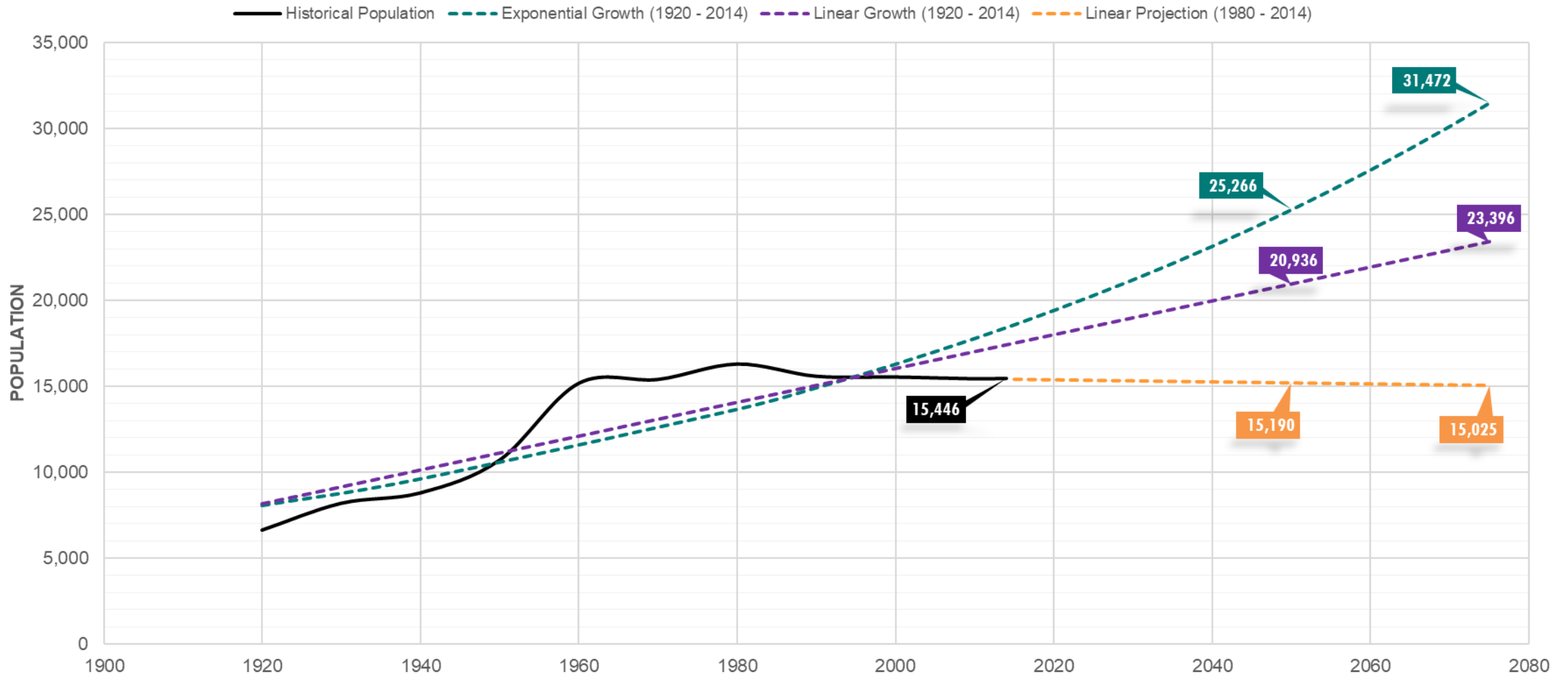
\*Cargill Permits in process of being transferred to ADM per corespondance w/ DWR

\*\*Permitted Allocation of No. 6597 (692 acre-feet) is embedded to Total Allocation of Permit No. 1120



# JAMESTOWN PREVIOUS POPULATION PROJECTIONS

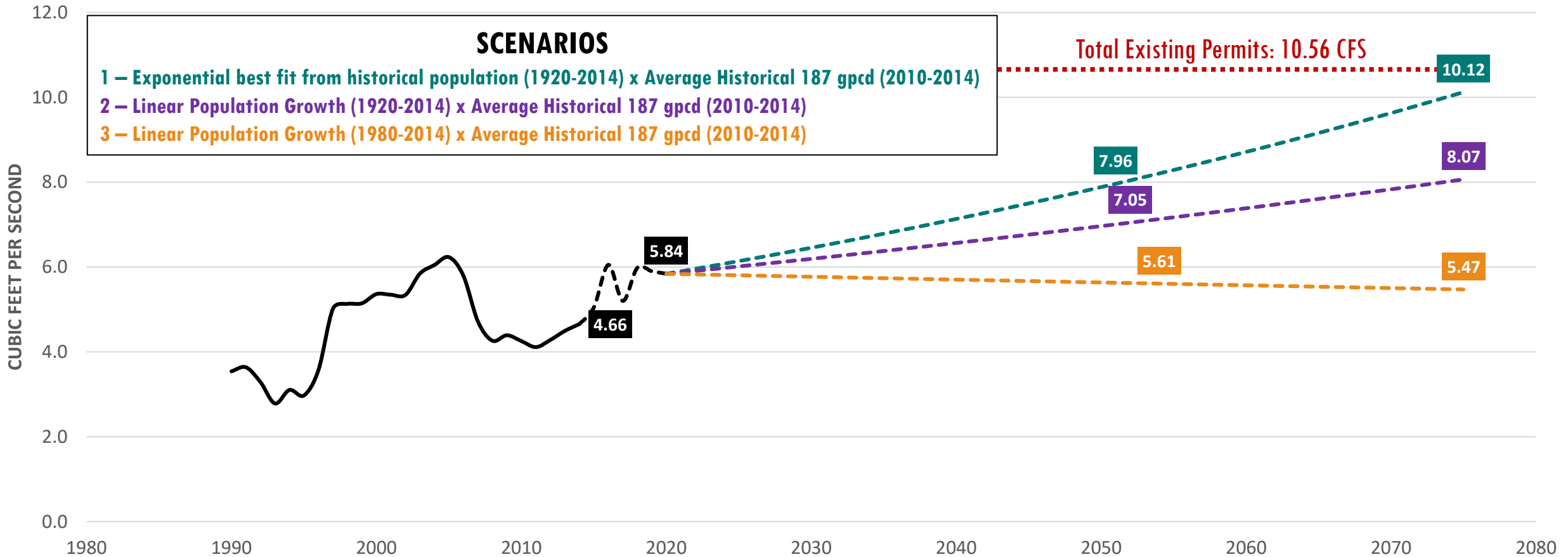
## JAMESTOWN POPULATION PROJECTIONS



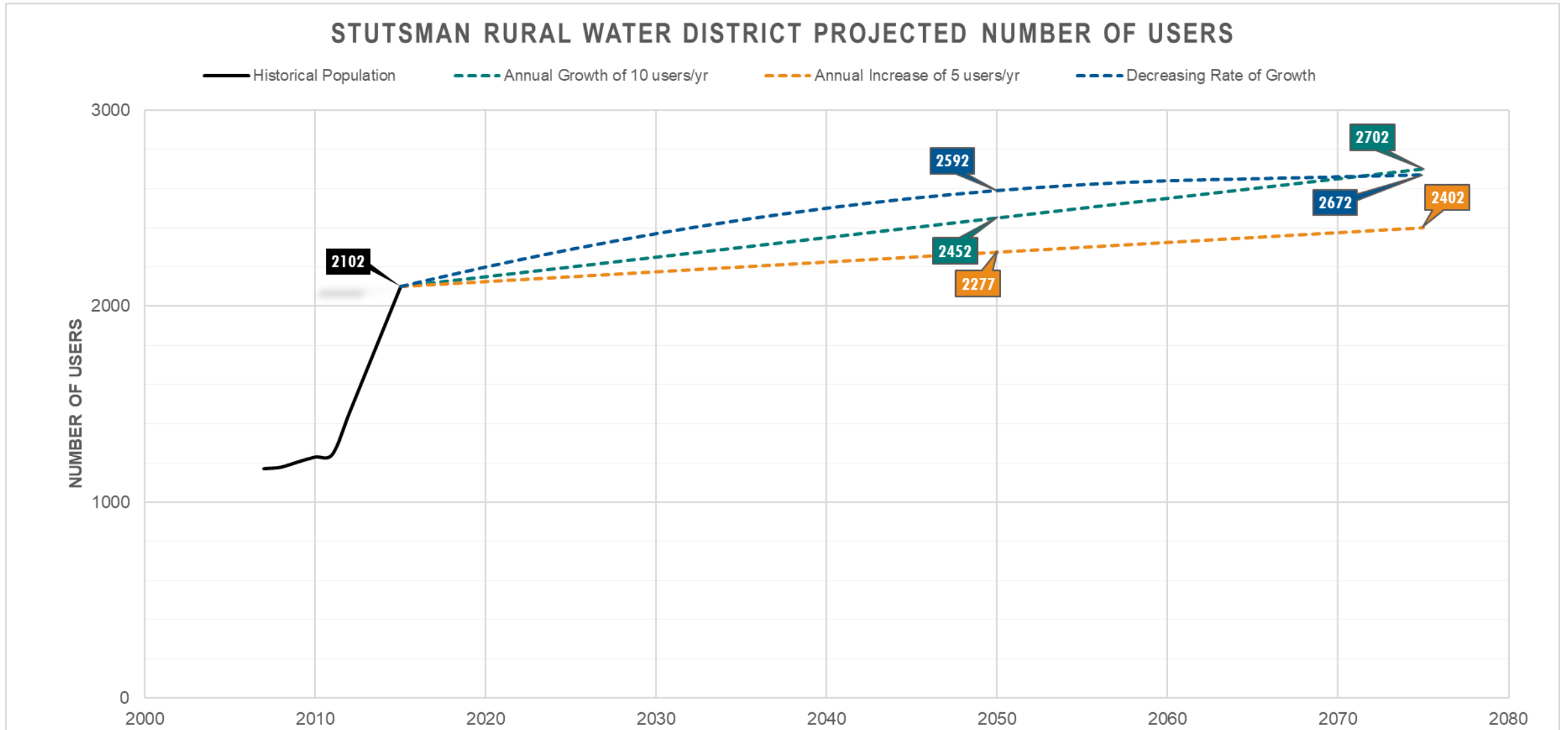
# JAMESTOWN WATER DEMAND PROJECTIONS

## JAMESTOWN PROJECTED WATER USAGE

— Jamestown Historical    - - - Scenario 1    - - - Scenario 2    - - - Scenario 3



# STUTSMAN RURAL WATER DISTRICT PREVIOUS USER PROJECTIONS



# STUTSMAN WATER DEMAND PROJECTIONS

## STUTSMAN RURAL WATER DISTRICT PROJECTED WATER USAGE

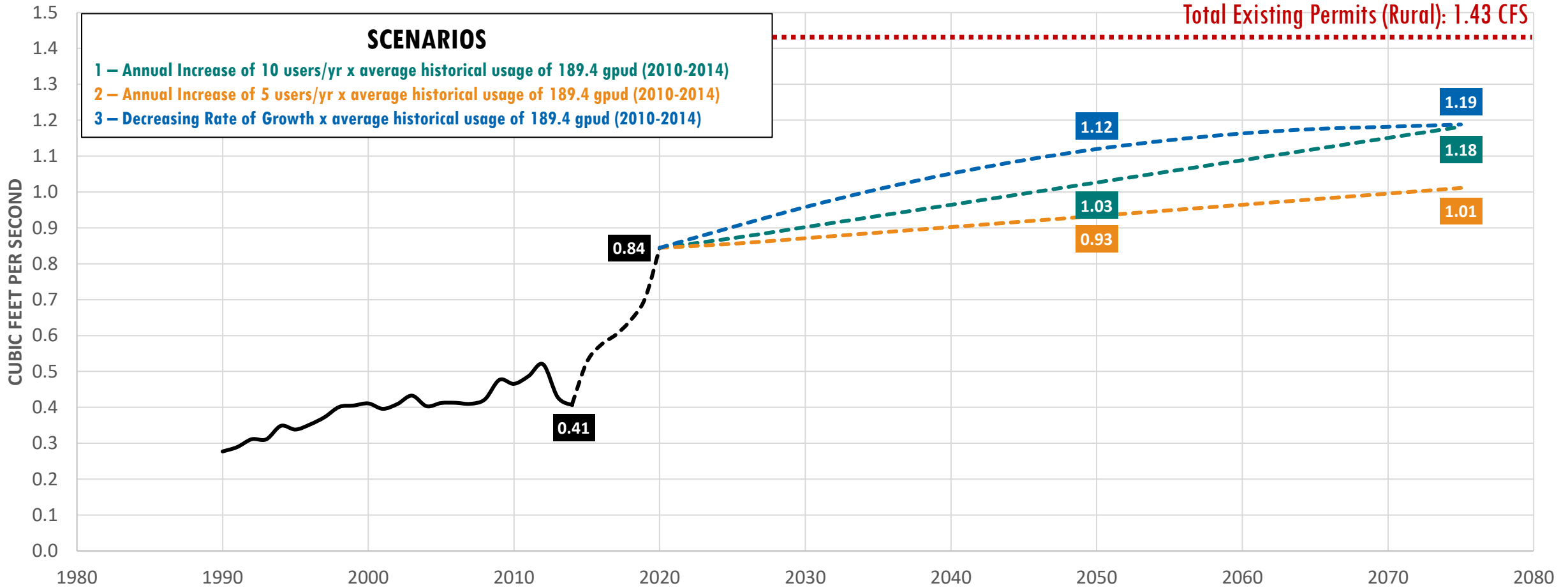
Total Existing Permits  
(Rural + Industrial): 5.24 CFS

— Stutsman Historical    - - - Scenario 1    - - - Scenario 2    - - - Scenario 3

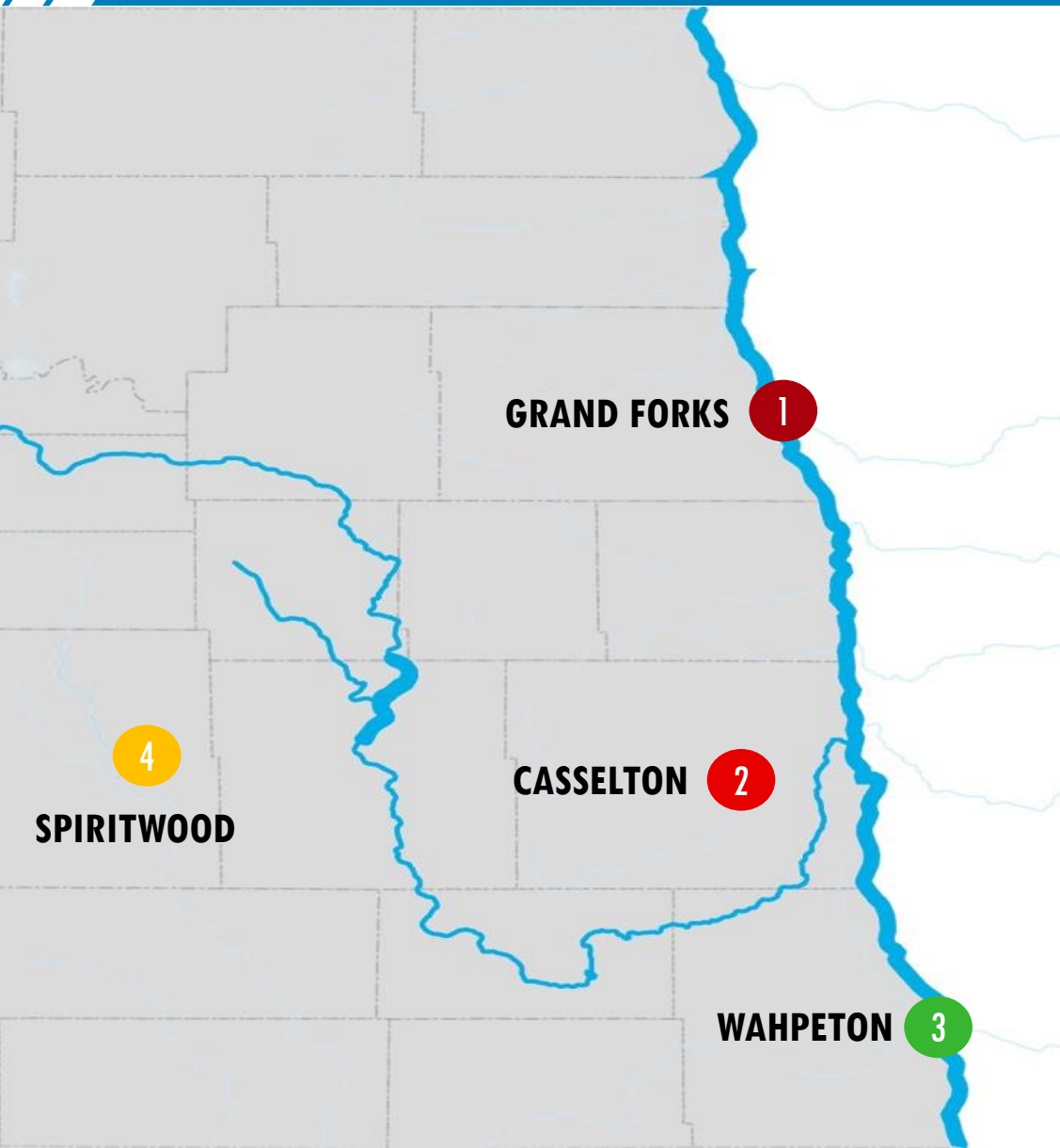
### SCENARIOS

- 1 – Annual Increase of 10 users/yr x average historical usage of 189.4 gpud (2010-2014)
- 2 – Annual Increase of 5 users/yr x average historical usage of 189.4 gpud (2010-2014)
- 3 – Decreasing Rate of Growth x average historical usage of 189.4 gpud (2010-2014)

Total Existing Permits (Rural): 1.43 CFS



# INDUSTRIAL WATER DEMAND EXCEEDS CURRENT SUPPLY



- 1 NORTHERN PLAINS NITROGEN**  
Permitted City's Wastewater Effluent Discharge
- 2 THARALDSON ETHANOL**  
Re-Used Fargo's Grey Water at Higher Cost
- 3 AGP SOYBEAN CRUSHING/CRACKING**  
*Relocated Facility, Missed Opportunity*
- 3 CARGILL (PRO GOLD)**  
Reliability & Expansion Precluded  
by Permit Restrictions
- 4 SPIRITWOOD ENERGY PARK**  
Water Options Limited
- DAIRY/POTATO WASHING/HOG & BEEF,  
MISC. WATER DISTRICTS**  
Water Options Limited

# THE PROJECT IS CRITICAL FOR NORTH DAKOTA

## LACK OF WATER MEANS FEWER INDUSTRIAL OPPORTUNITIES

- Our State's economic opportunities continue to grow
- North Dakota has garnished interest from many industries — including “thirsty” industries
- Already **missed industrial opportunities** in Central and Eastern ND
- Much of the existing water appropriations are spoken for and allocated

## MORE REGIONALIZATION / CHANGE IS EXPECTED IN FUTURE

- Oldest Water District in ND formed in 1969, or 52 Years Ago
- Project Will Serve **55 Years into Future** - Regionalization has occurred in last four years
- Users who do not participate in project will not be allowed to access RRVWSP water

## 1926B ENTITLEMENT COULD BE JEOPARDIZED WITHOUT SUFFICIENT WATER

- “To prove entitlement to 1926B's protection from corporation:
  - **It has provided or at least made water service available”**
- Potential for piercing 1926B protection if water districts can't supply water to users compared to municipalities that signed up





# BENEFITS OF DEVELOPING PROJECT INDUSTRIAL WATER

What Will Developing all **73 CFS** of Project Industrial Capacity Look Like?

**7,700**

Projected **Average Annual Employment** increase from **Full Utilization of Project Industrial Capacity**

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**\$1.7B**

Projected **Average Annual Economic Impact (GSP)** from **Full Utilization of Project Industrial Nominations**

\*Results from recently completed REMI economic impact analysis performed by Bank of North Dakota consultant FTI Consulting

# 2021 TO 2023 LEGISLATIVE ASKS

- **LONG-TERM / LOW-INTEREST / FLEXIBLE STATE LOAN PROGRAM**  
Such as 40 years @ 2% and shaped repayment (BND is currently working on structure)
- **AFFORDABLE COST-SHARE**  
75% State / 25% Local for large users (received in 2019)  
80% State / 20% Local for small users (not addressed)
- **DEFINED CONSTRUCTION SCHEDULE**  
6 to 10 years (not addressed)
- **FUNDING REQUEST**  
\$50 million (Included to SWC Budget for 2021-2023)  
\$25M of ARPA funds currently being requested in Special Session





# RRVWSP NDSWC APPROVED FUNDING TO DATE

**\$83.89M\***

**Total State  
Cost-Share**



**\$25.07M**

**Total Local  
Cost-Share**



**\$108.96M**

**Total  
Cost**

**\*Including Additional \$47.49M recently approved at October SWC Meeting**

- Interim agreements with Grand Forks, Fargo, and Garrison Diversion have funded majority of local share to date
- Jamestown/SRWD have funded \$131,895 of local share to date through Project Development Agreement



# INTERIM AGREEMENTS

The **Interim Agreements** between **GDCD** and **LAWA, through Fargo and Grand Forks,** will fund the local share of ongoing work.



## Purpose of Interim Agreement(s)

- **Series A** - Funds the 10% local share, up to \$1,444,444, of early out construction on the intake, pipeline and discharge structure.
- **Series B** - Funds the 25% local share, up to \$2,050,000, of continued design, permitting, construction support, financial planning and project development.
- **Series C** - Funds the 25% local share, up to \$22,430,000 of continued construction, land & easements, and project development.

Fargo, Grand Forks, and Garrison Diversion are pre-paying these expenses, subject to later reimbursement by project participants.

Currently working on a **Project Participation Agreement and Water Supply Agreement** to identify all final project participants.

# INTERIM AGREEMENT COSTS

| User                                     | Tier %        | 2017-2019 Biennium     | 2019-2021 Biennium   | 2021-2023 Biennium           | Total              |
|--|---------------|------------------------|----------------------|------------------------------|--------------------|
|  |               | Early-Out Construction | Revised Budget       | Engineering and Construction |                    |
|  |               | 10% Local Cost Share   | 25% Local Cost Share | 25% Local Cost Share         |                    |
| Fargo <sup>1</sup>                       | 67.823%       | \$979,664              | \$1,390,369          | \$15,212,699                 | \$17,582,732       |
| Grand Forks <sup>2</sup>                 | 13.387%       | \$193,369              | \$274,435            | \$3,002,704                  | \$3,470,508        |
| <b>Stutsman Rural Water / Jamestown</b>  | <b>5.629%</b> | <b>\$81,303</b>        | <b>\$115,388</b>     | <b>\$1,262,585</b>           | <b>\$1,459,276</b> |
| East Central Water District <sup>3</sup> | 1.912%        | \$27,615               | \$39,193             | \$428,862                    | \$495,670          |
| Wahpeton                                 | 1.856%        | \$26,808               | \$38,046             | \$416,301                    | \$481,155          |
| NE Regional Water District <sup>4</sup>  | 1.320%        | \$19,063               | \$27,055             | \$296,076                    | \$342,194          |
| Southeast Water Users District           | 1.031%        | \$14,893               | \$21,137             | \$231,253                    | \$267,283          |
| Grafton                                  | 0.901%        | \$13,014               | \$18,470             | \$202,094                    | \$233,578          |
| Carrington / Carrington JDA              | 0.840%        | \$12,128               | \$17,212             | \$188,412                    | \$217,752          |
| Richland County JPA                      | 0.825%        | \$11,915               | \$16,909             | \$185,048                    | \$213,872          |
| Valley City                              | 0.692%        | \$9,989                | \$14,177             | \$155,216                    | \$179,382          |
| Agassiz Water District                   | 0.421%        | \$6,074                | \$8,620              | \$94,430                     | \$109,124          |
| Devils Lake                              | 0.412%        | \$5,957                | \$8,455              | \$92,412                     | \$106,824          |
| Greater Ramsey Rural Water               | 0.412%        | \$5,957                | \$8,455              | \$92,412                     | \$106,824          |
| Tri-County Water District                | 0.412%        | \$5,957                | \$8,455              | \$92,412                     | \$106,824          |
| Walsh Rural Water District               | 0.412%        | \$5,957                | \$8,455              | \$92,412                     | \$106,824          |
| Dakota Rural Water District              | 0.289%        | \$4,170                | \$5,918              | \$64,823                     | \$74,911           |
| Barnes Rural Water District              | 0.214%        | \$3,095                | \$4,393              | \$48,000                     | \$55,488           |
| Hillsboro                                | 0.206%        | \$2,979                | \$4,227              | \$46,206                     | \$53,412           |
| Mayville                                 | 0.206%        | \$2,979                | \$4,227              | \$46,206                     | \$53,412           |

| User                                  | Tier % | 2017-2019 Biennium     | 2019-2021 Biennium   | 2021-2023 Biennium           | Total    |
|---------------------------------------|--------|------------------------|----------------------|------------------------------|----------|
|                                       |        | Early-Out Construction | Revised Budget       | Engineering and Construction |          |
|                                       |        | 10% Local Cost Share   | 25% Local Cost Share | 25% Local Cost Share         |          |
| Central Plains Water District         | 0.202% | \$2,911                | \$4,131              | \$45,309                     | \$52,351 |
| Park River                            | 0.165% | \$2,383                | \$3,382              | \$37,010                     | \$42,775 |
| Lisbon                                | 0.141% | \$2,043                | \$2,899              | \$31,626                     | \$36,568 |
| South Central Regional Water District | 0.113% | \$1,635                | \$2,321              | \$25,346                     | \$29,302 |
| Cooperstown                           | 0.082% | \$1,191                | \$1,691              | \$18,393                     | \$21,275 |
| McVille                               | 0.041% | \$596                  | \$845                | \$9,196                      | \$10,637 |
| McLean-Sheridan Water District        | 0.026% | \$375                  | \$532                | \$5,832                      | \$6,739  |
| Hannaford                             | 0.021% | \$298                  | \$423                | \$4,710                      | \$5,431  |
| Tuttle                                | 0.005% | \$65                   | \$93                 | \$1,122                      | \$1,280  |
| Forman                                | 0.004% | \$60                   | \$85                 | \$897                        | \$1,042  |

Notes:

- 1 – Fargo with West Fargo and Cass Rural Water District
- 2 – Grand Forks with East Grand Forks
- 3 – East Central Water District consists of Grand Forks Trail Water District, Trail Rural Water Users, and Larimore
- 4 – Northeast Regional Water District with Langdon

|                    |                    |                     |                     |
|--------------------|--------------------|---------------------|---------------------|
| 2017-2019 Biennium | 2019-2021 Biennium | 2021-2023 Biennium  | Total               |
| <b>\$1,444,444</b> | <b>\$2,050,000</b> | <b>\$22,430,000</b> | <b>\$25,924,444</b> |



# PROPOSED USER COSTS

## PROJECT COST COMPONENTS

| Cost Component                            | Estimated Cost (2021 Dollars) | Description  |
|---|-------------------------------|--|
| Core Pipeline Capital                     | \$1.22B                       | Includes costs to construct the main transmission pipeline from the Missouri River to the Sheyenne River and ancillary facilities  |
| Baseline Operating                        | \$1.53M (Annually)            | Operating costs under “low” flow conditions (year-round delivery of 4 cfs) to ensure appropriate water quality conditions and to maintain the Main Transmission Pipeline in good working condition and ready for “high” flow use |
| Project Renewal and Rehabilitation        | \$1.86M (Annually)            | Forecasted and annualized costs of renewing and rehabilitating the Main Transmission Pipeline for the first 40-years of project operation  |
| Drought Operating (if applicable)         | \$15.26M (Annually)           | Operating costs under “high” flow conditions (year-round delivery of 165 cfs) in time of project water requests to mitigate drought  |
| Branch Pipeline Capital (if applicable)   | Varies by Location            | Includes costs to construct additional pipeline and ancillary facilities to deliver water to smaller users that are not on the river systems downstream of Core Pipeline discharges  |
| Branch Pipeline Operating (if applicable) | Varies by Location            | To be determined   |



# PROPOSED USER COSTS

## LOCAL COST SHARE AND CORE PROJECT ALLOCATION

### LOCAL COST SHARE

Based on current legislation and anticipated future legislation, a State/Local cost share split of 75/25 is assumed for Core Pipeline Capital Cost, Drought Operating Costs, and Branch Pipeline Capital Cost.

Baseline Operating and Project Renewal and Rehabilitation are assumed to be funded 100% at the local level.

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### CORE PROJECT COST ALLOCATION COMPONENTS

**WATER SUPPLY NEED | PROJECT USER GROUPS | BENEFIT OF ACCESS**

**STUTSMAN RURAL WATER DISTRICT**  
**CORE PROJECT ALLOCATION PERCENTAGE**  
**1.501%**

2.5% of Total Nominations

**CITY OF JAMESTOWN**  
**CORE PROJECT ALLOCATION PERCENTAGE**  
**4.128%**

6.9% of Total Nominations

# PROPOSED USER COSTS

## ESTIMATED TOTAL FINAL PROJECT COSTS (2021\$) – FOR CURRENT NOMINATION

| COST COMPONENT  | STUTSMAN RURAL WATER DISTRICT | CITY OF JAMESTOWN             |
|---|-------------------------------|-------------------------------|
| Core Pipeline Share                                     | \$4.58M                       | \$12.59M                      |
| Debt Service (Annually)                                 | \$167,402                     | \$460,355                     |
| Baseline Operating (Annually)                           | \$22,962                      | \$63,146                      |
| Long-Term Project Renewal and Rehabilitation (Annually) | \$27,883                      | \$76,678                      |
| Drought Operating (if applicable)                       | N/A                           | N/A                           |
| Branch Pipeline Capital Share (if applicable)           | Total Capacity / Debt Service | Total Capacity / Debt Service |
|   | \$2.93M / \$107,286           | \$8.07M / \$295,036           |
| Branch Pipeline Operating (if applicable)               | TBD                           | TBD                           |

### PROJECTED BASELINE ANNUAL COST OF PROJECT

**\$218,247 / year**

**\$600,179 / year**

### PROJECTED END USER BILL IMPACTS

**\$7.94 / month**

**\$7.58 / month**



# CONTINUED USER PARTICIPATION

- **Project Participation Agreement** is being Developed between LAWA and Garrison Diversion Representatives
- **Additional Information Requests** have been sent to all users to support project development:
  - Develop better plans to **deliver water based on user preferences**
  - **Refine cost estimates** for the Project
  - Assist with final details of the **Project Participation Agreement**



# ADDITIONAL USER INFORMATION REQUESTS

- **DOMESTIC NOMINATION:** Projected average annual need for domestic water from the project to the year 2075 in units of CFS
- **INDUSTRIAL NOMINATION:** Projected average annual need for industrial water from the project to the year 2075 in units of CFS
- **PEAK DAY DEMAND:** Projected peak day demand of combined domestic and industrial water from the project in 2075
- **DESIRED POINT(S) OF CONNECTION:** Desired points for service from the project for planning purposes
- **DESIRED ROUTE OF SERVICE:** Desired route of service from pipeline or rivers sources to point(s) of connection
- **DESIRED WATER QUALITY:** Does treatment to drinking water standards and associated costs need to be considered for your system?



# RED RIVER VALLEY WATER SUPPLY PROJECT

RRVWSP is an **economic development initiative** and a **long-term emergency water supply!**



# RED RIVER VALLEY WATER SUPPLY PROJECT



## AFFORDABILITY

- Large and Small Users



## BENEFIT

- Up to 50% of North Dakotans
- \$32B Economic Impact w/o Project



## COMMITMENT to GOOD STEWARDSHIP

- Land
- State & Local Dollars
- Environment

# THANK YOU!



**RED RIVER VALLEY  
WATER SUPPLY PROJECT**

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



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