



Conrad Water PER 2026

Public Hearing

May 5, 2026

A Preliminary Engineering Report (PER) was recently completed on the City of Conrad's water system. The purpose of the PER is to review each component of the system and identify needs, review alternatives to address each need, estimate costs, and identify a funding strategy. The purpose of this public hearing is to present the findings of the PER.

Water System Needs:

- Water Treatment
 - Deteriorated Steel Filter Basins
 - Steel filter basins are leaking and require repair or replacement.
 - Obsolete Filter Control Valves and Actuators
 - Backwash Pond
 - Liner seams are starting to fail
 - Inoperable Valve – limits treatment efficiency
 - Backup Generator Not Currently Installed
 - Treatment won't be available during extended power outages.
- Water Supply Source
 - High Flow Pumps
 - Create scour in pipeline – cannot be used effectively, which limits treatment capacity.
 - Raw Water Transmission Main
 - Aging Pipe Materials – May be nearing end of life, requiring replacement.
 - Lack of Flushing locations – Allows sediment buildup in the main, which reduces hydraulic capacity.
 - Lake Francis
 - Years of Drought can limit available capacity for City use.
 - City has utilized up to 82% of its water right in recent years.
- Distribution System
 - Aging Pipe – Pipes date back to 1950 and may be nearing end of life. Aging pipes require increased maintenance/repair and may limit the City's ability to supply water to residents if failure occurs.



The most urgent system needs are associated with the supply system at Lake Francis, the transmission main from Lake Francis to the treatment plant, and the treatment plant. None of these improvements are needed if the City decides to fully connect to North Central Montana Regional Water (NCMRWA). The following three supply alternatives were therefore considered:

- WS-0 – (No Connection to NCMRWA)
- WS-1 (Partial Connection to NCMRWA)
- WS-2 (Full Connection to NCMRWA)

For purposes of comparing each option, a Present Worth Analysis considering a 20-Year Planning Period was developed for each option with the following breakdown:

Water Supply Alternative WS-0 – No Action (No Connection to NCMRWA)

- Under this alternative the City will maintain its current water supply at Lake Francis and receive no water from NCMRWA.
- Required Improvements (Construction Costs):
 - Water Treatment Filter Repair or Replacement \$2,800,000
 - Backwash Pond Repairs \$70,000
 - Variable Frequency Drives on High-Flow Intake Pumps \$125,000
 - Filter Control Valve's/Actuator Replacement \$450,000
 - Backup Generator \$585,000
 - Chlorine Monitoring Vault \$400,000
 - Full Raw Water Transmission Main Replacement \$13,100,000
 - Total Estimated Construction Cost - \$17,530,000
 - Estimated yearly O&M filter tank rehab (25 years) - \$112,000
 - **Total Estimated Present Worth Cost - \$19,200,000**

Water Supply Alternative WS-1 – (Partial Connection to NCMRWA)

- Under this alternative the City will maintain its current water supply at Lake Francis and connect to NCMRWA. Assumes 35% utilization of NCMRWA based on the resolution passed by the City in 2006 to take 35% of its Annual Water supply from NCMRWA.
- Required Improvements:
 - All Improvements from Alt. WS-0 (minus chlorine vault) \$17,130,000
 - 10% Cost Match for Installation of NCMRWA Transmission Main \$3,200,000
 - Estimate Provided by NCMRWA
 - Required Improvements to Accommodate Connection to NCMRWA \$929,000
 - Install Connection Vault
 - Modify Chemical Treatment System
 - South Tank Improvements

Total Estimated Construction Cost	\$21,259,000
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- Water Purchase/O&M Increase Per Year - \$265,000
- Estimated Yearly O&M filter tank rehab (25 years) - \$112,000
- **Total Estimated Present Worth Cost - \$26,900,000**

Water Supply Alternative WS-2 – Full Connection to NCMRWA

- Under this alternative the City will abandon its current water supply at Lake Francis, transmission main, and treatment system; and connect to NCMRWA.
- Required Improvements:

○ 10% Cost Match for Installation of NCMRWA Transmission Main	\$3,200,000
○ Install Connection Vault	\$700,000
○ Modify Chemical Treatment System	\$135,000
○ <u>Decommission WTP</u>	<u>\$20,000</u>
○ Total Estimated Construction Cost	\$4,055,000
○ Water Purchase/O&M Increase Per Year - \$380,000	
○ Total Estimated Present Worth Cost - \$9,715,000	

Supply Alternative Summary:

The present worth analysis uses a 20-year planning period. Longer periods were also preliminarily reviewed to determine if present worth results between WS-0 (No Connection to NCMRWA) and WS-2 (Full Connection to NCMRWA) would change. Higher water purchase and O&M costs for WS-2 (Full Connection to NCMRWA) were compared to estimated future maintenance and improvement costs for WS-0 (No Connection to NCMRWA). **Preliminary evaluation of longer planning periods indicates similar present worth costs as summarized above for both the No Connection and Full Connection alternatives.** WS-1 (Partial Connection) was not included in future analysis since it requires all the costs associated with both WS-0 and WS-2 making it the most costly alternative.



Following are project options, depending on which alternative above is selected:

No connection:

- Required Improvements ~ \$5,700,000
 - Water Treatment Filter Repair or Replacement
 - Backwash Pond Repairs
 - Variable Frequency Drives on High-Flow Intake Pumps
 - Filter Control Valve's/Actuator Replacement
 - Backup Generator
 - Chlorine Monitoring Vault

Recommended Funding Strategy:

- MCEP = \$500,000
- RRGL = \$125,000
- SRF/Forgiveness or RD Grant/Loan = \$5,075,000

Estimated Required Cost Per User Increase - \$20

Future Phases – Raw Water Main Replacement - \$13,100,000

Partial Connection

- Perform Improvements to City system to allow connection to NCMRWA
- Required Improvements ~ \$1,200,000
 - Install Connection Vault
 - Modify Chemical Treatment System
 - Decommission WTP
 - South Tank Effluent Pipe

Recommended Funding Strategy:

- MCEP = \$500,000
- RRGL = \$125,000
- SRF Loan/Forgiveness = \$575,000

Estimated Required Cost Per User Increase - \$2.50

- The Town could also perform additional treatment system improvements if a larger project is desired.
- Note: The Bureau of Reclamation (BOR) has indicated to NCMRWA that connections with partial utilization of water may not be allowed.



Full Connection:

- Perform Improvements to City system to allow connection to NCMRWA
- Required Improvements ~ \$1,100,000
 - Install Connection Vault
 - Modify Chemical Treatment System
 - Decommission WTP

Recommended Funding Strategy:

- MCEP = \$500,000
- RRGL = \$125,000
- SRF Loan/Forgiveness = \$475,000

Estimated Required Cost Per User Increase - \$2

The Town could also perform additional distribution system improvements if a larger project is desired.

Target Rates:

Department of Commerce Labor Market Information (LMI):

Required Rate to Qualify for Funding - \$90.75

Conrad's Current Residential Rate – \$89.82

Recommended Grant Application 2026:

MCEP - \$500,000

RRGL - \$125,000