



Conrad Council Meeting – 9/15/2026

NCMRWA Connection Discussion

A Preliminary Engineering Report (PER) was recently completed on the City of Conrad's water system. The purpose of the PER was to review each component of the system and identify needs, review alternatives to address each need, estimate costs, and identify a funding strategy. The PER included information regarding connection to the North Central Montana Regional Water System (NCMRWA). Following is a brief summary of 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.

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 considered:

- **WS-0 – (No Connection to NCMRWA)**
 - Under this alternative the City will maintain its current water supply at Lake Francis and receive no water from NCMRWA.
- **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.
- **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.

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. The following estimates were included in the analysis:

- Estimated 10% Cost Share = \$4.3 Million (Provided by NCMRWA)
- Estimated Water Purchase Price = \$2.85/1,000 gallons (Provided by NCMRWA)
- Conrad Estimated Average Day Demand in 2047 = 550,000 Gallons
- City of Conrad Equivalent Dwelling Units = 1,508

No Connection		Partial Connection		Full Connection	
Water Treatment Plant Filter Repair	\$ 2,800,000.00	Water Treatment Plant Filter Repair	\$ 2,800,000.00	Connection Vault	\$ 1,523,002.50
Backwash Pond Repairs	\$ 70,000.00	Backwash Pond Repairs	\$ 70,000.00	NCMRWA Connect Cost Share	\$ 4,300,000.00
Variable Frequency Drives on High-Flow Intake Pumps	\$ 125,000.00	Variable Frequency Drives on High-Flow Intake Pumps	\$ 125,000.00	Total	\$ 5,823,002.50
Filter Control Valve's/Actuator Replacement	\$ 450,000.00	Filter Control Valve's/Actuator Replacement	\$ 450,000.00		
Backup Generator	\$ 585,000.00	Backup Generator	\$ 585,000.00		
Chlorine Monitoring Vault	\$ 400,000.00	Chlorine Monitoring Vault	\$ 400,000.00		
Raw Water Transmission Main	\$ 13,100,000.00	Raw Water Transmission Main	\$ 13,100,000.00		
Total	\$ 17,530,000.00	Connection Vault	\$ 1,551,250.00		
		NCMRWA Connect Cost Share	\$ 4,300,000.00		
		Total	\$ 23,381,250.00		
Increased O&M - Filter Maintenance	\$ 112,000.00	Increase O&M - Water Purchase and Filter Maintenance	\$ 380,358.00	Increase O&M - Water Purchase	\$ 377,000.00
Interest	3%	Interest	3%	Interest	3%
Planning Period - Years	20	Planning Period - Years	20	Planning Period - Years	20
Total Net Present Value	\$ 19,196,277.18	Total Net Present Value	\$ 29,040,016.58	Total Net Present Value	\$ 11,431,810.52

In May of 2026, the City of Conrad applied for grant funds to complete improvements to allow for connection to NCMRWA at an estimated cost of \$1.2 Million and estimated user rate increase of ~\$2.50.

- **Required Improvements ~ \$1,200,000**
 - Install Connection Vault
 - Modify Chemical Treatment System
 - Decommission WTP
 - South Tank Effluent Pipe (Partial Connection)