



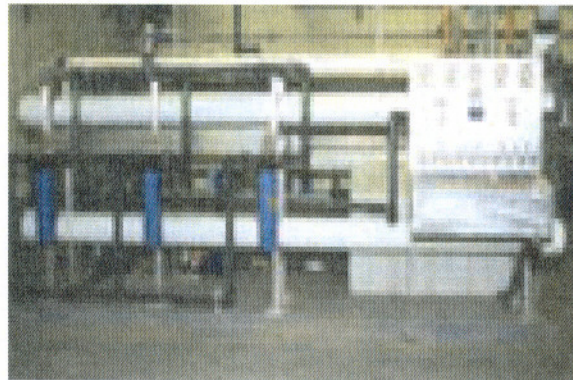
## *Wawota* **Water Treatment Project**

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### TOWN OF WAWOTA

### WATER TREATMENT SYSTEM

Wawota is continuously growing and improving the quality of services to its residents. One of the latest projects is its water treatment facility, which has just been completed.



Wawota's new water treatment plant and reservoir has been constructed at a cost of approximately \$950,000.00.

From April to July, 1998, Sask Water Corporation assisted the Town of Wawota in monitoring the water quality of a pilot water treatment system set up in the existing water treatment plant which was constructed in 1962.

The following table shows concentrations of certain constituents in the existing water quality, pilot plant water quality and the recommended guideline maximum concentrations.

Concentrations are trace amounts expressed in parts per million and in all cases, lower concentrations are preferred. All water quality concentrations relate to aesthetics (taste and odour of water). TDS, or total dissolved solids, is often viewed as the best general indicator of aesthetic water quality.

### EXISTING AND PILOT STUDY WATER QUALITY

Water Quality Existing Pilot Plant Recommended



### Parameter Treated Water Limit Guideline

Water Quality Parameter	Existing Treated Water	Pilot Plant Water	Recommended Guideline Limit
TDS	1,824	190	1.500
Sulphate	796	11	500
Hardness	813	7	800
Manganese	2.1	0.016	0.05
Sodium	204	62	3

Based on the results from this pilot project and also on the recommendation of our consulting engineer, Bullee Consulting Ltd. of Saskatoon, Saskatchewan, the Town made a decision to proceed with construction of the new plant. Our engineers have traveled to California to investigate various types of membrane treatment processes, with particular emphasis on the design and operations parameters of reverse osmosis systems.

The new water treatment plant has been constructed beside the old one and consists of two reverse osmosis units with room to install one more unit if required at a later date. A new 90,000 gallon reservoir has also been constructed, to be used in conjunction with our old reservoirs that have a total capacity of 45,000 gallons. Also, a concentrate main to dispose of the excess water from the treatment process has been installed in the ditch along Highway 48 to a small gully on the edge of Town. With reverse osmosis there is approximately 30% waste water that has to be disposed of. This rejected water is not typical municipal wastewater and poses no harm to downstream users.

The reverse osmosis treatment units have been supplied and installed by Central Water Conditioning of Watson, Saskatchewan. They also provided the pilot plant system used initially for testing purposes.

Construction of the works was completed around the end of October, 1999. With this treatment system water users will not need water softeners in their homes, will use less soap when cleaning, and water heaters and pipes will have a much longer life. At present the average life span of a water heater in Wawota is three years. This must all be taken into consideration when looking at the increased cost of water to the Town's users.

Outside users of the Town's water can fill their tanks and pails at the treatment plant, as we have also installed coin operated truck and pail outlets for their convenience.

