

2012/2016 SMALL CUSTOMER PLAN

Submitted To: Date May 3, 2012
Western Area Power Administration
P O Box 35800
Billings MT 59107-5800

MWWS ORGANIZATION

The rural water system is operated by the Morton County Water Resource District d/b/a the Missouri West Water System. This board is appointed by the Morton County Commissioners. The system staff consists of a general manager, three operators and an office manager.

SERVICE AREA

The system distributes potable water to portions of Eastern Morton County in North Dakota. In particular, areas around and in the cities of New Salem, Almont, Mandan, St. Anthony, Ft. Rice and Flasher.

SYSTEM DESIGN

Water from the Missouri River is treated by the City of Mandan for distribution by the Missouri West Water System. There are about 700 miles of transmission and distribution pipeline. The system operates three large pumping stations utilizing three-phase power and three smaller pumping stations using single-phase power. The three large pumping stations move the water to reservoirs at higher elevations. The water then flows with gravity to fulfill user demands. A telemetry system monitors levels and other alarms at all times.

CONSUMER MAKEUP

The domestic water needs of approximately 2000 households are being met. There are about 1300 individual residences, two housing developments and three small towns being served. Several commercial accounts are served; however, none use the water for commercial production purposes.

ENERGY SOURCE AND CONSUMPTION

Electrical power purchased from the Western Area Power Administration is generated by federally operated dams on the Missouri River System. The power is transported through the distribution systems of Mor-Gran-Sou Rural Electric Coop and Montana Dakota Utilities. Historical energy consumption is attached.

Missouri West Water is an end use consumer and does not re-sell electric energy.

MAINTENANCE & OVERSIGHT

Pumping stations are visited several times a week. Control stations not containing motors or other large energy consuming devices are inspected weekly. A radio-telemetry system continuously monitors the system. A regular maintenance program is in place to insure inspection of electric motor efficiency as well as the general security of system stations and operations.

ENERGY USE AND CONTROL

Power consumption and controls are an ongoing part of management because it represents a significant overhead expense of water delivery.

The stations are heavily insulated to utilize pump-motor produced heat during the winter. In 2009 air conditioning units were installed in two of the large pump stations and pumps were fitted in four of the stations with variable frequency drives. No part of the system is pressurized by continuous pumping. The telemetry system locks out the pumps for traditional peak times of power usage.

MAJOR ACTIVITIES 2012 to 2016

During the summer of 2012 electrical use at the Crown Butte pump station, which utilizes three-phase electrical power, will be significantly reduced when a large commercial account will shift their water service to an adjacent rural water system, Southwest Water Authority.

CONTACTS

This plan is submitted by:
Mike Kemnitz, General Manager
Missouri West Water System
P.O. Box 176
Mandan ND 58554
Telephone (701) 663-8549
E-mail: Manager@MissouriWest.com



Date: May 3, 2012