

TOWN OF FAIRFIELD, MONTANA GREEN PROJECT EVALUATION AND BUSINESS CASE

The Town of Fairfield, Montana project is being funded through the Drinking Water State Revolving Fund Loan Program. The Fairfield public water supply provides water to approximately 659 people. This project is to: 1) install water meters, 2) install a new water main to increase system reliability and redundancy by providing a second crossing from the west side of US Highway 89 and the Burlington Northern Santa Fe Railroad to the existing water system of the main town on the east side of the highway and railroad, 3) install variable speed drives in three wells, and 4) install well control system improvements. The project includes the engineering work for these 4 items.

Documents submitted and reviewed by the State:

1. Uniform Application for Montana Public Facility Projects City of Butte Water System Improvements, prepared by the NCI Engineering and the Town of Fairfield.
2. Water System Preliminary Engineering Report for the Town of Fairfield, dated April 2010, prepared by NCI Engineering.

List of eligible Green Project Reserve components:

1. Engineering studies, evaluations, design and permitting tasks and construction of the following:
 - Water meters installation
 - New water main crossing US Highway 89 and the BNSF Railroad
 - Design and installation of variable speed pumps in 3 wells
 - Improvements to the well system controls
2. Total project cost = \$ 1,005,960
3. Total Loan/Grant Request = \$ 350,000
4. Total project cost eligible for Green Project Reserve = \$350,000

Green Reserve Project – Categorical Project:

This project is not all categorically green.

Green Reserve Project – Business Case Evaluation:

“As stated in the USEPA March 2, 2009 Memorandum, for traditional projects that are not categorically green, for the project, or components of the project, to be counted towards the 20% requirement, the State project files must contain documentation that a clear business case for the project (or portion) investment includes achievement of identifiable and substantial benefits that qualify as Green Project benefits. The documentation should reference to a preliminary engineering or other planning document that makes clear that the basis upon which the project (or portion) was undertaken included identifiable and substantial benefits qualifying for the Green Project Reserve. The March 12, 2009 USEPA webcast slides 20 and 21 state that two components, the technical component and financial component, must be provided in the Business Case.”

Green Project Reserve Type:

This project fits in with the water efficiency and energy efficiency components of the Green Project Reserve definitions.

Technical Component Evaluation:

The loan will fund engineering studies and design for the above referenced projects. Meters will be installed on all services in town. Installation of meters has been shown to provide water conservation as users become aware of their water use and their costs are now directly related to the quantity of water they use. In addition, a new water main crossing US Highway 89 and the BNSF Railroad will eliminate the risk that most of the town could be without water if the single water main crossing were to fail. Variable speed drives in 3 of the town's wells will provide the dual environmental advantages of: 1) not stressing the aquifer more than is necessary when system demands are low, and 2) utilizing less energy overall as the energy consumption will be commensurate with system demands. Operation of all the town's wells will be facilitated by improved well system controls.

Financial Component Evaluation:

It is estimate that this project will also save on operation and maintenance costs as pumping costs and energy savings will occur due to decreases in friction losses, less energy use, more efficient use of the town's wells as a result of variable speed drives and improvements to the well system controls that will be specified for the pumping stations. Also, metering water use will contribute to a more manageable and understandable revenue stream for the town.

Green Reserve Project – Evaluation Conclusion: The technical and financial evaluation of this project clearly shows substantial benefits in accordance with USEPA guidance especially with regard to water conservation and energy conservation that will be realized with increased system reliability through redundancy and less pumping energy, time and cost. As above the green portion of the project from DWSRF funds will be \$350,000.