

PROGRESSIVE CONSULTING ENGINEERS, INC.
Civil • Water Supply • Municipal

WATER BULLETIN

Water Rate Study, Rochester Public Utilities Commission

The Minnesota Department of Natural Resources (DNR) mandates that all public water suppliers serving more than 1,000 people employ water use demand reduction measures and implement conservation water rates. Rochester Public Utilities (RPU) selected Progressive Consulting Engineers (PCE) to complete a water conservation and rate study. Earlier in 1992 and 1997 PCE had successfully completed water rate studies for RPU.

The study will address the DNR requirements of conservation rates to emphasize water conservation to their customers. The study will also analyze the conservation inclining block rates and seasonal rates using the base

extra capacity method, and will address various water conservation programs and include an estimate of the costs and savings to implement these programs.

Costs will be apportioned based on demands of residential, commercial, industrial and institutional customers. Unit cost of service will be developed. The revenue requirements will be allocated to fixed cost and commodity costs for residential, commercial, and industrial customers.

The functional costs, such as billing, collection and administrative expenses will be allocated based on the number of bills and meter size.

The rate structure developed will be based on the cost of service method and will be sufficient to meet short and long term revenue requirements of the RPU's water fund.

The rate study will contain recommendations for water conservation and efficient use of resources. The conservation measures to be considered will include incentivizing fixture replacement, control of leakage in home fixtures, efficient lawn watering strategies and education programs. A public meeting will be held to discuss water conservation measures.

The report is scheduled to be submitted to RPU by the end of October 2009.

Water & Sewer Rate Study, Cloquet, MN

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The City of Cloquet retained PCE in 1995 to complete a water and sewer rate study to establish equitable water and sewer rates for the customers. The City now intends to update their water and sewer rates to address the proposed Capital Improvement Plan (CIP) and to satisfy the Minnesota Department of Natural Resources (DNR) requirements of water conservation.

The study will include at least two different options of

rate structures, such as an increasing block rate and cost of service base rates. The City will then compare the two options and determine which is best for their water and sewer system.

PCE will develop rates based on cost of service using the base extra capacity method and inclining block rates with a fixed charge.

The City has developed a CIP to upgrade the water and sewer system. Equitable wa-

ter and sewer rates are needed to fund the CIP, ongoing operation, and the development of a fund balance for emergency needs. The rate study will address these concerns. The draft report will be completed by the end of November 2009.



2 Million Gallon Tower, Ramsey, MN

The City of Ramsey received bids for the 2 million gallon elevated tower designed by PCE. The City awarded the tower project for \$3,188,400.

The bid was about \$1 million less than the Engineer's Opinion of Probable Construction Cost, reflecting the very competitive construction market.

Construction of the tank started in July 2009. The foundation will be

complete in September and the tower erection is expected to start in October and continue over the winter. Tower painting will start in June 2010 and the tower is expected to be complete by fall 2010.

The tower is a welded steel fluted column, or hydropillar design and on completion will result in improved fire flow and pressure distribution in the northern part of the city.



Water Treatment Plant No. 1 Rehabilitation, St. Louis Park, MN

Water Treatment Plant No. 1 was built in 1969. The 4,000 gpm plant treats raw water by chemical injection and pressure filtration from Well Nos. 3, 10, 11, and 15 located in satellite well houses within Bronx Park. WTP No. 1 removes iron and manganese from the well water. The plant is now more than 30 years old and in need of rehabilitation. The City selected PCE for the project.

Similarly to what was successful at WTP Nos. 8 and 16, the City wants to replace the filter media at WTP No. 1 with CalMedia GSR Plus media by Calgon Carbon Corp. PCE worked on these two plant upgrade projects.

PCE will have an evaluation of the

existing steel filter tanks completed by an independent testing company. Testing of the tanks will consist of a coating condition assessment and a tank shell and under drain plate steel thickness and condition assessment. If the under drain plate shows considerable metal loss, it may require removal and replacement.

An important aspect of the project evaluation is the evaluation of the treatment process. PCE will evaluate the existing water quality data, the location of chemical feed points, and the condition of process and chemical feed equipment, including the piping and nozzles inside the filter tanks. PCE will make recommendations for improvement based on the findings.

The combined Radium 226/228 levels

in Well No. 11 are currently above the standard of 5 pCi/L, and the City is interested in making provisions for removing radium by feeding premixed hydrous manganese oxide (HMO).

The project will be bid this fall and all work will be completed by June 1, 2010 before the start of the summer high demand season.



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