



# WATER BULLETIN

Civil \* Water Supply \* Municipal

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## Water Rate Study - East Grand Forks, MN

Recently the Minnesota Department of Natural Resources (DNR) sent a letter requiring cities serving more than 1,000 customers to implement rates that promote water conservation. East Grand Forks Water and Light Department currently has a water rate structure that has a fixed charge based on the size of the meter and a flat rate commodity charge.

PCE was retained to complete a water rate study to establish new rates that meet the DNR requirements of water conservation.

New rates developed during the study take into account the cost of service, balancing income and expenses, funding the capital improvements, reviewing depreciation,

and maintaining an adequate fund balance. To address the DNR requirements of water conservation, an inclining block rate structure was developed for each customer class.



Equitable water rates are needed to fund the ongoing operations, CIP, and maintain a fund balance for emergency needs. The Utility staff has developed a capital improvement plan for water system upgrades. The new rates will address these concerns.

## Water Treatment Plant Evaluation - Hibbing Public Utilities

The Construction of the four (4) million gallons per day Hibbing water plant was completed in 1982. The plant was designed to remove manganese from water from six (6) wells. Since 1982, one of the wells has been abandoned and recent water quality testing of the raw water from all of the wells has shown that the iron content has increased dramatically from below 0.30 mg/L to up to approximately 2.57 mg/L.

The City retained PCE to conduct a plant evaluation to optimize the treatment process. The physical condition of the media and the chemical dosages were reviewed.

The plant filters are backwashed every 48 hours regardless of the headloss or plant effluent quality.

A backwash water turbidity analysis was conducted to determine the optimum duration of the backwash.

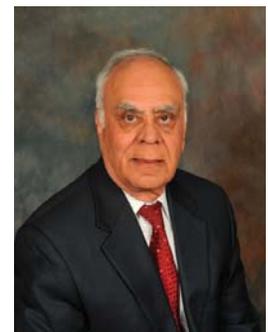


## Presentation - Minnesota Rural Water Association

Naeem Qureshi has been invited to make a presentation titled "Water Conservation Rates - Meeting the Deadline to Comply", at the 28th Annual Minnesota Rural Water Association Water and Wastewater Annual Conference on Wednesday, March 7, 2012 in St. Cloud.

The presentation will discuss the recent trend of decreasing water consumption and how utilities can strategically contain costs and rate increases. Data from recent rate studies completed in Chaska, Cloquet, East Grand Forks, Fridley, New Ulm, Rochester, St. Louis

Park, Shakopee, and Zimmerman will be presented. Naeem Qureshi and Jeny Shah have also submitted a paper titled "Chlorite, Perchlorate and Bromate in Hypochlorite Disinfection System", for publication in the Minnesota Rural Water Association magazine. The article is expected to appear in the spring issue.





## Booster Station - Shoreview, MN

The Weston Way area of Shoreview was experiencing low pressures during maximum hour water demands, resulting in customer complaints. The pressures were less than 30 psi.

In 2011, PCE completed a study and recommended the construction of a booster station to increase the pressures in the area.

The City retained PCE to prepare plans and specifications for the construction of the booster station. PCE

proposes to use a buried in-line booster station design to eliminate the need for a building along with electrical and HVAC systems. This approach will reduce the cost of the booster station by more than half.

The booster station design is expected to be completed this spring with construction being completed over the summer of 2012.

## Filter Reconstruction - Centennial Utilities (Circle Pines, MN)

The Centennial Utilities 1,500 gpm water treatment plant (WTP) was constructed in 1993 at the Public Works Campus in the City of Circle Pines. Earlier in 2011, the Utility retained PCE to complete an evaluation of the plant. The study indicated the need to add an air wash system to improve the effectiveness of the backwash, replace the media, and the under drains. Testing suggested that one of the under drains was broken.

The Utility directed PCE to prepare plans and specifications for the plant rehabilitation project. The project

includes an air blower, air wash piping and valves, a drain down loop, new under drains, and an air wash grid. The project will be bid in early February with construction scheduled for completion by late spring prior to the high demand season.



## Water Rate Study - Wayzata, MN

The City of Wayzata supplies water to in-City customers and to about 160 out-of-City Customers. The number of out-of-City customers is expected to increase to 240 when a development is connected to the water system. The City has not had a rate study done for several years.

The City has three main customer classes, namely residential, multi-residential, and commercial. There are also two categories of rates for sprinkling depending on the type of connection. The City charges 125% of in-City rates for out-of-City customers per a contract between the cities.

The City wants to consolidate the various categories into a simple, less complicated rate structure.

The City selected PCE to complete a rate study to develop an equitable rate structure in compliance with the DNR requirement for a conservation rate structure.

The new rate structure developed by this study will include an inclining block commodity rate structure or other rate structure acceptable to the City. The rate structure implemented will comply with the DNR requirements of water conservation, and a fixed charge based on customer meter size to cover the utility's fixed expenses will be determined.



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