



Metropolitan Water Reclamation District of Greater Chicago

Press Release

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MWRD selects disinfection technologies for the Calumet and North Side Water Reclamation Plants ***Chlorination, ultraviolet irradiation offer best alternatives at least cost***

Using a triple bottom line approach that considers economic, environmental and social criteria, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) has completed its evaluation of available disinfection technologies and has recommended the optimal technology for disinfecting the North Side and Calumet Water Reclamation Plant effluents.

The processes selected are chlorination/dechlorination for Calumet and ultraviolet irradiation (UV) with low pressure high output lamps for North Side. The estimated capital costs for construction at the two plants totals just over \$109 million, less than 50 percent of the anticipated cost.

This announcement comes eight months after the MWRD Board of Commissioners made a policy decision to implement disinfection at the two plants. An internal task force, which included staff from the departments of Monitoring and Research, Engineering, and Maintenance and Operations, systematically evaluated all available disinfection technologies and reviewed academic research and industry practice literature. The task force also performed bench scale studies, monitored existing plant effluent, reviewed site conditions, and contacted industry experts, manufacturers and suppliers, and other large wastewater treatment agencies. In addition, the task force gathered data about design parameters, operational needs, maintenance requirements, and annual and capital costs.

David St. Pierre, MWRD Executive Director, said that once the Board of Commissioners made its policy decision to proceed with disinfection, the task force worked swiftly to ensure disinfection will come online at the same time as the Thornton reservoir to maximize the water quality impact for the Cal-Sag channel.

According to St. Pierre, differences in existing infrastructure and hydraulics at the two plants require that a combination of methods be implemented as the basis of final design and construction of the facilities.

To fund the new projects, the MWRD restructured its Capital Improvement Program and adjusted operational

efficiency goals to reserve \$240 million in the budget for construction; however, based on task force results, the estimated costs for capital is roughly \$109 million.

“The task force reviewed combinations of technologies to treat baseline and peak flows to maximize our use of resources and as a result, we are able to do what is needed for less than half the cost of the original estimate,” said St. Pierre.

“We looked at the most economical processes so the MWRD can provide excellent customer service at the least cost,” said Commissioner Cynthia M. Santos, Finance Committee Chairman. “Now that the best disinfection alternatives have been selected for the two plants, the projects will proceed to the design phase.”

The Board’s next steps will be to hire an engineering consultant to do the design work so that construction can start in 2013 or early 2014. “We want to have construction completed by December 2015 and disinfection in service for the 2016 recreational season,” said Commissioner Santos.

Agreements with design consultants for each plant will be submitted to the Board of Commissioners for award in April 2012, and final designs will be completed by March 2013. A contract for construction will be awarded by October 2013.

Concurrent with the design phase, pilot testing of the proposed UV system for North Side will be conducted for at least three months. Not only does the Illinois Environmental Protection Agency approve design criteria based on pilot testing, important information regarding appropriate UV dosing over a range of hydraulic conditions will be documented.

More information about the MWRD can be found at www.mwrdr.org.

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Established in 1889, the MWRD (www.mwrdr.org) is an award-winning, special purpose government agency responsible for wastewater treatment and stormwater management in Cook County, Illinois.