



Metropolitan Water Reclamation District of Greater Chicago

Press Release

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Calumet facility upgrades receive industry award

The oldest wastewater treatment facility in the metropolitan Chicago area underwent an overhaul and recently received an award for merit from the American Council of Engineering Companies/Illinois.

The project at the Metropolitan Water Reclamation District of Greater Chicago's (MWRD's) Calumet Water Reclamation Plant (WRP) included construction of 12 new primary settling tanks and eight new aerated grit tanks to replace under-sized and antiquated facilities. The new and improved facilities serve an important part of the wastewater treatment process during which particles called grit, such as sand, stones and broken glass are removed. Grit particles can damage equipment if they are not removed during the early part of the treatment process. The Calumet WRP treats the wastewater from an area of approximately 300 square miles which includes parts of the City of Chicago and the southern suburbs.



Pictured is a new traveling grit bridge at the Calumet WRP. This bridge moves automatically back and forth along the grit chambers helping to remove inorganic particles that could harm equipment or interfere with downstream processes.

"We are deeply honored that this complex project has received recognition from the engineering industry," said MWRD Commissioner Frank Avila, Chairman of the MWRD Engineering Committee. "The new facilities will enable us to provide preliminary treatment to raw wastewater entering the Calumet WRP more efficiently and effectively. The new equipment will also help reduce maintenance and operation requirements."

The entire project was placed into service last year and the new facilities include innovative features developed by MWRD engineers, such as dual-action grit removal mechanisms and the use of computational fluid dynamic modeling to provide a configuration for the primary settling tanks to maximize performance efficiency. The Calumet WRP provides treatment which removes more than 90 percent of the contaminants.

The new equipment can treat over 500 million gallons of wastewater flow per day and will be able to handle the future sustained pumpback flow from the Thornton Composite Reservoir, which is currently under construction. The Thornton Reservoir, scheduled for completion by Dec. 31, 2015, will have almost eight billion gallons of storage capacity. The MWRD expects the reservoir to eliminate combined sewer overflows in the Calumet region and reduce area flooding.

The design consultant was M&E/CDM Design Partners. The general contractor was IHC/F.H. Paschen/S.N. Nielsen Joint Venture, and the MWRD's Engineering Department provided engineering design oversight and construction management services. The entire project cost \$233 million.

Additional information about the MWRD can be found at www.mwr.org.

*Established in 1889, the MWRD (www.mwr.org) is an award-winning, special purpose government agency responsible for wastewater treatment and stormwater management in Cook County, Illinois. **Our water environment, Take it personally.***