U.S. Senator Dick Durbin (D-IL), U.S. Environmental Protection Agency (EPA) Region 5 Administrator Susan Hedman and other community leaders joined the Metropolitan Water Reclamation District of Greater Chicago (MWRD) in unveiling the new disinfection facility at the Calumet Water Reclamation Plant (WRP) on Friday.

The new facility is designed to improve the water entering the Chicago Area Waterways (CAWS) from the treatment facility that serves more than one million people in a 300-square-mile area covering the South Side of Chicago and surrounding south suburbs.

“A safe and healthy waterway system benefits recreation and economic development alike, yet until now, Chicago was the only major U.S. city that failed to disinfect its treated sewage before it was pumped into the river system. With this new facility, the Metropolitan Water Reclamation District will now begin disinfecting wastewater for more than one million people, bolstering the area’s economic development and strengthening Chicago’s lakefront,” Senator Durbin said. “I appreciate the ingenuity that went into this project from staff at the District and the investment made by our area leaders who made this possible. Together, we have chosen to make our waterways a priority and take an important step in making our goals of a cleaner environment a reality.”

The new step in the MWRD’s water (continued)
Disinfected Water Begins Flowing to Chicago River System from MWRD’s Calumet Plant (continued)

Treatment protocols will include the chlorination/dechlorination process. This new process will reduce the amount of pathogenic bacteria in the water released from the plant into the Calumet River system. Disinfection technologies neutralize or kill bacteria and microorganisms in treated water and reduce the risk of health problems resulting from direct contact with the water while recreating on a waterway. Disinfection occurs after wastewater passes through a series of treatment processes, including screening, filtering, settling, microbial aeration.

“Today marks another significant date in the history of the Metropolitan Water Reclamation District of Greater Chicago, dating back to 1889, when the District was first tasked with addressing the issue of contamination in Lake Michigan,” said President Mariyana Spyropoulos. “Since then, we have constructed more than 60 miles of canals, reversed the flow of the Chicago River and built seven water reclamation plants. Creating a disinfection facility at Calumet is another chapter in our history of water treatment and one more upgrade we have made into improving the region’s water quality. I commend our Board and staff for delivering this project ahead of schedule and on budget.”

In addition to the disinfection facility at the Calumet WRP, the MWRD is also building a similar facility at the O’Brien WRP in Skokie by implementing an ultraviolet irradiation (UV) system to disinfect water entering the CAWS. The MWRD has allocated resources and funding to allow disinfection to occur without increasing taxes.

As recent as 2011, the CAWS had secondary classification for water quality standards, meaning direct contact with water was not possible outside of boating. But in advance of a possible decision by the U.S. Environmental Protection Agency to one day re-classify the CAWS for allowing primary contact, the MWRD Board of Commissioners adopted a policy to disinfect on June 7, 2011. MWRD officials instituted a blue ribbon panel to evaluate available disinfection technologies and devoted eight months to research and testing to determine optimal solutions for disinfecting at the most economical cost.

“The new Calumet disinfection facility will improve water quality for the growing number of people who kayak, water ski and enjoy other recreational activities in the Chicago Area Waterway System,” said Administrator Hedman. “U.S. EPA is proud to have played a role in making this project happen -- a project that created a lot of good jobs and will improve water quality for years to come.”

Using an existing chlorine contact chamber retrofitted for more efficient contact, the disinfection technologies neutralize or kill bacteria and microorganisms in treated water. Engineers modified the existing chlorine contact basin by replacing all interior baffle walls and associated walkways; replacing weir gates, discharge gates, drain sluice gates, inlet sluice gates and a bypass sluice gate; replacing liquid sodium hypochlorite diffuser piping; installing liquid sodium bisulfite diffuser piping; and installing sampling pumps.

In operation since 1922, Calumet WRP is the oldest of the seven MWRD plants in operation. The plant, which is home to 268 employees, will treat an average 354 million gallons per day and a maximum 430 million gallons per day.

“This is a historic moment for the Chicago/Calumet river system and one of the most significant water quality improvements in decades,” said Margaret Frisbie, Executive Director, Friends of the Chicago River. “Friends commends the MWRD Board for their leadership in making this day come. Not only are we achieving a new benchmark in water quality, we are also investing in the health of our communities by improving quality of life and access to the river for recreation and exercise while creating business income and jobs.

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