MWRD project wins National Mine Reclamation Award

If mining the world’s largest combined sewer reservoir were not a challenge enough, the next task provided a new and costly obstacle in finding a place for 1.8 million cubic yards of overburden materials. Metropolitan Water Reclamation District of Greater Chicago (MWRD) engineers decided to put that earthwork to constructive use by building two man-made hills along the Centennial Trail in the Columbia Woods Forest Preserve. That quick thinking led to new recreation opportunities in the forest preserve and helped the MWRD accomplish its goals of improving local water quality and reducing flooding through future use of the reservoir. That ingenuity also led to a national honor.

A few months after winning a statewide award for mined land reclamation from the Illinois Department of Natural Resources (IDNR), the MWRD received the Interstate Mining Compact Commission (IMCC)’s Kenes C. Bowling National Mine Reclamation Award. The IMCC said the McCook Reservoir project demonstrated excellence in reclamation based on achievement in five categories, including compliance, contemporaneous reclamation, drainage control, bond release and innovativeness.

“You have to be creative and resourceful when mining and constructing the world’s largest combined sewer overflow reservoir, and that’s what our engineers and contractors did in coming up with a beautiful bike trail that takes advantage of a scenic backdrop and adds new hills made from overburden,” said MWRD President Mariyana Spyropoulos. “We thank the Interstate Mining Compact Commission for this recognition and the Illinois Department of Natural Resources for nominating us for the award. We look forward to many years of using the Centennial Trail while we work to reduce flooding and water pollution at our new McCook Reservoir.”

The McCook Reservoir, located along the Stevenson Expressway between the Des Plaines River and Chicago Sanitary and Ship Canal, is part of the MWRD’s Tunnel and Reservoir Plan (TARP). The reservoir will capture and store combined stormwater and wastewater that otherwise overflows from sewers into waterways in rainy weather. This stored water will be (continued)
pumped from the reservoir to water reclamation plants to be cleaned and released when the plant has capacity to treat the water after significant rain events.

The McCook Reservoir will be completed in two phases. The first phase, expected to be completed by the end of 2017, will hold 3.5 billion gallons of water. The second phase is expected to be completed by 2029 and will hold an additional 6.5 billion gallons. The reservoir will be the largest of its kind, large enough to contain 11 Soldier Field stadiums side by side. The reservoir is designed to provide more than $114 million per year in flood damage reduction benefits for 3.1 million people living in 37 communities, including Chicago. It will improve water quality in local waterways, protect the drinking water source of Lake Michigan and increase fish species in waterways.

In mining the reservoir, dewatering equipment was used to pump about 110,000 gallons of groundwater and stormwater drainage per day within the excavation site. Construction crews have already pulled more than 42 million tons of limestone and 9.4 million cubic yards of soil. That’s enough soil to fill Chicago’s Merchandise Mart five times. In order to remove the overburden, there were approximately 500 truck trips taken per day.

The landscape architect firm Burns and McDonnell designed the new trail based on trail users input during three public meetings coordinated by the MWRD. The finished product includes two new hills along the Centennial Trail, including one that is 60 feet high and 2,300 feet long and an adjacent hill that is 40 feet high with a length of 5,300 feet. Using the overburden and MWRD’s class A exceptional quality biosolids, the hill offers a rare opportunity for Chicago area cyclists to ride up and down a slope that provides sweeping views of the surrounding landscape and waterways. For riders who prefer flat terrain, the trail provides a new and improved route through Columbia Woods. Additional improvements included a hiking trail, a rest area, benches, signage and landscaping.

“We created a reservoir to protect our homes from flooding and waterways from pollution during heavy rains, and we constructed a beautiful spot for all of the community to enjoy,” said MWRD Commissioner Martin J. Durkan. “We encourage area residents to take advantage of this new public amenity that is putting tax dollars to work in so many unique ways.”

The awards were presented at a banquet held in conjunction with the IMCC Annual Meeting in Williamsburg, VA, earlier this month.

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**Recovering Resources, Transforming Water**

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