

Protecting Our Resources



Harvesting and reusing rainwater is not only a way to supplement water supplies, it also helps protect vital water resources from pollutants that storm water runoff carries into them. As concerns about water pollution and the impending global water shortage grow, it is increasingly important for everyone to take part in conserving and protecting drinking water supplies.

Rain barrels and other rainwater collection and treatment systems offer ways for homeowners and businesses to do their parts. On a recent visit to the Metropolitan Water Reclamation District of Greater Chicago's Mainstream Pumping Station in Hodgkins, Ill., the Water Quality Products editorial staff saw firsthand how municipalities also are working to improve and protect water quality.

The pump station is part of the Tunnel and Reservoir Plan, also known as the Deep Tunnel project, which is an ongoing effort by MWRDGC to manage storm water and protect the quality of the region's waterways—especially its primary drinking water source, Lake Michigan.

The city has long been fighting the battle to keep its drinking water sources clean. Beginning in the early 1800s, the city realized that to avoid waterborne diseases, it needed to find ways to manage the sewage being dumped into the Lake Michigan. In the 1830s and 1840s, the Illinois and Michigan Canal was constructed to divert sewage from the Chicago River, which travels through the heart of the city before emptying into the lake. In 1900, the flow of the Chicago River was reversed so that water—and sewage—would flow away from the lake rather than into it. During the first half of the 20th century, the construction of additional canals and channels, plus locks at the mouth of the Chicago River, further improved water quality in Lake Michigan.

By the 1960s, the situation was improving but still far from perfect. Many communities in the Chicago area still have combined sewer and storm water systems, meaning that if the systems become overwhelmed during rainstorms, water overflows into area waterways, carrying sewage and any contaminants the rainwater may have picked up as it flowed in storm drains.

The Deep Tunnel project is designed to resolve this problem. It consists of four tunnel systems and three reservoirs designed to capture the combined sewer overflow from the district's 375-sq-mile service area, which includes Chicago and surrounding suburbs. The captured water can then be treated at the district's wastewater treatment plants before returning to local waterways. So far, the



MWRDGC Chief Operating Engineer Henry Marks and the WQP staff more than 300 ft underground at the facility's dewatering station. From left: Marks, Associate Editor Caitlin Cunningham, Editorial Director Neda Simeonova, Associate Editor Elizabeth Lisican and Managing **Editor Kate Cline.**

results have been successful: water quality in local rivers and Lake Michigan has greatly improved. The battle to protect Chicago's water resources is ongoing, but MWRDGC has made tremendous strides with the Deep Tunnel project. The same is true across the nation—as technology improves, we not only develop new ways to protect water quality, we also learn of new threats to our drinking water resources. Water is our most precious resource, and everyone—whether municipal water district, water dealer or homeowner—has the opportunity and responsibility to help protect and conserve it.

Kate Chri

Kate Cline, managing editor kcline@sgcmail.com

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