



Metropolitan Water Reclamation District of Greater Chicago

President's Annual Message 2018



Now entering our 130th year, it gives me tremendous pride to serve as President of this critical agency that has demonstrated historic influence on shaping the region and is working to protect our water environment through our innovative work. The Metropolitan Water Reclamation District of Greater Chicago (MWRD) works each day to improve the environmental health of Cook County and promote sustainable and resilient endeavors that protect our planet. Our list of accomplishments for 2018 have impacts that stretch beyond the boundaries we serve, while also bolstering the local communities and directly impacting more than five million people who live in Cook County. In 2018, we continued to strengthen our finances, expanded resource recovery efforts, increased stormwater management protection, and upgraded infrastructure at our plants and in the communities that we call home.

Here are a few of the highlights from 2018 that made this year as memorable as it was impressive.

A stylized, handwritten signature in black ink, belonging to Mariyana T. Spyropoulos.

Mariyana T. Spyropoulos
President of the Board of Commissioners

McCook Reservoir

The highly anticipated Stage I of the McCook Reservoir was placed into service in December 2017, and it has made an incredible impact in its first year alone protecting our waterways from pollution and our streets and basements from flooding. The reservoir has captured more than 20 billion gallons of water, and that number is climbing with each passing storm. Part of the MWRD's famed Tunnel and Reservoir Plan (TARP), the reservoir

protects a huge swath of Cook County from the north suburbs along the lakefront south through Chicago into the southwest suburbs. Unpredictable weather patterns tested the reservoir 12 days into January and again in February when an unprecedented 2.77 inches of rain fell over two days, combining with snowmelt and frozen ground to wreak havoc on the region. The reservoir took on an estimated 12 billion gallons of water,

not including several billion gallons of snowmelt that came as a result of 60-degree weather. Because of the reservoir's holding capacity, water was not released into Lake Michigan.

In addition to completing Stage I of McCook, engineering and mining work continued on Stage II this year, and we made significant strides in constructing the Des Plaines Inflow Tunnel to reduce combined sewer overflows.

McCook received instant worldwide recognition. On October 2, the Water Environment Federation (WEF) named the McCook Reservoir as a 2018 recipient of the WEF Project Excellence Award. Two weeks later, the Illinois Section of the American Society of Civil Engineers honored the MWRD and project partner, the U.S. Army Corps of Engineers (USACE), with the Outstanding Civil Engineering Achievement, Mega Project Award for our roles on the Chicago Underflow Plan and McCook Reservoir project.

Producing Clean Water

Treating 1.4 billion gallons per day is no small feat for our hard-working staff and water reclamation plants (WRPs). In order to maintain that quality, we have to brace for uncontrollable and unpredictable quantities of water, meet stringent regulations, and treat that wastewater and urban runoff before returning it to our environment. The National Association of Clean Water Agencies lauded MWRD in 2018 for complete and consistent compliance of National Pollutant Discharge Elimination System permits. Reaching these standards requires close attention to detail by our operations staff and Industrial Waste Division, and it also requires continued investment.

We replaced 36 Imhoff tanks at the Stickney WRP with a \$224 million project consisting of nine 160-foot diameter primary settling tanks and six 132-foot long aerated grit tanks, associated support facilities, service tunnels, and conduits. The new tanks will also increase and improve grit removal and protect downstream piping and equipment.

We also made key investments in maintaining TARP pumps and other WRP infrastructure, and committed to rehabilitating the Lockport Powerhouse and Controlling Works. We completed intercepting sewer construction projects that improve conveyance from local municipal sewers to our WRPs. The Salt Creek 2 Intercepting Sewer project will benefit 173,000 people living in Lyons, Brookfield, Riverside, and North Riverside, while the

Calumet 19F Intercepting Sewer project will benefit another 60,000 people living in the Tinley Park area.

Financially Sound

We cannot complete these wide-ranging projects and invest in new technologies without being on sound financial footing. This year Fitch Ratings reaffirmed our financial stability with a AAA credit rating. The Fitch report confirmed our steady financial performance, our sufficient reserves to cover unexpected expenditures and overfunding of pension contributions. This is accomplished by continuing to reduce energy costs, strengthening our long-term retirement reserves, promoting a favorable labor environment, discovering new revenue streams through resource recovery, and leasing of MWRD property.

As further evidence of excellence in fiscal management, the Government Finance Officers Association of the United States and Canada also awarded the MWRD with the Distinguished Budget Presentation Award for the 34th consecutive year. More significant to the taxpayers is tax reduction and low rates. As in the past three years, the Board of Commissioners passed a pair of ordinances to abate property taxes. This year, it was by more than a combined \$44 million. MWRD rates continue to be substantially lower than the average sewer service charge across the country.

Stormwater Management Projects

Delivering flood relief to communities across Cook County in 2018, we kicked off and completed several important projects that will promote local and regional resilience. Here are some stormwater projects we celebrated.

- The Tinley Creek widening and reshaping project was completed in May to relieve Crestwood homeowners from flooding. The streambank stabilization project provides protection from the 100-year flood event for approximately 173 homes and businesses and improves an existing pedestrian path.
- We partnered with the City of Chicago to complete the Albany Park Stormwater Diversion Tunnel to relieve the North Side neighborhood of major flooding. The tunnel diverts a flow of 2300 cubic feet of water per second and conveys the overflowing water at the North Branch of the Chicago River more than a mile east to the North Shore Channel.
- A \$3.3 million Cherry Creek East Branch Flood Control Project in Flossmoor was completed and will provide a new

flood relief channel and improved conveyance for water. This project resulted in 16 homes and six parcels being removed from the regulatory flood plain.

- We joined the City of Northlake to complete the Addison Creek Wetlands Restoration Project to restore natural stream function, improve the water quality of Addison Creek and provide a flood control benefit to the area. As a result, the 100-year base flood elevation will be reduced by up to three feet at several locations within the project area.
- The Melvina Ditch Reservoir expansion project broke ground in April. The project more than doubles the existing Melvina Ditch Reservoir storage capacity and will alleviate flooding for residents of Burbank and Oak Lawn.
- The Buffalo Creek Reservoir expansion project construction began in May and will alleviate flooding while improving public recreation for Buffalo Grove and other downstream communities. The project will include public access improvements and expand the reservoir's capacity by an additional 58.6 million gallons.
- We pledged our support for 14 projects that will assist municipalities and other government agencies throughout Cook County in projects to prevent flooding as part of MWRD's Phase II Stormwater Management Program. The projects represent approximately \$66.8 million in estimated construction costs, benefiting more than 2,000 affected structures impacted by flood waters. Diverse approaches such as new storm sewers, culverts, and outfalls are being built to address flooding throughout the region.
- We requested green infrastructure (GI) project applications and received 100 project applications. This gave us dozens of important projects to select that will reduce the amount of water flowing through the gray infrastructure of pipes and lessening the amount of urban flooding that impacts our communities. At our Sustainability Summit in October, we honored exemplary GI projects in the Village of Skokie and City of Berwyn.
- Our stormwater management projects also claimed honors. A Niles flood relief project was awarded the Public Works Project of the Year in the Environment category by the American Public Works Association. Besides reducing surface water flooding, the project with its 12,500 feet of new sewers will also protect the Chicago River from combined sewer overflows that drain into the waterway. The Westchester Reservoir expansion project was also recognized with a Merit Award from the American Council of Engineering Companies' Illinois Chapter. The Mayfair Reservoir Expansion Project provides an additional 34-acre-feet of stormwater storage.

Resource Recovery

We continued to make strides in meeting phosphorus discharge limits at our WRPs, while recovering large quantities of phosphorus and nitrogen at our nutrient recovery facility at Stickney WRP and other WRPs. Recovering nutrients before they are sent downstream will make them available for reuse and protect our waterways from contamination.

At the Stickney WRP, we continue to take these recovered nutrients and create a high value fertilizer known as Crystal Green. The Egan WRP is building upon a successful deammonification process, O'Brien WRP is growing algae for potential use in plastic products and Stickney and Calumet WRPs are working with companies to attract high strength organic materials.

We received a grant with our partners at the University of Illinois-Urbana to address nutrient loss reduction strategies and protect regional and national waterways downstream. In June, we joined central Illinois farmers at our Fulton County site to host a Field Day, where we highlighted best practices to reduce nutrients from running off into waterways.

Exceptional Quality Compost

The MWRD received commendation from the National Biosolids Partnership for establishing an elite biosolids program that has met and exceeded national standards for the last 10 years. In 2018, we continued to develop an Exceptional Quality compost operation that blends woodchips with part of the 145,000 tons of biosolids we produce each year to provide a premium quality product that supplies organic matter and improves the structure and porosity of soils. This fall, the Board authorized plans to make this product free to the public.

Open House, Tours and Outreach

This spring we hosted tours at six WRPs in conjunction with national Infrastructure Week to educate hundreds of visitors on our work and distribute free 40-pound bags of compost and free saplings. In October, our O'Brien WRP again welcomed the public as part of the Chicago Architecture Center's Open House Chicago. Nearly 900 visitors came for free guided facility tours, family friendly activities and the opportunity to meet and learn from MWRD staff.

We participated in 145 outreach events at farmers markets, community fairs and parades to promote our values in protecting our water environment. The District led more than 150 group

tours of our plants and facilities, including numerous international visits, like prestigious engineering delegations from China. In addition, District speakers presented at more than 60 locations, such as schools and libraries. Our goal in these endeavors is to share our water wellness values and educate citizens on how they can help us protect and improve the quality of our water.

Restore the Canopy

Now in its third year, our “Restore the Canopy” initiative sparked the MWRD’s distribution of approximately 16,500 oak tree saplings in 2018 at various fairs, farmers markets, schools and our WRPs to green our communities. Trees are a significant tool in managing stormwater by absorbing rain and lessening the load to our sewer systems. This program has distributed 58,000 saplings; since one medium-sized oak tree can absorb up to 2,800 gallons of rainwater per year, these trees will be able to capture 162,400,000 gallons of stormwater annually.

Space to Grow

Working with our partners at the Chicago Department of Water Management, Chicago Public Schools, Healthy Schools Campaign and Openlands, we completed six more schools this year through the award-winning Space to Grow program. The schoolyards at Fernwood Elementary, Cook Academy, Field Elementary, Morton School of Excellence, Nathaniel Davis and Farnsworth Elementary were transformed into beautiful, vibrant and functional community spaces for physical activities, outdoor learning, environmental literacy and community engagement that addressed neighborhood flooding.

Unwanted Medicine Collection and Chlorides

More than 334 pounds of unused or expired medications were collected at three water reclamation plants and properly destroyed. Although our drug collection boxes are open year round, U.S. Drug Enforcement Administration National Prescription Drug Take Back Days highlight efforts to educate the public about the potential for abuse of drugs and harm to the environment. The MWRD held a chlorides workshop to discuss best salting strategies that will keep roads safe but reduce the amount of chlorides entering the waterways.

Waterways

In keeping with our mission, we worked to not only clean our waterways by removing 2,500 cubic yards of debris, but we also

partnered to attract more visitors. We worked with Friends of the Chicago River to promote Overflow Action Days and with the Lathrop Riverfront Group to highlight improved access to the waterways. We also worked with the USACE to remove the North Branch Dam to allow upstream fish migration and improve navigation and surroundings for boaters.

New Veterans Policy

To salute our veterans, we formally adopted a policy to increase contracting opportunities for veteran-owned and operated small business enterprises. Under the terms of the new policy, a successful bidder must meet a three-percent veteran-owned business enterprise goal on contracts in which two or more eligible veteran-owned and operated small business enterprises are available to bid on a contract or subcontract. A nominal goal of three percent for veteran-owned businesses will allow the MWRD to say more than a simple ‘thank you for your service’ to our veterans.

Calumet WRP Roof Collapse

I would be remiss not to mention an event that impacted our MWRD family the morning of August 30. An explosion triggered the collapse of the sludge concentration building roof at the Calumet WRP, injuring 10 workers. This event turned into a shining example of the hard working MWRD staff who came to each other’s aid and kept operations running smoothly. We are also thankful for the tremendous effort put forth by the Chicago Fire Department and other responders.

While we triumphed through so many achievements this year, the Calumet event also brought us closer together in difficult circumstances and reminded us of the hard work so many of our staff exhibit each day. Our staff work in challenging conditions. We are deployed in the tanks, in the labs, in the pipes, in the tunnels, in the reservoirs, and in the intercepting sewers. We are operating the heavy machinery, filtering debris, processing solids, removing contaminants, engineering the trains, driving the trucks, cleaning our water and completing all facets of work that make our jobs so diverse and unique. We realize that many of these tasks and exercises, while often forgotten or overlooked by the public, are intrinsic in protecting our water environment and our planet. I am grateful to tell their stories and inform residents of our service area about the great lengths our staff go to in order to protect the water environment.

