



Metropolitan Water Reclamation District of Greater Chicago

President's Annual Message 2019: A Year in Review



I am honored to serve as President of one of the largest, innovative wastewater management agencies in the world.

I began my career working at the Metropolitan Water Reclamation District of Greater Chicago (MWRD) as a chemist. I have now served seven years as a member of the Board of Commissioners with 2019 being my first year as President of this illustrious organization. I bring to the Board unique qualifications as a chemist, environmentalist and former employee of MWRD. I am keenly aware of the MWRD's commitment to exceptional work and see my role as President as an opportunity to show young students studying Science, Technology, Engineering, and Math (STEM) and others that with hard work you can accomplish anything you set your mind to. My motto is "You Have To See It To Be It."

As I engage with constituents throughout Cook County, whether residents, water industry professionals or elected officials, I am grateful for the reminders that the MWRD name continues to shine bright for its strong record of reliability, ingenuity and commitment to quality service. Marking our 130th year, 2019 brought us an opportunity to reflect on our rich history of service and protection for our region's health and environment. Climate change challenged us with major rain events but we addressed each storm by confronting the surplus water with resiliency and hard work. I will continue making the protection of our most precious natural resource — Lake Michigan — my top priority along with emphasizing the use of green infrastructure as a cornerstone for building the Cook County of the future.

Here are a few memorable highlights and achievements from this year.

A handwritten signature in black ink that reads "Kari K. Steele". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Kari K. Steele

President of the Board of Commissioners

Firsts in 2019

Inspector General

My fellow commissioners and I unanimously approved plans in April to authorize Cook County's Office of Independent Inspector General to serve as the MWRD's inspector general for a three-year period. We are one of the best run agencies in the country, but it never hurts to have additional oversight.

Innovative Solutions

We enlisted the services of goats and sheep to reduce the use of herbicides and to clear out shrubs, trim back overgrowth, remove invasive plants and maintain landscaping in hard to reach stretches of Lemont WRP. These hard workers trimmed the grounds covering several acres, moving quickly across inaccessible areas, while also eliminating the need for herbicides or fuel to power lawn mowers.

Inaugural Celebrations

We hosted our inaugural Latinx celebration and held a Pride flag raising ceremony.

TARP

We received good news this year. The MWRD secured \$33.8 million from the United States Army Corps of Engineers (USACE) to cover the federal portion of the remaining McCook Reservoir costs. This funding will help the MWRD complete Stage 2 of the McCook Reservoir by 2029, adding 6.5 billion gallons of additional storage to the Tunnel and Reservoir Plan (TARP). Meanwhile, Stage 1, which contains 3.5 billion gallons of storage, is now in its second year of operation and has captured over 50 billion gallons of combined sewage, preventing this polluted water from overflowing to the waterways or flooding homes and businesses. The Thornton Composite Reservoir, which handles stormwater south of 87th Street in Chicago, has captured 32.9 billion gallons of combined sewage since inception in December 2015.

Fiscally Responsible

The MWRD continues to maintain a AAA bond rating from Fitch Ratings and a AA+ bond rating from Standard & Poor's, while also managing a stable corporate fund along with a sustainable capital improvement program. Our financial standing has drawn support of the Civic Federation and the Government Finance Officers Association of the United States and Canada (GFOA). The GFOA honored the MWRD in 2019 with the Distinguished Budget Presentation Award and Certificates of Achievement for Excellence in Financial Reporting. We replaced 36 Imhoff tanks at the Stickney Water Reclamation Plant (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.

Turning Wastewater into Clean Water

This year, we are on pace to treat nearly 500 billion gallons of wastewater, returning it to our environment in a far better state than when we first received it. The National Association of Clean Water Agencies (NACWA) in 2019 recognized the MWRD with six Platinum Peak Performance Awards for at least five consecutive years of meeting stringent permit guidelines at six plants. The annual awards honor treatment plants for meeting 100 percent compliance of National Pollutant Discharge Elimination System (NPDES) permits. We accomplished this by modernizing and updating aging infrastructure, enhancing operations and having an extremely qualified staff.

Managing Stormwater

As changing weather patterns meet a region full of impervious pavement, we continue to allocate more resources to manage stormwater and mitigate flooding. This year we joined our partners in April to break ground on the first of two Addison Creek projects that will provide benefits for Bellwood, Northlake, Stone Park, Melrose Park, Westchester and Broadview. The 600-acre-foot Addison Creek Reservoir in Bellwood will hold close to 200 million gallons of storage capacity and connect with the Addison Creek Channel, where additional improvements will reduce overbank flooding to approximately 2,200 structures, including an estimated 1,700 structures that will be removed from the flood plain. The Addison Creek project, which will provide \$116 million in flood benefits, highlighted a number of both local and regional stormwater management projects that will protect our communities from flooding, while improving streambanks and conveyance in local waterways. Later in April, during a rather symbolic downpour, we joined our partners in Palos Heights and the Forest Preserves of Cook County to formally kick off the Arrowhead Lake project to remove 70 structures from the flood plain. We have continued to make strides on the Natalie Creek flood control project to benefit Midlothian and Oak Forest and we are expanding the Melvina Ditch Reservoir to aid Burbank and Oak Lawn. This year we substantially completed the Buffalo Creek Reservoir to allow it to store an additional 58.6 million gallons and relieve area flooding. It is estimated that this project will protect 107 structures from various flooding intervals and provide in excess of \$25 million in flood relief benefits.

We are also working on other stormwater management solutions for the south suburbs. The \$11 million Midlothian Creek project in

Robbins is a three-phase project that will include the construction of a diversion channel that connects to the Calumet-Sag Channel, channel improvements on Midlothian Creek and the construction of a naturalized detention area that is designed to resemble a park setting.

We advanced our flood prone property acquisition program in Des Plaines, Riverside Lawn and Franklin Park to remove homes from the flood plain, create passive spaces and allow homeowners to sell their homes through voluntary means.

Protecting our Water Environment

Throughout the year, we collected more than 750 pounds of medications at our WRPs and downtown headquarters, and our boats removed 2,700 yards of debris from our waterways. In April, we coordinated a household hazardous waste collection event at Brookfield Zoo, attracting 1,500 residents.

Green Infrastructure

In 2019, we authorized intergovernmental agreements (IGAs) for 20 new green infrastructure projects and entered into 25 IGAs for local stormwater and green infrastructure partnership projects with a total cost of \$15 million. We celebrated the completion of projects in Riverside, La Grange and Tinley Park, where we came together with municipalities to fund and oversee dynamic land use upgrades. We completed five more Space to Grow projects with our partners to utilize green infrastructure and permeable surfaces. The schoolyards can capture collectively more than 880,000 gallons of water per storm event. Space to Grow not only practices water conservation but also teaches school children the value of being environmentally conscious. Through our popular Restore the Canopy program, we distributed more than 14,000 free oak tree saplings to empower residents to play a role in managing water from their own community. This brings our total to more than 72,000 oak trees since we launched the program only three years ago.

Resource Recovery

As new technology has emerged in energy savings, our inventive staff has worked to build solutions in the realm of resource recovery. By reclaiming resources, like biosolids, energy and nutrients, we have found a way to provide a return on investment that benefits taxpayers and the environment. Each year, we recover 145,000 tons of biosolids, and we took more steps this year to return that to the environment as a soil amendment to aid turf and plant growth throughout Cook County. Through our EQ Compost, we established pickup sites at our Water Reclamation Plants (WRPs) for distribution of the compost to businesses and the public each Wednesday. We also delivered EQ Compost orders to backyards and community gardens, golf courses and parks to keep the product local, which also reduces our carbon footprint. To expand the awareness and use of our EQ Compost, MWRD participated in the 2019 Chicago Flower and Garden Show at

Navy Pier. During the 5 day show, our staff hosted an informational booth and distributed 800 jars of EQ Compost to visitors from around the world. Our participation in the Chicago Flower and Garden Show was one of the many unique opportunities to share awareness about the use of our in-house produced EQ soil amendment.

Thanks to our biogas utilization evaluation team, we methodically studied ways to optimize renewable energy produced at our WRPs. Our Lockport Powerhouse is also working to generate hydroelectric energy by using two turbines to provide a safe and environmentally-friendly energy source that is sold back to Commonwealth Edison. For 2019 and 2020, the projected annual generation is 40 million kilowatt hours of power, with corresponding annual revenues of \$1.2 million.

WEFTEC in Chicago

The work of our talented scientists and engineers was on full display in September when we welcomed the world of water professionals to our lakefront at the 92nd Annual Water Environment Federation's Technical Exhibition and Conference (WEFTEC). More than 22,500 participants and 992 exhibitors descended on McCormick Place to exchange knowledge in pursuit of a healthy water environment. I was honored to give a welcoming address and introduce our Assistant Director of Monitoring and Research and WEF President Tom Kunetz. Our Sewer Rats Team performed well at the Operations Challenge, showing off their wide range of fast-paced skills. We gave tours of our facilities to water professionals from Denmark, Singapore, South Korea, Ethiopia, Brazil and the USACE. We also conducted guided tours of Stickney WRP for future career leaders through WEF's INFLOW (Introducing Future Leaders to Opportunities in Water) program, connecting underrepresented minority students to water. We hosted the Water Pooza educational fair at Saucedo Scholastic Academy and then returned to Saucedo the next day to construct a rain garden. A team of scientists and engineers from the MWRD and Illinois State University were honored for creating a system that optimizes chemical usage to control odors and corrosion at the Kirie WRP in Des Plaines.

Watershed Management Ordinance

We amended the Watershed Management Ordinance (WMO) in 2019 to adopt watershed specific releases rates, update requirements for redevelopment and incorporate recently updated rainfall data. We issued more than 500 permits and reviewed approximately 50,000 underground construction notices to protect MWRD infrastructure. While improving stormwater drainage and detention conditions as part of new development, the WMO continues to be a guiding force reducing flooding and soil erosion and ensuring the protection of wetlands and riparian areas; this ordinance will be reviewed and updated as needed.

Diversity & Inclusion

In conjunction with our Human Resources and Diversity sections, MWRD increased our promotions and hiring of minority candidates in 2019. In addition, for the first time, MWRD has entered into an apprenticeship agreement with one of our unions to assist in increasing diversity in their trade. We also have a robust internship program that provides training in various departments for future career consideration at MWRD. Introducing and inspiring youth at an early age to the many facets of stormwater and wastewater management is an important component of our outreach goals. In 2019, we lead the charge to participate in the annual Historically Black Colleges and Universities (HBCU) Chicago Football Classic at Soldier Field to engage attendees with information about MWRD careers and internship opportunities.

Outreach

We attended hundreds of events throughout the year to educate the public on the roles we all play in protecting our water environment. To continue celebrating the MWRD's 130th anniversary, we held road show events throughout Cook County, to bring our work to the people we serve. Each road show introduced visitors to our commissioners and staff and informed them about local projects, explained how to prevent basement backups, and shared career information and business opportunities. In addition, the Cook County Sheriff's Office collected unwanted medications, electronics and paper for shredding. The road show events were an effective avenue to connect with young audiences on STEM careers. We reached out to other important stakeholders as well. Our Diversity Section hosted two minority/women/small business entity outreach events, drawing 70 prime contractors and 500 subcontractors and other local government agencies and assist agencies.

We welcomed more than 1300 visitors at our open houses in May at the O'Brien, Stickney and Calumet WRPs, and as part of the Chicago Architecture Foundation's Open House Chicago to raise awareness of our essential facilities. We hosted elected officials, farmers, soil scientists and engineers at our Fulton County site for a Field Day in July to develop best management practices in nutrient runoff reduction. In the spring we had a productive annual Legislative Day with lawmakers in Springfield, in the summer we held our annual "A Celebration of STEM" event to congratulate and reward local school science fair winners, and in the fall we held the 7th annual Sustainability Summit at the Stickney WRP. We commemorated the contributions of many at the MWRD and beyond through our annual African American History Month celebration and Women's History Month celebration. All total, we participated in 245 events, reached more than 130,000 people during outreach initiatives, provided tours to 3,700 visitors, and reached up to 300,000 people on social media. And last but definitely not least, we launched our new website mwrld.org!

MWRD Tours

MWRD hosted various tour groups at all of our Water Reclamation Plants, including water industry leaders, youth and mentoring groups, nature conservationists and various summer programs.

In 2019, we invited and opened our doors to many first time visitors to explore our Water Reclamation Plants to learn about the fascinating world of wastewater treatment and stormwater management. This effort increases awareness of our services across all communities and age groups. To name a few, in 2019 we welcomed the following first time visitors: 100 Black Men of Chicago, Youth for A Better Tomorrow, My Block My Hood My City, Nature Conservancy Indian Boundary Prairie – Environmental Thinkers, Chicago-Lawndale Amachi Mentoring Program from the Chicago Mayor's Office One Summer Chicago Program, Prairie Jr. High School (Future City Competition participants) and numerous colleges and universities. Each youth and business group is provided the opportunity to see our facilities and speak with our team of professionals first-hand. This is another opportunity for MWRD to expound upon the thoughts of youth and their vision of the future to possibly include a career at MWRD.

Goals and Milestones

The mission and goals of MWRD is always our top priority, which are to protect and improve the quality of water in our 883.5 square miles of the Cook County service area. As we continue to work diligently with the highest standards of quality to protect businesses and homes from flood damages, we are often challenged to find additional ways to improve and build upon the services and resources that we provide. The MWRD of the future will rely more on green infrastructure projects, in addition to the gray infrastructure projects we currently utilize with our Tunnel and Reservoir Plan. Study sessions are being planned to determine how to add the 5% of Cook County currently not in our wastewater treatment service area to participate in our Green Infrastructure (GI) program. GI funds will help address flooding issues during these times of ever-changing weather patterns.

Complex issues like comprehensive ethics reform have been worked on for the 12 months of my presidency. We fully expect to realize the strongest ethics ordinance in the State of Illinois in 2020.

Conclusion

My first year serving as president has been incredibly fulfilling, and I thank my fellow commissioners and staff for supporting me in this role. We know there will be environmental challenges to maintain a clean water environment, but by continuing to work together, our resilience will yield additional success. I look forward to partnering with our staff and leadership in 2020 to manage an efficient government organization that responds to our taxpayers with essential services to protect the health and safety of the public, protect our water supply source (Lake Michigan), improve the quality of water in watercourses in its service area, protect businesses and homes from flood damages, and maintain a clean water environment.