



Metropolitan Water Reclamation District of Greater Chicago

President's Annual Message 2015



This has been an exciting first year for me as president of the Metropolitan Water Reclamation District of Greater Chicago (MWRD) Board of Commissioners. We celebrated many achievements in 2015 while inching closer to completing other significant projects that make this agency a leader in water quality improvement and resource recovery. This message presents highlights from an extremely productive and eventful year.

Mariyana T. Spyropoulos
President of the Board of Commissioners

Building International Relations

We kicked off the year by signing a collaborative agreement with Aarhus Water, an independent regional water and wastewater enterprise owned by the municipality of Aarhus, Denmark. The MWRD and the Danish entities share many common goals such as effective water management, sustainable operations, efficient customer service and environmental stewardship. Since the signing, we sent staff to study in Denmark and hosted the Danish delegation to tours and presentations. We further established our connections abroad this year by welcoming dozens of delegations from across the world from such places like Australia, China and Ukraine to share knowledge about best management practices in water treatment.

Beneficial Use of Real Estate

The openings of the Cal Sag Trail and Centennial Trail means more access and opportunities for residents to enjoy local waterways. This summer, we participated in the unveiling of the west segment of the Cal-Sag Trail that will connect Southland communities seeking recreation along the Cal-Sag Channel. The MWRD dedicated half of the land on which the trail was built. When totally complete, the Cal-Sag Trail will connect 14 communities within the Southland and Millennium Reserve area, from Lemont all the way to the Burnham Greenway near the Indiana border.

In October we unveiled the Centennial Trail on our property at Columbia Woods Forest Preserve in Willow Springs that is leased to the Forest Preserves of Cook County. Two new foothills accessible to hikers were constructed as part of the project to remove 1.8 million

cubic yards of overburden from the neighboring McCook Reservoir, a component of the Tunnel and Reservoir Plan (TARP).

TARP

When completed, McCook Reservoir will provide 10 billion gallons of storage to capture combined sewer overflows that discharge to waterways and cause sewer backups. Completed in two phases, the reservoir will also provide \$114 million per year in flood control benefits to 3.1 million people living in 37 communities. Mining work is expected to be completed in 2016, with the first phase of the reservoir to come online in 2017. But 2015 belonged to the Thornton Composite Reservoir, the second of TARP's three reservoirs which came online this year. After hosting more than 3,000 residents to tours of the Thornton Reservoir this summer, we held a ribbon cutting ceremony in September. U.S. Senator Dick Durbin, U.S. Reps. Robin Kelly and Mike Quigley, U.S. Environmental Protection Agency Region 5 Administrator Susan Hedman, Illinois Environmental Protection Agency (IEPA) Director Lisa Bonnett and a host of other leaders helped celebrate the occasion by cutting a ribbon on the reservoir floor.

Major Legislative Achievement

The MWRD worked with the IEPA, Illinois Department of Agriculture and several environmental groups to develop legislation to amend the Illinois Environmental Protection Act to create the new definition of exceptional quality biosolids and make this recovered resource more accessible. Gov. Bruce Rauner signed Public Act 99-0067 earlier this year. Recognition of Exceptional Quality

biosolids in the state of Illinois is consistent with federal rules and is an important step towards achieving a resource recovery model. The law helps cement the MWRD's biosolids program which has received much acclaim from the farmers, golf course managers, landscapers, municipalities, park districts, and home owners that have used them. The MWRD is working on a plan to make biosolids available for public use and plans to have a distribution method in place by next spring. The MWRD is expanding the use of biosolids by mixing them with tree debris provided by the city of Chicago. This debris mix is composted into an organic material for use as a substitute for fertilizer, compost and soil amendment. This material is used for maintaining or establishing turf grass in parks, athletic fields and public access areas throughout Cook County.

Resource Recovery

Biosolids are one of the most prized resources recovered from the water treatment process, but the MWRD is also investing in recovering phosphorus, nitrogen and ammonia. Not only will this transformation reduce landfill usage, but we will see a reduction in greenhouse gases and in our carbon footprint. These innovative processes are good for the environment, good for the economy and good for residents.

PHOSPHORUS RECOVERY

Work continues on the world's largest phosphorus recovery facility that will come on line in 2016 at the Stickney Water Reclamation Plant. Ostara will produce between 9,000 to 10,000 tons of Crystal Green fertilizer annually. This facility will greatly reduce the MWRD's nutrient load to the receiving waterways.

ENERGY RECOVERY THROUGH DIGESTERS

The MWRD is working to maximize energy recovery through new feedstocks for existing digesters which will help us move toward our energy neutral goal by 2023. This process reduces cost and provides an additional revenue stream. This project has the potential to lower greenhouse gas emissions by 110,000 metric tons per year and deliver a significant return on investment for our taxpayers. We are also examining ways to reduce energy through the removal of nitrogen and ammonia at our Egan Water Reclamation Plant and optimizing aeration processes, while exploring algae nutrient reduction processes as an additional energy resource.

WATER REUSE

The MWRD is also pursuing reuse applications for the high quality water produced at our plants and for the capture and reuse of stormwater. By delivering this treated water to the industrial sector, we are relying less on Lake Michigan's precious waters and building partnerships to leverage funds. At the same time, we are also improving the quality of our waterways where this water reuse has taken on many meanings.

Improving Water Quality

Water quality ascended to a new threshold in 2015. In July, we celebrated the completion of this heightened standard in water quality by introducing a new disinfection facility at the Calumet

Water Reclamation Plant. The chlorination/de-chlorination disinfection facility along with the ultraviolet disinfection system at O'Brien Water Reclamation Plant will drastically improve the quality of the region's waterways. I commend our staff and contractors who worked diligently to bring the CTA's Yellow Line back into service after a five-month hiatus due to an embankment collapse at the site of the O'Brien disinfection construction project.

WATER TREATMENT

The MWRD's core mission is to provide wastewater treatment for more than 5 million people living and working in Cook County. That work is strictly scrutinized and requires the monitoring, testing and the evaluation of hundreds of water samples on any given day, and a flaw in any one could affect a perfect score. All seven of our treatment facilities achieved 100 percent compliance for exceptional performance under National Pollutant Discharge Elimination System (NPDES) permit requirements and federal Clean Water Act standards from the National Association of Clean Water Agencies' (NACWA). The MWRD received platinum peak performance honors for five of its plants for meeting full compliance for at least five consecutive years.

ADDING TO THE FLEET

During the spring we christened two new pollution control boats. Affectionately and aptly named "Skimmy Dipper" and "Skim Pickens," these two new vessels will ply Chicago area waterways removing debris and cleaning these vital waterways that have experienced a surge in recreation in recent years.

CHI-CAL RIVERS FUND

The MWRD continues to partner with seven private and public organizations to support regional efforts that are designed to improve the health, vitality and public access of the waterways in the Chicago and Calumet region. Administered by the National Fish and Wildlife Foundation, the Chi-Cal Rivers Fund (Fund) is a partnership between the MWRD, ArcelorMittal, The Chicago Community Trust, Crown Family Philanthropies, Gaylord and Dorothy Donnelley Foundation, Illinois Department of Natural Resources (IDNR), the Joyce Foundation, and the Wrigley Company Foundation. Partners committed \$2.5 million to the Fund over three years beginning in 2013. This year the MWRD joined the Friends of the Chicago River (FOCR) and the IDNR to release approximately 140,000 catfish into Chicago area waterways as part of the Chi-Cal Rivers Fund. The fund also awards grants to reduce stormwater runoff with green infrastructure, enhance fish and wildlife habitat, and improve public-use opportunities.

UNWANTED MEDICINE COLLECTIONS

To further improve water quality, the MWRD hosted unwanted medicine collections at the Calumet, Stickney and O'Brien plants, and more than 237 pounds of pharmaceuticals were removed from the waste stream. We are working on a partnership with the Cook County Sheriff's office to permanently collect unwanted medicines in the future.

STORMWATER MANAGEMENT

In 2004, the MWRD assumed responsibility for stormwater management in Cook County, and since then, the agency has over \$300 million in regional stormwater projects underway which will yield over \$400 million in benefits. Phase 1 of the MWRD's Stormwater Management Program (SMP) focuses projects conceived in Detailed Watershed Plans to address overbank flooding and streambank erosion along waterways in Cook County. MWRD has completed construction on five Phase I projects, initiated construction of two projects, and is currently designing 19 projects. Municipalities are designing two Phase 1 projects, preparing to award one project, and completed construction on one project in 2015. Phase 2 of the SMP was initiated in 2013 and addresses other flooding issues not necessarily related to waterways, such as lack of localized detention and insufficient conveyance capacity for stormwater drainage. MWRD worked with local municipalities to identify these types of projects and potential solutions; 23 shovel-ready projects were approved and 15 problem areas were identified for further study by the Board under Phase 2. The MWRD is performing preliminary engineering for the 15 problem areas, while 14 of the shovel-ready projects are under construction, and six of the remaining nine projects are under design by others. The three other problem areas that were identified will need further study before a potential solution can be designed; those investigations began in 2014. By early 2016, it is anticipated that several of the MWRD preliminary engineering projects will move into final design.

STORMWATER MASTER PLANS

Another aspect of the Phase 2 program is the creation of Stormwater Master Plans for all communities in Cook County. The goal of these plans is to analyze existing flooding problems and the potential for future issues to identify a comprehensive approach to address those problems. We are conducting five pilot studies at various locations impacted by flooding. These locations include the far South Side of Chicago; Harwood Heights; Northbrook; the Little Calumet/Cal-Sag Channel drainage area, comprised of Blue Island, Calumet Park, Riverdale, Robbins and Alsip; and the Roberts Road Study Area, —which includes portions of Justice, Palos Hills, Hickory Hills, Bridgeview and Bedford Park. It is envisioned these studies will serve as the basis for subsequent studies that will ultimately cover the entire county.

ACQUIRING FLOOD-PRONE HOMES

The MWRD also began participating in a useful program this year to fund the purchase of homes at-risk to flooding. This project allows homeowners from select communities to voluntarily participate in the buyout of their flood-prone residences through contributions from the MWRD and the Federal Emergency Management Agency (FEMA). As a result of recent legislation signed last summer, the MWRD Board of Commissioners adopted a policy for the selection and prioritization of projects for acquiring flood-prone properties. The voluntary program assists in the acquisition of homes that flood repetitively, and already in its first year the MWRD has offered assistance to help purchase 17 flood-prone homes in Glenview and

is working to finalize an Intergovernmental Agreement with Des Plaines for purchasing additional homes that have been impacted by flooding, providing a huge relief to homeowners. Additional acquisition projects throughout Cook County are being evaluated by MWRD, and agreements for the acquisition, structure removal, and transfer of property to the appropriate government agency will follow.

STORMWATER PROJECTS

In 2015, we completed several pivotal stormwater projects with local partners, while breaking ground on others to provide much needed flood relief in Cook County. For example, in August construction began on the long-awaited Busse Woods Reservoir South Dam Modification project in Elk Grove Village to relieve the impacts of flooding for those living and working along Salt Creek in both Cook and DuPage counties. That same month working together with federal leaders, the U.S. Army Corps of Engineers (USACE), various agencies, and northwest suburban communities surrounding the Des Plaines River, the MWRD helped open Levee 37 in Mount Prospect and Prospect Heights. Located between Palatine Road and Euclid Avenue on the west side of the Des Plaines River, it will protect more than 600 existing homes and dozens of businesses in Mount Prospect and Prospect Heights from future flooding, with an estimated annual savings of more than \$3 million in avoided flood damage. The project became a reality after the MWRD stepped in to build a compensatory storage facility in Heritage Park in nearby Wheeling, which was needed to fill a 600-foot gap in the levee structure that could prevent additional water levels from escaping downstream. In September, the MWRD joined officials with the village of Glenview, Glenview Park District, Cook County and MWRD to celebrate the completion of the East of Harms Storm Relief Project and reopening of Cunliff Park in the north suburb. The flood control project will benefit 1,150 single-family homes east of Harms Road in Glenview that have been stricken by repeated flooding due to the low-lying location in relation to the main stem of the North Branch of the Chicago River.

SPACE TO GROW PARTNERSHIP

Since 2013 the MWRD has been working with the City of Chicago Department of Water Management (DWM), Chicago Public Schools, Openlands and Healthy Schools Campaign to minimize flooding and reduce stormwater runoff by replacing impermeable asphalt surfaces with green infrastructure, such as permeable pavement and rain gardens. We completed four elementary schools in 2014 and two more in 2015. DWM and the MWRD share the cost of the green infrastructure components and CPS assumes all costs associated with the recreational improvements. This work is transforming Chicago school grounds into green spaces that will improve student health. Previously covered with impervious asphalt surface, these schools now have rain gardens and other features that collect rainwater to help stop basement flooding and prevent pollution from flowing into the Chicago Area Waterways. This partnership has already received many awards, including the National Physical Activity Plan Champions Award, Illinois Association of Floodplain and Stormwater Management's Sustainability Award, and the



Students and community members participate in a Space to Grow planting event at Leland Elementary School. One of four pilot schools participating in the District-funded Space To Grow program in 2014, Leland Elementary's grounds were transformed with green infrastructure improvements.

American Council of Engineering Companies' Special Achievement Award. The U.S. Green Building Council Illinois chapter (USGBC-IL) rewarded Space to Grow with the Chapter Mission Award at the 10th annual Emerald Awards.

CHICAGO HOUSING AUTHORITY

Stormwater staff are working toward active control of stormwater detention facilities on Chicago Housing Authority properties with an eye toward water reuse for irrigation and more effective stormwater management. The project is currently in design and construction is anticipated to start next year.

RAIN BARRELS

Perhaps the most active program this year has been our successful rain barrel distribution program. The Board modified the rain barrel program in May and since then, we partnered with more than 60 local communities and 12 non government organizations to deliver 25,000 rain barrels at no cost to residents. We will continue this incredibly popular program in 2016.

Improving our Financial Environment

The MWRD accurately communicates its financial story to the public every year and again received awards for financial reporting excellence from the Government Finance Officers Association (GFOA) of the United States and Canada. Steven Gauthier, Director of the Technical Services Center for the GFOA, presented four distinguished awards for financial reporting excellence for 2013 and 2014. The GFOA awards are an independent attestation of the MWRD's prudent fiscal management.

Vendor Outreach

Qualified business owners seeking to register as a potential vendor with MWRD learned more about the process at two vendor outreach events. Contractors, consultants, subcontractors and potential vendors met with commissioners and staff to learn how to register as a vendor and secure a contract with either

the MWRD or other business entity. These events aim to expand and maximize business opportunities for local Minority Business Enterprises (MBE), Women Business Enterprises (WBE) and Small Business Enterprises (SBE). More than 300 participants joined the MWRD to learn about future work opportunities at vendor outreach fairs held at Prairie State College in Chicago Heights in September and at the Gleacher Center in Chicago in November. The events brought together dozens of firms and government agencies to expose smaller firms to the various opportunities to grow business.

Board Changes

Patrick D. Thompson left the Board in May after being elected as a Chicago Alderman for the 11th Ward. We wish him the best of luck. Taking his seat is David J. Walsh who was appointed Sept. 28 by Gov. Rauner. Commissioner Walsh will serve as chairman of the Board of Commissioners' committees on Industrial Waste & Water Pollution and Monitoring & Research and vice chairman of the Information Technology and Judiciary committees. In April, we said farewell to former Commissioner Gloria Alitto Majewski. The respected commissioner served the MWRD from 1984 to November 2010 when she retired from office. Commissioner Majewski quickly became a distinguished leader on the Board and in 1986 made history when she became the first woman chosen by her fellow board members to serve as chairman of the Finance Committee, an office she retained until her last day of service.

Staff Celebrations, Honors, Achievements

Commissioners and staff celebrated African American History Month during a special event held in the Board Room in February, and we also hosted a Women's History Month ceremony in March. In November we commemorated our veterans with a special flag presentation by Electrical Mechanic Jack Vollriede who served the country in Afghanistan.

WEFTEC 2015 brought the world's water treatment issues to the forefront in Chicago, and many staff shared their expertise with a worldwide audience. One highlight during WEFTEC was a press conference to announce the Zee Lung process currently being investigated at the Egan WRP.

Community Outreach

Commissioners and staff engaged in community outreach events, gave numerous presentations, participated on panels, and presented papers and PowerPoints on a wide range of topics to help tell the MWRD's story. I will end the year by speaking to the City Club of Chicago. I'll take the opportunity to provide an overview of the MWRD's accomplishments over the past 126 years and demonstrate how the MWRD is not only the leading environmental agency in the U.S. but how it is the leading environmental agency around the globe.

