Green Bonds

Project Expenditure Report

as of June 30, 2018

Metropolitan Water Reclamation District of Greater Chicago

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Overview

In December 2014 and June 2016, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) issued $225 million and $104 million respectively in Green Bonds to fund a variety of sustainability-focused projects, including streambank stabilization efforts, construction of a phosphorus recovery facility, and a capital improvements project to improve energy efficiency and eliminate air pollution at various facilities. The MWRD issued Green Bonds to allow investors to invest directly in bonds which specifically fund, or partially fund, environmentally-beneficial capital projects undertaken by the MWRD. Green Bonds are secured by the full faith and credit of the MWRD, and therefore, holders of the bonds do not assume any specific project-related risk.

Four Categories of the MWRD's Green Bonds

1. Tunnel and Reservoir Plan (TARP)

The MWRD's innovative TARP or "Deep Tunnel" system is designed to reduce flooding and pollution caused by combined sewer overflows (CSOs). TARP was adopted in 1972 as a comprehensive pollution and flood control program for its 375 square mile combined sewer area. This area includes part or all of 52 communities, including the City of Chicago, and is one of the country's largest public works projects for pollution and flood control. The primary goals of TARP are to protect Lake Michigan – the area's primary source of drinking water – from polluted back-flows; clean area waterways; and provide an outlet for floodwaters in order to reduce basement flooding. Since it went online in 1985, the tunnel portion of TARP has reduced combined sewer overflow pollution in our rivers by about 85%. Since the Thornton Composite Reservoir came into service in late 2015, there have been only three reported CSOs in the Calumet River System. The 3.5 billion gallon McCook Reservoir Stage I came online in 2017, and once Stage II is completed by 2029, water quality will improve even further.

As a result of these water quality improvements, aquatic life in waterways has flourished. The MWRD conducts fish monitoring periodically throughout its service area, which includes the Chicago, Calumet, and Des Plaines River Systems. The number of fish species found in the Chicago Area Waterway System (CAWS) has drastically increased since the 1970s when monitoring of the fish population first began. From 10 known species in 1974, that number has ballooned to 76 in 2017, including 59 that have been found in the CAWS since 2000. Thanks in part to advancements at the MWRD's water reclamation facilities, the waterways have experienced decreases in levels of ammonia and biochemical oxygen demand (BOD).

Performance metrics for TARP projects include tracking the reduction in CSOs discharged into the Chicagoland waterways, total detention and storage volume for the reservoirs during rain events, reduced frequency of diverting river water to Lake Michigan, and the quantity and diversity of fish species in the waterways measured over time.

2. Stormwater Management Program Projects

As the stormwater management authority for Cook County since 2004, the MWRD has been working to address streambank erosion and flooding issues throughout the county. In 2014, Phase II of the MWRD's Stormwater Management Program was initiated to address local drainage problems, develop stormwater master plans across Cook County and establish a program for purchasing flood prone and flood damaged property on a voluntary basis.

Through partnerships with local communities and other government organizations, the MWRD has completed numerous stormwater projects to protect homes and businesses from erosion and flooding issues.

Performance metrics include linear feet of streambank stabilized, number of structures benefiting from flood control projects, and dollar value of flood damages prevented.

3. Resource Recovery Projects

The MWRD is focusing on implementing sustainable and resilient practices in affecting a sustainable economy and financial base through the proper regulation and use of water, phosphorus, biosolids, and energy. The MWRD is pursuing innovative projects with respect to water and stormwater reuse; the MWRD completed the construction of a phosphorus recovery facility for reuse as a fertilizer and is studying food to energy gas production from anaerobic digestion processes.

Improved wastewater treatment and greater plant efficiency will allow the District to increase production of biosolids, a sustainable alternative to chemical fertilizers, including the packaging and distribution of free high quality biosolids.

Performance metrics include tons of phosphorus recovered and biosolids produced.

4. Water Reclamation Plant Expansions and System Improvements

The MWRD's seven water reclamation plants and 22 pumping stations clean an average of 1.2 billion gallons of wastewater each day. The total wastewater treatment capacity is over two billion gallons per day.

The MWRD's Capital Improvements Program includes replacing, remodeling, completing, altering, constructing and enlarging water reclamation plants, water quality improvement projects or flood control facilities, and constructing pumping stations, tunnels, conduits, intercepting sewers and outlet sewers. It also includes purchasing air pollution equipment and property as well as covering engineering expenses for the design and construction of these various projects.

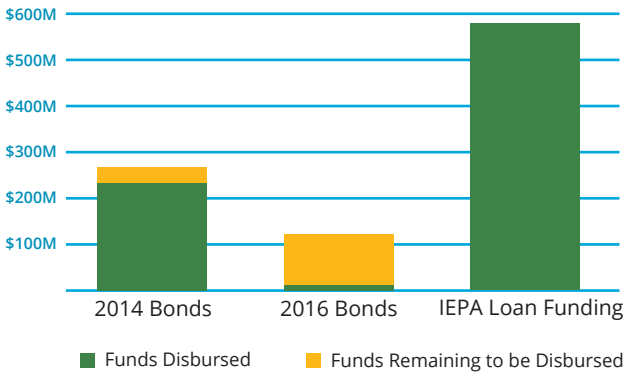
Performance metrics include optimization of aeration processes to reduce energy consumption, water reuse by converting current use of potable water in plant processes, and reduction in greenhouse gas emissions.

Use of proceeds

The following is a summary of the programs and projects funded by the Green Bonds as of June 30, 2018. In some cases, the Green Bonds may only provide partial funding for the specific program and/or project, or proceeds from both bond sales may be utilized to complete the funding of larger scale projects. Additional State Revolving Loan funding may have been, or will be, provided for use in funding the projects. All Green Bond proceeds have been segregated for use for the purposes identified in the overview section of this report. Until the proceeds are expended, specific projects may be added or deleted. Any projects added will comply with the eligible categories described in this report. See the Appendix to this report which details total project spending to date. This report will be updated annually for each series of the bonds until all of the bond proceeds have been disbursed.

Green Bond Funding

January 1, 2015 through June 30, 2018



Highlighted Projects

The status and description of some of the green bonds projects are provided below. Please see the Appendix for complete project spending by bond sale.

McCook Reservoir

A flood mitigation and water quality improvement project unrivaled in size throughout the world, the MWRD's McCook Reservoir was placed into service at the end of 2017. Benefitting 3.1 million people living in Chicago and 36 suburbs, McCook Reservoir Stage I captures and stores water before it can be sent by gravity and pumped from the MWRD's TARP tunnels to MWRD water reclamation plants to be cleaned and released to waterways. Since coming into service, the reservoir has captured 20 billion gallons of water.

Stage I of the reservoir has 3.5 billion gallons of storage capacity and provides an estimated $114 million per year in flood reduction benefits, while also capturing untreated water that previously overflowed into waterways during storm events. Stage II, due for completion by 2029, will be able to hold an additional 6.5 billion gallons of captured water. When it is completed, the McCook Reservoir will surpass the MWRD's Thornton Composite Reservoir as the largest reservoir of its type in the world.

Recently, the Water Environment Federation Board of Trustees recognized the design of the McCook Reservoir and the value that it will add to the community and the water sector by selecting it as the 2018 recipient of the Project Excellence Award.

McCook Reservoir is an essential part of TARP. TARP's goal is to prevent flooding and pollution from CSOs; when complete, the four TARP tunnel systems and three reservoirs the tunnels flow into will have a storage capacity of more than 20 billion gallons.

Opposite page: Aerial view of the McCook Reservoir in August of 2017
See page 12 for the reservoir's first fill.

Calumet Water Reclamation Plant

Public Building Commission Projects

The Guaranteed Energy Performance Contract dated August 24, 2016, was substantially completed on May 31, 2017. This project provides energy savings, improves occupant comfort, reduces maintenance requirements, and yields environmental benefits at MWRD facilities including the Calumet Water Reclamation Plant (WRP) and Stickney WRP. Savings and benefits were realized through the implementation of energy efficient lighting upgrades, steam blanket insulation improvements, and improved heating, ventilation, and air conditioning control systems, accomplished through three Energy Conservation Measures (ECMs):

1. LED Interior Lighting Upgrades at the Calumet WRP and the Stickney Storeroom – Annual demand savings will be 3,987 kW. Annual Peak Load Contribution (PLC) savings will be 342 kWh. Annual electrical energy savings will be 1,787,122 kWh. First-year guaranteed utility savings is $114,306, and first-year guaranteed operations and maintenance (O&M) and other savings is $12,505.
2. Steam Blanket Insulation at the Calumet WRP – First-year natural gas savings is 24,369 therms, and first-year guaranteed utility savings is $23,095.
3. Controls Upgrades at the Calumet WRP – Annual Electrical energy savings will be 539,582 kWh. First-year natural gas savings is 101,230 therms, and first-year guaranteed utility savings is $122,633.

The total annual savings guaranteed for the first year is $272,539, comprising:

- Electrical energy: 2,326,704 kWh
- Natural gas: 119,480 therms
- Utility savings: $260,034
- O&M and other savings: $12,505

Cherry Creek in Flossmoor, IL

Flood Control Project on East Branch of Cherry Creek, Flossmoor

After studying the Little Calumet River watershed, the MWRD published a detailed watershed plan to identify flood-prone areas within southern Cook County, including Cherry Creek. Under terms of an intergovernmental agreement between the MWRD, the Village of Flossmoor, and Homewood-Flossmoor (H-F) School District #233, the MWRD was tasked with overseeing the construction and covering the cost of the project. Located along Governors Highway south of 183rd Street and north of Flossmoor Road, the project was completed in 2018 and included a new 940-foot flood relief channel west of Governors Highway on H-F High School property, increased culvert capacity under Governors Highway, improved conveyance from the H-F High School pond with a new 48-inch culvert, and construction of channel improvements on Cherry Creek East Branch on property purchased from the Calvary Assembly of God Church. These improvements are expected to alleviate flooding of portions of Governors Highway and Braemar Road. This project also resulted in a Federal Emergency Management Agency flood plain map change that became effective October 26, 2018, as 16 homes and an additional six parcels were removed from the regulatory flood plain.

The MWRD has produced over 92,000 cubic yards of compost.

Composting

The current MWRD Green Bonds finance a composting project to provide for a windrow turner at the Lawndale Avenue Solids Management Area (LASMA) to mix wood chips and/or yard waste with the MWRD's biosolids as part of the composting process. Composted biosolids such as that produced by the MWRD at CWRP and LASMA improve soil quality by supplying organic matter, improving soil structure and porosity for a better plant root environment, and retaining nutrients longer which allows plants to more effectively utilize them. Composted biosolids can be used as a substitute for fertilizer, compost, and soil amendment or conditioner for establishing turf grass, mixing into custom topsoil blends, or adding to planter beds and pots for establishing flowers and trees. The MWRD's composted biosolids are odor-free and meet the US Environmental Protection Agency's Exceptional Quality (EQ) Designation, a term given to biosolids that meet Class A pathogen reduction requirements with the most stringent metal limits and vector attraction standards; therefore, it can be safely applied to any use with no restrictions. Illinois State legislation signed in 2015 also recognized MWRD EQ biosolids and biosolids compost as a safe, beneficial and renewable resource that can be made available to the public. Since the program began, the MWRD has produced over 92,000 cubic yards of compost.

The MWRD partnered with the city of Chicago to produce this composted biosolids blend by co-composting woodchips from the city's tree trimming and landscaping programs. In 2017 the MWRD also began adding yard waste and other organic materials from municipalities,

park districts, landscaping companies, and utilities to this composting process to expand the program. To date, the MWRD has received over 61,000 tons of woodchips and 5,200 tons of vegetative materials from its partners for use in the co-composting process. This collaboration has reduced the collective transportation costs and carbon footprints for all entities participating.

The next report will be prepared and posted to the MWRD's website detailing capital expenditures through June 30, 2019.

Stage I of the McCook Reservoir began taking water for the first time after rainy conditions during an unusually warm January 11, 2018.

Appendix
Project Spending Report

2014 Series B
General Obligation Unlimited Tax Bonds (Alternate Revenue Source)
January 1, 2015 through June 30, 2018
$50,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 1/1/2015-6/30/2018	Estimated Useful Life of Project (years)
Addison Creek Reservoir *Excavation and installation of flood control reservoir in Bellwood; includes control structure, inlet structure, spillway, piping and a pump station. This will reduce overbank flooding to approximately 2,200 structures along Addison Creek and serve as compensatory storage for a channel improvement project.*	111863F	$ 109,542,000	$ 12,126,227	50
Intergovernmental Agreement - Glenview Acquisition of Flood Prone Property *Acquisition and removal of 17 flood-prone homes along the West Fork of the North Branch of the Chicago River in Glenview, with the property preserved as open space.*	15IGA01	$ 11,735,000	$ 8,000,000	30
Albany Park Stormwater Diversion Tunnel^ *Installation of a stormwater diversion tunnel to alleviate overland flooding in the Albany Park neighborhood in Chicago to reduce overbank flooding affecting 336 structures in the area.*	140663F	$ 24,750,000	$ 5,629,814	50
Acquisition, Conversion to, and Maintenance of Open Space of Certain Flood-Prone Parcels of Real Property Located along the Des Plaines River, Riverside Lawn *Purchase 39 flood-prone homes along Des Plaines River. This will reduce the flood hazard risk in the Riverside Lawn area.*	16IGA06	$ 8,000,000	$ 5,333,333	30
Flood Control Project on East Branch of Cherry Creek, Flossmoor *Construction of an overflow channel on Homewood-Flossmoor High School's property, replacement of two collapsed culverts, and creation of shelf storage on Cherry Creek. This will remove 16 structures from the regulatory floodplain.*	10883CF	$ 3,305,000	$ 2,683,426	50
Franklin Park 5 - Phase 2 IGA *Construction of channel improvements on Silver Creek from Riverside Drive to Scott Street to alleviate flooding of approximately 76 residential structures.*	15IGA07	$ 4,175,771	$ 2,272,731	50
Addison Creek Channel Improvements *Improvements to channel conveyance such as open channel, gabions, sheet piles, riprap, and stream clearing in Northlake, Melrose Park, Stone Park, Bellwood, Westchester, and Broadview.*	111873F	$ 48,133,000	$ 2,131,754	50
Niles 1 - Phase 2 IGA *Installation of relief storm sewer under Cleveland Street to connect to existing storm sewers and divert stormwater to the North Branch of the Chicago River through an outfall near the intersection of Cleveland Street and Caldwell Street to address flooding in Niles.*	15IGA02	$ 2,000,000	$ 2,000,000	50
Flood Control Upper Salt Creek *Creation of flow bypass from an inundated area south of Dundee Road to an outfall into Upper Salt Creek, located south of Cherry Brook Village in the Village of Palatine. This reduces overbank flooding affecting 18 structures within the Village of Palatine.*	10884AF	$ 1,350,000	$ 1,327,506	50
Kenilworth Green Infrastructure *Construction of green infrastructure on Cumberland Avenue, Rosylyn Road, and Melrose Avenue between Abottsford Road and Sheridan Road, providing more than one million gallons of stormwater retention capacity.*	16IGA01	$ 8,100,000	$ 1,200,000	20
Intergovernmental Agreement - Cook County Trunk Storm Sewer Roberts Road *Installation of a new trunk storm sewer along Roberts Road to protect 32 structures from flooding in Hickory Hills and Bridgeview.*	15IGA03	$ 2,385,294	$ 1,181,713	50
Intergovernmental Agreement - Elk Grove Busse Woods Reservoir Dam Modifications *Modifications to the Busse Woods Dam on Salt Creek to provide increased flood protection for 44 structures, as well as transportation benefits, and benefits to the Forest Preserve.*	15IGA06	$ 2,736,750	$ 1,125,000	50
New Storm Sewers on Shermer Road and Cherry Lane in Northbrook, Illinois *Construction of new storm sewers on Shermer Road and Cherry Lane to provide direct flood reduction benefits to an estimated 18 residential structures and to reduce storm-related access impacts for approximately 32 homeowners.*	15IGA10	$ 1,050,000	$ 1,050,000	50
Demo and Clean Up at Addison Creek Reservoir *Demolition and clean-up of debris at the Addison Creek Reservoir site in Bellwood, IL.*	17555J0	$ 1,684,455	$ 1,031,358	50
Melvina Ditch Reservoir Improvements *Expansion of the existing Melvina Ditch Reservoir; modification of the pump station to accommodate the reservoir expansion, and installation of a new emergency overflow weir to reduce the likelihood of reservoir overtopping. This will help alleviate flooding in Burbank and Oak Lawn.*	142633F	$ 21,452,000	$ 906,662	50

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Project Name	Project Number	Estimated Total Project Cost	Spending 1/1/2015-6/30/2018	Estimated Useful Life of Project (years)
Acquisition, Conversion, and Maintenance of Flood Prone Property along Addison Creek, Northlake *Purchase and conversion of eight flood-prone homes along Addison Creek to reduce flood hazard risk.*	16IGA14	$ 1,184,000	$ 902,500	30
Flood Control Project on Natalie Creek in Oak Forest and Midlothian (Design) *Design of flood control measures along Natalie Creek from 157th and Central Park in Oak Forest to 146th and Pulaski in Midlothian. The project will increase the level of protection to existing residential and commercial structures that are prone to flooding in frequent storm events.*	142523F	$ 933,267	$ 895,549	50
Prairie/Washington Pumping Station Improvements, Brookfield *Installation of a new pumping station and back-up generator near Washington Avenue/Forest Avenue intersection, a box culvert under Forest Avenue, a new detention pond west of Forest Avenue, and other miscellaneous storm sewer improvements and restorations to reduce residential flooding from Salt Creek.*	15IGA16	$ 1,000,000	$ 815,633	50
Intergovernmental Agreement - Hoffman Estates Jones/Highland Sewer Improvements *Installationof new storm sewers to provide flood relief to 7 residential structures and reduce storm related access impacts for 50 homeowners.*	15IGA08	$ 1,088,016	$ 788,812	50
Acquisition, Conversion, and Maintenance of Flood Prone Property along the Des Plaines River in the City of Des Plaines *Purchase and conversion of 13 flood-prone homes along the Des Plaines River to reduce flood hazard risk.*	15IGA18	$ 950,000	$ 752,044	30
Intergovernmental Agreement - Evanston Civic Center Parking Lot *Installation of green infrastructure in the Evanston Civic Center parking lot to address flooding issues and reduce run-off and pollutant loads to the North Shore Channel.*	14IGA05	$ 1,519,000	$ 667,906	20
Blue Island Green Infrastructure Project *Construction of bioswales, rain gardens, and permeable pavement in parkways in a flood prone area of Blue Island. This will provide for the capture of approximately 100,000 gallons of stormwater per rain event.*	142543F	$ 697,030	$ 663,838	20
Stony Island Ditch and Lansing Manor Detention Basin and Pumping Station Modifications *Excavation and regrading of the existing ditch on Stony Island Avenue, the demolition of an existing detention basin pumping station, and the installation of a new pumping station to mitigate major flooding problems.*	15IGA09	$ 1,173,000	$ 606,421	20
Flood Control Project on Midlothian Creek in Robbins (Design) *Design of a wetland lake/park and outfall channel to the Cal-Sag Channel to provide a 100-year storm level of protection for the 137th St. and Kedzie Ave. Project Area in Robbins, IL.*	142533F	$ 1,815,130	$ 604,344	50
Other Projects			$ 3,312,622	
		Project Expenditures 1/1/2015 - 6/30/2018	**$ 58,009,193**	**100%**
		Principal Amount of Bonds	**$ 50,000,000**	
		Original Issue Premium	**$ 7,720,129**	
		Costs of Issuance	**$ (165,813)**	
		Investment Income	**$ 454,877**	
		Available for Spending	**$ 58,009,193**	
		Remaining Available for Spending	**$ -**	**0%**

^A portion of the project was also funded by Unlimited Tax 2016 Series E bonds.

2014 Series B
General Obligation Unlimited Tax Bonds (Alternate Revenue Source)
January 1, 2015 through June 30, 2018
$50,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 1/1/2015-6/30/2018	Estimated Useful Life of Project (years)
Acquisition, Conversion, and Maintenance of Flood Prone Property along Addison Creek, Northlake *Purchase and conversion of eight flood-prone homes along Addison Creek to reduce flood hazard risk.*	16IGA14	$ 1,184,000	$ 902,500	30
Flood Control Project on Natalie Creek in Oak Forest and Midlothian (Design) *Design of flood control measures along Natalie Creek from 157th and Central Park in Oak Forest to 146th and Pulaski in Midlothian. The project will increase the level of protection to existing residential and commercial structures that are prone to flooding in frequent storm events.*	142523F	$ 933,267	$ 895,549	50
Prairie/Washington Pumping Station Improvements, Brookfield *Installation of a new pumping station and back-up generator near Washington Avenue/Forest Avenue intersection, a box culvert under Forest Avenue, a new detention pond west of Forest Avenue, and other miscellaneous storm sewer improvements and restorations to reduce residential flooding from Salt Creek.*	15IGA16	$ 1,000,000	$ 815,633	50
Intergovernmental Agreement - Hoffman Estates Jones/Highland Sewer Improvements *Installationof new storm sewers to provide flood relief to 7 residential structures and reduce storm related access impacts for 50 homeowners.*	15IGA08	$ 1,088,016	$ 788,812	50
Acquisition, Conversion, and Maintenance of Flood Prone Property along the Des Plaines River in the City of Des Plaines *Purchase and conversion of 13 flood-prone homes along the Des Plaines River to reduce flood hazard risk.*	15IGA18	$ 950,000	$ 752,044	30
Intergovernmental Agreement - Evanston Civic Center Parking Lot *Installation of green infrastructure in the Evanston Civic Center parking lot to address flooding issues and reduce run-off and pollutant loads to the North Shore Channel.*	14IGA05	$ 1,519,000	$ 667,906	20
Blue Island Green Infrastructure Project *Construction of bioswales, rain gardens, and permeable pavement in parkways in a flood prone area of Blue Island. This will provide for the capture of approximately 100,000 gallons of stormwater per rain event.*	142543F	$ 697,030	$ 663,838	20
Stony Island Ditch and Lansing Manor Detention Basin and Pumping Station Modifications *Excavation and regrading of the existing ditch on Stony Island Avenue, the demolition of an existing detention basin pumping station, and the installation of a new pumping station to mitigate major flooding problems.*	15IGA09	$ 1,173,000	$ 606,421	20
Flood Control Project on Midlothian Creek in Robbins (Design) *Design of a wetland lake/park and outfall channel to the Cal-Sag Channel to provide a 100-year storm level of protection for the 137th St. and Kedzie Ave. Project Area in Robbins, IL.*	142533F	$ 1,815,130	$ 604,344	50
Other Projects			$ 3,312,622	
		Project Expenditures 1/1/2015 - 6/30/2018	**$ 58,009,193**	**100%**
		Principal Amount of Bonds	**$ 50,000,000**	
		Original Issue Premium	**$ 7,720,129**	
		Costs of Issuance	**$ (165,813)**	
		Investment Income	**$ 454,877**	
		Available for Spending	**$ 58,009,193**	
		Remaining Available for Spending	**$ -**	**0%**

^A portion of the project was also funded by Unlimited Tax 2016 Series E bonds.

2014 Series C
General Obligation Limited Tax Capital Improvement Bonds
January 1, 2015 through June 30, 2018
$75,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 1/1/2015 - 6/30/2018	Estimated Useful Life of Project (years)
West Side Primary Settling Tanks 1-9 and Aerated Grit Facility, SWRP* *Construction of nine primary settling tanks (PST) and six aerated grit tanks. This will utilize more modern and effective treatment equipment.*	041283P	$ 226,208,000	11,081,214	70
Aeration Tanks Auto in Batt ABCD, SWRP *Automation of angle globe valves and modification of associated air drop piping to improve process control during biological phosphorus removal at the Stickney WRP.*	151223P	$ 6,566,307	$ 6,280,146	50
Rehabilitation of the A/B & C/D Service Tunnels - Phase One, SWRP *Rehabilitation of service tunnels and pump discharge conduits to restore structural capacity, extend service life, and prevent further damage to the utilities inside the tunnels.*	041312D	$ 14,047,000	$ 3,923,350	50
Disinfection Final Design & Post Award, NSWRP *Construction of UV light disinfection facilities and improvements to existing infrastructure at the O'Brien WRP to protect health and and preserve the recreational function of the Chicago Area Waterway System.*	110543P	$ 61,724,000	$ 2,794,374	50
Centrifuge Building and Sludge Loading System Upgrades, EWRP and HPWRP *Replacement of conveyor, pumps, silos, tanks, piping, valves, and flow meters. Reline two aged polymer tanks. Modify aeration tank A-1 at the Hanover Park WRP as part of the energy conservation study pilot test. This will eliminate a bottleneck in the dewatering and biosolids hauling operations and reduce odor and spill problems, improve system performance, and reduce maintenance costs and operator attention.*	064943P	$ 10,600,000	$ 2,770,744	20
Calumet TARP Pumping Station Improvements, CWRP* *Replacement of TARP pumps and motors, installation of new variable frequency drives (VFDs) for pumps, and modification of suction and discharge piping. Construction of low pressure steam line will be constructed from high-level influent pumping station to TARP for heating needs. Completion and restoration of grading, roads, and site work disturbed during construction. This will increase firm pumping capacity of each pump room while restoring dependability of equipment; additionally, VFDs will allow better control of pumping and reduce energy costs by matching pump speed with flow needs.*	062123M	$ 35,288,000	$ 2,548,349	35
Rehabilitation of Bridges, NSA *Replacement of sidewalks, removal of encasing concrete from steel girders and beams, and strengthening and painting of steel members. Two bridges will be modified to be bicycle-friendly.This will improve the safety of pedestrians and bicyclists, and protect the structures from further corrosion.*	148243D	$ 2,093,000	$ 2,348,146	50
Covered Composting System, CWRP *Construction of a covered composting system according to USEPA standards to produce an exceptional quality Class A Bio-solids product and contain odors.*	162703P	$ 23,635,000	$ 2,208,263	50
Civil, Structural, Architectural Support *Consulting services to provide miscellaneous Civil, Structural and Architectural Design and Inspection Services for the next three years on an as-needed basis.*	098753D	$ 3,000,000	$ 1,734,149	20
Distributed Control System for WSPS & RAPS, SSA *Implementation of a Distributed Control System to interface with and replace critical components of the existing computer monitoring and control system for solids processes at the Stickney WRP, Mainstream Pumping Station, and Stickney Service Area remote/unmanned facilities to improve monitoring and control.*	91177DE	$ 9,789,000	$ 1,732,303	20
Nitrogen Removal in Centrate, EWRP *Partial mitritation-deammonification of centrate at the Egan WRP using ANITA Mox Moving Bed Biofilm Reactors. This process will use significantly less energy compared to conventional nitrogen removal, reduce odors and corrosion in the conduit that conveys the flow, and* ***decrease*** *the load on the O'Brien WRP.*	134093P	$ 2,675,000	$ 1,596,599	35
Distributed Control System for MSPS and Other Remote Stations, SSA *Implementation of a Distributed Control System to interface with and replace critical components of the existing computer monitoring and control system for solids processes at the Stickney WRP, Mainstream Pumping Station, and Stickney Service Area remote sites. This project will improve the efficiency of plant operations by providing enhanced monitoring and control functionality of on-site and remote plant processes.*	91177CE	$ 33,115,000	$ 1,522,097	20

2014 Series C
General Obligation Limited Tax Capital Improvement Bonds
January 1, 2015 through June 30, 2018
$75,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 1/1/2015 - 6/30/2018	Estimated Useful Life of Project (years)
Civil, Structural & Architectural Engineering Consulting Services *Consulting services to augment District staff on specialized design or inspection, or when additional staffing is needed.*	098723D	$ 2,990,195	$ 1,414,813	20
Thornton Reservoir Surface Aeration *Solar-powered floating mixer/aerators for maintaining toxic conditions in the surface layer of the Thornton Composite Reservoir, used as part of the pollution control process.*	04203AF	$ 1,896,000	$ 1,202,700	20
Wet Weather Treatment Facility and Reservoir, LWRP *Expansion of interceptor sewer from the Village of Lemont's combined sewer area; construction of a wet-weather treatment facility to provide primary treatment and disinfection; and construction of an equalization reservoir to buffer the peak wet-weather flows from the Village's separate sewer area. This will assist with providing adequate treatment of excess flows during wet-weather periods at the Lemont WRP per IEPA requirements.*	107163P	$ 29,154,000	$ 1,062,543	70
North Branch Dam Removal and River Riparian Connectivity *Removal of the North Branch Dam and concrete streambed to restore riparian connectivity; bank stabilization; and habitat restoration from Lawrence Avenue to Peterson Avenue. This will allow for a more natural stream environment and encourage aquatic movement and habitat. Streambank stabilization on District property leased by the Chicago Park District will improve usage opportunities at the parks and promote safety.*	16IGA22	$ 2,500,000	$ 1,010,806	50
Demolition of Westside Imhoff Battery A and Skimming Tanks, SWRP *Demolition and removal of tanks and support buildings to prepare for installion of the new West Side primary settling tanks and aerated grit facilities. This will increase solids capture, increase digester gas production, increase on-site energy production, lower labor, maintenance, and operation costs, and reduce odors, and increase process efficiency.*	081713P	$ 41,267,000	$ 990,925	5
Main Sewage Pump Seal Water System Modification *Installation of break tanks, pumping equipment, piping, valving, electrical conduits, and wiring for power and controls to provide an air gap separation between the city water and the service water systems at the North and South Pump Houses and in the Gate House Control Building. This will update the city water system to the latest Illinois plumbing code.*	151183M	$ 1,121,000	$ 933,203	50
North Shore 3 Manhole at Station 276 and 80 *Emergency repair of a manhole on the District's Northshore 3 Intercepting Sewer in Glencoe after deterioration of the manhole casused a sinkhole in the street pavement adjacent.*	16076AS	$ 1,000,000	$ 792,346	50
Stop Logs and Diversion Pumps at Wilmette Pumping Station and Evanston Pumping Station Rehabilitation, NSA *Rehabilitation of the deteriorated areas of the Evanston Pumping Station to permit continued service. Rehabilitation and modification of areas of the Wilmette Pumping Station and gate areas to eliminate operational problems with the existing pumps and gates to ensure better control for lake water diversions and flow reversals.*	060233P	$ 17,486,000	$ 677,290	35
Geotechnical Analysis 2013-2015 *Geotechnical design and analysis for tunnel and reservoir engineering plans to investigate subsurface conditions and materials; determine the relevant physical/mechanical and chemical properties; evaluate stability of natural slopes and man-made soil deposits; assess risks posed by site conditions; design earthworks and structure foundations; and monitor site conditions, earthwork and foundation construction.*	128003C	$ 720,000	$ 644,768	20
Sludge Thickening Facilities, SWRP *Construction of a gavity thickening facility for primary settling tank sludge from the southwest and future west side primary settling tanks. This will improve the efficiency and effectiveness of the sludge thickening processes.*	091763P	$ 164,544,000	$ 635,835	35
Furnish and Deliver Windrow Turner, LASMA *Purchase of a windrow turner to mix wood chips and/or yard waste with biosolids to utlimately produce a substitute for fertilizer, compost, and soil amendment. This product will be odor-free and meet the USEPA's Class A pathogen reduction requirements.*	1760321	$ 650,000	$ 579,900	15

2014 Series C
General Obligation Limited Tax Capital Improvement Bonds
January 1, 2015 through June 30, 2018
$75,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 1/1/2015 - 6/30/2018	Estimated Useful Life of Project (years)
Computer Models to Analyze TARP Performance *Professional engineering services which included updating the TARP computer model, running the model to evaluate the benefits and impacts of various flood control measures to the Chicago area, evaluating alternatives that include proposed flood control measures being developed by the City of Chicago, and evaluating different potential operational changes to the District's TARP system.*	158283C	$ 558,376	$ 530,601	10
Other Projects			$ 5,725,512	
Project Expenditures 1/1/2015 - 6/30/2018			**$ 56,740,976**	**63%**
Principal Amount of Bonds			**$ 75,000,000**	
Original Issue Premium			**$ 14,022,875**	
Costs of Issuance			**$ (248,244)**	
Investment Income			**$ 993,086**	
Available for Spending			**$ 89,767,717**	
Remaining Available for Spending			**$ 33,026,741**	**37%**

*A portion of the project was also funded by IEPA SRF loans.

2016 Series C
General Obligation Unlimited Tax Capital Improvement Bonds
July 1, 2016 through June 30, 2018
$30,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 7/1/2016 - 6/30/2018	Estimated Useful Life of Project (years)
McCook Reservoir Vulcan Agreement Hard Costs, SSA *Agreement between the District and Vulcan to mine out a rough hole at the site of the McCook CUP Reservoir.*	73161EH	$ 94,717,000	$ 3,137,930	50
McCook Reservoir (CUP), Stages 1, 2 & 3 *Local matching contribution to the construction of the McCook Reservoir, an essential part of the District's Tunnel and Reservoir Plan to prevent flooding and pollution from combined sewer overflows (CSO) and comply with federal and state water quality standards.*	731612H	$ 657,600,000	$ 2,887,496	50
Tollway Dam, Grout Curtain & Quarry Plugs, Thornton Composite Reservoir, CSA *Conversion of the north lobe of Thornton Quarry into the Thornton Composite Reservoir, inlcuding construction of a concrete dam, two concrete plugs, and a double-row grout curtain to prevent water infiltration/exfiltration. The Thornton Composite Reservoir project is an essential part of the District's Tunnel and Reservoir Plan to prevent flooding and pollution from combined sewer overflows and to comply with requirements of the Clean Water Act.*	042014F	$ 77,801,000	$ 978,575	50
Thornton Composite Reservoir Mining, Land, and Corp Costs, CSA *Acquisition of the north lobe of the Thornton Quarry, and mining and use of the west lobe for the transitional reservoir. This allows for the use of the Thornton Composite Reservoir to capture combined sewer overflows and for the Thornton Transitional Reservoir to capture flood waters from Thorn Creek.*	772352F	$ 52,806,000	$ 802,107	50
McCook Reservoir Des Plaines Inflow Tunnel* *Construction of a tunnel that will connect the DesPlaines tunnel directly to the McCook Reservoir including a gate shaft, primary gate, backup gate, gate control building, temporary construction access shaft, tunnel portal and highway stability measures, and an energy dissipation apron with baffle blocks. The McCook Reservoir project will help prevent flooding and pollution from combined sewer overflows (CSO).*	131064F	$ 109,841,000	$ 705,799	50
Connecting Tunnels and Gates, Thornton Composite Reservoir, CSA *Construction of rock tunnels and a control structure to connect the Calumet Tunnel and Reservoir Plan (TARP) System to the Thornton Composite Reservoir. The project also includes the construction of a diffuser apron, a concrete-lined gate shaft, a control building, steel-lined tunnel bifurcations, four wheel gates, a maintenance bulkhead, two jet flow dewatering gates, a live connection to the existing Indiana Avenue TARP tunnel, and all other work collateral thereto. The Thornton Composite Reservoir project is an essential part of the District's TARP to prevent flooding and pollution from combined sewer overflows and comply with requirements of the Clean Water Act.*	042024F	$ 147,084,000	$ 206,061	50
Thornton Reservoir Surface Aeration *Solar-powered floating mixer/aerators for maintaining toxic conditions in the surface layer of the Thornton Composite Reservoir. The Thornton Composite Reservoir project is an essential part of the District's Tunnel and Reservoir Plan to prevent flooding and pollution from combined sewer overflows (CSO).*	04203AF	$ 1,896,000	$ 121,719	20
		Project Expenditures 7/1/2016 - 6/30/2018	**$ 8,839,687**	**24%**
		Principal Amount of Bonds	**$ 30,000,000**	
		Original Issue Premium	**$ 5,739,300**	
		Costs of Issuance	**$ (79,534)**	
		Investment Income	**$ 564,730**	
		Available for Spending	**$ 36,224,496**	
		Remaining Available for Spending	**$ 27,384,809**	**76%**

*A portion of the project was also funded by IEPA SRF loans.

2016 Series E
General Obligation Unlimited Tax Bonds (Alternate Revenue Source)
January 1, 2015 through June 30, 2018
$50,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 1/1/2015-6/30/2018	Estimated Useful Life of Project (years)
Albany Park Stormwater Diversion Tunnel^ *Installation of a stormwater diversion tunnel to alleviate overland flooding in the Albany Park neighborhood in Chicago to reduce overbank flooding affecting 336 structures in the area.*	140663F/14IGA07	$ 24,750,000	$ 6,745,388	50
		Project Expenditures 7/1/2016 - 6/30/2018	**$ 6,745,388**	**11%**
		Principal Amount of Bonds	**$ 50,000,000**	
		Original Issue Premium	**$ 10,545,322**	
		Costs of Issuance	**$ (131,789)**	
		Investment Income	**$ 1,028,923**	
		Available for Spending	**$ 61,442,456**	
		Remaining Available for Spending	**$ 54,697,068**	**89%**

^A portion of the project was also funded by Unlimited Tax 2014 Series B bonds.

2016 Series F
General Obligation Limited Tax Capital Improvement Bonds
Qualified Energy Conservation Bonds
July 1, 2016 through June 30, 2018
$4,000,000 Principal

Project Name	Project Number	Estimated Total Project Cost	Spending 7/1/2016 - 6/30/2018	Estimated Useful Life of Project (years)
2016 Public Building Commission Projects *Acquisition and installation of energy conservation measures such as steam blanket insulation, control upgrades, LED interior lighting upgrades, and storeroom improvements.*	16PBCMO	$ 4,250,000	$ 4,040,585	20
		Project Expenditures 7/1/2016 - 6/30/2018	**$ 4,040,585**	**100%**
		Principal Amount of Bonds	**$ 4,000,000**	
		Costs of Issuance	**$ (17,646)**	
		Investment Income	**$ 58,231**	
		Available for Spending	**$ 4,040,585**	
		Remaining Available for Spending	**$ -**	**0%**

Illinois Environmental Protection Agency Funding
State Revolving Funds Series General Obligation Bonds
July 1, 2017 through June 30, 2018

Project Name	Project Number	Estimated Total Project Cost	Estimated Useful Life of Project (years)	Spending 7/1/2017 - 6/30/2018	Spending 1/1/2015 - 6/30/2017	Estimated Cost Remaining
West Side Primary Settling Tanks 1-9 and Aerated Grit Facility, SWRP* *Construction of nine primary settling tanks (PST) and six aerated grit tanks. This will utilize more modern and effective treatment equipment.*	041283P	$ 226,208,000	70	$ 45,252,283	$ 162,414,347	$ 18,541,370
McCook Reservoir Des Plaines Inflow Tunnel* *Construction of a tunnel that will connect the DesPlaines tunnel directly to the McCook Reservoir including a gate shaft, primary gate, backup gate, gate control building, temporary construction access shaft, tunnel portal and highway stability measures, and an energy dissipation apron with baffle blocks. The McCook Reservoir project will help prevent flooding and pollution from combined sewer overflows (CSO).*	131064F	109,841,000	50	32,142,448	35,891,694	41,806,858
Salt Creek Intercepting Sewer 2 Rehabilitation, SSA *Rehabilitation of intercepting sewer and junction chambers; rehabilitation, rebuilding, raising, and construction of manholes; and modifications of control structure. This will resolve the problems of cracks/holes, sewage solids deposits, sags, offset joints, root intrusion, infiltration, and concrete corrosion due to the action of hydrogen sulfide generated by the decomposition of settled solids.*	061553S	43,878,000	50	12,478,480	23,266,715	8,132,805
Calumet Intercepting Sewer 19F Rehabilitation, CSA *Rehabilitation of sewer pipe, drop manholes, and junction structure; removal of a cast-in-place structure; and abandoning of a pipe. This will restore the hydraulic and structural integrity of the sewers, which were impaired due to infiltration and concrete/metal deterioration from hydrogen sulfide.*	112393S	12,396,000	50	11,330,776	-	1,065,224
A/B and C/D Service Tunnel and Connecting Tunnel Rehabilitation - Phase II, SWRP *Rehabilitation of the A/B and C/D service tunnels, and replacement of connecting tunnel in between. This will restore structural capacity, extend service life, and prevent further damage to the utilities inside the tunnels.*	041323D	20,519,000	50	8,751,302	7,139,291	4,628,407
Calumet TARP Pumping Station Improvements, CWRP* *Replacement of TARP pumps and motors, installation of new variable frequency drives (VFDs) for pumps, and modification of suction and discharge piping. Construction of low pressure steam line will be constructed from high-level influent pumping station to TARP for heating needs. Completion and restoration of grading, roads, and site work disturbed during construction. This will increase firm pumping capacity of each pump room while restoring dependability of equipment; additionally, VFDs will allow better control of pumping and reduce energy costs by matching pump speed with flow needs.*	062123M	35,288,000	35	7,611,073	21,701,858	5,975,069
McCook Reservoir Expanded Stage 2 Slope Stabilization and Retaining Walls, SSA *Construction of a soil nail retaining wall and slope stabilization work on the McCook Reservoir. This will provide sufficient mining reserves to achieve the intended capacity of 10 billion gallons as part of the District's Tunnel and Reservoir Plan to prevent flooding and pollution from combined sewer overflows.*	161254F	7,339,000	50	5,048,047	-	2,290,953
Conversion of Old GCTs to the WASSTRIP® Process, SWRP *Conversion of the remaining old gravity concentration tanks to the Waste Activated Sludge Stripping to Remove Internal Phosphorus (WASSTRIP®) process to aid in the release of phosphorus to be recovered through the Ostara process. This will enhance the District's strategic plan toward sustainability and resource recovery by increasing the quantity of phosphorus that will be recovered by the Ostara facility, reducing struvite formation in the digesters and post-centrate piping, improving the dewaterability of biosolids, and creating additional volatile fatty acids necessary for a more stable operation of the enhanced biological phosphorus removal treatment process.*	151203P	5,223,000	20	4,073,796	805,627	343,577
D799 Switchgear Replacement, SWRP *Replacement of switchgear and feeder cables. This will improve reliability, reduce the risk of failure, provide enhanced safety features, allow future expansion, and ensure an appropriate level of service.*	091823E	12,645,300	30	4,072,739	2,153,309	6,419,252

Illinois Environmental Protection Agency Funding
State Revolving Funds Series General Obligation Bonds
July 1, 2017 through June 30, 2018

Project Name	Project Number	Estimated Total Project Cost	Estimated Useful Life of Project (years)	Spending 7/1/2017 - 6/30/2018	Spending 1/1/2015 - 6/30/2017	Estimated Cost Remaining
Phosphorus Recovery System, SWRP *Construction of a phosphorus recovery facility, including a building to house the recovery process and product storage, installation of Ostara Pearl reactors, and installation of pumping equipment and appurtenances to transfer centrates to this facility. This will reduce phosphorus concentrates in Stickney WRP effluent.*	11195AP	33,049,000	70	3,627,950	29,029,330	391,720
Safety Railing Around Tanks, SWRP *Installation of walkway safety railings for worker safety and to meet Occupational Safety and Health Administration regulations.*	151233D	5,803,000	50	2,152,178	3,228,379	422,443
Calumet TARP Screens, CWRP *Replacement of bar screens with new mechanically cleaned screens. This will restore the dependability of the equipment, decrease maintenance costs, and provide safer operations.*	132463M	12,754,000	50	1,841,838	9,755,254	1,156,908
Safety Railing Around Tanks, O'Brien Plant *Installation of safety railings for worker safety and to meet Occupational Safety and Health Administration regulations.*	150723D	1,593,000	50	1,220,427	237,948	134,625
Safety Railing Around Tanks, Calumet Plant *Installation of safety railings for worker safety and to meet Occupational Safety and Health Administration regulations.*	152653D	1,528,000	50	1,118,885	189,119	219,996
Other Projects				3,049,351	137,949,035	

Project Expenditures by Period	***7/01/2017 - 6/30/2018***	***1/01/2015 - 6/30/2017***	**Cumulative Expenditures**
	$ 143,771,573	**$ 433,761,906**	**$ 577,533,479**

*A portion of the project was also funded by Limited Tax 2014 Series C or Unlimited Tax 2016 Series C bonds.

Representatives from the MWRD, Village of Flossmoor, Homewood-Flossmoor High School District #233, and Calvary Assembly of God Church unveiled the new $3.3 million Cherry Creek East Branch Flood Control Project in Flossmoor on October 11. The project included a new 940-foot flood relief channel west of Governors Highway on HFHS property; increased culvert capacity under Governors Highway; improved conveyance from the HFHS pond with a new 48-inch culvert; and, construction of channel improvements on Cherry Creek East Branch on property purchased from the Calvary Assembly of God Church.

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