

Metropolitan Water Reclamation District of Greater Chicago

STORMWATER MANAGEMENT PROGRAM 2017 Annual Report

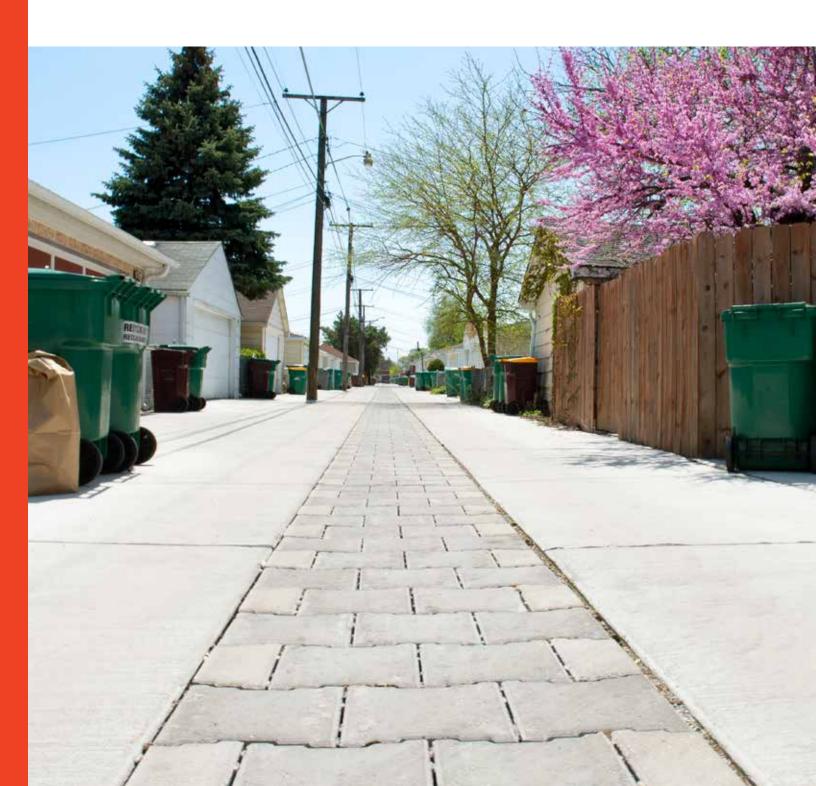


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The Metropolitan Water Reclamation District of Greater Chicago (MWRD) was granted stormwater management authority for Cook County with the passage of Public Act 93-1049 (Act) in November 2004. The framework of the MWRD's Stormwater Management Program, including its mission, goals, and program elements, is presented in the Cook County Stormwater Management Plan (CCSMP), which was adopted by the MWRD's Board of Commissioners in February 2007. The CCSMP

was amended on July 10, 2014 to be consistent with P.A. 98-0652, which amends the MWRD's statutory authority to allow for acquisition of flood-prone properties and to plan, implement, finance, and operate local stormwater management projects. During 2017, the MWRD continued preliminary engineering and design work for several of the alternatives recommended in Detailed Watershed Plans (DWPs), continued work on the Small Streams Maintenance Program (SSMP), administered the



Watershed Management Ordinance (WMO), which was adopted by the MWRD Board of Commissioners on October 3, 2013 and became effective May 1, 2014. New activities for 2017 were undertaking calls for Green Infrastructure, flood prone property acquisition, and Phase II projects to address flooding issues in partnership with other government agencies and local communities. Further details concerning these items and other stormwater management activities are provided in this Annual Report.

MISSION AND GOALS

STORMWATER MANAGEMENT MISSION STATEMENT

The mission of the Stormwater Management Program is to protect the safety of Cook County's residents and minimize flooding damage by coordinating, planning, implementing, financing, and operating regional stormwater management projects, and to develop and enforce reasonable rules with respect to watershed development. The framework of the MWRD's countywide stormwater management program is presented in the Cook County Stormwater Management Plan (CCSMP).

2017 Accomplishments for the Stormwater Management Program include the following::

- Completed construction of one streambank stabilization and three flood control projects originally identified in the DWPs:
- Awarded five flood control and streambank stabilization projects;
- Continued design of Phase I regional projects recommended from the DWPs, including streambank stabilization projects on reaches of three waterways and flood control projects on reaches of six waterways;
- Continued design of Phase II conceptual flood control projects identified by local municipalities, townships, and agencies, including the Cities of Blue Island and Palos Heights, the Villages of Crestwood, Midlothian, Robbins, and Worth, the Town of Cicero, Bremen Township, the Illinois Department of Transportation, and the Cook County Department of Transportation and Highways;

- Entered into Intergovernmental Agreements (IGAs) for acquisition of flood-prone properties with the Villages of Flossmoor, Franklin Park, and Stone Park;
- Continued the SSMP with the objective of removing debris and blockages from 532 miles of small streams and rivers;
- Solicited applications for Green Infrastructure projects from local communities and agencies and identified partnership opportunities to assist in constructing local improvements to address flooding issues through green solutions;
- Solicited applications for Phase II local drainage issues and flood-prone property acquisition projects to be prioritized for selection in 2018.

STORMWATER MANAGEMENT ACTIVITIES

STORMWATER MANAGEMENT CAPITAL IMPROVEMENT PROGRAM

Capital improvement projects recommended for implementation by DWPs are separated into two categories: streambank stabilization and flood control. Projects given the highest priority for implementation are streambank stabilization projects which address streambank erosion posing an imminent threat to public safety and/or structures. Flood control projects will address regional flooding issues through traditional measures, such as stormwater detention reservoirs, levees, and conveyance improvements. Preliminary engineering and design of projects approved by the Board of Commissioners are underway and will continue into the future.

STREAMBANK STABILIZATION PROJECTS

The following is a detailed list of streambank stabilization projects. Streambank stabilization project locations are shown in APPENDIX A.



OLCR-3 (OAK LAWN CREEK) Watershed: Calumet-Sag Channel **Location:** Oak Lawn panels.

Estimated Construction Cost: \$3,035,000 **Status:** Under Construction

TICR-7 (TINLEY CREEK)

Watershed: Calumet-Sag Channel **Location:** Orland Park

Description: Stabilize approximately 2,200 LF of Tinley Creek between 86th Avenue and Crystal Creek Drive and 2,800 LF between 151st Street and Oriole Court.

Estimated Construction Cost: \$3,806,000 **Status:** Final Design. Finalizing Intergovernmental Agreement with the Village of Orland Park. Orland Park to assist in procuring easements from affected property owners.

CUDD-G3 (CALUMET UNION DRAINAGE DITCH)

Watershed: Little Calumet River **Location:** Markham Description: Stabilize approximately 3,559 LF of Calumet Union Drainage Ditch, between Sunset and Central Park Avenues. **Estimated Construction Cost:** \$1,568,000 Status: Final Design. Working on acquiring required easements and coordinating utility relocations.

Description: Stabilize approximately 1,200 LF of Oak Lawn Creek using soldier piles and precast concrete

MTCR-G2 (MIDLOTHIAN CREEK)

Watershed: Little Calumet River **Location:** Tinley Park **Description:** This project will stabilize approximately 495 linear feet of Midlothian Creek from 66th Court, north of 173rd Street, extending east approximately 300 feet, in the Village of Tinley Park. Estimated Construction Cost: \$644,948

Status: Final Design



MEDT-1 (MELVINA DITCH)

Watershed: Calumet-Sag Channel Location: Chicago Ridge, Oak Lawn Description: This project involves streambank stabilization along Melvina Ditch, from 95th Street to 99th Street. Approximately 150 linear feet of the ditch at the north end of the project will be stabilized with twin box culverts. The remaining 2,500 linear feet of the ditch will be stabilized with a

precast concrete modular block retaining wall system.

Estimated Construction Cost: \$8,800,000

Status: Finalizing easements and permits. The District is currently seeking funding from the Illinois Environmental Protection Agency's State Revolving Fund loan program.

ADCR-9 (ADDISON CREEK)

Watershed: Lower Des Plaines River

Location: Northlake and North Riverside

Description: The scope of this project involves stabilization of approximately 750 feet of Addison Creek adjacent to Fullerton Avenue in the City of Northlake and 410 linear feet of streambank adjacent to 19th Avenue in the Village of North Riverside. Stabilization methods include the installation of native vegetation, a vegetated geogrid, turf reinforcing mat, and the placement of riprap.

Estimated Construction Cost: \$1,000,000 **Status:** Final Design

FLOOD CONTROL PROJECTS

The following is a detailed list of flood control projects. Flood control project locations are shown in Appendix B.

TICR-5 (TINLEY CREEK)

Watershed: Calumet-Sag Channel Location: Orland Hills, Orland Park **Description:** This project will provide naturalized channel stabilization/flood control on Tinley Creek, from Lake Lorin to 88th Avenue in Orland Hills. Estimated Construction Cost: \$664,000 **Status:** Under Construction

TICR-3 (TINLEY CREEK)

Watershed: Calumet-Sag Channel Location: Crestwood **Description:** This project will increase the conveyance capacity of Tinley Creek, downstream of Central Avenue, and will stabilize approximately 1,000 linear feet of Tinley Creek, downstream of the conveyance improvements. Estimated Construction Cost: \$7,583,000 **Status:** Under Construction

NVCR-3 (NAVAJO CREEK)

Watershed: Calumet-Sag Channel **Location:** Palos Heights Description: Raise existing bicycle trail on the north side of Arrowhead Lake, in unincorporated Palos Heights, to increase stormwater storage in the lake. Estimated Construction Cost: \$1,200,000 **Status:** The District is finalizing an Intergovernmental Agreement with the Forest Preserve District of Cook County and the City of Palos Heights. The District is also working to obtain a dam permit from the Illinois Department of Natural Resources. Contract documents are being prepared for advertisement.

CHEB-G3 (CHERRY CREEK)

Watershed: Little Calumet River **Location:** Flossmoor Description: Construction of an overflow channel on Homewood-Flossmoor High School's property, west of Governors Highway. It will also replace two collapsed culverts and create shelf storage on Cherry Creek. Estimated Construction Cost: \$3,305,000 Status: Under Construction.



DRCR-G1 (DEER CREEK) Watershed: Little Calumet River **Location:** Ford Heights **Description:** This project will reduce flood damage by improving channel conveyance and raising a berm at approximately 3,000 feet, between U.S. Route 30 and Hammond Lane, within the Village of Ford Heights. Project includes the construction of vegetated berm, stabilization of

bank slopes, placement of pools and rock riffles, and planting of diverse native landscaping. **Estimated Construction Cost:** \$3,440,000 **Status:** Final Design. The District is currently working to obtain the required easements and acquisitions for the project. Permits need to be finalized with the Army Corps of Engineers and the Illinois Department of Natural Resources.



ADCR-6B (ADDISON CREEK)

Watershed: Lower Des Plaines River **Location:** Bellwood

Description: This project will create an approximately 600 acre-foot flood control reservoir in Bellwood just north of Washington Boulevard and east of Addison Creek. The project includes reservoir excavation and installation of necessary appurtenances for operation of the facility,

such as control structure, inlet structure, spillway, piping, and a pumping station. Estimated Construction Cost: \$95,155,000 **Status:** Final Design

ADCR- (DEMOLITION AT ADDISON CREEK AND THORNTON RESERVOIR)

Watershed: Lower Des Plaines River Location: South Holland and Bellwood Description: Demolition of the three buildings and a tank at the Addison Creek Reservoir site in Bellwood. Demolition of the three buildings and two sheds at the Thornton Reservoir site in South Holland Estimated Construction Cost: \$1,050,000 **Status:** Final Design

DPR-14D (LYONS LEVEE)

Location: Lyons

Watershed: Lower Des Plaines River

Description: Restoration and improvement of the

overtopping by events up to a 100-year design flood.

Estimated Construction Cost: \$3,500,000

levee to a condition that will elevate the levee to modern

design standards, provide flood protection, and prevent



FRCR-12 (FARMERS PRAIRIE CREEK).

Watershed: Lower Des Plaines River *Location:* Park Ridge, Des Plaines, and Maine Township **Description:** This project includes flood storage and conveyance improvements along Farmers and Prairie Creeks, including channel modifications, detention expansion, diversion sewer construction, and streambank stabilization.

Estimated Construction Cost: \$14,100,000 **Status:** Final Design



Status: Final Design

BUCR-3 (BUFFALO CREEK RESERVOIR EXPANSION)

Watershed: Lower Des Plaines River *Location:* Buffalo Grove

Description: This project will increase the impoundment capacity of the existing Buffalo Creek Reservoir by approximately 180 acre-feet. Pedestrian bridges and boardwalks will be replaced and existing trails will be relocated to remove them from the 10-year storm event.

Estimated Construction Cost: \$21,131,000 **Status:** Finalizing IGA for construction of the project with the Lake County Forest Preserve District and the Village of Buffalo Grove. The District is also working to obtain necessary permits, which requires an intergovernmental agreement with the Lake County Forest Preserve District for wetland mitigation.

ADCR-7B (ADDISON CREEK)

Watershed: Lower Des Plaines River **Location:** Norhtlake **Description:** This is a cost sharing agreement with the City of Northlake. This project

Northlake.

Estimated Construction Cost: \$1,000,000 Status: Design stage.

ARQUILLA PARK LEVEE

Watershed: Little Calumet River *Location:* Glenwood **Description:** This project will provide a levee at Arguilla Park to protect residential structures from overbank flooding. This is a cost sharing agreement with the Village of Glenwood.

Estimated Construction Cost: \$3,870,000 **Status:** Design stage.

PHASE II STORMWATER MANAGEMENT PROGRAM

Based on the direction provided by MWRD's Board of Commissioners on April 18, 2013, the MWRD initiated Phase II of its Stormwater Management Program to address local drainage problems, develop stormwater master plans across Cook County, and set up a program for purchasing flood prone and flood damaged property on a voluntary basis.

Based on stormwater problem and potential project information solicited from each municipality, township and regional agency having jurisdiction in Cook County a total of 38 projects have been approved by the Board of Commissioners (on September 19, 2013 and October 16, 2014) authorizing the MWRD assist local communities and agencies in the furtherance of these projects in the form of funding, engineering, and/or other assistance to be defined through negotiations with these entities. The approved projects are distributed across Cook County and include green infrastructure improvements, localized detention, upsizing critical storm sewers/ culverts, pump stations, and establishing drainage ways.

will stabilize Addison Creek between Wolf Road and Palmer Avenue in the City of

In addition to assisting the local communities with the projects as described above, the MWRD initiated five Stormwater Master Plan pilot studies in 2015 to begin putting together a Cook County green and gray infrastructure plan that will better protect the community against severe weather events. The goal of these pilot studies is to identify solutions to 100-year flooding of structures and basement backups which involve green and gray infrastructure located in publicly and privately owned properties. To achieve this goal, it will be necessary to demonstrate to the general public that no agency alone can solve the flooding woes plaguing our region. Through extensive public outreach and education, MWRD will work to educate the public as to the magnitude of the flooding issues faced by our region. Based on input from each of the four Councils of Government and the City of Chicago, the five pilot locations are: 1) the Little Calumet River/Calumet-Sag Channel drainage areas, 2) Northbrook, 3) Roberts Road drainage area, 4) Village of Harwood Heights, and 5) the City of Chicago's 8th Ward and surrounding area (on the southeast side). After completing the pilot Stormwater Master Plans, MWRDGC will continue to develop additional wet weather plans for other areas in Cook County over the next several years following the process to be defined through the pilot studies.

On August 7, 2014, the Board of Commissioners adopted a policy on the selection and prioritization of projects for acquiring flood-prone property. This program is comprised of three distinct components:

- **1. LOCAL SPONSOR ASSISTANCE PROGRAM** The MWRD's top priority will be to facilitate the Illinois Emergency Management Agency's federally funded program by assisting Local Sponsor communities in providing their share of the cost for property acquisition.
- 2. DISTRICT INITIATED PROGRAM In communities where the MWRD's Board of Commissioners approved capital projects from the MWRD's Detailed Watershed Plans for further study, should the cost of a property acquisition alternative be less for equivalent benefits, the acquisition alternative will be pursued.
- 3. LOCAL GOVERNMENT APPLICATION PROGRAM The MWRD will consider applications directly from local governments requesting property acquisition of specific flood-prone structures.

In the third quarter of 2017, the District solicited applications from municipalities and townships for assistance with the acquisition of flood-prone structures located throughout Cook County. The District also entered into IGAs to partner with the Villages of Flossmoor, Franklin Park, and Stone Park to acquire 68 flood-prone residential structures. These acquisitions will be completed in 2019. As a result of the 2018 applications, additional IGAs will be negotiated to assist local communities with flood-prone property acquisitions in the future.

The District continued design of Phase II conceptual flood control projects identified by local municipalities, townships, and agencies, including the Cities of Blue Island and Palos Heights, the Villages of Crestwood, Midlothian, Robbins, and Worth, the Town of Cicero, Bremen Township, the Illinois Department of Transportation, and the Cook County Department of Transportation and Highways. The District also entered into Intergovernmental Agreements (IGAs) for acquisition of flood-prone properties with

the Villages of Flossmoor, Franklin Park, and Stone Park. The following is a list of these phase II projects. Project locations are shown on APPENDIX B & C.

MIDLOTHIAN 1 14-252-5F

Service Area: Calumet

Location: Oak Forest and Midlothian **Description:** The scope of this project is to install flood control measures for an estimated 15,800 linear feet along Natalie Creek from 157th and Central Park in Oak Forest to 146th and Pulaski in Midlothian. Flood control measures involve the upsizing of restrictive culverts, improving the channel at several locations and the installation of a stormwater detention basin. The project will reduce flood damages for over 230 structures.

Estimated Construction Cost: \$7,806,000 **Status:** Final Design

ROBBINS 2 14-253-5F

Service Area: Calumet Location: Robbins **Description:** The Flood Control Project on Midlothian Creek in Robbins will include

structures and provide opportunity for economic development in Robbins. The actual District cost share will be determined based upon funding being sought from various local and regional agencies as well as grants. Estimated Construction Cost: \$11,000,000 **Status:** Final Design.

BLUE ISLAND 1 14-260-5F

Service Area: Calumet Location: Blue Island **Description:** The Flood Control Project for the Washington Street Area in Blue Island will include stormwater storage and conveyance improvements to address flooding of approximately 45 structures. The actual District cost share will be determined based upon funding being sought from various local and regional agencies as well as grants. **Estimated Construction Cost:** \$5,700,000 Status: Preliminary Design phase is being finalized.

MDRE 14-263-3F

Service Area: Calumet **Location:** Burbank

Description: This project consists of expanding the existing Melvina Ditch Reservoir by up to 195 acre-feet to increase its storage capacity (up to a 118 percent increase), modifying the pumping station to accommodate the reservoir expansion, and installing a new emergency overflow weir to reduce the likelihood of reservoir overtopping. Reservoir expansion will include work within the existing reservoir footprint on District property and includes additional private properties around the perimeter of the reservoir. Local stakeholders gave feedback, and a reservoir expansion configuration was selected. Additional work includes the installation of an emergency overflow/

the creation of a naturalized wetland detention area along with channel improvements to resemble a park setting. The project will reduce flood damages for over 92

high water bypass structure and three flap gates and the replacement of the existing elliptical culverts at the outlet of the Melvina Ditch Reservoir Pumping Station with dual box culverts and a stormwater chamber. Construction limits that are immediately adjacent to the pumping station and in the 87th Street right-of-way are needed to install the culverts and to replace any disturbed utilities in conflict with the installation. Storm pumps will be removed and serviced and the impellers will be lengthened. Estimated Construction Cost: \$14,245,000 Status: Preliminary Engineering.

DES PLAINES BUYOUT (PHASE I)

Service Area: Stickney **Location:** Des Plaines **Description:** Purchase 13 flood-prone homes along the Des Plaines River. This is a cost sharing agreement with the City of Des Plaines. Estimated Construction Cost: \$950,000 Status: The acquisitions of flood-prone homes under this project has started.

OAK LAWN 2&4 PHASE II 15-IGA-22

Service Area: Calumet Location: Oak Lawn **Description:** This is a cost sharing agreement with the Village of Oak Lawn to install precast box culverts under 103rd Street and a back flow preventer with a pump at Stony Creek to provide underground stormwater detention storage. Estimated Construction Cost: \$3,000,000 **Status:** Under Design.

LA GRANGE 7 16-IGA-02

Service Area: Stickney **Location:** Village of La Grange

Description: The drainage basin south of 47th Street in the Village of La Grange has been subject to overland flooding and sewer backup. A new trunk sewer is scheduled for construction along 50th Street to provide a main drain for the area. The Village of La Grange, in partnership with the District, is proposing to construct lateral sewers in this basin to the future trunk line to drain the depressional areas. **Estimated Construction Cost:** \$3,000,000 **Status:** The project is under consideration.

RIVERSIDE 13 16-IGA-03

Service Area: Stickney

Location: Riverside

Description: Construct a 24-inch storm sewer outlet to the Des Plaines River and block or restrict flow from the storm sewers of the railroad drainage area to the existing combined sewer in the Village of Riverside, which is responsible for design, construction, operations, and maintenance of the project, which is located in the Lower Des Plaines River watershed.

Estimated Construction Cost: \$90,000 **Status:** Under Design.

BERKELEY 4 16-IGA-04

Service Area: Stickney **Location:** Village of Berkeley **Description:** Construct two new storm sewers along McDermott Drive and Morris Avenue, expand the existing detention basin, and construct a stormwater pumping facility at the southwest corner of the existing detention basin to adequately convey a 100-year storm event. This is a cost sharing agreement with the Village of Berkeley. **Estimated Construction Cost:** \$2,696,000 Status: Under Construction.

RIVERSIDE LAWN BUYOUTS 16-IGA-06

Service Area: Stickney Location: Riverside Lawn **Description:** Purchase 39 flood-prone homes along the Des Plaines River. This is a cost sharing agreement with the Cook County Land Bank Authority for the acquisition of flood-prone properties in unincorporated Riverside Lawn. Estimated Construction Cost: \$8,000,000 Status: The Intergovernmental Agreement has been prepared.

DES PLAINES BUYOUTS (PHASE II) 16-IGA-11

Service Area: Stickney **Location:** Des Plaines **Description:** Purchase 49 flood-prone homes along the Des Plaines River. This is a cost sharing agreement with the City of Des Plaines. **Estimated Construction Cost:** \$3,625,000 Status: The Intergovernmental Agreement has been prepared.

FLOSSMOOR BUYOUTS 16-IGA-12

Service Area: Calumet Location: Flossmoor **Description:** Purchase two flood-prone homes along Butterfield Creek. This is a cost sharing agreement with the Village of Flossmoor. Estimated Construction Cost: \$638,000 Status: The Intergovernmental Agreement has been prepared.

FRANKLIN PARK BUYOUTS 16-IGA-13

Service Area: Stickney **Location:** Franklin Park **Description:** Purchase 32 flood-prone homes along Silver Creek. This is a cost sharing agreement with the Village of Franklin Park. Estimated Construction Cost: \$4,681,000 Status: The Intergovernmental Agreement has been prepared.

NORTHLAKE BUYOUTS 16-IGA-14

Service Area: Stickney Location: Northlake **Description:** Purchase eight flood-prone homes along Addison Creek. This is a cost sharing agreement with the City of Northlake. Estimated Construction Cost: \$1,184,000 Status: The Intergovernmental Agreement has been prepared.

STONE PARK BUYOUTS 16-IGA-15

Service Area: Stickney **Location:** Stone Park **Description:** Purchase 35 flood-prone homes along Addison Creek. This is a cost sharing agreement with the Village of Stone Park. **Estimated Construction Cost:** \$2,700,000 Status: The Intergovernmental Agreement has been prepared.

FLOOD CONTROL PROJECT AT 61ST AVENUE AND 36TH STREE 16-IGA-21

Service Area: Stickney

Location: Cicero

Description: New storm sewers will be constructed to collect stormwater tributary to the 61st Avenue and 36th Street intersection in the Town of Cicero and conveyed to Kolar Park, where it will be detained and released via a constricted outlet. A new split detention system will include a 5.5 acre-feet underground detention facility beneath Kolar Park, designed to attenuate a 25-year storm, and an additional 1.9 acre-feet of storage will be provided above ground by recessing Kolar Park to achieve a 50-year storm total level of protection. This is a cost sharing agreement with the Town of Cicero. The design, construction, operations, and maintenance will be the responsibility of the Town.

Estimated Construction Cost: \$2,500,000

Status: The Intergovernmental Agreement is being negotiated between the District and the Town of Cicero.

ROBBINS LAND ACQUISITION 17-IGA-02

Service Area: Calumet

Location: Robbins

Description: The Village of Robbins will work with the Cook County Land Bank Authority and the South Suburban Land Bank Development Authority to assemble and acquire parcels that are required for a Flood Control Project on Midlothian Creek under Contract 14-253-3F. The District will assist the Village in acquiring the needed parcels.

Estimated Construction Cost: \$200,000

Status: The Cook County Land Bank Authority has started the land acquisition process.



SMALL STREAMS MAINTENANCE PROGRAM (SSMP)

The 2017 Small Streams Maintenance Program (SSMP) successfully concluded the eleventh full year of operation. The program, conceived and established in 2006, follows the MWRD's stormwater management mission to improve flooding in urbanized areas through immediate and relatively simple remedies. The objective of the program is to remove obstructions and debris in the waterways that impede the natural drainage of Cook County's small streams and rivers with the potential for flooding urban areas.

MWRD and contractor crews removed approximately 21,043 cubic yards of debris in 2017. In addition 3,302 cubic yards of river and canal debris was removed by the MWRD's debris and skimmer boat crews along the Chicago Area Waterways (CAWS). In 2017, the District continued to utilize a two-year stream maintenance contract. The District paid a total of \$2,250,515 in 2017 to contractors to provide stream maintenance. Listed in the table below are the debris amounts removed in each watershed for the past five years.

WATERSHED	2013 DEBRIS REMOVED (CY)	2014 DEBRIS REMOVED (CY)	2015 DEBRIS REMOVED (CY)	2016 DEBRIS REMOVED (CY)	2017 DEBRIS REMOVED (CY)
Little Cal	7,405	3,615	6,545	7,550	8,810
Cal Sag	8,115	5,200	5,860	8,465	4,326
Lower Des Plaines	10,038	9,939	8,746	5,456	5,889
North Branch	4,533	1,896	1,656	3,774	1,443
Upper Salt Creek	480	1,095	491	631	295
Poplar Creek	250	150	380	140	280
Total	30,821	21,895	23,678	26,016	21,043

The SSMP will continue in 2018 and is anticipating removal of approximately 25,000 cubic yards of debris. Major goals include standardizing procedures, identifying critical stream areas, scheduling critical inspections and continuing to introduce the MWRD's Small Stream crews to local governments to increase the public's awareness of the MWRD's presence and execution of the SSMP.

The 2016 expenditure for the SSMP program (Functional Area 4332) was \$4,860,584. Therefore, the average cost per cubic yard was \$167.70.

WATERSHED MANAGEMENT ORDINANCE

The Watershed Management Ordinance (WMO) establishes uniform, minimum, countywide stormwater management regulations throughout Cook County. Components which are regulated under the WMO include drainage and detention, volume control, floodplain management, isolated wetland protection, riparian environment protection, and soil erosion and sediment control. The MWRD's Board of Commissioners adopted the Watershed Management Ordinance on October 3, 2013, which became effective on May 1, 2014. The WMO was amended by MWRD's Board of Commissioners on July 10, 2014, to incorporate the Infiltration/Inflow Control Program (Article 8). In 2016, the Board of Commissioners authorized amending the WMO, which is anticipated to be adopted in early 2018. The MWRD continues to develop the Technical Guidance Manual (TGM), which serves as a technical reference to the WMO. The WMO webpage, wmo.mwrd.org, contains more information on both the WMO and the TGM.

Regulation of the WMO is administered by issuing permits for development within Cook County. Permits are reviewed by Engineering staff to ensure the project design is in compliance with the WMO. Additionally, construction sites are inspected to enforce the provisions approved under the permit. The following table illustrates the number of permits issued and inspected in both 2017 and since the inception of the WMO. Volumes of water captured onsite in the form of volume control (green infrastructure) and detention are also included.

	NO. PERMITS ISSUED	TOTAL ACTIVE PERMITS (ALL YEARS)	NO. PERMITS UNDER CONSTRUCTION	NO. SITE INSPECTIONS	TOTAL GI VOLUME (GAL)	TOTAL GI VOLUME (GAL)
2017	526	1,028	170	7,5,274	17,498,900	104,462,900
ALL WMO	1,446				38,556,600	277,064,800

GREEN INFRASTRUCTURE INSTALLATION







STORMWATER BYPASS THROUGH CONSTRUCTION SITE



INFILTRATION/INFLOW CONTROL PROGRAM (IICP) ADMINISTRATION

The District's Infiltration/Inflow Control Program (IICP) provides a framework for asset management of separate sewer systems to meet the following goals:

- Maintain infrastructure to prevent sanitary sewer overflows and basement backups due to sewer surcharging and other adverse sewer system conditions;
- Comply with the District's NPDES permits and all other applicable federal, state, and local laws and regulations;
- Minimize extraneous flows transported to the District's facilities due to defective system components or illegal connections.

The IICP is implemented due to special conditions imposed within the National Pollutant Discharge Elimination System (NPDES) permits issued by the Illinois Environmental Protection Agency (IEPA) for the District's Water Reclamation Plants. In addition to adopting a Capacity, Management, Operation and Maintenance (CMOM) program for the conveyance and treatment facilities, the District is required to take action to reduce excessive I/I within the local sanitary sewer systems.

All satellite entities (sewer system owners) within the District's separate sewer area, that discharge directly or indirectly into District facilities, are required to identify and address I/I sources within the public and private sewer systems. This will be accomplished by the individual satellite entities performing ongoing inspections and conducting maintenance and rehabilitation work on the sewer system. All satellite entities must annually report work completed to meet the goals of the IICP to the District.

IICP SATELLITE ENTITIES

Alsip Aqua Illinois Arlington Heights Bartlett Bedford Park Bellwood Berkeley Bridgeview Broadview Brookfield Buffalo Grove Burr Ridge Calumet City Chicago Ridge Country Club Hills Countryside Crestwood Deer Park Des Plaines Dolton East Hazel Crest Elk Grove Township Elk Grove Village Evergreen Park Flagg Creek WRD Flossmoor Ford Heights Forest River SD Franklin Park Garden Homes SD Glenbrook SD Glencoe Glenview Glenwood Hanover Park Harvey Harwood Heights Hazel Crest

Hickory Hills Hillside Hinsdale Hodgkins Hoffman Estates Homewood Illinois American Water Indian Head Park Inverness Justice Kenilworth Kimberly Heights SD La Grange La Grange Highlands SD La Grange Park Lansing Lemont Leyden Township Lynwood Markham Matteson McCook Melrose Park Merrionette Park Midlothian **Mission Brook SD** Morton Grove Mount Prospect Niles Norridge Northbrook Northfield Northfield Township Northfield Woods SD Northlake Oak Forest Oak Lawn Oak Meadow SD

	Olympia Fields Orland Park Palatine Palatine Township Palos Heights Palos Hills Palos Park Park Ridge Plum Grove Estates SD Plum Grove Woodlands SD Prospect Heights
	Richton Park
	River Grove
)	Riverdale
	Robbins
	Rolling Meadows Roselle
	Rosemont
	Sauk Village Schaumburg
	Schaumburg Schiller Park
	South Barrington
	South Holland
	South Lyons Township SD
	South Palos Township SD
	South Stickney SD
	Stone Park
	Streamwood
	Thornton
	Tinley Park
	Westchester
	Western Springs
	Wheeling
	Willow Springs
	Wilmette
	Winnetka
	Woodley Road SD
	Worth

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JOINT FUNDING AGREEMENT WITH THE UNITED STATES GEOLOGICAL SURVEY (USGS) FOR STREAM GAGING STATIONS IN COOK COUNTY

The MWRD entered into a Joint Funding Agreement (JFA) with the USGS beginning in 2006 and has since renewed the agreement annually to fund the continued maintenance and operation of various stream gages and rain gages within Cook County. Under the 2017–2018 JFA, the MWRD is funding the following seven stream gages:

- Salt Creek at Rolling Meadows
- Salt Creek near Elk Grove Village
- Salt Creek at Western Springs
- Des Plaines River at Lyons
- North Branch of the Chicago River at Deerfield
- Natalie Creek at Midlothian
- Tinley Creek near Palos Park

and two rain gages located on Salt Creek near Rolling Meadows and on Natalie Creek at Midlothian, respectively. The data from the streamflow gaging stations have proven useful for the MWRD with calibration of the hydrologic and hydraulic models in the DWP development, and MWRD will continue to use data from these stations in ongoing and future planning and design of stormwater improvements. Real time data from the stream gages are available on the USGS's website at https://waterdata.usgs. gov/nwis. Precipitation data are available at http://il.water.usgs.gov/gmaps/precip/ index.php. A map showing the location of the gages is presented in APPENDIX F.

COORDINATION WITH WATERSHED PLANNING COUNCILS (WPCS)

The Act required the formation of WPCs, which serve as advisory bodies to the MWRD for its stormwater management program. Membership in the WPCs includes the chief elected official, or his or her designee, for municipalities and townships, and the Cook County Board President, or his or her designee, for unincorporated areas. In 2005, the municipal conferences, with assistance from the MWRD, established WPCs for the watersheds of the North Branch of the Chicago River, the Lower Des Plaines River, the Calumet-Sag Channel, the Little Calumet River, Poplar Creek, and Upper Salt Creek. Since 2005, each of the WPCs has met at least quarterly, as required by the Act. WPC meetings serve as a mechanism for representatives of municipalities and townships to

be updated on the progress of the DWPs, SSMP, WMO, and capital projects, as well as to communicate concerns of the public to the MWRD.

The following Councils of Government (COGs) are responsible for coordination of the WPCs: Northwest Municipal Conference, West Central Municipal Conference, South Suburban Mayors and Managers Association, and Southwest Conference of Mayors. The MWRD negotiated agreements with each of the COGs to provide administrative assistance related to coordination of the WPCs; the current agreement was renewed for 2018 and 2019. In 2017, the COGs assisted the MWRD by arranging meeting schedules, drafting and distributing meeting agendas, distributing information from

the MWRD to WPC members, assembling contact information for WPC representatives, and forwarding information about stormwater management concerns from the WPC members to the MWRD.

GREEN INFRASTRUCTURE PROGRAM

The MWRD entered into a Federal Consent Decree (CD) with USEPA and IEPA on January 6, 2014. Appendix E of the CD requires MWRD to create a Green Infrastructure Plan to guide the goals of its Green Infrastructure Program. The Plan was submitted to the USEPA and IEPA in December 2014.

Elements of the Green Infrastructure Program include an expanded rain barrel program, land use policy for property owned by MWRD, community technical assistance, a reporting schedule, and a plan for early monitoring, evaluation, and knowledge building.

The MWRD has partnered with organizations with similar goals. One such example is with the Chicago Public Schools, which did a major rehabilitation of the grounds of four elementary schools, with Stormwater Green Infrastructure (GI) as a major design component of each project. MWRD contributed to the design process, and contributed close to \$500,000 to each of the four schools, for a total of approximately \$1,907,000, specifically on GI measures that will reduce local flooding, while reducing the amount of rainwater entering the local combined sewer systems. As a part of the inter-governmental partnership, City of Chicago Department of Water Management also provided close to \$2,000,000 for GI at the schools. Each project included various amounts of permeable pavement, rain gardens, native landscaping, stormwater trees, bioswales, and bioretention areas greenways to store and infiltrate stormwater generated from the site. The four elementary schools, Grissom, Leland, Morrill and Schmid, are all in low income areas that experience basement backups throughout the City. The four sites have been constructed using a high degree of community involvement, and all employ educational components to inform students and the surrounding community about the benefits of Green Infrastructure. All four projects were completed in the fall of 2014.

Due to the success of the school projects, the MWRD committed to fund up to \$500,000 per school, for a total of 30 schools, for the period 2015-2020. The Chicago Department of Water Management has committed to contributing a similar amount of money. Two more schools; Willa Cather Elementary School and Jose Clemente Orozco Elementary School were built In 2015. Three more schools were constructed in 2016; Daniel J. Corkery Elementary School, Frank W. Gunsaulus Elementary Scholastic Academy and James Wadsworth Elementary School. The MWRD agreed to fund the design of five additional schools in 2017, and five more in 2018. The 2017 designed schools; John W. Cook Elementary School, Nathan S. Davis Elementary School, Fernwood Elementary School, Eugene Field Elementary School and Morton Elementary Career Academy, will be built in 2018.

MWRD is funding a project at the Chicago Housing Authority's Dearborn Homes, where an existing 290,000 gallon storage tank will be retrofitted with a control system in order to capture and store stormwater that can be used for irrigation of the local

grounds and a nearby park. The design cost of this project is \$327,695, and the design was completed in late 2017. The project will be constructed in 2018, and will cost the MWRD an additional \$1,088,000.

Besides the Dearborn Homes Project, three other projects were to be designed and built in 2017. The projects are located in Berwyn, Niles and Skokie. All of the above community projects used various Green Infrastructure technologies to augment grey projects that are meant to reduce local flooding. Besides assistance in flood reduction, GI will also keep stormwater out of the stressed combined sewer systems. The MWRD is already investigating similar potential projects to be funded in 2018 and beyond.

The Village of Berwyn partnered with the MWRD to construct ten green alleys within the Village. The MWRD agreed to pay the difference between using conventional pavement and pervious pavement which provides an estimated DRC of 679,122 gallons. The rainwater that previously would run off to the local sewer system will now be absorbed into the ground. The project was completed in the summer of 2017. The cost to the MWRD was \$666,700.

The Village of Niles partnered with the MWRD to construct a bioswale and permeable pavement parking lot at Oak Park. The project will reduce flooding and reduce the load to the local sewer system, and provides an estimated DRC of 53,811 gallons. The project was primarily completed by the end of 2017. The cost to the MWRD will be around \$200,000.

The Village of Skokie partnered with the MWRD to construct a rain garden at Devonshire Park and a naturalized detention area at the Police Headquarters within the Village. The project will reduce local flooding and will provide an estimated DRC of 46,424 gallons. The project was designed in 2017, but will not be constructed until early 2018. The cost to the MWRD is anticipated to be \$200,000.

The MWRD completed a permeable parking lot and bioretention area at its John Egan Water Reclamation Plant in Schaumburg. The parking lot is made up of permeable pavers and an 11,000 square foot bioretention area. The project will reduce flooding, and provides an estimated DRC of 360,255 gallons. The cost of the project was \$1,519,000.



In May of 2017, the MWRD sent out a request to potentially partner on GI projects to municipalities and other government agencies within its boundaries. A total of 47 project applications were submitted. The MWRD chose 20 of the 47 projects to partner on. Draft Intergovernmental Agreements (IGA's) were developed for each project, as well as Operations and Maintenance Plans. These projects are now in various stages of development, with most of the projects anticipated to be started in 2018. Due to the interest of the projects, another request will be sent out sometime in the spring of 2018.

GREEN INFASTRUCTURE PROJECTS

The following is a detailed list of green infrastructure projects. Green Infrastructure project locations are shown in Appendix D.

DEARBORN HOMES 14-113-5F

Service Area: Stickney Location: Chicago

Description: Construct and install storm sewers, structures, irrigation equipment, rainwater harvesting pumps, water service connections, and the OptiRTC control tool to reuse the detained stormwater for irrigation of nearby landscaping for six buildings within the housing complex.

Estimated Construction Cost: \$1,088,000 **Status:** Final Design to be completed by early 2018.

CPS SPACE TO GROW 15-IGA-20

Service Area: North, Calumet, and Stickney Location: All Service Areas

Description: The District, the Chicago Department of Water Management, and the Chicago Public Schools are partnering to design and install playgrounds at various Chicago Elementary Schools utilizing green infrastructure. The projects will reduce flooding, reduce the load on the combined sewer system, and educate students and neighbors about green infrastructure techniques and purpose. Estimated Construction Cost: \$16,000,000 **Status:** Four playgrounds were transformed in 2014 as a pilot program under a different Intergovernmental Agreement. The current Intergovernmental Agreement has called for 30 more school playgrounds to be designed and constructed during the period of 2015 through 2019. Six schools were designed in 2015. Two of these schools, Willer Cather Elementary and Orozco Elementary Academy of Fine Arts and Sciences, were completed in 2015. The construction of three more school playgrounds (Daniel J. Corkery Elementary, Frank W. Gunsaulus Elementary Scholastic Academy, and James Wadsworth Elementary School) were completed in 2016. It is anticipated that ten more schools will be designed in 2017-2018. The District plans to fund the ten designs, with the anticipation that the Chicago Department of Water Management and Chicago Public Schools will fund the design of the remaining schools. An amendment to the current Intergovernmental Agreement to allow us to fund these designs is being drafted by the Law Department.

BERWYN GI 16-IGA-07

Service Area: Stickney

Location: Berwyn

Description: The City of Berwyn will be replacing ten alleys with permeable pavements throughout the city to reduce the current load to the combined sewer system and to help alleviate flooding within the project area. The District will be funding approximately 27.5 percent of the total \$2,428,557.20 construction cost. **Estimated MWRD Contribution:** \$666,700 **Status:** Completed in 2017.

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NILES GI 16-IGA-09

Service Area: North Location: Niles

Description: The Village of Niles will be constructing a bioswale and a permeable pavement parking lot adjacent to Oak Park with the goals to increase groundwater infiltration, capture stormwater, reduce combined sewer overflow events, and offer volunteer opportunities. The District will be funding approximately half of the \$400,000 estimated project cost.

Estimated MWRD Contribution: \$200,000 **Status:** Substantially Completed in 2017.

SKOKIE GI 16-IGA-10

Service Area: North Location: Skokie

Description: The Village of Skokie is proposing to construct a rain garden to be located at Devonshire Park to address localized flooding at the intersection of Greenwood Street and Kenneth Terrace. The Village is also proposing to construct a naturalized stormwater detention basin at the Police Station Headquarters located at 7300 Niles Center Road.

Estimated MWRD Contribution: \$200,000 **Status:** Anticipated Construction in 2018.

PUBLIC AFFAIRS

In 2017, MWRD staff provided information about the MWRD and the Stormwater Management Program at various public events in communities throughout the region and at various technical conferences. The MWRD attends all WPC meetings to provide updates on watershed planning efforts, changes to the WMO, and stream maintenance activities. These meetings are open to the public and provide an opportunity for concerns of the public to be communicated to the MWRD. The projects that MWRD is partnering with Chicago Public Schools and Department of Water Management also have a large public affairs component, including community meetings to recommend design elements, community planting days, and ribbon cutting ceremonies, where the value of green stormwater infrastructure is presented and demonstrated. The MWRD also worked to educate the general public on their water footprint by attending numerous community and environmental fairs. The 2017 Stormwater Management related press releases are listed in APPENDIX H. MWRD Staff will continue to participate in community outreach events in 2018. The MWRD will also continue to participate in Watershed Planning Council meetings, and continue to promote the MWRD stormwater management efforts using press releases and other media outlets.

APPENDICES

APPENDIX A	STREAMBANK STABILIZATION PRO
APPENDIX B	FLOOD CONTROL PROJECTS
APPENDIX C	FLOOD CONTROL RESERVOIRS
APPENDIX D	GREEN INFRASTRUCTURE PROJECT
APPENDIX E	2017 COMPLETED PROJECTS
APPENDIX F	MWRD AND USGS JOINT FUNDED S
APPENDIX G	COMMITTED EXPENDITURES
APPENDIX H	STORMWATER MANAGEMENT REL

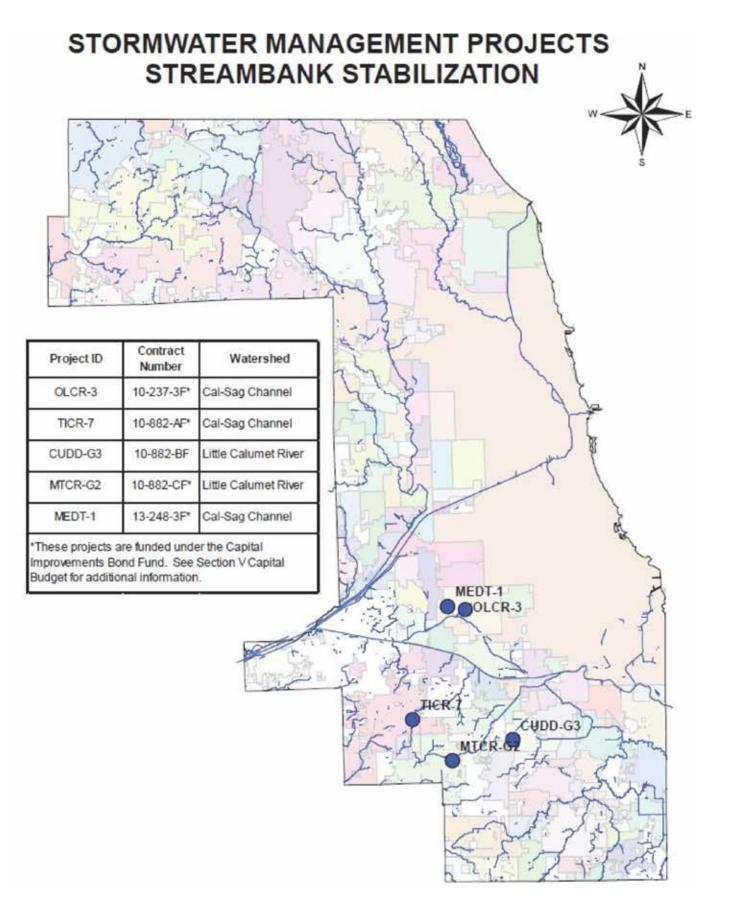


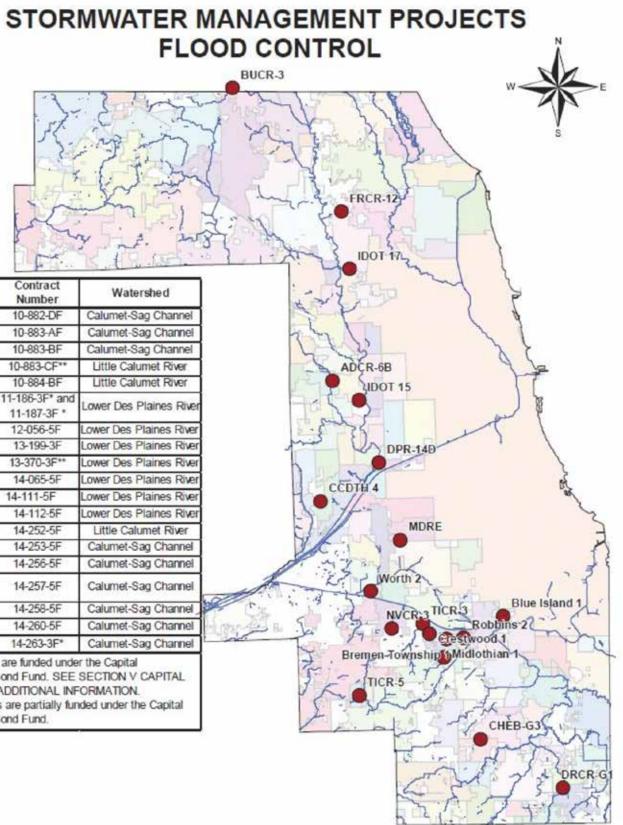
DJECTS

TS AND IGAs

STREAM GAGES

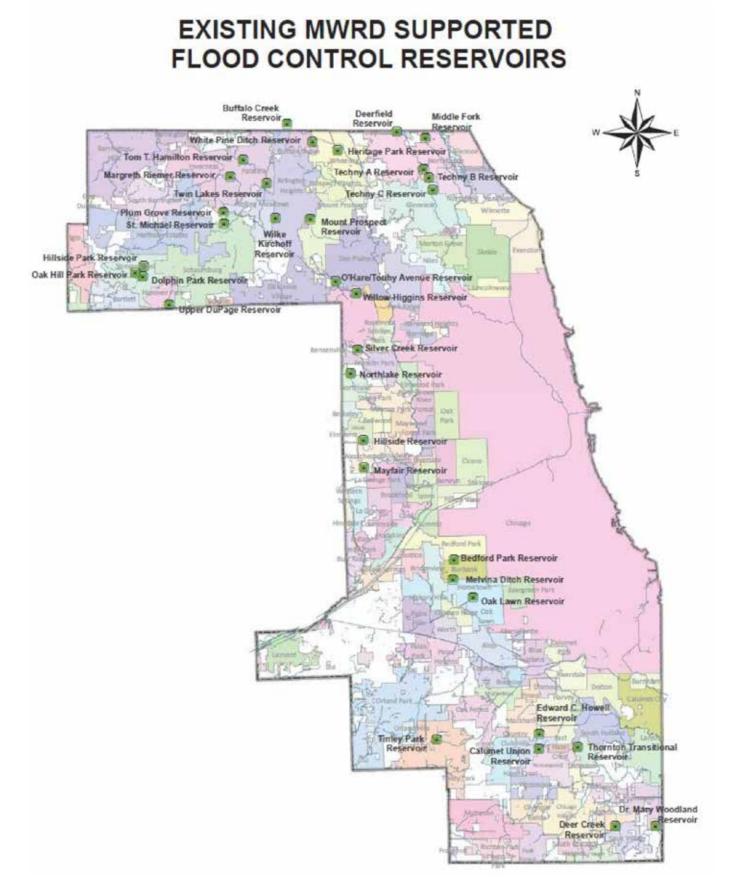
LATED PRESS RELEASES

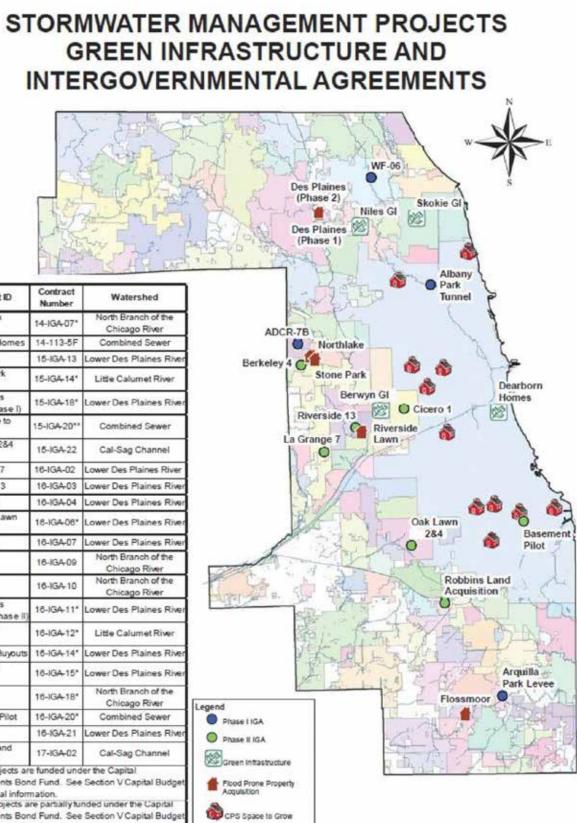




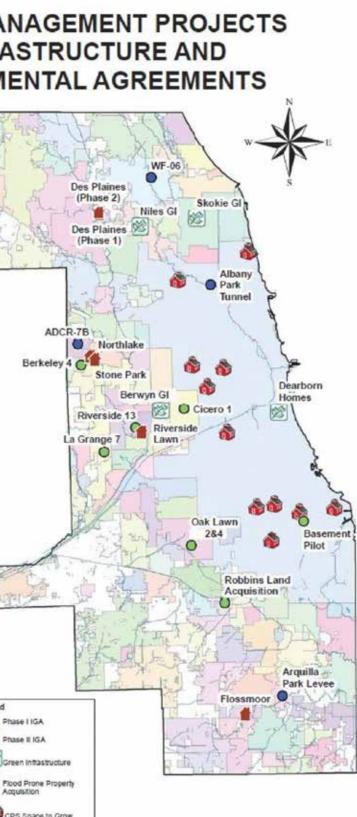
Project ID	Contract Number	Watershed	
TICR-5	10-882-DF	Calumet-Sag Channel	
TICR-3	10-883-AF	Calumet-Sag Channel	
NVCR-3	10-883-BF	Calumet-Sag Channel	
CHEB-G3	10-883-CF**	Little Calumet River	
DRCR-G1	10-884-BF	Little Calumet River	
ADCR-68	11-186-3F* and 11-187-3F *	Lower Des Plaines River	
FRCR-12	12-056-5F	Lower Des Plaines River	
DPR-14D	13-199-3F	Lower Des Plaines River	
BUCR-3	13-370-3F**	Lower Des Plaines River	
IDOT 17	14-065-5F	Lower Des Plaines River	
IDOT 15	14-111-5F	Lower Des Plaines River	
CCDTH 4	14-112-5F	Lower Des Plaines River	
Midlothian 1	14-252-5F	Little Calumet River	
Robbins 2	14-253-5F	Calumet-Sag Channel	
Worth 2	14-256-5F	Calumet-Sag Channel	
Bremen Township 1	14-257-5F	Calumet-Sag Channel	
Crestwood 1	14-258-5F	Calumet-Sag Channel	
Blue Island 1	14-260-5F	Calumet-Sag Channel	
MDRE	MDRE 14-263-3F* Calumet-Sag Channe		

inese projects are partially Improvements Bond Fund.





Project ID	Contract Number	Watershed	
Albany Park Tunnel	14-IGA-07*	North Branch of the Chicago River	
Dearborn Homes	14-113-5F	Combined Sewer	
ADCR-78	15-IGA-13	Lower Des Plaines River	
Arquilla Park Levee	15-IGA-14*	Little Calumet River	
Des Plaines Buyout (Phase I)	15-IGA-18*	Lower Des Plaines River	
CPS Space to Grow	15-IGA-20**	Combined Sewer	
Oak Lawn 284 Phase II	15-IGA-22	Cal-Sag Channel	
La Grange 7	16-IGA-02	Lower Des Plaines River	
Riverside 13	16-IGA-03	Lower Des Plaines River	
Berkeley4	16-IGA-04	Lower Des Plaines River	
Riverside Lawn Buyouts	16-IGA-06*	Lower Des Plaines River	
Berwyn Gl	16-IGA-07	Lower Des Plaines Rive	
Niles Gl	16-IGA-09	North Branch of the Chicago River	
Skokie Gl	16-IGA-10	North Branch of the Chicago River	
Des Plaines Buyouts (Phase II)	16-IGA-11*	Lower Des Plaines River	
Flossmoor Buyouts	16-IGA-12*	Little Calumet River	
Northlake Buyouts	18-IGA-14*	* Lower Des Plaines Rive	
Stone Park Buyouts	16-IGA-15*	Lower Des Plaines Rive	
WF-06	18-IGA-18*	North Branch of the Chicago River	
Basement Pilot	16-IGA-20*	Combined Sewer	
Cicero 1	16-IGA-21	Lower Des Plaines River	
Robbins Land Acquisition	17-IGA-02	Cal-Sag Channel	
for additional infor ** These projects a	d Fund. See nation. re partiallytu id Fund. See	er the Capital Section V Capital Budget nded under the Capital Section V Capital Budget	



APPENDIX E COMPLETED PROJECTS

CONTRACT: 11-052-3F (STREAMBANK STABILIZATION FOR THE NORTH BRANCH OF CHICAGO RIVER)

Construction Cost: \$413,000

Construction Duration: 365

Location: Northbrook

Description: This project will stabilize the eastern streambank along the West Fork of the North Branch of the Chicago River through construction of a 155-foot gravity retaining wall.

Completed: 4/21/2017

CONTRACT: 15-IGA-02 (NILES 1 PHASE II)

Construction Cost: \$2,000,000

Construction Duration: 270

Description: The Village of Niles' Cleveland Street Relief Sewer project consists of approximately 11,200 feet of new storm sewer to provide relief from surface water flooding for the area generally bounded by Main Street to the north, Harlem Avenue to the east, Monroe Street to the south, and Oketo Avenue to the west. The Village is responsible for the design, construction, operation, and maintenance. **Completed:** 3/15/2017

CONTRACT: 16-IGA-05 GLENCOE 4 & 6

Construction Cost: \$190,082 Construction Duration: 300

Description: Upsize Skokie Ridge Basin storm sewers with 3500 linear feet of 18 to 30 inch pipe and upsize Terrace Court Basin storm sewers with 1800 linear feet of 12 to 36 inch pipe to adequately convey a 100 year storm event. Add a stormwater treatment system to treat dischages into Lake Michigan. **Completed:** 2/11/17

CONTRACT: 16-IGA-19

Construction Cost: \$40,000 **Duration:** 14

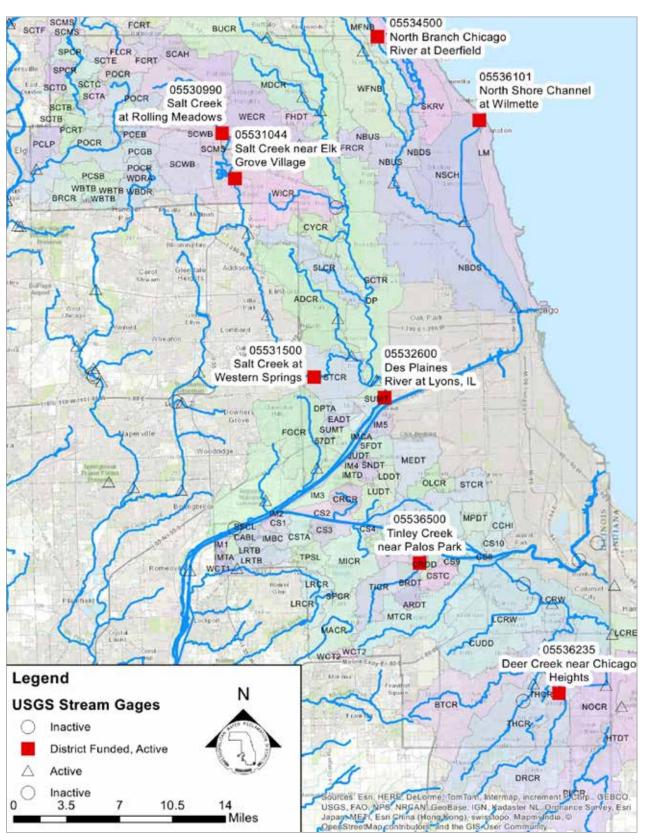
Description: Install a passive flood control system using Parjana Technology at Mount Greenwood Park, located at 3721 W. 111th Street in the City of Chicago. **Completed:** 5/28/17

CONTRACT: 15-IGA-01 GLENVIEW FLOOD PRONE ACQUISITION

Cost: \$8,000,000

Duration: 730

Description: Acquisition of certain flood prone parcels of real property located along the West Fork of the North Branch of the Chicago River in Glenview. **Completed:** 1/31/17



APPENDIX F MWRD AND USGS JOINT FUNDED STREAM GAGES

APPENDIX G COMMITTED EXPENDITURES

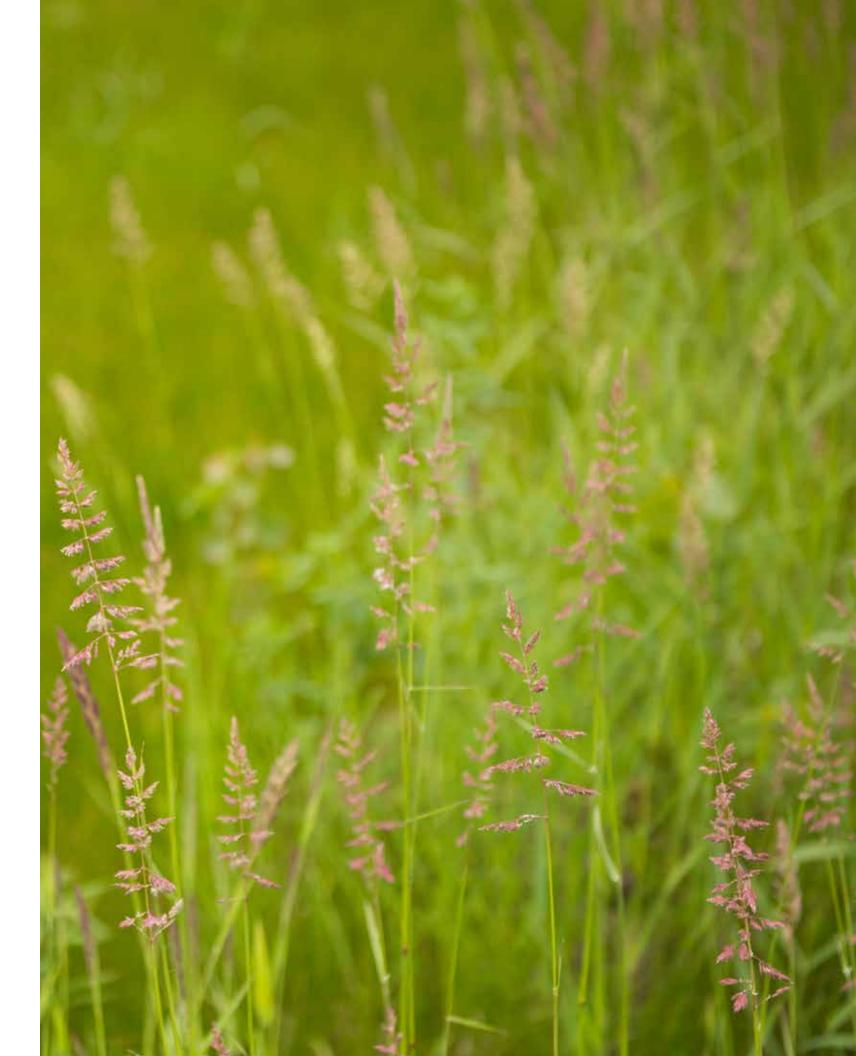
CATEGORY	DESCRIPTION	2017 COMMITTED EXPENDITURES
Personal Services: Consultants	Fees paid to consultants for professional services rendered, including the following projects:	\$1,213,445
	Preliminary Engineering	\$1,097,336
	Final Engineering	\$116,109
	Post Award	0
Personal Services: In-House	Salaries and associated costs related to MWRD personnel:	\$6,066,024
Contractual Services	Fees paid for services provided by COGs, agencies or companies, including the following:	\$6,835,008
	COGs Administrative Contracts:	\$34,398
	Small Streams Maintenance Program	\$2,700,160
	Small Streams Maintenance Program Waste Disposal	\$53,786
	Court Reporting Services	\$10,508
	USGS Joint Funding Agreement for Stream Gauging Stations in Cook County	\$128,951
	Streetscape and Sustainability Design Program	\$0
	Flood Control Facility Land Acquisition and Appraisals	\$0
	Waterways Facilities Structures (Construction)	\$961,501
	Repairs to Collection Facilities	\$0
	Permit Review	\$39,670
	IGAs	\$2,546,071
	Equity Transfer to B&I Fund	\$3,269,250
	Payments for Easements	\$13,536
	Miscellaneous Contractual Services	\$359,963
Administrative Expenses	Materials, equipment, supplies:	\$2,930
	Total 2017 Committed Expenditures	\$17,401,402

APPENDIX H 2017 STORMWATER MANAGEMENT RELATED PRESS RELEASES

Time-lapse video captures Spa Wadsworth Elementary School
MWRD and environmental org on agreement
MWRD leaders lend water mar India
New MWRD innovation draws
Work to protect Chicago area winning, scenic trail
Local photographer features g Second Nature'' exhibit
New Analysis Finds Closing the Infrastructure Would Create 1. Economic Activity
MWRD partners with Friends o Overflow Action Days
MWRD President Mariyana Spy Club panel to discuss "Our Gre Chicago and Calumet Rivers"
MWRD, US DEA partnership to continues; national collection s
April Overflow Action Month to
Overflow Action Month offers of protect Chicago River
MWRD flood relief prompts Nil trash
MWRD flood solutions plan for Innovation Award from IL Asso Management
Restoring the Canopy: MWRD 1 2017
MWRD, DEA partnership to rer continues; national collection s
IWEA recognizes MWRD for pro
Commissioners honored for ef
U.S. Senators Dick Durbin, Tam Congressman Mike Quigley lea funding for McCook Reservoir

- pace to Grow transformation at loc
- rganizations release joint statement
- nanagement wisdom in Hyderabad,
- s honor for cleaning a waterways creates an award-
- s green infrastructure in "Rooftop:
- he Investment Gap in Water e 1.3 Million Jobs, \$220 Billion in
- of the Chicago River to promote
- Spyropoulos participates on City Great Rivers: What's Next for the
- to remove drugs from waterways
- n set for April 29, 2017
- to Help the Chicago River
- rs daily tips to conserve water,
- Niles residents to toss mops into the
- for Chicago's South Side claims ssoc. for Floodplain and Stormwater
- D returns popular tree program in
- remove drugs from waterways n set for April 29, 2017
- protecting the public's water quality
- r efforts to improve water quality
- ammy Duckworth, and
- lead charge in procuring federal

JUNE 12, 2017	New pilot program will work to prevent basement backups on South Side
JUNE 14, 2017	Calling all green infrastructure projects: MWRD welcomes government partners
JUNE 23, 2017	Fun on the Cal-Sag Channel shines light on cleaner MWRD waterways
JUNE 29, 2017	Space to Grow program promotes equitable water future for Chicago
AUGUST 21, 2017	Crowds flock to MWRD's stunning view of McCook Reservoir
AUGUST 28, 2017	Platinum awards reaffirm MWRD as clean water leader
SEPTEMBER 13, 2017	Legislation curbs water pollution through nutrient trading program
SEPTEMBER 28, 2017	Service Project to Build Outdoor Classroom and Green Infrastructure at Manierre Elementary
OCTOBER 19, 2017	International WEFTEC conference showers MWRD with 3 awards for championing clean water
OCTOBER 26, 2017	International water experts, MWRD, DWM transform local schoolyard
NOVEMBER 3, 2017	Rep. Olsen tours MWRD facilities and McCook Reservoir
NOVEMBER 14, 2017	State Senator Aquino, Rep. Hurley deep dive into McCook Reservoir's intricacies
NOVEMBER 29, 2017	MWRD, Senator Dick Durbin, Congressman Mike Quigley, US Army Corps of Engineers, USEPA, IEPA, other officials to celebrate completion of McCook Reservoir Stage 1
NOVEMBER 30, 2017	Preparing Chicago schoolyards for water makes Space to Grow a Storm Water Solutions Top Project
DECEMBER 4, 2017	Behold McCook Reservoir: A 21st century icon for water quality and flood protection
DECEMBER 7, 2017	MWRD, U.S. Army Corps' 3.5 billion gallon McCook Reservoir unveiled
DECEMBER 19, 2017	MWRD's Cherry Creek flood control project in Flossmoor progressing
DECEMBER 22, 2017	Oaks of North Lawndale aids the MWRD in restoring the canopy
DECEMBER 26, 2017	Communities urged to apply for MWRD stormwater assistance under Phase II program



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Barbara J. McGowan Vice President Frank Avila Chairman of Finance Cameron Davis Kimberly Du Buclet Marcelino Garcia Josina Morita Debra Shore Kari K. Steele

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Metropolitan Water Reclamation District of Greater Chicago

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