

2023 ANNUAL REPORT

STORMWATER MANAGEMENT PROGRAM



**Metropolitan Water
Reclamation District
of Greater Chicago**

TABLE OF CONTENTS

BACKGROUND AND HISTORY 3

2023 YEAR IN REVIEW 4

2023 COMPLETED PROJECTS 7

MWRD STORMWATER MANAGEMENT PROGRAM OVERVIEW 13

PHASE I – REGION-WIDE STREAMBANK AND FLOOD CONTROL PROJECTS 13

PHASE II – LOCALIZED STORMWATER MANAGEMENT 13

FLOOD-PRONE PROPERTY ACQUISITION 23

STORMWATER MASTER PLANNING 24

GREEN INFRASTRUCTURE 27

SPACE TO GROW 33

STORMWATER MAINTENANCE AND OPERATION 34

WATERSHED MANAGEMENT ORDINANCE 36

PARTNERSHIPS AND PUBLIC OUTREACH 40

2023 STORMWATER MANAGEMENT PRESS RELEASES 44

2023 STORMWATER MANAGEMENT COMMITTED EXPENDITURES 45

PLEASE VISIT [MWRD website](#) for more [Stormwater Management](#) information.

MISSION

The mission of the Metropolitan Water Reclamation District of Greater Chicago Stormwater Management Program is to protect the safety and health of Cook County's residents, minimize flooding damage and improve water quality by coordinating, planning, implementing, financing, and operating regional stormwater management projects and to develop and enforce reasonable rules with respect to watershed development.



Excavation and construction at the Phase 1 area for the Robbins Heritage Park and Midlothian Creek Restoration Project.

BACKGROUND AND HISTORY

For years, stormwater management in Cook County was a patchwork of efforts by local, regional, state and federal agencies. The Illinois General Assembly enacted Public Act 93-1049 in November of 2004, allowing for the creation of a comprehensive [Stormwater Management Program](#) in Cook County under the supervision of the Metropolitan Water Reclamation District of Greater Chicago (MWRD).

The Act required the MWRD to develop the [Cook County Stormwater Management Plan](#). The Cook County Stormwater Management Plan provides the framework for the Stormwater Management Program, including its mission, goals, and program elements. The [MWRD Board of Commissioners](#) (Board) adopted the plan in February 2007. Adoption of the plan and the implementation of the MWRD's countywide Stormwater Management Program afforded Cook County the means to address a range of stormwater management issues through proper watershed regulations and watershed planning.

Under this plan, the MWRD has established Watershed Planning Councils and completed Detailed Watershed Plans for six major watersheds in Cook County, initiated a Stormwater Management Capital Improvement Program, initiated a Small Streams Maintenance Program, and adopted and implemented the [Watershed Management Ordinance](#) (WMO). The six planning watersheds are

Calumet-Saganashkee Channel (Cal-Sag Channel), Little Calumet River (Little Calumet), Lower Des Plaines River (Lower Des Plaines), North Branch of the Chicago River (North Branch), Poplar Creek and Upper Salt Creek.

The program expanded significantly in 2014. The Cook County Stormwater Management Plan was amended in July 2014 to be consistent with Public Act 98-0652, which granted the MWRD authority to allow for acquisition of flood-prone properties and to plan, implement, and finance local [stormwater management projects](#). The MWRD entered a [Consent Decree](#) with the Environmental Protection Agency in January 2014, establishing the [Green Infrastructure Program](#). Additionally, the [Infiltration/Inflow Control Program](#) was incorporated into the WMO in 2014.

Through a variety of engineered solutions, both green and gray, and voluntary [flood-prone property acquisitions](#), the MWRD's Stormwater Management Program addresses both regional and local flooding problems throughout Cook County. The MWRD has made significant investments in developing over 250 capital stormwater projects since it assumed the authority for stormwater management in 2004. These projects, which range in both size and scope, provide flood protection for thousands of homes, businesses, and critical infrastructure.

2023 YEAR IN REVIEW

As the MWRD continued to advance its mission and goals to alleviate the impact of flooding and erosion, its Stormwater Management Program has also been aligned with the new organization-wide [Strategic Plan](#) released in June 2022. Under this new Strategic Plan, goals and objectives have been established to ensure our approach to mitigate flooding across Cook County is done through a proactive and equitable approach for stormwater management, including implementation of gray and green infrastructure, enforcement of the WMO, and acquisition of flood-prone property.

In 2023, projects under construction, in partnership with municipalities, included large scale flood control projects (e.g., [Addison Creek Reservoir](#) and Channel Improvements); green infrastructure (GI) projects in numerous communities; and new stormwater storage and conveyance systems throughout Cook County. Further details concerning these projects and other stormwater management activities are provided in this annual report.

This year the effects of climate change were felt throughout Cook County. Two presidential disaster orders were issued after intense storms and rainfall had caused significant flooding of homes, businesses, and streets. The MWRD responded to affected communities by attending public meetings, surveying community needs, and providing timely communication through alerts and media interviews with the MWRD stormwater experts. The MWRD continued to proactively tackle flooding in historically underserved communities with projects that have multiple benefits for community members, applying the principles of environmental justice to policy and decision-making.



MWRD President Kari K. Steele speaks at the West Side Leaders Meeting at the Columbus Park Refectory on July 11, 2023, days following record rains that flooded communities on Chicago's West Side, Cicero and surrounding suburbs.



MWRD leaders, town and county officials met with Cicero area residents to address devastating flooding following record rain events in July 2023.

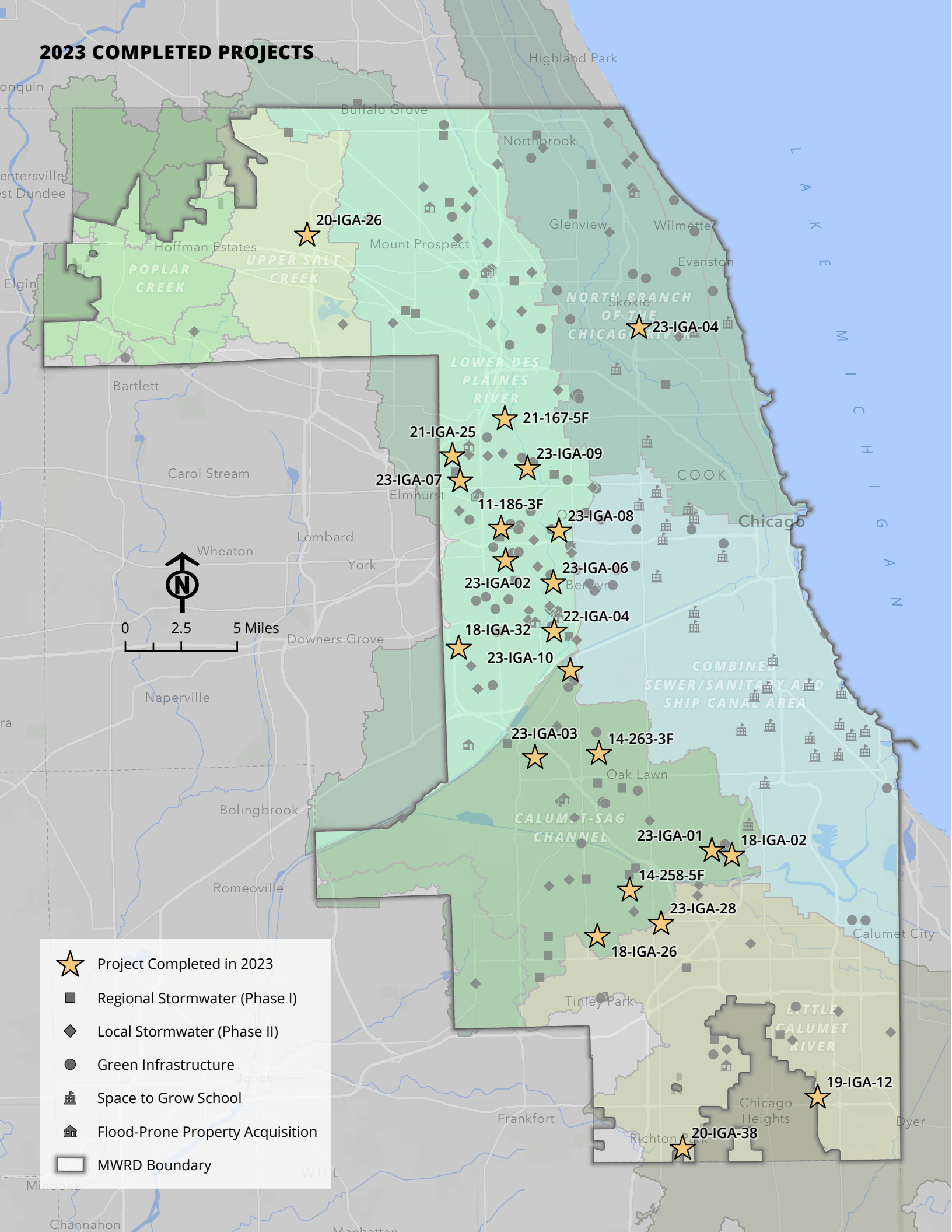
2023 STORMWATER MANAGEMENT PROGRAM ACCOMPLISHMENTS INCLUDE:

- Twenty-two stormwater management and GI projects were completed.
- Further developed a **Volumetric Approach** to stormwater planning; this approach serves as a long-term plan that is flexible, dynamic, and compatible with local communities' timeline and strategies for addressing flooding problems.
- Advanced negotiations for strategic partnerships with the Chicago Park District and Forest Preserve District of Cook County for the planning, prioritization, design, and oversight of GI projects and other Stormwater Management Program initiatives. Through regular coordination with the City of Chicago, a framework for future strategic partnerships with city agencies is also being developed.
- Solicited information from communities on impacts from the July 2, 2023, and subsequent severe storm events.
- Awarded construction of channel improvements along Addison Creek in the communities of Northlake, Melrose Park, Stone Park, Bellwood, Westchester, and Broadview.
- Negotiated intergovernmental agreements (IGAs) for acquisition of flood-prone properties with three communities throughout Cook County.
- Entered into a subrecipient agreement with Cook County for \$18 million to supplement the **MWRD's Stormwater Partnership Program** with federal funding from the American Rescue Plan Act.
- Made substantial progress on \$29 million Robbins **flood control** and stormwater park projects.

A detention basin in Richton Park is an example of a project funded through the MWRD's Stormwater Partnership Program.



2023 COMPLETED PROJECTS



- ★ Project Completed in 2023
- Regional Stormwater (Phase I)
- ◆ Local Stormwater (Phase II)
- Green Infrastructure
- 🏠 Space to Grow School
- 🏠 Flood-Prone Property Acquisition
- ▭ MWRD Boundary

★ 20-IGA-26

★ 23-IGA-04

★ 21-IGA-25

★ 21-167-5F

★ 23-IGA-09

★ 23-IGA-07

★ 11-186-3F

★ 23-IGA-08

★ 23-IGA-02

★ 23-IGA-06

★ 18-IGA-32

★ 22-IGA-04

★ 23-IGA-10

★ 23-IGA-03

★ 14-263-3F

★ 23-IGA-01

★ 18-IGA-02

★ 14-258-5F

★ 23-IGA-28

★ 18-IGA-26

★ 19-IGA-12

★ 20-IGA-38



A view to the east showing the Addison Creek Reservoir in Bellwood on Dec. 12, 2023. The Addison Creek Reservoir and the Addison Creek Channel Improvements are two connected flood control projects that will work together to significantly benefit communities along Addison Creek, including Bellwood, Northlake, Stone Park, Melrose Park, Westchester and Broadview. The 600-acre-foot Addison Creek Reservoir will hold 195 million gallons of storage capacity and connect with the Addison Creek Channel to protect the communities from overbank flooding.

2023 COMPLETED PROJECTS

ADDISON CREEK RESERVOIR

Contract: 11-186-3F
Watershed: Lower Des Plaines
Location: Bellwood, IL
Description: Construction of an approximately 600-acre-foot flood control reservoir in Bellwood, north of Washington Boulevard and east of Addison Creek, with installation of operation equipment, piping, pump station, and other structures to alleviate public health and safety concerns.
Construction Cost: \$81,304,222
MWRD Contribution: \$76,304,222
Status: Construction substantially completed.

MELVINA DITCH RESERVOIR IMPROVEMENT

Contract: 14-263-3F
Watershed: Cal-Sag Channel
Location: Burbank, IL
Description: Expansion of existing Melvina Ditch Reservoir by 195 acre-feet to increase storage capacity, modification of pumping station, and installation of new emergency overflow weir to reduce reservoir overtopping.
Construction Cost: \$16,779,803
MWRD Contribution: \$16,779,803
Status: Construction completed.

CRESTWOOD FLOOD CONTROL

Contract: 14-258-5F
Watershed: Cal-Sag Channel
Location: Crestwood, IL
Description: Installation of a new storm sewer along 135th Street and improvements to existing storage and basin on the Nathan Hale School property and conveyance improvements along the Crestwood Drainage Ditch.
Construction Cost: \$7,724,790
MWRD Contribution: \$7,714,839
Status: Construction substantially completed.

BOCA RIO DITCH CULVERT AND CHANNEL IMPROVEMENT

Contract: 18-IGA-26

Watershed: Cal-Sag Channel

Location: Oak Forest, IL

Description: Replacement of deteriorated roadway culverts, upsizing and installation of box culvert, installation of three sedimentation basins along Boca Rio Ditch south of 151st, and streambank stabilization improvements along Boca Rio Ditch north of 151st.

Construction Cost: \$903,510

MWRD Contribution: \$810,000

Status: Construction completed.

DETENTION BASIN AT BUTTERFIELD CREEK IN RICHTON PARK

Contract: 20-IGA-38

Watershed: Little Calumet

Location: Richton Park, IL

Description: Construction of a regional detention basin along Governors Highway, south of the intersection of Sauk Trail, at the Butterfield Creek East Branch.

Construction Cost: \$2,242,625

MWRD Contribution:

\$1,977,556

Status: Construction completed.

GREEN ALLEYS WATER MANAGEMENT PROJECT 2 IN LYONS

Contract: 22-IGA-04

Watershed: Lower Des Plaines

Location: Lyons, IL

Description: Reconstruction of two "T" alleys using permeable pavers.

Construction Cost: \$639,402

MWRD Contribution: \$312,000

Status: Construction completed.

VILLAGE COMMONS PARKING LOTS PERMEABLE PAVER PROJECT IN NORTH RIVERSIDE

Contract: 23-IGA-06

Watershed: Lower Des Plaines

Location: North Riverside, IL

Description: Reconstruction of several parking lots at North Riverside's Village Commons using permeable pavers.

Construction Cost: \$1,530,775

MWRD Contribution:

\$1,275,135

Status: Construction completed.

GREEN INFRASTRUCTURE ALLEY PROGRAM IN SUMMIT

Contract: 23-IGA-10

Watershed: Combined Sewer/
Sanitary and Ship Canal

Location: Summit, IL

Description: Reconstruction of three alleys using permeable pavers.

Construction Cost: \$764,634

MWRD Contribution: \$375,000

Status: Construction completed.

GREEN STREETS PROJECT IN FORD HEIGHTS

Contract: 19-IGA-12

Watershed: Little Calumet

Location: Ford Heights, IL

Description: Construction of roadside bioswales located in the street right-of-way.

Construction Cost: \$356,125

MWRD Contribution: \$356,125

Status: Construction completed.

WINCHESTER AVENUE GREEN INFRASTRUCTURE PROJECT IN CALUMET PARK

Contract: 18-IGA-02

Watershed: Cal-Sag Channel

Location: Calumet Park, IL

Construction begins on two areas of a green infrastructure project at North Riverside's Village Commons in October.



A completed section of the North Riverside permeable parking lots is working as planned to absorb excess water on a rainy day.





Description: Construction of a roadside bioswale, permeable pavers in the parking lane, and permeable asphalt in the driving lane of Winchester Avenue.

Construction Cost: \$3,399,763

MWRD Contribution: \$360,000

Status: Construction completed.

GREEN ALLEY PROGRAM IN RIVER GROVE 2

Contract: 23-IGA-09

Watershed: Lower Des Plaines

Location: River Grove, IL

Description: Reconstruction of four alleys using permeable pavers.

Construction Cost: \$2,167,671

MWRD Contribution: \$755,000

Status: Construction completed.

GREEN ALLEY PROJECT IN BLUE ISLAND

Contract: 23-IGA-01

Watershed: Cal-Sag Channel

Location: Blue Island, IL

Description: Construction of three permeable paver alleys located at the 2600 block 121st St.-121st Pl.; the 2600 block 121st Pl.-122nd St.; the 2600 block 122nd St.-122nd Pl.

Construction Cost: \$786,060

The work is nearly complete at Boca Rio Ditch in Oak Forest, where the MWRD has upsized culverts and made improvements to the channel.

MWRD Contribution: \$579,326
Status: Construction completed.

**VILLAGE HALL
PARKING LOT GREEN
INFRASTRUCTURE
IMPROVEMENT IN
BROADVIEW**

Contract: 23-IGA-02
Watershed: Lower Des Plaines
Location: Broadview, IL
Description: Replacement of asphalt parking lot at Village Hall/police station with permeable pavers.
Construction Cost: \$559,325
MWRD Contribution: \$300,000
Status: Construction completed.

**POLICE DEPARTMENT
PARKING LOT PERMEABLE
PAVEMENT IN HICKORY
HILLS**

Contract: 23-IGA-03
Watershed: Cal-Sag Channel
Location: Hickory Hills, IL
Description: Conversion of an existing parking lot at the Hickory Hills Police Department with permeable pavement.
Construction Cost: \$1,055,401
MWRD Contribution: \$675,000
Status: Construction completed.

**GREEN ALLEY PROJECT IN
LINCOLNWOOD**

Contract: 23-IGA-04
Watershed: North Branch
Location: Lincolnwood, IL
Description: Construction of one permeable paver alley, bound by Keating and Kilpatrick, just south of Touhy.
Construction Cost: \$200,359
MWRD Contribution: \$95,000
Status: Construction completed.

**GREEN ALLEY
IMPROVEMENTS IN RIVER
FOREST**

Contract: 23-IGA-08
Watershed: Lower Des Plaines

Location: River Forest, IL
Description: Reconstruction of two alleys using permeable pavers.
Construction Cost: \$531,495
MWRD Contribution: \$90,000
Status: Construction completed.

**MILLENNIUM PARK
PERMEABLE PARKING LOT
IN NORTHLAKE**

Contract: 23-IGA-07
Watershed: Lower Des Plaines
Location: Northlake, IL
Description: Reconstruction of two parking lots at Millennium Park using permeable pavers.
Construction Cost: \$372,469
MWRD Contribution: \$263,336
Status: Construction completed.

**STORM SEWERS AND
OUTFALL TO FLAGG CREEK
IN WESTERN SPRINGS**

Contract: 18-IGA-32
Watershed: Lower Des Plaines
Location: Western Springs, IL
Description: Construction of new storm sewer outfall to Flagg Creek located in/near Spring Rock Park to provide localized flood relief.
Construction Cost: \$3,200,000
MWRD Contribution: \$752,937
Status: Construction completed.

**FLOOD-PRONE PROPERTY
ACQUISITIONS IN
PALATINE TOWNSHIP**

Contract: 20-IGA-26
Watershed: Upper Salt Creek
Location: Palatine Township, IL
Description: The acquisition of one flood-prone property along Salt Creek that experiences severe and repetitive flooding.
Acquisition Cost: \$262,500
MWRD Contribution: \$131,250
Status: Property acquired. Project completed.

**ACQUISITION OF FLOOD-
PRONE PARCELS IN
MIDLOTHIAN**

Contract: 23-IGA-28
Watershed: Little Calumet
Location: Midlothian, IL
Description: Acquisition of one structure from the floodplain.
Acquisition Cost: \$162,500
MWRD Contribution: \$162,500
Status: Property has been acquired.

**UNDERGROUND
STORMWATER DETENTION
STORAGE FACILITY IN
SCHILLER PARK**

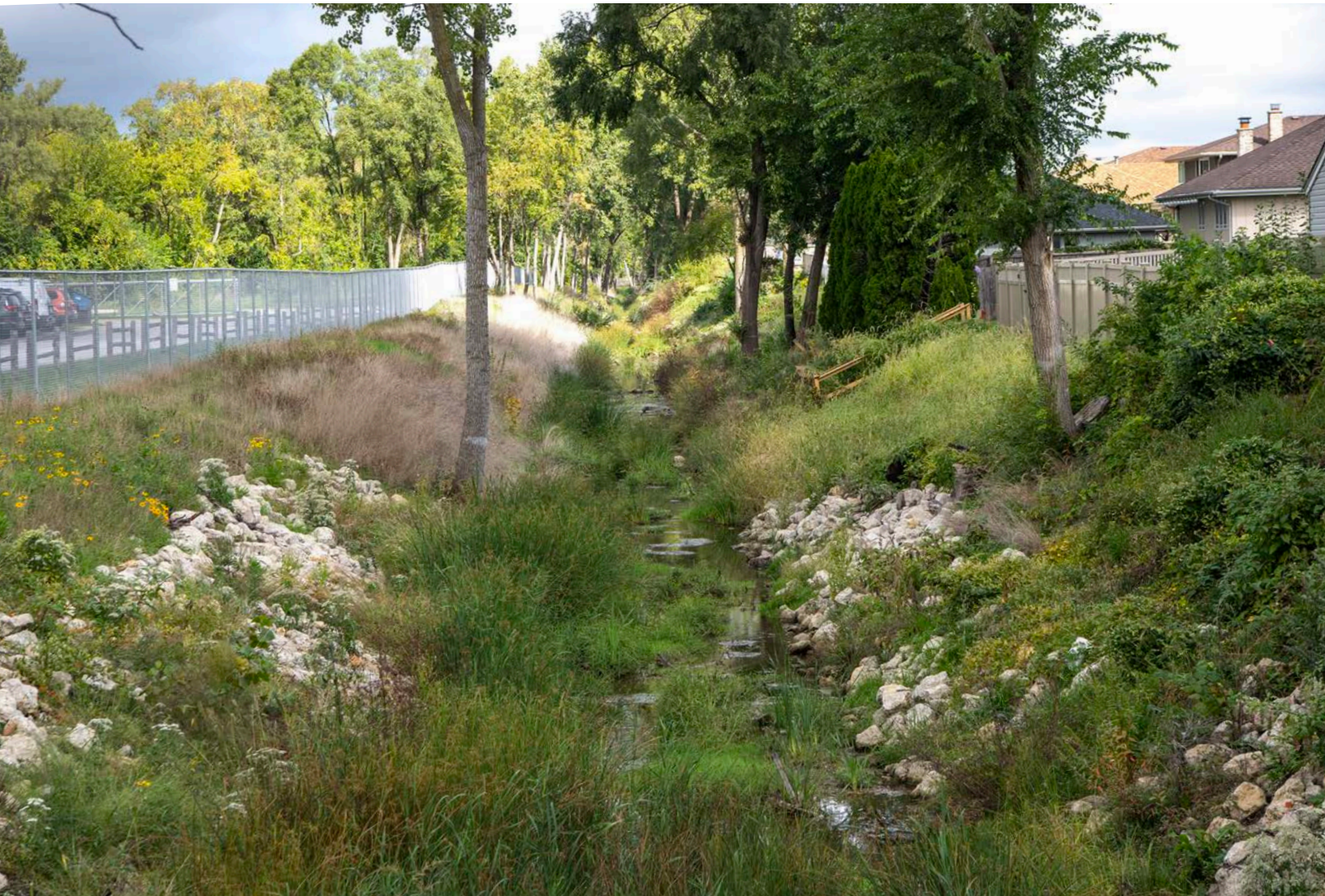
Contract: 21-167-5F
Watershed: Lower Des Plaines
Location: Schiller Park, IL
Description: Preliminary design of a proposed underground stormwater detention storage facility located at the southeast corner of Wesley Terrace and Seymour Avenue.
MWRD Contribution: \$136,600
Status: Preliminary design has been completed.

**NORTHLAKE FLOOD-
PRONE PROPERTY
ACQUISITION III**

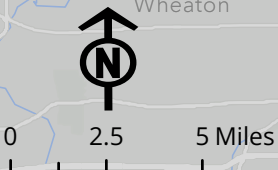
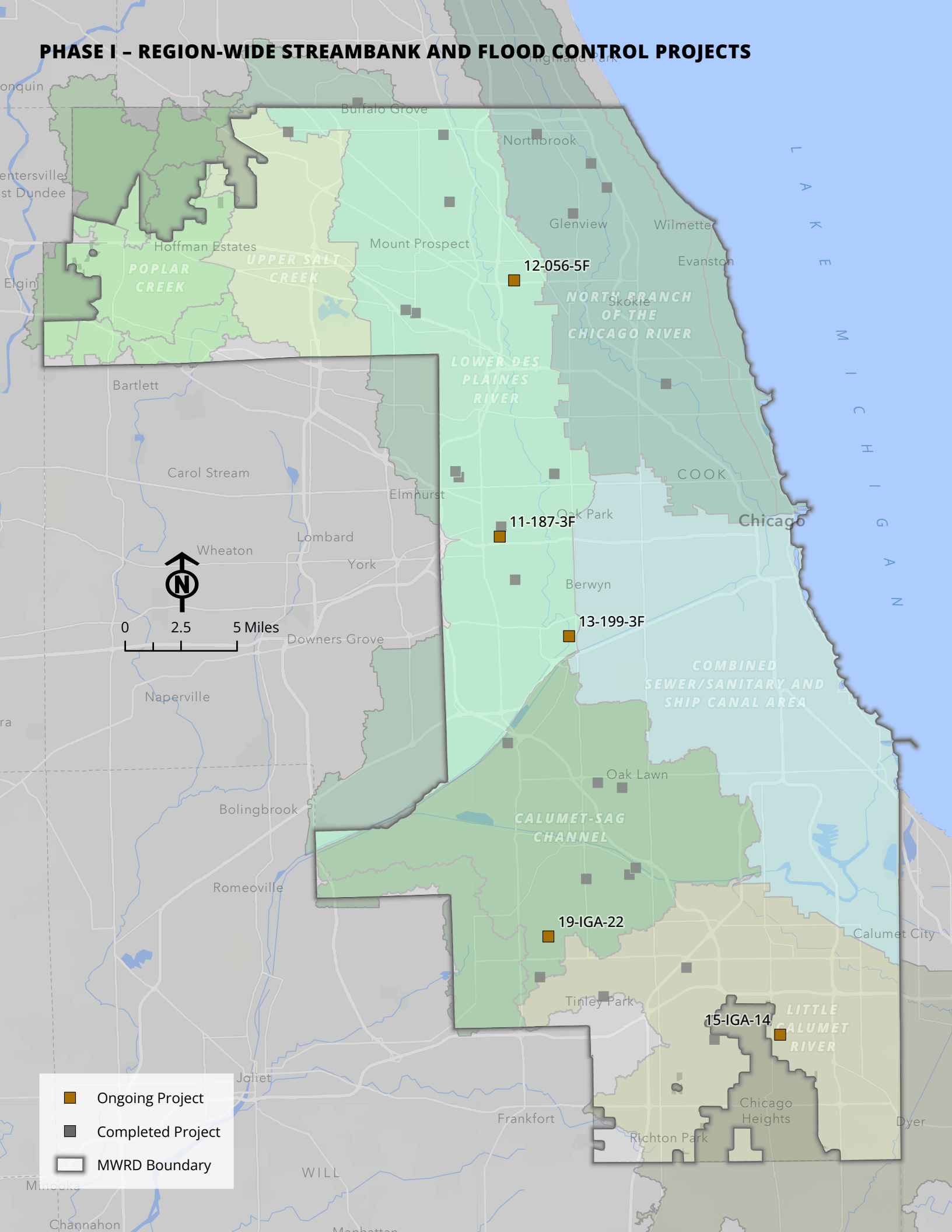
Contract: 21-IGA-25
Watershed: Lower Des Plaines
Location: Northlake, IL
Description: Purchase one flood-prone home.
Acquisition Cost: \$230,000
MWRD Contribution: \$230,000
Status: Project completed.




OPPOSITE: The MWRD stabilized the banks of the Crestwood Drainage Ditch, removed overgrown vegetation, seeded, and added capacity to the existing pipe culverts under Cal-Sag Road.

This permeable paver parking lot retrofit provides an estimated 110,700 gallons of stormwater storage each time it rains.



PHASE I - REGION-WIDE STREAMBANK AND FLOOD CONTROL PROJECTS



-  Ongoing Project
-  Completed Project
-  MWRD Boundary

PHASE I – REGION-WIDE STREAMBANK AND FLOOD CONTROL PROJECTS

One of the initial goals of the Stormwater Management Program was to develop [Detailed Watershed Plans](#) (DWPs) for each of the six planning watersheds in Cook County. The DWPs identify and prioritize regional stormwater projects based on a benefit to cost ratio. Projects are identified into two categories.

- 1) Streambank stabilization projects that address critical active streambank erosion threatening public safety, structures, and/or infrastructure.
- 2) Flood control projects that address regional overbank flooding through traditional measures such as stormwater detention reservoirs, levees, and conveyance improvements. The MWRD Board has approved over 30 regional projects moving forward to design and construction.

STREAMBANK STABILIZATION PROJECTS (PHASE I – REGIONAL)

The following is a detailed list of ongoing streambank stabilization projects. For projects completed in 2023, refer to page 6. Locations of both ongoing and completed streambank stabilization projects can be found on page 12.

STREAMBANK STABILIZATION ALONG TINLEY CREEK

Contract: 19-IGA-22

Watershed: Cal-Sag Channel

Location: Orland Park, IL

Description: Cost sharing agreement with the Village of Orland Park. Project will stabilize approximately 2,200 linear feet of Tinley Creek between 86th Avenue and Crystal Creek Drive and 2,800 linear feet between 151st Street and Oriole Court.

Estimated Construction

Cost: \$3,800,000

Status: IGA between the Village and the MWRD has been executed. The Village is finalizing design and easement acquisitions, and construction is expected to begin in 2025.

FLOOD CONTROL PROJECTS (PHASE I - REGIONAL)

The following is a detailed list of ongoing flood control projects. For projects completed in 2023, refer to page 6. Locations of both ongoing and completed flood control projects can be found on page 12.

ADDISON CREEK CHANNEL IMPROVEMENTS

Contract: 11-187-3F

Watershed: Lower Des Plaines

Location: Bellwood, IL

Description: Channel conveyance improvements in Northlake, Melrose Park, Stone Park, Bellwood, Westchester, and Broadview.

Estimated Construction

Cost: \$77,297,500

MWRD Contribution: \$67,314,384

Status: Construction scheduled to be completed in fall of 2026.



Addison Creek Channel project is designed to improve channel conveyance through six municipalities.



A view looking south from the new culvert under Cal-Sag Road in Crestwood, showing the improved Crestwood Drainage Ditch.

FLOOD CONTROL PROJECT ON FARMERS AND PRAIRIE CREEKS

Contract: 12-056-5F
Watershed: Lower Des Plaines
Location: Park Ridge and Maine Township, IL
Description: Flood storage and conveyance improvements along Prairie Creek, including channel modifications, detention expansion, and streambank stabilization.
Estimated Construction Cost: \$14,100,000
Status: Working on final design, expect to advertise project before the end of 2024 with construction starting in early 2025.

LYONS LEVEE FLOOD CONTROL IMPROVEMENTS

Contract: 13-199-3F
Watershed: Lower Des Plaines
Location: Lyons, IL
Description: Restoration and improvement of the Lyons Levee, located on the east bank of the Des Plaines River, to provide flood protection and prevent overtopping with severe storms.
Estimated Construction Cost: \$2,695,119
MWRD Contribution: TBD
Status: In design process. Scheduled for completion February 2025.

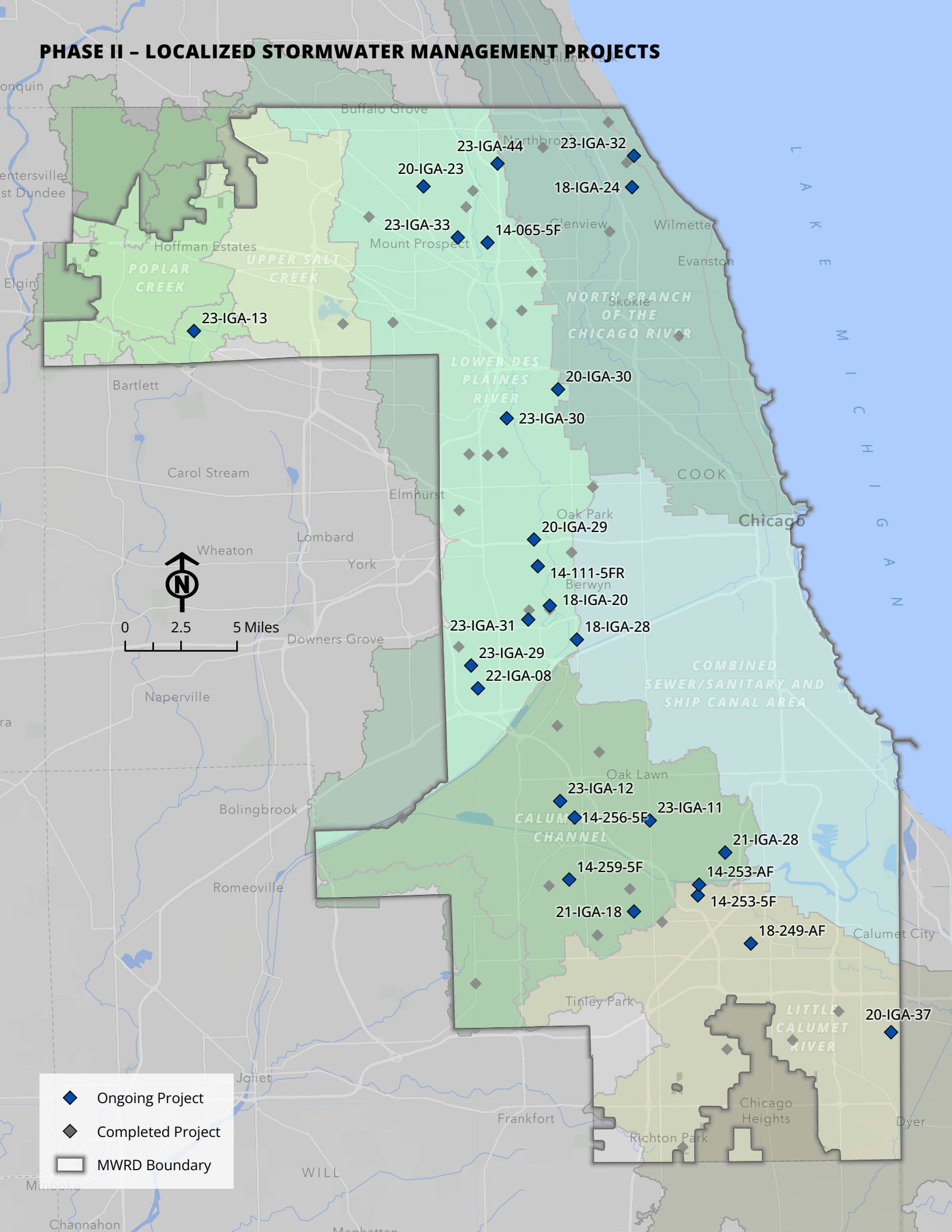
LEVEE ALONG THORN CREEK AT ARQUILLA PARK

Contract: 15-IGA-14
Watershed: Little Calumet
Location: Glenwood, IL
Description: Construction of a levee at Arquilla Park to protect residential structures from overbank flooding.
Estimated Construction Cost: \$3,494,340
MWRD Contribution: \$3,483,000
Status: IGA has been executed. The project is in the design phase. Construction is expected to begin in summer 2024.

OPPOSITE: Native plantings and stabilized banks of the Crestwood Drainage Ditch protect 82 homes and businesses from flooding, improve infrastructure safety and aesthetics for Nathan Hale School property, and boost water quality.



PHASE II - LOCALIZED STORMWATER MANAGEMENT PROJECTS



PHASE II – LOCALIZED STORMWATER MANAGEMENT

In 2014, the Illinois State Legislature expanded the authorities of the MWRD's stormwater management legislation to address local drainage and flooding problems, and to acquire flood-prone property from property owners on a voluntary basis. These legislative changes form the basis of the MWRD's Phase II Stormwater Management Program. The MWRD also conducted Stormwater Master Plan studies in priority areas to address flooding by identifying potential projects and funding opportunities.

STORMWATER PARTNERSHIP PROGRAM

The MWRD initiated the [Stormwater Partnership Program](#) to directly support municipalities throughout Cook County in identifying, funding, and building projects that address localized flooding and drainage concerns. These projects utilize a variety of traditional engineered solutions such as localized detention, upsizing critical storm sewers and culverts, pumping stations, and establishing drainage way, alongside green infrastructure (GI).

Projects are prioritized on their ability to reduce localized flooding and the number of structures benefitted by the project amongst other criteria. Projects are identified as either Shovel Ready Projects with a near finalized design, or [Conceptual Projects](#) where flooding has been identified but no engineering analysis has been performed. Selected Shovel Ready Projects will enter into a cost-share agreement to build the project. The MWRD assists Conceptual Projects with identifying flood control alternatives through a preliminary engineering study.

The MWRD and the partnering agency execute an IGA to facilitate the project, with long term maintenance responsibilities assigned to the partnering agency. Design and/or construction of each installation is monitored by the MWRD. After completion, the MWRD inspects the project installation, ensuring maintenance is in line with the project's operation and maintenance plan.

Based on the initial Phase II outreach by the MWRD starting in September 2013, dozens of projects were initially approved by the MWRD Board. The approved projects that resulted from the initial outreach and subsequent Call for Projects are distributed across Cook County and include a wide variety of stormwater solutions.

In 2020, the Phase II Program became the Stormwater Partnership Program to better reflect the fact that the resulting projects are a partnership between the MWRD and government agencies. Since 2013, 61 projects have been either completed or are ongoing. In late 2023, the MWRD solicited both Shovel Ready and Conceptual Projects through a call for Stormwater Partnership Program applications. It is anticipated selections will be finalized in Summer 2024.

LOCALIZED FLOODING PROJECTS (PHASE II)

The following is a detailed list of ongoing localized flooding projects. For 2023 completed projects, refer to page 6. Locations of both ongoing and completed localized flooding projects can be found on page 16.

DIVERSION CHANNEL FOR FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS

Contract: 14-253-AF

Watershed: Little Calumet

Location: Robbins, IL

Description: Flood reduction through creation of naturalized wetland detention and diversion channel. The project will reduce flood damages for over 92 structures.

Estimated Construction

Cost: \$11,000,000



A southward view of construction for the MWRD's stormwater project in Robbins on the edge of the Cal-Sag Channel.

MWRD Contribution:

\$11,000,000

Status: Substantial completion expected in Spring 2024.

SPRINGDALE DRAINAGE IMPROVEMENT IN WESTERN SPRINGS

Contract: 23-IGA-29

Watershed: Lower Des Plaines

Location: Western Springs, IL

Description: Construction of a supplemental storm sewer system and storage basin for flood mitigation, benefiting approximately 20 homes and two local roads.

Estimated Construction

Cost: \$5,300,000

MWRD Contribution:

\$1,000,000

Status: Construction anticipated to begin late Summer 2024.

FLOOD CONTROL PROJECT ON CENTRAL ROAD FROM DES PLAINES RIVER TO GLENWOOD LANE

Contract: 14-065-5F

Watershed: Lower Des Plaines

Location: Des Plaines, IL

Description: Upsize storm sewer capacity and construct detention basin.

Estimated Construction

Cost: \$30,000,000

MWRD Contribution: TBD

Status: Working on final design, estimated to go out to bid in 2025.

FLOOD CONTROL ON CAL-SAG TRIBUTARY C IN BREMEN TOWNSHIP, MIDLOTHIAN, AND CRESTWOOD

Contract: 21-IGA-18

Watershed: Cal-Sag Channel

Location: Midlothian, IL

Description: Reconstruction and improvements of channel, culvert replacement and stabilization to reduce flooding along Cal-Sag Tributary C in the vicinity of 143rd Street and Linder Avenue.

Estimated Construction

Cost: \$3,780,000

MWRD Contribution:

\$3,780,000

Status: IGA negotiation and evaluation.

SOUTH GREEN BAY ROAD STORMWATER IMPROVEMENT

Contract: 23-IGA-32

Watershed: North Branch

Location: Glencoe, IL

Description: Upsizing and replacement of storm sewer around South Green Bay Road.

Estimated Construction

Cost: \$4,239,077

MWRD Contribution: \$1,000,000

Status: The IGA has been executed. Construction is expected to begin in Spring 2024.

WENONAH AVENUE BASIN FLOODING RELIEF IMPROVEMENTS

Contract: 18-IGA-28

Watershed: Combined Sewer/ Sanitary and Ship Canal

Location: Forest View, IL

Description: Construction of storm sewers and outfall.

Estimated Construction

Cost: \$1,900,000

MWRD Contribution:

\$1,350,000

Status: Construction is expected to start in Spring 2024 and be completed by Fall 2024.

FLOOD CONTROL PROJECT ON 1ST AVENUE FROM ROOSEVELT ROAD TO CERMAK ROAD

Contract: 14-111-5F

Watershed: Lower Des Plaines

Location: Proviso Township, IL

Description: Replacement of existing storm sewer system to increase the 1st Avenue drainage conveyance capacity; installation of multiple bioswales and underdrains along Cook County Forest Preserve areas.

Estimated Construction

Cost: \$10,195,300

Status: Construction to complete Spring/Summer 2024.

ACACIA ACRES FLOOD RELIEF PROJECT

Contract: 22-IGA-08

Watershed: Lower Des Plaines

Location: Lyons Township, IL

Description: Construction of a detention facility along with conveyance improvements to reduce flooding.

Estimated Construction

Cost: \$724,355

MWRD Contribution: \$724,355

Status: Construction to complete in Spring 2024.

FLOOD CONTROL ON MIDLOTHIAN CREEK IN ROBBINS

Contract: 14-253-5F

Watershed: Little Calumet

Location: Robbins, IL

Description: Midlothian Creek channel improvements, construction of new diversion channel and stormwater park for detention and recreation.

Estimated Construction

Cost: \$18,132,446

MWRD Contribution:

\$18,132,446

Status: Construction scheduled to start May 2024 and end November 2025.

FLOOD CONTROL IN WORTH WOODS SUBDIVISION

Contract: 14-256-5F

Watershed: Cal-Sag Channel

Location: Worth, IL

Description: Construction of a swale and a 24-inches to 72-inches storm sewer, in the vicinity of 112th Place and Beloit Avenue, with an outlet to Lucas-Berg Quarry.

Estimated Construction

Cost: \$4,347,083

MWRD Contribution:

\$4,347,083



A view to the south shows excavation and placement of pipe during construction along 1st Avenue near Miller Meadow Nature Preserve in Forest Park.

Status: Construction due to start February 2025 and be completed May 2026.

SPRINGSGUTH STREAM CORRIDOR IMPROVEMENTS

Contract: 23-IGA-13

Watershed: Poplar Creek

Location: Hanover Park, IL

Description: Proposal to grade and stabilize streambank, install new stormwater outlets, and restore existing wetlands, buffers, woodlands, and prairies.

Estimated Construction

Cost: \$3,831,545

MWRD Contribution: \$1,250,000

Status: Construction 75 percent complete. Project expected to be completed in summer 2025.

FLOOD CONTROL AT 131ST STREET AND CYPRESS LANE

Contract: 14-259-5F

Watershed: Cal-Sag Channel

Location: Palos Heights, IL

Description: Installation of swale at property demolition site and new storm sewer and outfall to Navajo Creek.

Estimated Construction

Cost: \$502,824

MWRD Contribution: \$502,824

Status: Construction due to start October 2024 and be completed January 2025.

FLOOD CONTROL FOR THE WASHINGTON STREET AREA IN BLUE ISLAND

Contract: 21-IGA-28

Watershed: Cal-Sag Channel

Location: Blue Island, IL

Description: Construction of a new sanitary sewer line and pumps to move excess stormwater to higher elevation along Washington Avenue from 119th Place to 121st Street.

Estimated Construction

Cost: \$5,700,000

Status: Negotiating IGA. Design expected to start in Spring/Summer 2024, and construction expected to start in Summer 2025.

SCHILLER PARK DRAINAGE IMPROVEMENTS

Contract: 23-IGA-30

Watershed: Lower Des Plaines

Location: Schiller Park, IL

Description: Extension of storm sewers along multiple local roads to redirect stormwater from the combined sewer system to an existing storm sewer on Seymour Avenue.

Estimated Construction

Cost: \$1,900,000

MWRD Contribution: \$1,000,000

Status: Construction is anticipated to start in May 2024.



The Willow Road Flood Control Project is designed to provide relief for Prospect Heights residents who have not been able to enter or exit their homes on rainy days.

**CITATION LAKE
STORMWATER
IMPROVEMENTS**

Contract: 23-IGA-44
Watershed: Lower Des Plaines
Location: Northfield Township, IL
Description: Installation of stormwater storage vaults and new storm sewers.
Estimated Construction Cost: \$3,000,000
MWRD Contribution: \$3,000,000
Status: IGA negotiation and evaluation.

**BURLINGTON AVENUE
STORM SEWER
IMPROVEMENTS**

Contract: 23-IGA-31
Watershed: Lower Des Plaines
Location: Brookfield, IL
Description: Installation of new storm sewers and an outfall to Salt Creek, along with the construction of drainage structures and conveyances.

Estimated Construction

Cost: \$4,266,599
MWRD Contribution: \$1,075,745
Status: Construction anticipated to begin in Spring 2024.

**STORMWATER STORAGE
AT POLARIS INTERMEDIATE
SCHOOL**

Contract: 23-IGA-11
Watershed: Cal-Sag Channel
Location: Oak Lawn, IL
Description: Construction of stormwater management improvements including a detention facility and upsizing storm sewers.
Estimated Construction Cost: \$3,500,000
MWRD Contribution: \$3,500,000
Status: Working on final design. Project award scheduled for Fall 2024.

**GROVELAND AVENUE LEVEL
IMPROVEMENTS**

Contract: 18-IGA-20
Watershed: Lower Des Plaines
Location: Riverside, IL
Description: MWRD to provide non-federal share of design and construction costs for levee improvements, pumping station, raised street through an IGA with Village of Riverside, which is partnering with the Army Corps of Engineers.
Estimated Construction Cost: TBD
MWRD Contribution: TBD
Status: in design phase.

**CRAIG MANOR DRAINAGE
SYSTEM IMPROVEMENTS**

Contract: 23-IGA-33
Watershed: Lower Des Plaines
Location: Des Plaines, IL
Description: Construction of drainage system improvements, including underground detention

facility, relief sewers to convey flow into the detention facility and outlet storm sewers to convey flow out of the detention facility.

Estimated Construction

Cost: \$1,000,000

MWRD Contribution: \$1,000,000

Status: Working on final design.

Project is scheduled to be awarded in June 2024.

ROBERTS ROAD DRAINAGE IMPROVEMENTS

Contract: 23-IGA-12

Watershed: Cal-Sag Channel

Location: Palos Hills, IL

Description: Flood reduction along Roberts Road, between 99th Street and 103rd Street.

Estimated Construction

Cost: \$350,000

MWRD Contribution: \$350,000

Status: Waiting for City to receive funding. Design scheduled to start in Summer 2024 and construction to start in 2025.

HIBBARD ROAD FOREST PRESERVE WETLAND AND DUKE CHILDS STORAGE PROJECT

Contract: 18-IGA-24

Watershed: North Branch

Location: Winnetka, IL

Description: Construction of wetland and underground stormwater storage area near the Skokie River.

Estimated Construction

Cost: \$25,434,569

MWRD Contribution: \$500,000

Status: Construction scheduled to be completed by end of 2024.

FLOOD CONTROL PROJECT ON WILLOW ROAD AT MCDONALD CREEK TRIBUTARY A

Contract: 20-IGA-23

Watershed: Lower Des Plaines

Location: Prospect Heights, IL

Description: Elevation of Willow Road and local roads to reduce flooding by extreme storms and installation of culverts and storage.

Estimated Construction

Cost: \$2,957,798

MWRD Contribution: \$1,774,679

Status: Construction due to start Summer 2024 and finish Summer 2025.

VAN BUREN AND 5TH AREA STORM RELIEF PROJECT

Contract: 20-IGA-29

Watershed: Lower Des Plaines

Location: Maywood, IL

Description: Installation of new storm sewers to alleviate overland flooding and basement backups.

Estimated Construction Cost:

\$7,299,727

MWRD Contribution: \$4,000,000

Status: Construction to complete in Fall 2024.

ORIOLE AVENUE FLOOD MITIGATION PROJECT

Contract: 20-IGA-30

Watershed: Lower Des Plaines

Location: Harwood Heights, IL

Description: Installation of an underground stormwater detention culvert and larger storm sewers.

Estimated Construction

Cost: \$3,146,754

MWRD Contribution: \$411,600

Status: Project is under construction and anticipated to be completed in Spring 2024.

FLANAGIN SUBDIVISION: NORTH CREEK FLOOD RELIEF PROJECT

Contract: 20-IGA-37

Watershed: Little Calumet

Location: Lansing, IL

Description: Construction of a new culvert for North Creek, separate from subdivision drainage to relieve backwater flooding.

Estimated Construction

Cost: \$1,600,000

MWRD Contribution: \$1,600,000

Status: Construction to be complete in Spring 2024.

CENTRAL PARK STORMWATER DETENTION BASIN AND SEPARATE STORM SEWER IMPROVEMENTS

Contract: 18-249-AF

Watershed: Little Calumet

Location: Harvey, IL

Description: Construction of a 23-acre-foot stormwater detention basin on the site of a future park in the City of Harvey. Construction of a separated storm sewer to convey stormwater to the proposed basin and allow discharge into the Wood Street storm sewer system.

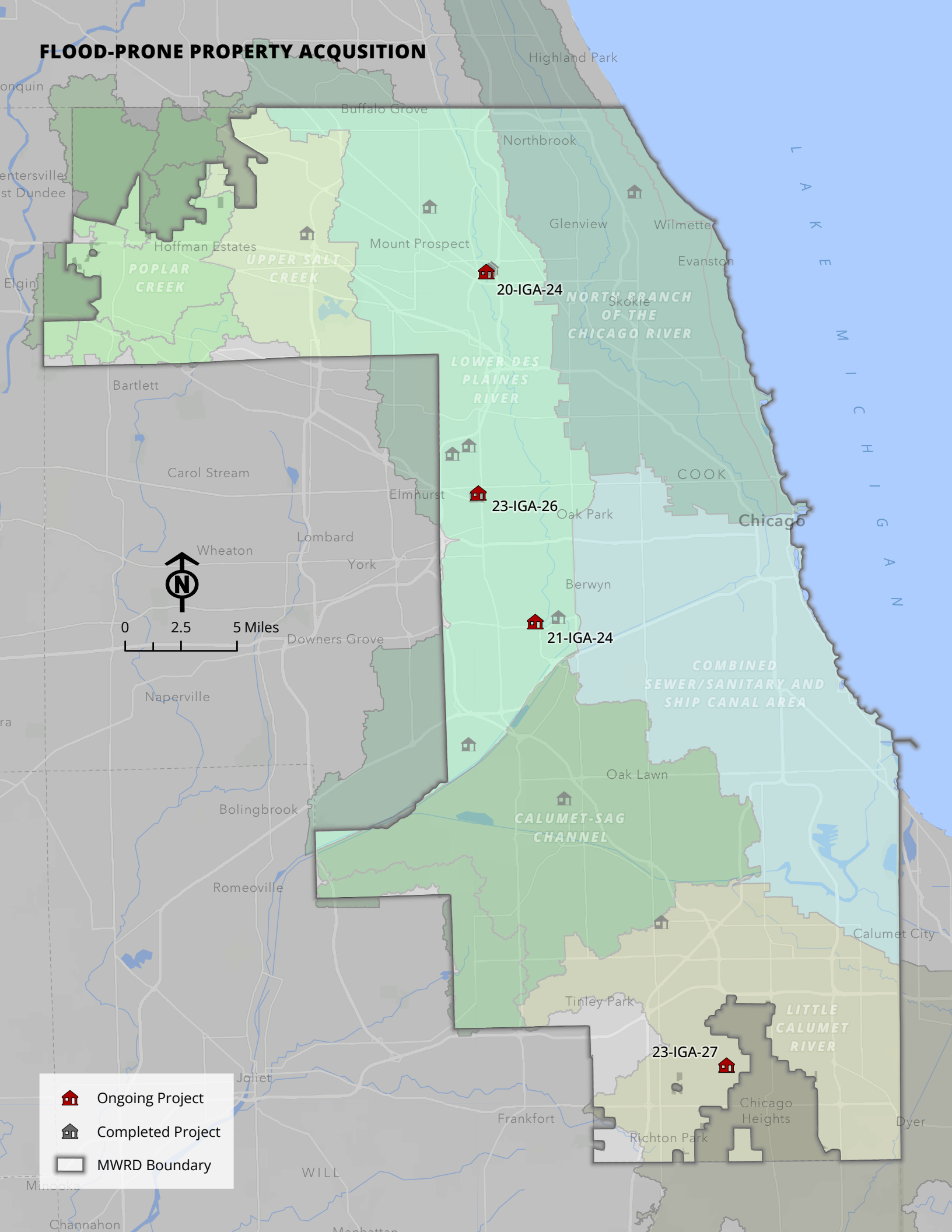
Estimated Construction Cost:

\$9,848,774

MWRD Contribution: \$9,848,774

Status: Completing final design. Construction anticipated to begin in early 2025.

FLOOD-PRONE PROPERTY ACQUISITION



VOLUNTARY FLOOD-PRONE PROPERTY ACQUISITION

On August 7, 2014, the MWRD Board adopted a policy on the selection and prioritization of [projects](#) for acquiring voluntary flood-prone property. This program is comprised of three distinct components:

- **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.
- **MWRD Initiated Program:** In communities where the MWRD Board approved capital projects from the MWRD's DWPs, should the cost of a property acquisition alternative be less than the capital project while providing equivalent benefits, the acquisition alternative will be pursued.
- **Local Government Application Program:** The MWRD will consider applications directly from local governments requesting property acquisition of specific flood-prone structures.

Since 2017, the MWRD solicited applications from municipalities and townships for assistance with the acquisition of flood-prone structures located throughout Cook County. The MWRD has entered into IGAs with several municipalities and the Cook County Land Bank Authority and has acquired 115 flood-prone properties at the end of 2023. Upon acquisition, the structures are removed and deed restrictions are placed on the acquired properties, requiring them to remain as open spaces in perpetuity.

VOLUNTARY FLOOD-PRONE PROPERTY ACQUISITION PROJECTS

The following is a detailed list of ongoing flood-prone property acquisition projects. For 2023 completed projects, refer to page 6. Locations of both ongoing and completed flood prone property acquisition projects can be found on page 22.

ACQUISITION OF FLOOD-PRONE PROPERTIES IN LYONS

Contract: 21-IGA-24

Watershed: Lower Des Plaines

Location: Lyons, IL

Description: Acquisition and demolition of up to 26 homes in the floodway and floodplain.

Estimated Acquisition

Cost: \$3,000,000

MWRD Contribution: \$3,000,000

Status: Four properties have been acquired.

DES PLAINES IV FLOOD-PRONE PROPERTY ACQUISITIONS

Contract: 20-IGA-24

Watershed: Lower Des Plaines

Location: Des Plaines, IL

Description: The MWRD to share costs with City of Des Plaines to purchase 19 flood-prone homes near the Des Plaines River.

Estimated Acquisition

Cost: \$5,000,000

MWRD

Contribution: \$5,000,000

Status: Four of the 19 properties have been acquired.

ACQUISITION OF A FLOOD-PRONE PARCEL IN FLOSSMOOR

Contract: 23-IGA-27

Watershed: Little Calumet

Location: Flossmoor, IL

Description: Acquisition and removal of one structure from the floodplain with property to be maintained as open space.

Estimated Acquisition

Cost: \$115,000

MWRD Contribution: \$115,000

Status: IGA negotiations are ongoing. Acquisition is anticipated to occur in 2024.

ACQUISITION OF FLOOD-PRONE PARCELS IN NORTHLAKE IV

Contract: 23-IGA-26

Watershed: Lower Des Plaines

Location: Northlake, IL

Description: Purchase of two flood prone properties, converting them to open space.

Estimated Acquisition

Cost: \$550,000

MWRD Contribution: \$550,000

Status: Northlake is working on voluntary acquisition of the two properties.

STORMWATER MASTER PLANNING

Under Phase II of the MWRD's Stormwater Management Program, five master plan pilot studies were performed, one in each of the Council of Government (COG) service areas and one in the City of Chicago. The locations of these pilot studies as determined by the respective COGs and the City of Chicago, included the Little Calumet/Cal-Sag Channel drainage areas, the Village of Northbrook and surrounding unincorporated areas, the Roberts Road drainage area, the Village of Harwood Heights, and the City of Chicago's 8th Ward and surrounding area. Upon completion of these studies in 2017, a standard approach, using lessons learned from the pilot studies, for performing additional master plans was developed. Six additional study areas were identified and prioritized in 2019: Butterfield Creek, North Creek and Deer Creek, Weller Creek and Willow Creek, South Suburbs, Chicago West, and Chicago South. The scope of these studies included analysis of existing flooding issues, development of concept level alternative solutions, and review of potential funding opportunities for implementing stormwater improvements. While these studies will provide meaningful recommendations for reducing the impact of flooding issues, the MWRD realized that expanding this approach for master planning countywide could take several decades.

A NEW AND INNOVATIVE APPROACH

Because master plans, developed through a traditional approach, can have a limited shelf-life due to changing conditions such as climate, development, and community priorities, there is a narrow window of time they will remain relevant. This approach to stormwater planning can result in static solutions being developed for dynamic conditions.

In order for the MWRD to develop master planning that is flexible and dynamic, an innovative approach is needed to be more compatible with each community's needs and timeline for addressing their evolving stormwater issues. The MWRD found that the WMO offered an approach that could serve as a useful planning tool to apply across the entire county. The basic principle of the WMO is to ensure that volume control and/or detention is created for new development to abate the negative impacts of stormwater runoff. By adopting this WMO principle, an estimate of volume needed throughout the county's subwatersheds and sewersheds could be established and serve as the foundation of a planning tool that places each community's stormwater needs on common ground while addressing changing conditions.

Dubbed the Volumetric Approach, this set of dynamic planning tools can be used to focus on areas where flooding is more likely and applied countywide in a much shorter timeframe. The Volumetric Approach includes building an online platform to allow communities and other agencies to easily access information from a Geographic Information System (GIS) database. This database can be easily adapted to climate change and development trends with each community's changing priorities and timelines.

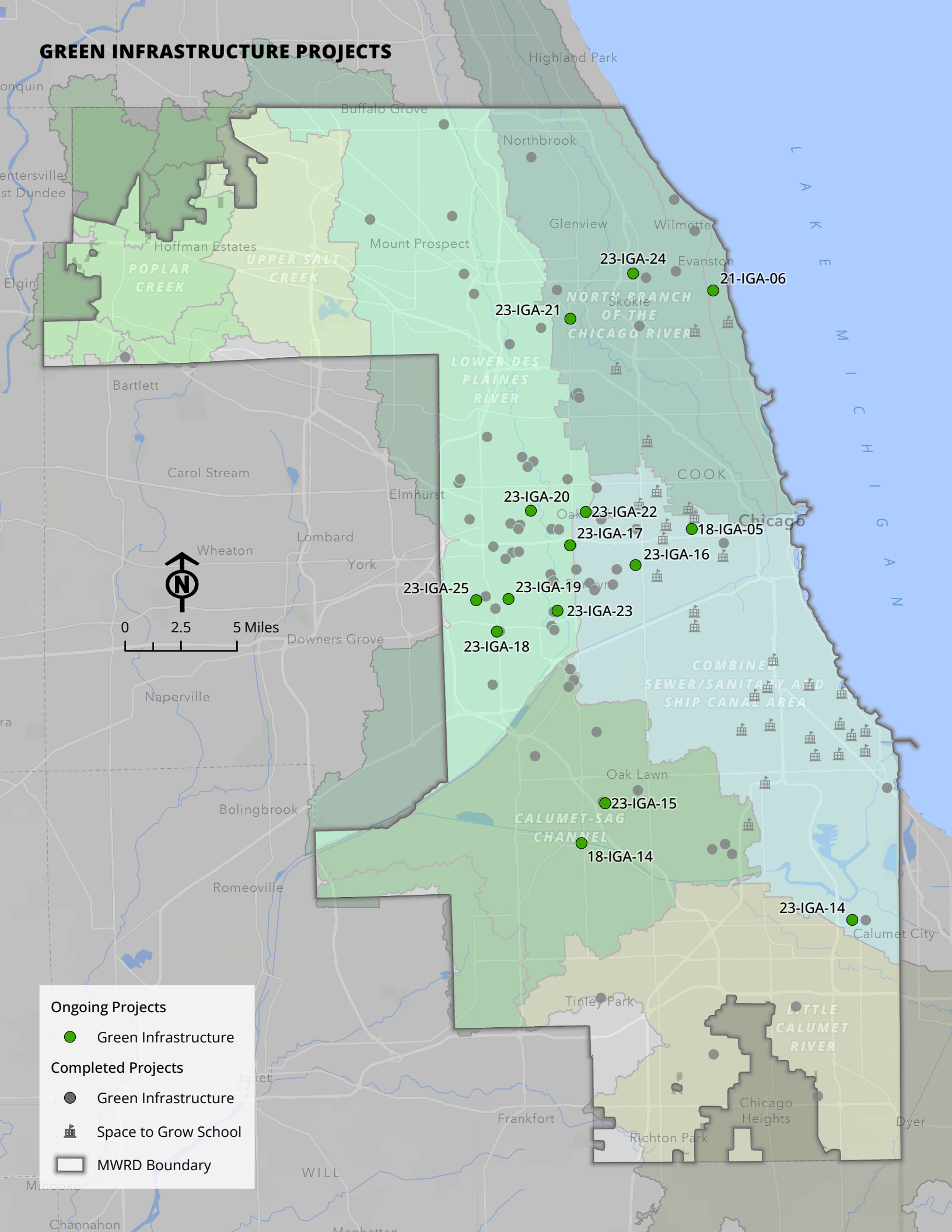
Initially, this approach will allow the MWRD to answer two key questions about urban flooding: Where is it most likely to occur? And how much volume an area is deficient in storage? Development of this tool includes a series of countywide maps and data metrics that are being created to identify where potential flood problem areas are located; opportunities for mitigation projects; priority areas for actionable next steps.

The Volumetric Approach for Stormwater Master Planning is expected to achieve more results in a shorter timeframe than traditional planning approaches. Based on the foundation of the GIS data, additional tools could be incorporated to reduce investment in studies and planning and be an invaluable asset to conceptualize and implement projects. Examples of additional data that could be incorporated to make this tool even more powerful include local storm and combined sewer conveyance information, flooding data collected by past studies, and location of planned infrastructure projects, amongst other relevant community data that align with the goals and objectives of MWRD's Stormwater Management Program.

In addition to flood reduction and volume control, green infrastructure (GI) benefits include providing butterflies and other pollinators with urban habitats.



GREEN INFRASTRUCTURE PROJECTS



Ongoing Projects

● Green Infrastructure

Completed Projects

● Green Infrastructure

🏫 Space to Grow School

▭ MWRD Boundary

GREEN INFRASTRUCTURE

Green Infrastructure (GI) focuses on engineered systems that capture and manage precipitation where it falls rather than traveling through conventional stormwater systems. By addressing the increase of impervious area due to land development, GI can reduce combined sewer discharges, localized flooding and stormwater impacts in an area. GI includes natural systems which use vegetation, such as bioswales and rain gardens, to manage rainfall. GI also includes manufactured solutions such as **rain barrels**, permeable pavement, and rainwater harvesting. Established in 2014, the Green Infrastructure Program seeks to increase the acceptance and investment of GI throughout Cook County through numerous partnerships.

GREEN INFRASTRUCTURE PARTNERSHIP PROGRAM

The MWRD introduced the **Green Infrastructure Partnership Program** to scale its investment into GI. The program seeks to partner with local communities and public agencies throughout Cook County to fund and build GI projects. These projects vary in size and scope and can include roadside bioswales and rain gardens, green roofs, permeable pavement alleys, green streetscapes, and eco-orchards.

The program is available to government organizations within the MWRD's corporate boundaries. Projects are prioritized on their ability to capture and store water (measured as design retention capacity or DRC), flood risk, and structures benefitted by the GI amongst other criteria. The MWRD and a partnering agency execute an IGA to facilitate the project, with long term maintenance responsibilities assigned to the partnering agency. Design and construction of each installation are monitored by the MWRD to optimize benefits. After completion, the MWRD inspects the installation, ensuring maintenance is in line with the project's operation and maintenance plan.

In 2017 through 2022, 93 projects were selected. The projects selected in those years that have since completed construction have provided a total of approximately 6.8 million gallons of DRC.

In 2023, an additional 12 projects were selected from the round of applications that were reviewed in 2022. These 12 projects will provide a combined estimated DRC of 1,037,500 gallons. In late 2023, the MWRD again solicited GI projects through a call for Green Infrastructure Partnership Program applications. It is anticipated selections will be finalized in Spring 2024.

The following is a list of GI ongoing projects scheduled for construction in 2024. For completed projects, refer to page 6. Locations of both ongoing and completed GI projects can be found on page 24.



A cabbage white butterfly enjoys the purple aster blooms in the native planting beds at Schuth's Grove.

Permeable pavers were used to replace two parking lots in Countryside at Countryside Park.



GARFIELD PARK COMMUNITY ECO ORCHARD IN CHICAGO

Contract: 18-IGA-05

Watershed: Combined Sewer/
Sanitary and Ship Canal Area

Location: Chicago, IL

Description: Divert stormwater to areas with native plantings at vacant City-owned land on 5th Avenue between Mozart Avenue and Kedzie Avenue.

Estimated Construction

Cost: \$900,000

MWRD Contribution: \$500,000

Status: Construction anticipated to begin in Summer 2024.

LAKE KATHERINE COMMUTER PARKING LOT IN PALOS HEIGHTS

Contract: 18-IGA-14

Watershed: Cal-Sag Channel

Location: Palos Heights, IL

Description: Installation of a new permeable parking lot and bioswales at Lake Katherine Nature Center.

Estimated Construction

Cost: \$1,129,025

MWRD Contribution: \$184,000

Status: Construction anticipated in Summer 2024.

MAIN STREET IMPROVEMENTS PROJECT IN EVANSTON

Contract: 21-IGA-06

Watershed: North Branch

Location: Evanston, IL

Description: Reconstruction of parking lanes along Main Street using permeable pavers.

Estimated Construction

Cost: \$430,000

MWRD Contribution: \$322,500

Status: Construction anticipated to begin in Spring 2024.

EAST POLICE DEPARTMENT PERMEABLE PAVER PARKING LOT PROJECT IN CHICAGO RIDGE

Contract: 23-IGA-15

Watershed: Cal-Sag Channel

Location: Chicago Ridge, IL

Description: Reconstruction of a portion of one parking lot using permeable pavers.

Estimated Construction

Cost: \$501,925

MWRD Contribution: \$251,000

Status: Scheduled for construction in 2024.

GREEN ALLEYS PROJECT 2 IN CALUMET CITY

Contract: 23-IGA-14

Watershed: Combined Sewers/
Sanitary and Ship Canal

Location: Calumet City, IL

Description: Reconstruction of four alleys using permeable pavers.

Estimated Construction

Cost: \$777,351

MWRD Contribution: TBD

Status: Construction anticipated to begin in Summer 2024.

GREEN INFRASTRUCTURE ALLEY PAVING IMPROVEMENTS 2 IN CICERO

Contract: 23-IGA-16

Watershed: Combined Sewers/
Sanitary and Ship Canal

Location: Cicero, IL

Description: Repavement of two existing alleys using permeable pavers.

Estimated Construction

Cost: \$621,000

MWRD Contribution: \$355,000

Status: IGA is being finalized.

Project is expected to be advertised in Spring 2024 with construction and completion of the project in Summer 2024.

GREEN ALLEY PROJECT IN FOREST PARK

Contract: 23-IGA-17

Watershed: Lower Des Plaines

Location: Forest Park, IL

Description: Reconstruction of two alleys using permeable pavers.

Estimated Construction

Cost: \$740,120

MWRD Contribution: \$494,000

Status: Construction anticipated to begin in Spring 2024.

PARKING LOT 3 GREEN INFRASTRUCTURE RETROFIT IN LA GRANGE

Contract: 23-IGA-18

Watershed: Lower Des Plaines

Location: La Grange, IL

Description: Reconstruction of one parking lot using permeable pavers.

Estimated Construction

Cost: \$406,489

MWRD Contribution: \$179,668

Status: Construction anticipated to begin in Spring 2024.

GREEN ALLEY PROJECT IN LA GRANGE PARK

Contract: 23-IGA-19

Watershed: Lower Des Plaines

Location: La Grange Park, IL

Description: Reconstruction of two alleys using permeable pavers.

Estimated Construction Cost:

\$504,325

MWRD Contribution: \$249,137

Status: Construction anticipated to begin in Spring 2024.

GREEN INFRASTRUCTURE ALLEY IMPROVEMENTS 2 IN MAYWOOD

Contract: 23-IGA-20

Watershed: Lower Des Plaines

Location: Maywood, IL

Description: Reconstruction of five alleys using permeable pavers.

Estimated Construction

Cost: \$999,403

MWRD Contribution: \$662,000

Status: Construction anticipated to begin in Spring 2024.

MILWAUKEE AVENUE GREEN ALLEY IN NILES

Contract: 23-IGA-21

Watershed: North Branch

Location: Niles, IL

Description: Reconstruction of one alley using permeable pavers.



Permeable pavers were used to replace two parking lots in Countryside at Countryside Park.

Estimated Construction

Cost: \$211,338
MWRD Contribution: \$134,411
Status: Construction is expected to begin in Summer 2024.

GREEN ALLEYS AND PARKING LOT 10 PROJECT IN OAK PARK

Contract: 23-IGA-22
Watershed: Combined Sewers/ Sanitary and Ship Canal
Location: Oak Park, IL
Description: Reconstruction of four alleys and one parking lot using permeable pavers.

Estimated Construction Cost: \$1,243,302
MWRD Contribution: \$500,000
Status: IGA for project is being finalized. Project is expected to be advertised in Spring 2024 with construction and completion of the project in Summer 2024.

COMMUTER LOT 8 GREEN PARKING LOT IN RIVERSIDE

Contract: 23-IGA-23
Watershed: Lower Des Plaines
Location: Riverside, IL
Description: Reconstruction of one parking lot using permeable pavers.

Estimated Construction Cost: \$442,200
MWRD Contribution: TBD
Status: Construction anticipated to begin in Summer 2024.

GREEN ALLEY PROGRAM 2 IN SKOKIE

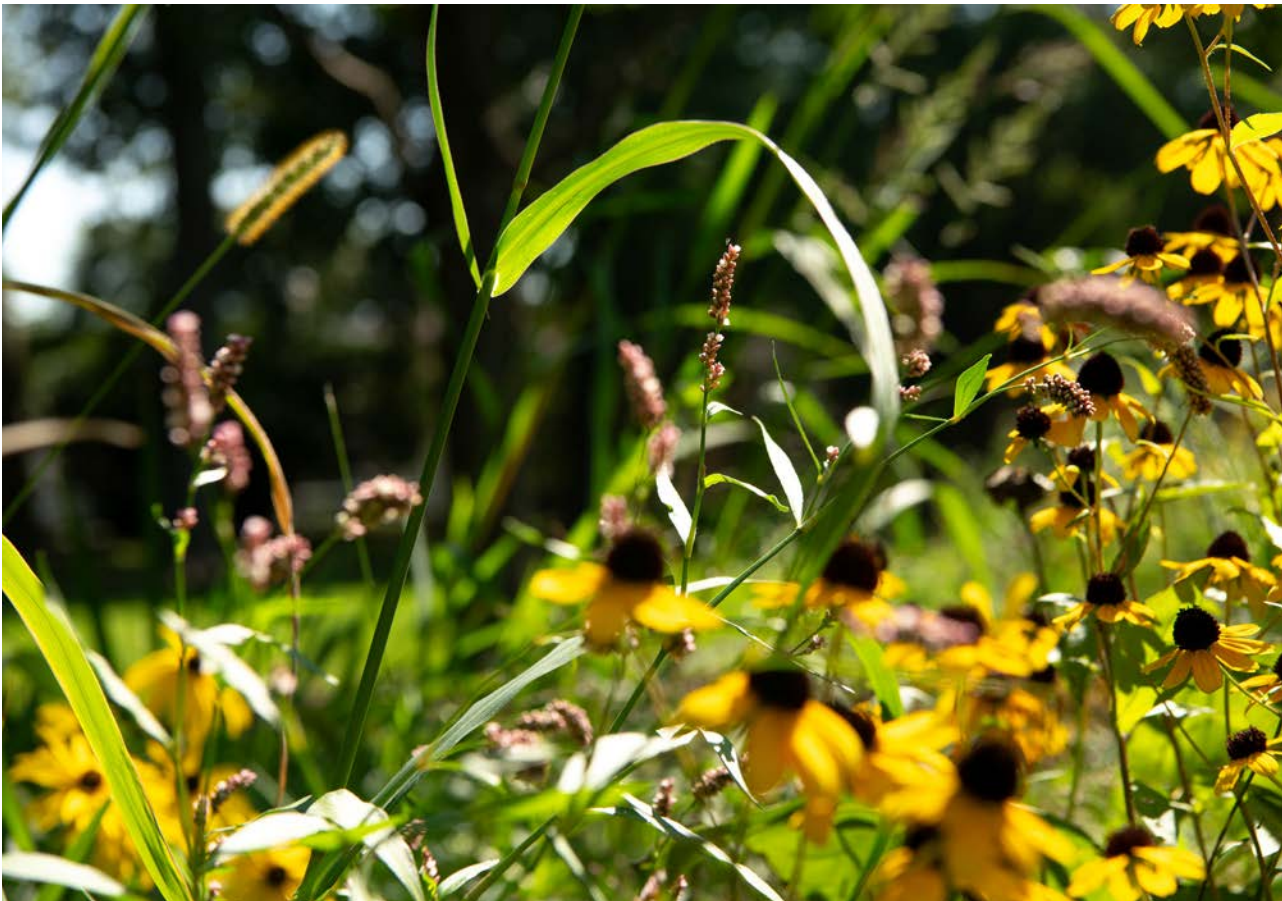
Contract: 23-IGA-24
Watershed: North Branch
Location: Skokie, IL
Description: Reconstruction of three alleys using permeable pavers.

Estimated Construction Cost: \$730,000
MWRD Contribution: TBD
Status: Construction anticipated to begin in Summer 2024.

GREEN ALLEY RECONSTRUCTION PROJECT 2 IN WESTCHESTER

Contract: 23-IGA-25
Watershed: Lower Des Plaines
Location: Westchester, IL
Description: Reconstruction of four alleys using permeable pavers. The Village of Westchester will be responsible for operations and maintenance.

Estimated Construction Cost: \$914,750
MWRD Contribution: \$548,850
Status: The bid has been advertised and is expected to be awarded in March 2024. Construction is expected to begin in Spring 2024.



The Proksa Park rain gardens provide year-long habitat for pollinators and improve drainage after major storms.



Honeybees enjoy numerous swamp milkweed flowers in Franklin Park rain gardens, a green infrastructure project funded by the MWRD.

Late summer
flowers bloom
at the Proksa
Park rain
gardens, built
by the MWRD
in cooperation
with the Berwyn
Park District.



SPACE TO GROW

Space to Grow is an innovative public-private partnership with a mission of transforming Chicago schoolyards into vibrant green spaces for physical activity, outdoor learning and play. As centers of school and community life, Space to Grow schoolyards typically feature expanded and safer playground equipment, track and field areas, multi-purpose courts, turf fields, outdoor classrooms, and vegetable gardens. The schoolyards also incorporate many GI design elements to reduce water pollution and neighborhood flooding. These features include permeable play surfaces, native plantings and rain gardens.

The program is co-managed by the Healthy Schools Campaign and Openlands with capital funding, leadership and expertise from the MWRD, Chicago Public Schools (CPS) and the City of Chicago Department of Water Management. The MWRD also provides technical support for GI elements to ensure that the new schoolyards provide optimal stormwater capture benefits.

Space to Grow schools are prioritized based on flood risk, site suitability, and socioeconomic factors. Numerous community meetings are held to describe project details and benefits. The MWRD and CPS executed an IGA to facilitate the projects whereby long-term maintenance responsibilities are assigned to CPS. The MWRD maintains the right to inspect the GI to ensure it is being properly maintained in accordance with the operations and maintenance plan developed for each school.

Starting in 2014 through 2022, the MWRD invested over \$15.3 million into 34 schools providing 6.54 million gallons of DRC. A new IGA for future projects is being negotiated, and the partners expect new school playgrounds to be constructed starting in 2024.

SUBURBAN GREEN SCHOOLYARD PILOT PROGRAM

In 2020, the MWRD initiated a feasibility study for a GI program for suburban Cook County schools and the following pilot project locations were identified:

- 1) the Burnham School District 154.5's Elementary School;
- 2) the Des Plaines School District 62's Forest Elementary and Algonquin Middle Schools' shared campus;
- 3) the Morton High School District 201's Morton East High School in Cicero;
- 4) the Summit School District 104's Graves Elementary and Heritage Middle Schools' shared campus.

In 2023, Des Plaines School District 62 declined further participation in the pilot program, and the MWRD identified Leyden High School District 212's Leyden East High School as an alternate site. Thirty percent (30%) designs have been completed for Burnham Elementary School and Graves Elementary and Heritage Middle Schools' shared campus, and conceptual planning was initiated in late 2023 for the two high schools.

The MWRD is currently developing preliminary engineering and cost estimates for the four green schoolyard pilot projects at the above referenced schools. As the preliminary engineering work advances, the MWRD will solicit stakeholder input and identify and pursue grants and other potential funding opportunities for the pilot sites.

STORMWATER MAINTENANCE AND OPERATION

CAPITAL PROJECT MAINTENANCE AND INTERGOVERNMENTAL AGREEMENTS

Regular upkeep and maintenance are necessary for the new installations to function properly and provide the expected stormwater benefit. For that reason, routine maintenance is required as dictated by an operation and maintenance plan developed for each project.

Agencies that receive financial assistance from the MWRD enter into an IGA, which includes an operation and maintenance plan defining the partner agencies responsibilities for inspection, operation, and maintenance of the project. The MWRD reviews inspection reports generated to assess the operation of the final project and to ensure proper maintenance is being performed. The MWRD may also conduct their own inspections of the project on an as needed basis.

SMALL STREAMS MAINTENANCE PROGRAM

Through the management of the [Small Streams Maintenance Program](#), the MWRD's Maintenance & Operations Department works to reduce flooding in urbanized areas. Cook County has little elevation change; therefore, its streams tend to move slowly and are naturally prone to flooding. Many developed areas were originally uninhabited muddy marshes with meandering streams that often overtopped their banks. Through more than century's worth of development across the region, the streams that flow through Cook County continue to serve the vital function of draining stormwater, but can also be a source of flooding. Minor blockages can build up quickly in heavy rains, restricting flow and creating a potential for urban flooding. In order to function properly, the streams must be maintained.

The Small Streams Maintenance Program, established in 2006, has successfully concluded its 17th year of operation. The program follows the MWRD's stormwater management mission to relieve flooding in urbanized areas, through immediate and relatively simple remedies. The program's top priorities are to maintain creeks, streams, and waterways by removing blockages, obstructions, and debris. The program also prevents future blockages by removing dead and unhealthy trees, which can fall into streams. Maintenance crews also remove harmful invasive species, such as buckthorn and honeysuckle, which can choke out native plants and leave streambanks vulnerable to erosion.

The MWRD removed approximately 15,686 cubic yards of debris in 2023. In addition, 2,027 cubic yards of river and canal debris was removed by the MWRD's debris and skimmer boat crews along the Chicago Area Waterways. In 2023, the MWRD continued to utilize a two-year stream maintenance contract, expending a total of \$2,052,433 to provide stream maintenance. Listed in the table below are the debris amounts removed in each watershed for the past two years.

TOTAL DEBRIS REMOVED BY WATERSHED (CUBIC YARD)

Watershed	2022	2023
Little Cal	7,956	5,420
Cal-Sag	3,395	2,823
Lower Des Plaines	5,514	4,131
North Branch	2,159	1,607
Upper Salt Creek	360	170
Poplar Creek	150	1,535
Total	19,534	15,686

Based on the 2023 expenditure for the Small Streams Maintenance Program noted above, the average cost per cubic yard of debris removed was \$131.

The Small Streams Maintenance Program will continue in 2024 and is anticipating removal of approximately 20,000 cubic yards of debris. Major goals include standardizing procedures, identifying critical stream

Native grasses add color and deep, rain-loving roots to the bioretention areas at Berwyn's Proksa Park.



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 program.

Citizens are encouraged to report [waterway blockages](#) and request removal of debris from small creeks or waterways in Cook County by either visiting [Report a Waterway Blockage](#) at the MWRD website or contacting Arturo Hernandez by email at hernandez@mwrd.org or by phone at 708-588-3171.

WATERSHED MANAGEMENT ORDINANCE

The MWRD began requiring stormwater detention in 1972, under the Sewer Permit Ordinance for development projects greater than five acres. In 2007, the MWRD began work on a new stormwater management regulatory ordinance known as the Watershed Management Ordinance (WMO). Numerous public hearings were held on the WMO in order to receive public input. The MWRD Board subsequently approved the WMO, which became effective on May 1, 2014. The WMO is a comprehensive regulatory ordinance drafted with the assistance of an Advisory Committee consisting of regulatory agencies, municipalities, and non-governmental organizations.

The WMO aims to protect public health, safety, and welfare, and Cook County homes and businesses from flood damage by managing and mitigating the effects of development and redevelopment on stormwater drainage. It provides uniform minimum stormwater management regulations for Cook County that are consistent with the region. The WMO replaced the MWRD's Sewer Permit Ordinance with more comprehensive permit requirements. Components regulated under the WMO include drainage and detention, volume control, floodplain management, isolated wetland protection, riparian environment protection and soil erosion and sediment control. Through the volume control requirement of the ordinance, the capture of 1-inch of runoff from impervious surfaces for parcels greater than one-half acre in size is required, and typically is achieved through GI measures.

The WMO was amended by the MWRD Board on July 10, 2014, to incorporate the Infiltration/Inflow Control Program (Article 8). It was amended again on May 16, 2019, to include watershed specific release rates. The WMO was also amended on May 7, 2020, to allow the regional stormwater detention and volume control trading program pilot study in the Lower Des Plaines and Little Calumet watershed planning areas to commence. References to current rainfall data were also updated. The most recent amendment to the WMO was adopted on April 7, 2022. This amendment added new regulatory requirements and terminology for projects involving and/or impacting wetlands. This amendment also included clarifications to requirements for development in flood protection areas.

The MWRD has developed the Technical Guidance Manual (TGM), which serves as a technical reference to the WMO, and updates the TGM as needed. The [WMO webpage](#) contains more information on both the [WMO](#) and the [Technical Guidance Manual](#).

LEFT: The corner of Sarah Street and Pacific Avenue in Franklin Park before completion of the MWRD's GI project.



RIGHT: The corner of Sarah Street and Pacific Avenue in Franklin Park after completion of the MWRD's GI project.





This ditch stabilization project provides additional storm and flood protection for more than 80 homes and structures throughout Crestwood.

Regulation of the WMO is administered by [issuing permits](#) for development within Cook County. [Permits](#) are reviewed by the MWRD's Engineering Department 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. In 2023, 387 permits were issued, requiring a total of 81,058,098 gallons of detention volume and 20,152,780 gallons of GI retention volume. The following table illustrates the number of permits issued and inspected in 2023 and since the inception of the WMO. Volumes of water captured onsite in the form of GI detention and volume control are also included.

Watershed Management Ordinance Program

Year	# Permits Issued	# Site Inspections	Total Detention Volume	Total Green Infrastructure Volume
2023	387	5,499	81,058,098 gallons	20,152,780 gallons
Total	3,125	48,411	697,415,627 gallons	154,135,610 gallons

GIS/GPS ASSISTANCE

In 2017, the MWRD purchased six Global Positioning System (GPS) units to provide sewer system owners with resources to begin mapping their sewer systems in a GIS or to improve their existing sewer system maps. In return, sewer system owners provide the MWRD with their sanitary, storm and combined sewer data. To obtain GPS equipment and related software at no cost, sewer system owners must enter into an IGA with the MWRD. Since 2017, 10 municipalities have entered into IGAs with the MWRD to utilize the GPS units. No municipalities have requested to use the new GPS units that were purchased in 2023. Sewer system owners that wish to be added to the list for the next available GPS unit should submit a letter of intent to the MWRD's Director of Engineering. A template IGA and modifiable letter of intent can be found at [Geographic Information System Assistance](#).

INFILTRATION / INFLOW CONTROL PROGRAM ADMINISTRATION

MWRD's Infiltration/Inflow (I/I) Control Program 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 MWRD's National Pollution Discharge Elimination System permits and all other applicable federal, state, and local laws and regulations.
- Minimize extraneous flows transported to the MWRD's facilities due to defective system components or illegal connections.

The I/I Control Program is implemented due to special conditions imposed within the National Pollutant Discharge Elimination System permits issued by the Illinois Environmental Protection Agency (IEPA) for the MWRD's Water Reclamation Plants. In addition to adopting a [Capacity, Management, Operation and Maintenance program](#) for the conveyance and treatment facilities, the MWRD is required to take action to reduce excessive I/I within the local sanitary sewer systems. The [Infiltration/Inflow Control Program Annual Summary Report](#) is provided to the IEPA each year. All satellite entities (sewer system owners) within the MWRD's separate sewer area that discharge directly or indirectly into the MWRD's facilities are required to identify and address infiltration and inflow 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 I/I Control Program to the MWRD.



A mix of blue vervain and milkweed flowers in one of the rain gardens along Pacific Avenue in Franklin Park.

INFILTRATION / INFLOW CONTROL PROGRAM SATELLITE ENTITIES

Alsip	Hickory Hills	Orland Park
Aqua Illinois	Hillside	Palatine
Arlington Heights	Hinsdale	Palos Heights
Bartlett	Hodgkins	Palos Hills
Bedford Park	Hoffman Estates	Palos Park
Bellwood	Homewood	Park Ridge
Berkeley	Illinois American Water	Plum Grove Estates SD*
Bridgeview	Indian Head Park	Plum Grove Woodlands SD*
Broadview	Inverness	Prospect Heights
Brookfield	Justice	Richton Park
Buffalo Grove	Kenilworth	River Grove
Burr Ridge	Kimberly Heights SD*	Riverdale
Calumet City	La Grange	Robbins
Chicago Ridge	La Grange Highlands SD*	Rolling Meadows
Country Club Hills	La Grange Park	Roselle
Countryside	Lansing	Rosemont
Crestwood	Lemont	Sauk Village
Deer Park	Leyden Township	Schaumburg
Des Plaines	Lynwood	Schiller Park
Dolton	Markham	South Barrington
East Hazel Crest	Matteson	South Holland
Elk Grove Township	McCook	South Lyons Township SD*
Elgin	Melrose Park	South Palos Township SD*
Elk Grove Village	Merrionette Park	South Stickney SD*
Evergreen Park	Midlothian	Stone Park
Flagg Creek WRD**	Mission Brook SD*	Streamwood
Flossmoor	Morton Grove	Thornton
Ford Heights	Mount Prospect	Tinley Park
Forest River SD*	Niles	Westchester
Franklin Park	Norridge	Western Springs
Garden Homes SD*	Northbrook	Wheeling
Glenbrook SD*	Northfield	Willow Springs
Glencoe	Northfield Township	Wilmette
Glenview	Northfield Woods SD*	Winnetka
Glenwood	Northlake	Woodley Road SD*
Hanover Park	Oak Forest	Worth
Harvey	Oak Lawn	
Harwood Heights	Oak Meadow SD*	*Sanitary District
Hazel Crest	Olympia Fields	**Water Reclamation District

PARTNERSHIPS AND PUBLIC OUTREACH

JOINT FUNDING AGREEMENT WITH THE UNITED STATES GEOLOGICAL SURVEY FOR STREAM GAGING STATION IN COOK COUNTY

The MWRD entered into a Joint Funding Agreement with the United States Geological Survey 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 2022-2023 agreement, the MWRD is funding the following ten 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
- North Branch of the Chicago River at N Pulaski Rd at Chicago
- Deer Creek near Chicago Heights
- Calumet Union Drainage Ditch at Markham
- Natalie Creek at Midlothian
- Tinley Creek near Palos Park

The MWRD is also funding two rain gages located on Salt Creek near Rolling Meadows and at Calumet Union Drainage Ditch near Markham. The data from the streamflow gaging stations has proven useful for the MWRD with calibration of the hydrologic and hydraulic models in the DWP development, and the 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 [United States Geological Survey's website](#) along with [precipitation data](#).

COOK COUNTY HAZARD MITIGATION PLAN

[The Cook County Hazard Mitigation Plan](#) is the use of long-term and short-term policies, programs, projects, and other activities to alleviate the death, injury and property damage that can result from a disaster. Cook County, the MWRD, and a coalition of planning partners prepared the [Cook County Multi-Jurisdictional Hazard Mitigation Plan](#) in order to identify the risks posed by hazards and find ways to reduce their impacts. The plan reduces risk for those who live in, work in, and visit the County. MWRD continues to work closely with Cook County and our other planning partners to mitigate flooding through projects identified in our annual report.



A view to the west shows a flood-prone section of Willow Road along Hillcrest Lake in Prospect Heights, which becomes unpassable during heavy rain events.

WATERSHED PLANNING COUNCILS

The **Watershed Planning Councils** (WPCs) were formed in 2005 to serve as advisory bodies to the MWRD for its Stormwater Management Program. Municipalities and townships are represented in the councils by their chief elected officials or designees. Councils meet quarterly 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. Watershed Planning Council meetings serve as a mechanism for representatives of municipalities and townships to be updated on the MWRD's Stormwater Management Program as well as to communicate the public's concerns to the MWRD.



The MWRD and the Village of Lincolnwood incorporate green infrastructure into an alley, which will help collect 47,000 gallons of water per rain event.



The Village of Lincolnwood unveil its very first green alley at the intersection of Touhy, North Kilpatrick and North Keating avenues. This investment from the MWRD and Village of Lincolnwood marked a significant step toward sustainable urban development. The MWRD contributed up to \$95,000 toward the permeable pavers which will collect 47,000 gallons of water per rain event.

The following Councils of Government are responsible for coordination of the WPCs:

- Northwest Municipal Conference
- West Central Municipal Conference
- South Suburban Mayors and Managers Association
- Southwest Conference of Mayors

The MWRD negotiated agreements with each of the Councils of Government to provide administrative assistance related to coordination of the WPCs; the current agreement was renewed for five years starting Jan. 1, 2024, through Dec. 31, 2028. The Councils of Government assist the MWRD by arranging meeting schedules, drafting and distributing meeting agendas, distributing information from the MWRD to council members, assembling contact information for council representatives, and forwarding information about stormwater management concerns from the council members to the MWRD.

WPC meetings are open to the public. For meeting dates, visit [the MWRD's WPC meeting schedule web page](#).



MWRD commissioners, state and federal leaders, and local mayors formally unveil the new Addison Creek Reservoir.

PUBLIC AFFAIRS

In 2023, the MWRD provided information about its Stormwater Management Program at various virtual and in-person events for 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 Space to Grow projects in partnership with CPS and City of Chicago 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 GI is demonstrated.

The MWRD staff will continue to participate in community outreach events in 2024.

A list of stormwater management press releases issued in 2023 can be found on page 43.

HOW YOU CAN HELP

As we work to manage stormwater across the county, the MWRD cannot do it alone. You can help reduce stormwater runoff and improve the quality of our waterways. Click on the links below to learn more.

Understanding your sewer: Follow the flush and the stormwater to the sewers and places it will go. Learn how you can help in your backyard.

Rain barrels: Discounted rain barrels are available to Cook County residents while supplies last.

Restore the canopy: MWRD gives away free native tree saplings. Find out [where](#).

Go easy on the salt: Too much road salt can harm our environment. What can you do?

Green Neighbor Guide: Get a PDF guide on how you can stop sending stormwater to the sewers.

Disposal of medical products: How to keep medicines out of the waterways.

Report a waterway blockage: See something? Say something. It's easy to report.



2023 STORMWATER MANAGEMENT PRESS RELEASES

[Projects highlight MWRD's green infrastructure commitment](#)

FEBRUARY 6, 2023

[MWRD-Niles partnership yields resilient Golf Mill stormwater park](#)

MAY 18, 2023

MWRD issued 10 severe storm updates and overflow action alerts from July 2, 2023, through July 13, 2023

[JULY 2; 5 P.M. JULY 2; JULY 3; 7 P.M. JULY 3; JULY 2-3 STORM FOLLOW-UP; JULY 11; OVERFLOW ACTION ALERT ISSUED FOR JULY 11; JULY 12; 4:30 P.M. JULY 12; JULY 11-12 STORM FOLLOW-UP](#)

[MWRD's green infrastructure partnership program accepting pre-applications now](#)

AUGUST 2, 2023

[9 a.m. storm update](#)

AUGUST 15, 2023

[MWRD commends President Biden's disaster declaration for June 29-July 2 flooding](#)

AUGUST 15, 2023

[Ribbon cutting at MWRD's Addison Creek Reservoir marks milestone in flood relief and kick off to next phase of work](#)

AUGUST 18, 2023

[Weekend storm update 9/16 - 9/17](#)

SEPTEMBER 18, 2023

[Calumet City flooding statement](#)

SEPTEMBER 20, 2023

[Water professionals host educational fair, construct rain garden during Water Palooza at O.A. Thorp Scholastic Academy](#)

OCTOBER 6, 2023

[MWRD, Village of Crestwood to cut ribbon on Crestwood flood control project](#)

OCTOBER 9, 2023

[MWRD, Crestwood unveils completed flood control project](#)

OCTOBER 17, 2023

[Tree Ambassador Program helps MWRD restore the canopy](#)

OCTOBER 18, 2023

[MWRD and partners exchange ideas at Alsip Boat Launch](#)

OCTOBER 19, 2023

[Water professionals descend on Chicago for WEFTEC 2023](#)

OCTOBER 23, 2023

[The MWRD's new Stormwater Partnership Home Page is live!](#)

DECEMBER 6, 2023

[Brookfield storm sewer improvements approved by MWRD](#)

DECEMBER 14, 2023

[MWRD to help fund Prospect Heights Flood Control Project](#)

DECEMBER 22, 2023

2023 STORMWATER MANAGEMENT COMMITTED EXPENDITURES

Personal Services: Consultants (subtotal)	\$4,094,645
Preliminary Engineering	\$297,233
Final Engineering and Post Award	\$3,797,412
Personal Services In-House	\$11,758,181
Contractual Services (subtotal)	\$41,098,585
Small Streams Maintenance Program	\$2,362,345
Small Streams Maintenance Program waste disposal	\$135,694
Court Reporting Services	\$7,261
Contractual Services NOC	\$156,021
Land Acquisition and Appraisals	\$ -
Waterways Facilities Structures (Construction)	\$17,073,883
Army Corps of Engineers Services	\$49,999
Permit Review	\$369,548
IGAs	\$20,862,473
Payments for Easements	\$ -
Miscellaneous Contractual Services	\$81,360
Administrative Expenses (subtotal)	\$8,821
Materials, Equipment, & Supplies	\$8,821
Total 2023 Committed Expenditures	\$ 56,960,231

* These figures do not include stormwater bond funds used to finance larger capital projects. Refer to the MWRD's [2023 Annual Budget Report](#) for more detailed information.



An egret visits Hillcrest Lake near an MWRD project designed to provide flood relief for Prospect Heights residents during rainstorms.

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Established in 1889, the MWRD is an award-winning, special purpose government agency responsible for wastewater treatment and stormwater management in Cook County, Illinois.
