



# **INFILTRATION / INFLOW CONTROL PROGRAM**

## **ANNUAL STATUS REPORT**

**VOLUME 4**  
**NOVEMBER 2019**

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

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**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

**ENGINEERING DEPARTMENT  
INFRASTRUCTURE MANAGEMENT DIVISION  
LOCAL SEWER SYSTEMS SECTION**

## PREFACE

This is Volume No. 4 of the Infiltration/Inflow Control Program (IICP) Annual Status Report (Report) published by the Metropolitan Water Reclamation District of Greater Chicago (District). This Report pertains to the IICP for the local sewer systems as required by Article 8 of the Watershed Management Ordinance (WMO).

This Report covers the last 12 month period from October 1, 2018 through September 30, 2019, and is based on the information contained in the annual summary reports submitted by the local sewer system owners.

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## **INFILTRATION / INFLOW CONTROL PROGRAM STATUS**

On July 10, 2014, the Metropolitan Water Reclamation District of Greater Chicago's (District) Board of Commissioners (Board) adopted the Infiltration/Inflow Control Program (IICP) set forth in Article 8 of the Watershed Management Ordinance (WMO). The District implements the IICP due to special conditions imposed within the National Pollutant Discharge Elimination System (NPDES) permits issued by the 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 infiltration and inflow (I/I) within the local sanitary sewer systems.

Currently, there are a total of 115 satellite entities (local sanitary sewer system owners) that require compliance with the IICP. The City of Elgin was added to the IICP in May 2018. All satellite entities are listed in Table 4.

The IICP consists of two parts: the Short Term Requirements (STR) and the Long Term Operation and Maintenance Program (LTOMP). Under the STR, satellite entities conducted a prioritized condition assessment of high risk public sewers, conducted rehabilitation work to address high priority deficiencies (I/I sources), and developed and submitted their individual Private Sector Program (PSP) and LTOMP to the District for approval. The STR was required to be completed by July 10, 2019, and the final STR Annual Summary Report is required to be submitted by March 1, 2020 detailing completion of the STR.

Condition assessment includes televising and smoke testing the system and manhole inspections per NASSCO standards, applicable dye water testing, and external property inspections. Sanitary sewer rehabilitation consists of I/I corrective work on public and private sewers. The PSP and LTOMP refer to programs developed by individual satellite entities. These programs identify and address I/I sources within the public and private sewer systems by performing on-going inspections, and conducting maintenance and rehabilitation work on the sewer system.

The status of STR completion is provided in Table 1 and those satellite entities are listed in Table 2. As of September 30, 2019, no satellite entities have reported completion of the STR. The District considers the STR complete when the satellite entity completes the condition assessment, addresses high priority deficiencies, has an approved PSP and LTOMP, and submits a current sewer system atlas. Due to the multiple requirements and extensive work required under the STR, all of the satellite entities have used the full five year timeframe to work on the STR. The progress of completing the STR, which is determined by the information submitted by the satellite entities during the reporting period, is provided in Table 3.

Once the District determines that a satellite entity completed their STR, they will transition to the LTOMP. Under the LTOMP, the satellite entities will implement their programs for on-going inspection, maintenance and rehabilitation of the public sewer system, and their PSP for identification and correction of I/I sources in the private sewer systems.

## **INFILTRATION / INFLOW BACKGROUND**

In the District's service area, local sewer systems (satellite systems) are owned, operated and maintained by local cities, villages, townships, local sanitary districts, and utility companies. These local systems convey flow that is tributary to the District's intercepting sewers and water reclamation plants (WRPs) for treatment.

The local systems are comprised of both combined sewer areas and separate sewer areas. The combined sewer area, common to older communities, contains a single sewer where stormwater runoff and wastewater flows are combined within the same sewer and conveyed to the District's WRPs for treatment. The separate sewer area includes separate storm and sanitary sewers. Stormwater runoff is collected and conveyed by a storm sewer or other conveyance system that discharges into a receiving waterway, and wastewater flows are collected and conveyed by a sanitary sewer to the District's WRPs. Unlike existing combined sewers, which were designed and intended to collect and convey stormwater runoff and wastewater flows, the existing sanitary sewer systems are designed and intended to collect and convey only wastewater flow.

The major components of the local sanitary sewer system are the public sector sewer mains (mains) and the privately-owned sewer laterals (PSLs). These components were not designed to collect and convey clear water. The major sources of clear water entering the sanitary sewer system are groundwater infiltration and stormwater inflow (I/I).

Infiltration is groundwater entering defective sanitary sewer systems. Sewer system defects that allow infiltration include pipe cracks, open or off-set joints, pipe-structure connections and leaking manhole walls. Removal/reduction of infiltration sources is accomplished by sewer system rehabilitation (repair/replacement). Additional advantages of rehabilitation include restored structural integrity of the sewer, restored hydraulic flow capacity and the removal/prevention of root intrusion.

Inflow is stormwater entering the sanitary sewer system through stormwater and groundwater conveyance systems that are connected to the sanitary sewer system. Conveyance systems that contribute clear water inflow include downspouts, yard and area drains, footing/foundation drains, sump pumps, driveway and window well drains, and storm sewer direct/indirect cross-connections. Removal/reduction of inflow sources is accomplished by disconnecting the source from the sanitary sewer and re-directing the flow to discharge at grade or re-routing the discharge into a stormwater conveyance system tributary to a waterway.

When intense rain events occur excessive I/I can overload sewers causing loss of conveyance capacity for wastewater flow resulting in sanitary sewer overflows (SSOs), damage to private property through basement backups, , and increased wastewater conveyance and treatment costs. To prevent this from occurring, the District is implementing the IICP with which all satellite entities (local sanitary sewer system owners) must comply.

## **HISTORY OF ADDRESSING INFILTRATION / INFLOW**

As early as 1920, the District issued permits to local sewer system owners allowing them to connect to District interceptors. These permits contain language prohibiting surface water from entering the sewer system. Although this prohibition continued for permits issued in the separate sewer area, excessive I/I in the District's system became a growing problem.

On October 18, 1972, the Federal Water Pollution Control Act was amended by Public Law 92-500 which required all applicants for treatment works, after July 1, 1973, to demonstrate that each sewer system discharging into such treatment works is not subject to excessive I/I in order to receive USEPA grant funding. Due to this requirement, the District amended the Manual of Procedures for the Administration of the Sewer Permit Ordinance (MOP) to include Article 6.5 - Correction of Existing Deficiencies in the Separate Sewered Areas, which became effective January 1, 1973. This I/I control program required all satellite entities to inspect their systems for all directly/indirectly connected downspouts and inflow sources, and disconnect those identified within one year.

Initially, the District required satellite entities to demonstrate that average daily wet weather flow in the sanitary sewer system did not exceed 100 gallons per capita per day (gpcpd). In the 1970s, at the request of the satellite entities, the District raised the maximum allowable wet weather flow rate to 150 gpcpd. Areas served by combined sewer systems were exempt from the program because excessive wet weather flows would be captured by the Tunnel and Reservoir Plan (TARP).

In 1985, a series of meetings were held between locally-elected officials and representatives from the District, USEPA and IEPA on excessive I/I and sanitary sewer rehabilitation. These meetings lead to the Sewer Summit Agreement (SSA) which established the guidelines and a schedule for achieving final compliance with the sanitary sewer rehabilitation requirements.

The Board adopted the SSA on November 21, 1985 and Article 6.5 of the MOP was amended to include the new Infiltration/Inflow Corrective Action Program (ICAP) option, in addition to the existing compliance criteria, referred to as the 150 gpcpd option. Under the ICAP option, satellite entities had to perform an SSES which included a cost-effective analysis for the removal of specific I/I sources. Satellite entities were required to remove cost-effective I/I sources, develop and implement a Long Term Operation & Maintenance Program for their sewer systems, and submit annual summary reports of completed rehabilitation work.

Despite considerable effort and resources spent towards removing excessive I/I under ICAP and the 150 gpcpd option, the District still experiences high wet weather flows from separate sewer areas. Additionally, the District is at risk of enforcement measures by the IEPA should SSOs occur within its system. Furthermore, satellite entities have voiced concerns regarding excessive wet weather flows due to SSOs and basement backups occurring within their local systems.

In 2009, the IEPA issued draft versions of NPDES permits for the District's Calumet WRP, O'Brien WRP and Stickney WRP for public comment, which contained new special conditions addressing the District's I/I control program. The special conditions require the District to impose measures over and beyond the 1985 SSA on separate sewer systems that cause or contribute to SSOs and/or basement backups, and adopt a CMOM program for the District's Facilities.

Meetings were held on December 6, 2010 and February 28, 2011, which were attended by representatives from the IEPA, District and the satellite entities, to discuss impacts of the special conditions. The satellite entities expressed their concerns of the financial burden and challenges in achieving the targeted wet weather flow reductions. They also requested development of a more achievable, less financially burdensome, gradual approach for I/I control with participation of all stakeholders.

In anticipation of the special conditions, the District formed an Advisory Technical Panel (ATP) in 2011 to discuss elements of a new I/I control program. The ATP is comprised of representatives from the District, USEPA, IEPA, satellite entities, a sewer construction contractor and engineering consultants. The ATP met regularly from 2011 to 2013, and provided insight and valuable perspective on elements of a new I/I control program proposed by the District. The ATP also worked to develop Article 8 of the Technical Guidance Manual (TGM) as a guide for program compliance.

On January 1, 2014, the IEPA issued NPDES permits for the District's WRPs that impose the new special conditions. On July 10, 2014, the District's Board adopted the new IICP set forth in Article 8 of the Watershed Management Ordinance. The District also created the [mwrdr.org/ii](http://mwrdr.org/ii) webpage dedicated to IICP and related I/I issues. The IICP (WMO Article 8), TGM documents, proceedings of the ATP meetings, and several I/I resources are posted there for public benefit.

# INFILTRATION / INFLOW CONTROL PROGRAM

## SCOPE AND GOALS

The purpose of this program is to provide a framework for asset management of separate sewer systems to meet the following goals:

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

## APPLICABILITY

IICP is applicable to all satellite entities (local sewer system owners) located in the separate sewer area that are directly and/or indirectly tributary to the District's facilities. For sewer systems that consist of both combined and separate sewers, IICP applies to local sewer systems located within the designated separate sewer area. Separate sewer systems within the City of Chicago are exempt from the IICP.

## GENERAL REQUIREMENTS

IICP will be implemented by all satellite entities to reduce SSOs and basement backups, and to reduce excessive wet weather flow in the sanitary sewer system. This will be accomplished through completing the STR, implementing a PSP and a LTOMP, and annual reporting of planned and completed work to meet these requirements.

## SHORT TERM REQUIREMENTS

Each satellite entity must conduct a prioritized condition assessment of their sewer system, begin addressing high priority deficiencies, and develop and submit their individual PSP and LTOMP submittal to the District for approval. The STR was required to be completed by July 10, 2019. The STR include the following:

### Condition Assessment Prioritization

In order to proceed with condition assessment, each satellite entity must determine the extent of the high risk sewers within their systems. The high risk sewers are those considered to contribute the most I/I into the system. The determination should be completed by the time the first STR Annual Status Report is submitted to the District since it defines areas of the system for condition assessment. Public sewers in the following areas may be considered high risk: areas with SSOs and/or basement backups, areas upstream of SSOs and/or basement backups, subbasins known to surcharge, areas

with excessive wet weather flows and/or excessive lift station pumpage, and areas with system deficiencies that can result in system failure.

#### Condition Assessment

Once the high risk sewers are defined, each satellite entity must conduct and complete a condition assessment of all high risk sewers. Condition assessment includes televising, smoke testing, manhole inspections, lift station inspections, applicable dye water testing, and external property inspections. Condition assessment will identify system defects and produce a permanent record of the condition of the system.

All condition assessment must be conducted in accordance with National Association of Sewer Service Companies (NASSCO) standards for Pipeline Assessment and Certification Program (PACP), Manhole Assessment and Certification Program (MACP), and Lateral Assessment and Certificate Program (LACP). Smoke testing also must be done in accordance with NASSCO standards.

Utilizing NASSCO standards for condition assessment provides consistency among all satellite entities for defect coding, rehabilitation cost estimation, and rehabilitation work eligible for IEPA SRF funding.

#### High Priority Deficiencies

Once the condition assessment of the high risk sewers is completed, the High Priority Deficiencies (HPD) can be identified. The HPD are system defects that have a low cost of removal to I/I flow rate ratio, or that will likely cause system blockage or collapse if not rehabilitated.

The HPD include NASSCO Grade 4 or 5 coded defects, direct and indirect cross-connections, connected and poorly disconnected downspouts, and missing and damaged cleanout caps/covers.

#### Sewer System Rehabilitation

Once the HPD are identified, rehabilitation of the sanitary sewers and manholes are required. The District requires cross-connections, downspouts, and cleanout caps/covers be disconnected and/or repaired within one year of identification. For other HPD that cannot be immediately addressed, the District requires corrective work to begin within three years of identification.

#### Private Sector Program

Each satellite entity is required to develop, and submit to the District for approval, a PSP that details the means and methods for on-going internal and external I/I source identification and source removal. Satellite entities that did not already have an inspection ordinance in place were required to enact ordinances granting them authority to conduct inspections and take enforcement actions for PSP compliance. The PSP details

how identified private sector I/I sources will be removed. The PSP document is a component of the LTOMP document and was required to be submitted by July 10, 2019.

#### Long Term Operation & Maintenance Program

Each satellite entity is required to develop and submit to the District for approval, a LTOMP that details means and methods to continually maintain system capacity and performance. Local sewer systems that are not properly designed, managed, operated or maintained can result in SSOs and basement backups due to excessive I/I and system failure. The LTOMP details on-going system inspections, maintenance and rehabilitation. The LTOMP document was required to be submitted by July 10, 2019.

### **LONG TERM OPERATION & MAINTENANCE PROGRAM**

Once the District determines that a satellite entity completed their STR, they will transition to the LTOMP. Under the LTOMP, the satellite entities will implement their programs for on-going inspection, maintenance and rehabilitation of the public sewer system, and implement their PSP for identification and correction of I/I sources in the private sewer systems. The LTOMP will detail the following items:

#### Sewer System Management

Sewer system management includes staffing, training of staff, standard operating procedures, tracking of system activities and complaints, and responding to SSOs and basement backups. Clearly defined procedures, management and training are required for effective operation and management activities to reduce potential risks to the environment and public health.

#### Mapping

Satellite entities are required to have an accurate, current map of their sanitary sewer system. An accurate map of the location, size, depth, material, and age of the sanitary sewer system including appurtenances is vital for effective operation and maintenance activities. Additionally, a procedure for updating the system map must be detailed.

#### Equipment and Collection System Maintenance

Every satellite entity will have a well-planned, systematic and comprehensive maintenance program. The goals of which are preventing and eliminating SSOs and basement backups, maximizing service and system reliability at minimal cost, and establishing infrastructure sustainability. Procedures and instructions should be in place to describe the maintenance and repair approach of various systems and facilities. The goal is to reduce corrective and emergency maintenance through planned and predictive maintenance.

### Material and Equipment

Every satellite entity will maintain an inventory of spare parts, equipment and supplies, and it should be based on the manufacturers' recommendations and/or historical records. This inventory will reduce the down time of the sanitary sewer system in the event of a failure.

### Sewer System Capacity Evaluation

A procedure and methodology to perform an evaluation of the capacity of the sanitary sewer system will be detailed. An evaluation can be used to determine dry weather flow for an area being developed or re-developed, or if system capacity is causing dry weather SSOs and basement backups.

### Sewer System Inspection and Condition Assessment

The description, procedure, and frequency of continuous system inspection and assessment will be detailed. This will identify and locate I/I sources, reveal blockages in the system, and identify structural defects which cause SSOs, basement backups, sewer surcharging, exfiltration of wastewater into the ground, collapse of roadways, and an increase of deposits in the sewers and lift stations. The goal is to inspect the entire public sanitary sewer system on a 10-year cycle. At a minimum, two percent (2%) of the sanitary sewer system must be inspected each year. Inspections must be conducted according to NASSCO standards.

### Sewer System Rehabilitation

The rehabilitation program will be established to maintain the conveyance capacity of the sewer system. The program should prioritize rehabilitation work according to severity of defects, sewer age, impacts of sewer failure, anticipated public works projects, and available funding/resources. The LTOMP must include an explanation of the process used by the satellite entity to prioritize sewer rehabilitation projects. The type of rehabilitation method depends on several pipe characteristics such as age, material, size, location, sewer flow, surface condition, severity of I/I, etc. Rehabilitation methods include replacement, lining, grouting, joint sealing, etc. The rehabilitation program should identify methods that have previously been used successfully to guide methods to be utilized for subsequent sewer rehabilitation.

### Funding Plan

A funding source must be secured to continually implement the LTOMP. The system owner should track all costs in order to have accurate records each time the annual operating budget is developed. An annual baseline provides documentation for future budget considerations and provides justifications for any future rate increases if they are needed. The plan must indicate how annual operating costs, emergency repairs and capital improvements will be funded.

### Private Sector Program

The PSP, described under the Short Term Requirements, will be implemented in conjunction with the LTOMP.

### Sewer Use Ordinance

Satellite entities will have strict control over the nature and quantity of existing or new flows entering their sewer systems by enacting a sewer use ordinance. They must also establish design standards for sewer construction in both private and public sewer systems. Satellite entities must submit copies of their sewer use ordinance with the LTOMP. Additionally, the LTOMP must describe the process for updating the sewer use ordinance.

## **ANNUAL REPORTING**

Each satellite entity must submit an Annual Status Report (ASR) to the District to report their progress and plans relative to their STR and LTOMP. The ASR must be submitted regardless of the degree of progress made during the reporting period. Standardized ASR forms, and supplemental forms and documents, are provided to each satellite entity to complete for the reporting year. Among other uses, the District will compile information provided in the ASR to prepare and distribute this Report regarding the progress made by the satellite entities on their I/I identification and removal efforts.

### Reporting of Sanitary Sewer Overflows and Basement Backups

Satellite entities are required to keep detailed records on SSOs and basement backups occurrences within their systems. In addition to reporting progress made toward completing the STR and reporting LTOMP activities, each satellite entity must report SSO and basement backup occurrences. The District will use this information to view SSO and basement backup trends over time. Implementation of an effective IICP should result in fewer SSOs and basement backups.

### Auditing

The District reserves the right to audit any satellite entity to review condition assessment and inspection documentation, verify completed work, verify NASSCO standards are used, verify system repairs have been completed, review PSP and LTOMP records, and verify records on SSOs and basement backups.

## **NON-COMPLIANCE**

Any satellite entity may be found to be in non-compliance with IICP for failure to adequately implement and complete their Short Term Requirements, failure to adequately implement their LTOMP, failure to adequately implement their PSP, and failure to submit or submittal of an ASR that does not meet the requirements of the program.

**TABLE 1. INFILTRATION / INFLOW CONTROL PROGRAM - STATUS SUMMARY**

	Number of Satellite Entities	Percent of Total
Short Term Requirements Completed <sup>1</sup>	0	0.0%
Long Term Operation & Maintenance Program Compliance <sup>2</sup>	0	0.0%

**TABLE 2. SHORT TERM REQUIREMENTS COMPLETED - SATELLITE ENTITY SUMMARY**

None
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**TABLE 3. SHORT TERM REQUIREMENTS - PROGRESS SUMMARY**

	Number of Satellite Entities	Percent of Total
Annual Summary Reports Received	96	83.5%
Annual Summary Reports in Compliance <sup>3</sup>	20	15.6%
Condition Assessment Completed <sup>4</sup>	12	10.4%
Private Sector Program Submitted <sup>5</sup>	43	37.4%
Long Term Operation & Maintenance Program Submitted <sup>5</sup>	45	39.1%

<sup>1</sup> The deadline to complete the Short Term Requirements was July 10, 2019. Due to the March 1<sup>st</sup> Annual Summary Report deadline, satellite entities have not submitted their final Short Term Requirements report demonstrating compliance.

<sup>2</sup> Satellite entities will transition to the Long Term Operation & Maintenance Program once they demonstrate completion of the Short Term Requirements.

<sup>3</sup> Annual Summary Reports in compliance with the reporting requirements of the IICP. The District is continually providing assistance and collaborating with the satellite entities to produce compliant Annual Summary Reports.

<sup>4</sup> Condition Assessment includes televising, smoke testing, manhole inspections, lift station inspections, applicable dye water testing, and external property inspections.

<sup>5</sup> Long Term Operation & Maintenance Program document which includes a Private Sector Program will be reviewed and approved by the District. Two of the satellite entities that submitted Long Term Operation & Maintenance Programs did not include Private Sector Programs but requested additional time to complete them.

**TABLE 4. SATELLITE ENTITIES**

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

TABLE 5. SATELLITE ENTITIES BY WATER RECLAMATION PLANT SERVICE BASIN

<b>WRP: Stickney</b> <b>Basin: Central</b> <b>(36)</b>	Bedford Park	La Grange
	Bellwood	La Grange Highlands SD
	Berkeley	La Grange Park
	Bridgeview*	Leyden Township
	Broadview	McCook
	Brookfield	Melrose Park
	Burr Ridge	Niles*
	Countryside	Norridge*
	Des Plaines*	Northlake
	Franklin Park	Park Ridge*
	Flagg Creek WRD	River Grove
	Harwood Heights*	Rosemont
	Hillside	Schiller Park
	Hinsdale	South Lyons Township SD
	Hodgkins	Stone Park
	Illinois American Water*	Westchester
	Indian Head Park	Western Springs
	Justice*	Willow Springs
<b>WRP: Lemont</b> <b>Basin: Lemont</b> <b>(1)</b>	Lemont	
<b>WRP: O'Brien</b> <b>Basin: North Side</b> <b>(20)</b>	Aqua Illinois	Niles*
	Des Plaines*	Norridge*
	Glenbrook SD	Northbrook
	Glencoe	Northfield
	Glenview	Northfield Township
	Harwood Heights*	Oak Meadow SD
	Illinois American Water*	Park Ridge*
	Kenilworth	Wilmette
	Mission Brook SD	Winnetka
	Morton Grove	Woodley Road SD
<b>WRP: Kirie</b> <b>Basin: O'Hare</b> <b>(12)</b>	Arlington Heights	Illinois American Water*
	Buffalo Grove	Mount Prospect
	Des Plaines*	Northfield Woods SD
	Elk Grove Township	Prospect Heights
	Elk Grove Village*	Rolling Meadows*
	Forest River SD	Wheeling

\*System discharges into more than one basin

TABLE 5 (CONTINUED). SATELLITE ENTITIES BY WATER RECLAMATION PLANT SERVICE BASIN

<b>WRP: Fox River</b> <b>Basin: Poplar Creek</b> <b>(5)</b>	Bartlett*	South Barrington*
	Elgin	Streamwood
	Hoffman Estates*	
<b>WRP: Calumet</b> <b>Basin: South</b> <b>(43)</b>	Alsip	Markham
	Bridgeview*	Matteson
	Calumet City	Merrionette Park
	Chicago Ridge	Midlothian
	Country Club Hills	Oak Forest
	Crestwood	Oak Lawn
	Dolton	Olympia Fields
	East Hazel Crest	Orland Park
	Evergreen Park	Palos Heights
	Flossmoor	Palos Hills
	Ford Heights	Palos Park
	Garden Homes SD	Richton Park
	Glenwood	Riverdale
	Harvey	Robbins
	Hazel Crest	Sauk Village
	Hickory Hills	South Holland
	Homewood	South Palos Township SD
	Illinois American Water*	South Stickney SD
	Justice*	Thornton
	Kimberly Heights SD	Tinley Park
	Lansing	Worth
	Lynwood	
<b>WRP: Hanover Park</b> <b>Basin: Upper DuPage River</b> <b>(3)</b>	Bartlett*	Schaumburg*
	Hanover Park	
<b>WRP: Egan</b> <b>Basin: Upper Salt Creek</b> <b>(13)</b>	Deer Park	Plum Grove Estates SD
	Elk Grove Village*	Plum Grove Woodlands SD
	Hoffman Estates*	Rolling Meadows*
	Illinois American Water*	Roselle
	Inverness	Schaumburg*
	Palatine	South Barrington*
	Palatine Township	

\*System discharges into more than one basin

**FIGURE 1. DISTRICT WATER RECLAMATION PLANTS**

