

Combined Sewer Overflow Operational and Maintenance Plan



**Village of Lincolnwood, Illinois
NPDES Permit No. ILM580034**

October 2008

TABLE OF CONTENTS

CHAPTER

1. OBJECTIVES

2. GENERAL INFORMATION

- Combined Sewer System
- Combined Relief Sewer System
- CSO Outfall Structures
- Monitoring & Reporting of CSO Events
- Public Notification Program
- Maximize Storage of Pollutants in Combined Sewer System
- Pollution Prevention
- Illinois Pollution Control Board
- Sensitive Areas

3. MAINTENANCE

- Street Sweeping
- Catch Basin Cleaning
- Sewer Rodding
- Root Cutting
- Sewer Relining
- Manhole Relining

4. INSPECTIONS & MONITORING

- Manholes
- Sewers
- Outfall Structures and Siphon Chambers
- Flow Monitoring
- Building Inspections
- Rehabilitation and Maintenance Work
- Elimination of Dry Weather Overflows

5. OTHER CSO PERMIT EFFORTS

- Record Keeping
- Inventory
- Procedures for New Developments

APPENDIX A

- CSO Operational Plan Checklist and Certification
- Certification of Sewer Use Ordinance Review
- CSO Pollution Prevention Plan Certification

CHAPTER 1 OBJECTIVES

This Operations and Maintenance Plan was developed in compliance with the Requirements of the Village's National Pollutant Discharge Elimination System (NPDES) Combined Sewer Overflow (CSO) General Permit No. ILM580034. The primary objective of this plan is to provide a program for effectively improving the Village's combined sewer overflow management. More specifically, the plan has been developed to comply with the following eight requirements of the NPDES CSO permit:

1. Collection system inspection on a regular scheduled basis;
2. Sewer, catch basin, manhole, and regulator cleaning and maintenance on a regularly scheduled basis;
3. Inspections are made and preventative maintenance is performed on all pump/lift stations;
4. Collections system replacement, where necessary;
5. Detection and elimination of illegal connections;
6. Detection, prevention, and elimination of dry weather overflows;
7. The collection system is operated to maximize storage capacity and the combined sewer portions of the collection system are operated to delay storm water entry into the system and;
8. The collection system is operated to maximize treatment

Chapter 2 General Informaton

The Village of Lincolnwood is located along the North Brach of the Chicago River waters. The Village's Combined Sewer Overflow drains into the North Shore Channel at two outfall locations. The Village is located entirely within the service area of the Metropolitan Water Reclamation District of Greater Chicago (MWRD).

COMBINED SEWER SYSTEM

The Village of Lincolnwood is served by a combined sewer system. All wastewater generated in Lincolnwood flows through Village owned and maintained sewers to MWRD interceptor and outfall sewers. The MWRD sewers ultimately flow to the Howard Street Wastewater Treatment Plant for treatment. The sewers are constructed of polyvinyl chloride (PVC) pipe and vitrified clay pipe (VCP). The combined sewer system is in generally good physical condition. In addition, numerous storm sewer improvements have been installed to reduce the flows to the combined sewer.

COMBINED RELIEF SEWER SYSTEM

When the combined system's capacity is exceeded, a Combined Sewer Overflow (CSO) event will occur. In the event the MWRD TARP system reaches capacity, the combined sewer overflow discharges into the North Shore Channel via two outfall pipes.

CSO OUTFALL STRUCTURES

The Village of Lincolnwood maintains two CSO outfall structures:

1. North Shore Channel at a point northeast of the intersection of McCormick Road and Pratt

Avenue at $-87^{\circ} 42' 40''$ W and $42^{\circ} 2' 40''$ N.

2. North Shore Channel at a point east of the intersection of McCormick and Pratt Avenue at $-87^{\circ} 42' 40''$ W and $42^{\circ} 2' 40''$ N.

Discharges from the combined sewer system into the North Shore Channel River are controlled by a junction chamber. Discharges from the combined sewer system into the deep tunnel are controlled by motorized sluice gates owned and operated by the MWRD.

MONITORING & REPORTING OF CSO EVENTS

Pursuant to the NPDES CSO Permit Requirements, the Village is responsible for the reporting of all wet and dry weather overflow discharges. The MWRD has installed telemetry equipment on the Morse Avenue outfall structure to monitor any wet or dry weather overflows. The Village of Lincolnwood has authorized the MWRD to submit CSO monitoring data, detailing any overflows, directly to the Illinois Environmental Protection Agency (IEPA) on the Village's behalf.

PUBLIC NOTIFICATION PROGRAM

Pursuant to the NPDES CSO Permit Requirements, the Village is responsible for developing a program for notifying the public of any discharges. The Village has developed a Public Notification Program to incorporate the MWRD's Combined Sewer Overflow Public Notification Plan. The program consists of a publication on the Village newsletter with background information on CSOs and directions to access the MWRDGC website (<http://www.lincolnwoodil.org/CombinedSewerOverflows.cfm>) for CSO occurrences.

One sign has been installed by the MWRD at the Morse Ave. outfall. The Village will coordinate with MWRD to install a sign at the Pratt Ave. outfall requesting that any observed dry weather flows be reported to the Village.

MAXIMIZE STORAGE OF POLLUTANTS IN COMBINED SEWER SYSTEM

The following is a summary of many of the Village's efforts to maximize the storage of sanitary flow (pollutants) in the combined sewer system, or minimize the flow of stormwater into the combined sewer system:

- Constructed numerous separate storm sewers in the 1990s.
- Structural deficiencies in the combined sewer system (sewer mains, catch basins, manholes, etc.) and groundwater infiltration are corrected by reconstruction or replacement.
- The Village continues a regular program to clean and inspect the combined sewer system (sewer mains and catch basins) so their capacity is undiminished by debris and roots which can impede the flow in the sewers.
- The Village's Storm Water Management Ordinance (Chapter 6, Article 13) is intended to "diminish threats to public health, safety and welfare caused by runoff of excessive storm water from new development and redevelopment."
- Prohibited stormwater discharge from vacant lands greater than one acre to any storm water sewers or combination storm water and sanitary sewers of the municipality until such time as the storm water facilities of the municipality are expanded or otherwise made adequate to serve such vacant tracts of land without endangering the public health, safety and welfare of the municipality and residents (Chapter 13, Article 3).
- Prohibited connection of downspouts, rainwater leaders, cisterns and overflows to the sanitary or combined sewer system (Chapter 13, Article 3).

POLLUTION PREVENTION

Pursuant to the NPDES CSO Permit Requirements, the Village is responsible for creating a Pollution Prevention Plan. The Plan compliments this Operational and Maintenance (O & M) Plan and provides more details about the Village's efforts to prevent contaminants from entering into the combined sewer system.

A few of the services the Village provides are listed below and are intended to collect and remove various solid waste materials from the Village and to keep pollutants and other debris from entering the Village's combined sewer system with the potential of discharging into the Chicago River via CSO:

- Street sweeping/cleaning
- Catch basin/drainage structure cleaning
- Solid waste collection and disposal - (refuse, recyclables, yard waste, bulk items)

ILLINOIS POLLUTION CONTROL BOARD

The Illinois Pollution Control Board has not issued any orders or violations regarding the CSO outfall structure.

SENSITIVE AREA CONSIDERATION

The CSO outfall structures do not discharge to a "sensitive area" such as wetlands, beaches, endangered species habitat, etc. However, the Chicago River is used for limited contact recreation such as canoeing and kayaking.

CHAPTER 3 MAINTENANCE

The Village of Lincolnwood performs or contracts preventative maintenance programs of the combined sewer system to ensure proper operation during dry and wet weather flows. Proper and regular maintenance of the combined sewer system will effectively reduce excessive inflow and/or infiltration into the system, prevent basement sewer backups, prevent adverse surcharging of the manholes, and prevent reduction of solids during "first flush" conditions and discharge at overflows/outfalls.

STREET SWEEPING

The Village of Lincolnwood owns, operates and maintains two street sweepers for the purpose of sweeping litter and other debris from streets and curbs almost continuously throughout the year – weather permitting. There are two sweepers in the Public Works Department. One runs on a set schedule and another runs to keep up with peak times in the fall and spring. Tickets are issued for cars obstructing the streets on days scheduled for street cleaning. Street sweeping is done every three to four weeks for each street. The street sweeping program normally begins in April and runs through mid December (weather permitting) Monday through Friday.

CATCH BASIN CLEANING

The Village of Lincolnwood owns, operates and maintains a vactor-type sewer truck/machine that is used to clean catch basins and other drainage structures throughout the spring, summer and fall seasons – weather permitting. Every catch basin is inspected and cleaned at least once every two years. This work is typically performed following leaf removal periods. Material removed during the cleaning process is disposed of as "landscape" waste.

SEWER RODDING

The Public Works Department performs high pressure jet rodding on the Village's 35 miles of combined sewer, prior to televising of sanitary sewers. This includes identifying root intrusion, grease build-up, and mineral growth, which are cleaned or cleared when discovered during routine inspections.

ROOT CUTTING

The Village of Lincolnwood contracts for root cutting on an as needed basis. Sewers with a history of problems are serviced more frequently. Procedures for root cutting are as follows:

1. Attach proper size root cutter to jet hose.
2. Root cutting proceeds from manhole to manhole.
3. Debris and roots are pulled backed to the point of entry manhole.
4. After completion of process, inspect structure and sewer for any repairs that may be necessary.

CHAPTER 4 INSPECTIONS & MONITORING

The special appurtenances in the sewer system, such as lift stations, Village-owned junction chambers, combined sewer overflows, flap gates, etc., will be inspected periodically on a schedule established by the Director of Public Works.

MANHOLES

All manholes will be inspected on a five-year cycle. Manholes will be routinely inspected and the results of the inspections will be documented for necessary repairs.

1. **Inflow through the lid:** Whether the manhole is located where storm runoff could accumulate around and over the lid, and enter the manhole through pick/vent holes, or through the space between the lid and the frame. This could be remedied by installation of a gasket seal cover or solid watertight cover with concealed pick holes.
2. **Frame Seal:** The manhole frame should be sealed watertight with the cone or adjustment rings. If signs of water leakage are noted, the frame should be removed and resealed.
3. **Adjustment Rings:** The existing adjustment rings between the frame and cone will be inspected for water tightness. If a leak(s) is observed, the frame and the rings should be removed and resealed. Any brick/block adjustment rings should be removed and replaced with pre-cast concrete rings.
4. **Manhole Walls:** To be inspected for signs of leaks. Leaking walls may be repaired by chemical grout sealing. Poured- in-place concrete liners or guniting may be considered for brick/block manholes with multiple defects.
5. **Manhole Base and Pipe Invert(s):** To be inspected for signs of leaks. Chemical grouting is the most likely repair method.
6. **Bench:** To be inspected for erosion of the bench. Eroded benches should be repaired by an appropriate method, ranging from application of mortar of an appropriate type to repouring of the bench.
7. **Steps:** To be inspected for leaks at the holes the steps are grouted into, and the condition of the step itself. Possible repair methods include regrouting and/or replacement of the step.

SEWERS

All sewer opening(s) in a manhole shall be visually inspected using a high intensity lamp and a mirror, to the extent visible from the manhole for the signs of obstructions, roots, sediment deposits and other defects.

Televising of sewer mains will occur on a rotating basis based on observed impedance of flow capacity as well as pipe material and age or in conjunction with street improvement and water main improvement projects. Video recordings of the televised sewers are retained by the Village.

OUTFALL STRUCTURE

Outfall structures shall be inspected annually and be cleaned or repaired as necessary.

FLOW MONITORING

If visual or other inspections indicate possible excess flow problems, flow monitoring should be performed at key manholes. Smoke testing, dye testing and excavations may be required where complaints or backup causes are difficult to locate.

BUILDING INSPECTIONS

If other inspections indicate that the increased flow may be a source of inflow/infiltration located on private property, an inspection of such property, including any building(s) on it, will be conducted. Village Staff will be familiarized with the sewer use ordinance so that unauthorized connections to the sewer can be identified and disconnected. Also, they will ensure that these connections are not reconnected later.

REHABILITATION AND MAINTENANCE WORK

The rehabilitation work determined necessary to be done, as a result of the inspections described above, will be scheduled as soon as possible. Contemporary and modern methods suitable for such repairs will be used. An outside contractor will be used to make the appropriate repairs.

The MWRD initiated the Interceptor Inspection and Rehabilitation Program (IIRP) to undertake the maintenance of the interceptor sewer system in a systematic plan. The goal of the IIRP is to increase the reliability of an aging interceptor sewer system as well as to reduce the incidents of cave-ins and the resulting emergency repair work.

Sewers to be inspected are classified according to criteria such as age, TARP diversion capability, brick construction (or otherwise noted as damaged), and industrial sewers. Inspections are performed by the MWRD using physical inspections, television inspections, and infrared inspections, as needed. Surface inspections are performed as part of IIRP. Flow metering is also be used to identify blockages and pipe cave-ins.

Based on the inspection reports, deficiencies in sewers and related structures will be repaired by the MWRD on an emergency basis, or by competitive bid contracts. Manholes are repaired using a competitively bid manhole repair contract.

ELIMINATION OF DRY WEATHER OVERFLOWS

One sign has been installed by the MWRD at the Morse Ave. outfall. The Village will coordinate with MWRD to install a sign at the Pratt Ave. outfall alerting the public to call the Village if a discharge or overflow event is observed during dry weather. In the event a dry

weather overflow occurs, and as soon as either the Village observes an event or MWRD informs the Village of such event (MWRD monitors overflow events using telemetry equipment), the Village will notify the IEPA.

The maintenance programs discussed in Chapter 3 and inspection and monitoring procedures discussed in this chapter minimize the potential for dry weather overflows.

CHAPTER 5 OTHER CSO PERMIT EFFORTS

RECORD KEEPING

The Village will maintain the records of collapsed and blocked sewers, basement backups, street flooding, collection system complaints, and excess flow levels at combined sewer overflows. Said records will be in such a form that can be easily accessed for reference or review. The data collected will form the basis for projecting a sequence of future maintenance work.

INVENTORY

The Village continues to update the map of the combined sewer system through the GIS Consortium. The combined sewer map(s) will include an inventory of the entire system (mains, manholes, catch basins, inlets, chambers, etc.) and will be updated continuously in accordance with actual system improvements. Paper copies of the latest version of the map will be distributed to field personnel.

PROCEDURES FOR NEW DEVELOPMENTS

The Village of Lincolnwood will issue building permits for applicable projects after approval is granted by the MWRD for compliance with its Sewer Permit Ordinance

Appendix A

1. CSO Operational Plan Checklist and Certification
2. Certification of Sewer Use Ordinance Review
3. CSO Pollution Prevention Plan Certification

Combined Sewer Overflow Pollution Prevention Plan



**Village of Lincolnwood, Illinois
NPDES Permit No. ILM580034**

October 2008

POLLUTION PREVENTION PLAN

This plan was developed in compliance with the requirements of the Village's National Pollutant Discharge Elimination System (NPDES) Combined Sewer Overflow (CSO) General Permit No. ILM580034. The primary objective of this plan is to keep contaminants from entering the combined sewer system. The following is a description of the activities that the Village is undertaking:

Street Cleaning

The Village of Lincolnwood owns, operates and maintains two street sweepers for the purpose of sweeping litter and other debris from streets and curbs almost continuously throughout the year – weather permitting. There are two sweepers in the Public Works Department. One runs on a set schedule and another runs to keep up with peak times in the fall and spring. Tickets are issued for cars obstructing the streets on days scheduled for street cleaning. Street sweeping is done every three to four weeks for each street. The street sweeping program normally begins in April and runs through mid December (weather permitting) Monday through Friday. Street sweepings do not occur during below freezing temperatures or after a heavy rainfall.

Public Education

The Village of Lincolnwood has developed informational material that is located on the Village website. Articles relating to pollution prevention and stormwater are frequently included in the Village newsletter (which is also available on the Village website).

The Village of Lincolnwood passed a resolution committing the Village to participate in the Greenest Region Compact of Metropolitan Chicago. By signing the Compact, the Village pledged to make environmental considerations a priority. The Compact involves participating municipalities to demonstrate that environmental practices are fiscally responsible and calls on residents and businesses to join the Village as environmental stewards to preserve the resources, climate, and economic viability of the Chicagoland region for future generations. Specifically, by signing the Compact the Village committed to implementing three priority strategies as identified by the Metropolitan Mayors Caucus Environmental Committee:

1. Promote Resident Water Conservation Practices & Reduce Water Consumption by 15% by the year 2015
2. Enact Electronic Waste Recycling programs
3. Reduce Residential Energy Consumption by Encouraging the use of Compact Fluorescent Light (CFL) Bulbs

The Village of Lincolnwood also implemented an incentives program for existing businesses to implement green initiatives. The program known as Green Improvements for Tomorrow and commonly referred to as GIFT, is one of the first grant programs of its kind in the Chicago metropolitan area. Through GIFT, business owners are eligible to apply for matching grants of up to \$10,000 to implement green improvements on their property. Eligible improvements include: green roofs, energy efficient lighting, rain gardens, rain barrels & native plantings, dual flush toilets & aerated faucets, passive solar for heating & cooling, and energy star windows, doors & furnaces.

DOES THE VILLAGE REQUIRE NEW GRATES AND LIDS TO INCLUDE CASTING TO INDICATE "DO NOT DUMP, DRAINS TO RIVER"

Solid Waste Collection and Recycling

The residents of Lincolnwood have a curbside collection program. They are allowed unlimited refuse, recycling and yard waste each week as long as items are prepared accordingly. Residents are also allowed to place two bulk items at the curbside per week for collection.

Items collected in recycling include metals (aluminum cans, clean foil, tin/steellbimetal, cookie tins, empty aerosol cans), glass (clear, green, blue, brown), plastics (#1, 2, 3, 5, 6, 7), and paper (newspaper, mixed paper, corrugated cardboard). Recycling drop-off locations are also available to residents in nearby communities.

DID THE VILLAGE INTRODUCE 65 GALLON CARTS FOR RECYCLING?

Proper refuse, recycling and yard waste procedures, as well as drop-off locations, are announced on the Village's website and through the Village's newsletters.

Product Ban/Substitution

Currently, the Village of Lincolnwood does not ban any product packaging or participate in product packaging substitution.

Control of Product Use

The Public Works Department uses herbicides sparingly throughout the summer/autumn (May through October). Sprayings concentrate directly on weed and wild growth on curb lines, islands, sidewalks, medians and expansion joints. Areas of weed and wild growth are sprayed with herbicides only once a year. In addition, the Village encourages the minimal use of road salt during the winter months.

Illegal Dumping

The Public Works Department posts illegal dumping signs in designated areas where illegal dumping is frequent in the Village. The Village of Lincolnwood Police Department monitors for any illegal dumping in the Village and investigates illegal dumping occurrences. Items that have been illegally dumped are collected by the Public Works Department after the initial investigation and disposed of accordingly.

Bulk Refuse Disposal

The Village's waste hauler will pick up bulk refuse upon request. In addition, the Solid Waste Agency of Northern Cook County operates a transfer station in the adjacent community of Glenview which charges a flat fee for acceptance of bulk refuse.

The Village of Lincolnwood is a member of the Solid Waste Agency of Northern Cook County (SWANCC). Through participation in SWANCC, Village residents have the opportunity to participate in many programs including document destruction, electronics recycling, and household chemical waste disposal. Information and a link to SWANCC website are located on the Village website.

Hazardous Waste Collection

The SWANCC publicizes Household Chemical Waste Collections conducted periodically by the Illinois Environmental Protection Agency. Residents of the Village of Lincolnwood are encouraged to participate in these programs.

The Village has partnered with SWANCC to offer a Prescription Drug and Sharps Disposal Program. The program is intended to ensure the environmentally safe disposal of drugs and needles and to guard against potential theft associated with disposing of old medications. Prescription drugs and sharps may be disposed of at the Lincolnwood Police Department.

The Village posts information regarding the Household Chemical Waste Disposal Program. A permanent facility exists in Chicago in the Goose Island District for Illinois residents to dispose of household chemical waste, computer materials and latex paint. The facility accepts the following materials for recycling or safe disposal: antifreeze, used motor oil, old gasoline, oil-based paints, paint thinners, aerosol paints, herbicides, insecticides, pesticides, lawn chemicals, solvents, drain cleaners, cleaning products, pool chemicals, hobby chemicals, mercury, fluorescent lamps and bulbs, computers and cell phones.

The Village has partnered with the SWANCC to implement a Compact Fluorescent Light bulb (CFL) Recycling Program. CFLs contain small amounts of mercury that are best left out of our landfills. Residents are encouraged to recycle their bulbs by dropping them off at the Lincolnwood Fire Department. Information on mercury and the proper disposal of CFLs is posted on the Village website.

Water Conservation

The Village of Lincolnwood enforces a requirement to use water-conserving fixtures. In addition, Village Code allows for restriction or prohibition of outdoor water usage during periods of chronic shortage. During this time, residents are allowed to water their lawns between 8 pm and 8 am and days in which a resident can water their lawn are dependent upon even and odd numbered addresses.

Commercial/Industrial Pollution Prevention

The purpose of the Village of Lincolnwood's Cross-Connection Control and Backflow Prevention Ordinance (Chapter 13, Article 4) is to protect the public water supply system from contamination or pollution by isolating within the customer's water system contaminants or pollutants which could backflow through the service connection into the public water supply system. Enforcement of this ordinance will eliminate and control existing cross-connection, actual or potential, between the public consumer's potable water system and non-potable water systems, plumbing fixtures and sources or systems containing substances of unknown or questionable quality. The ordinance

requires installation of an approved backflow prevention device on each water line to a consumer's water system serving, but not limited to, the following types of facilities unless the plumbing inspector determines that no actual or potential hazard to the public water supply system exist:

1. Hospitals mortuaries, clinics and nursing homes.
2. Laboratories.
3. Piers, docks and waterfront facilities.
4. Sewage treatment plants, sewage pumping stations or storm water pumping stations.
5. Food or beverage processing plants.
6. Chemical plants.
7. Metal plating industries.
8. Petroleum processing or storage plants.
9. Radioactive material processing plants or nuclear reactors.
10. Car washes.

Combined Sewer Overflow Public Notification Program



**Village of Lincolnwood, Illinois
NPDES Permit No. ILM580034**

October 2008

PUBLIC NOTIFICATION PROGRAM

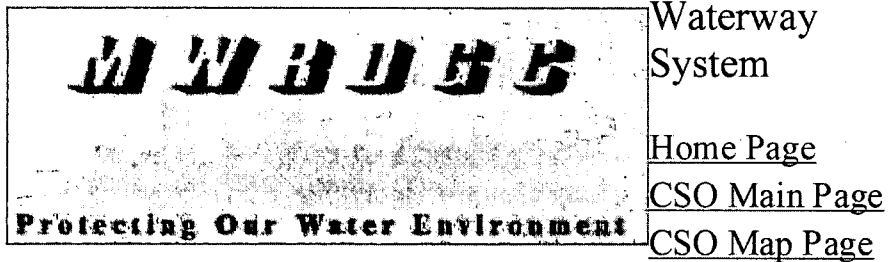
This program was developed in compliance with the requirements of the Village's National Pollutant Discharge Elimination System (NPDES) Combined Sewer Overflow (CSO) General Permit No. ILM580034. The primary objective of this program is to inform the public in the event of combined sewer overflows.

The Metropolitan Water Reclamation District (MWRD) has flow monitoring equipment installed at representative locations throughout its service area, including the drop shafts to which Lincolnwood's CSOs are tributary. In addition, the MWRD has created a public notification plan that includes signage at the outfalls, a web page to inform the public of CSO occurrences, and an email address book for the sending of CSO notifications to interested parties.

In the interest of avoiding a redundancy of efforts, the MWRD has invited TARP municipalities to use the MWRD Public Notification Plan for their public notification compliance. The Village of Lincolnwood has accepted the MWRD offer and taken the following actions:

- Provided the web address of the MWRD CSO web page to Village residents in a newsletter article.
- Signed on to the MWRD CSO email notification such that the Village Engineer will be alerted to any combined sewer overflows.

The Village Engineer shall at all times keep the Village President, and/or his appointee, informed of any dangerous condition that may exist.



**Combined Sewer Overflow
Public Notification Plan**
Revised January 2006

Stickney Water Reclamation Plant NPDES Permit No. IL0028053
Calumet Water Reclamation Plant NPDES Permit No. IL0028061
North Side Water Reclamation Plant NPDES Permit No. IL0028088

In accordance with Special Condition (SC) 10.12 of the above referenced permits effective March 1, 2002, the following plan is submitted for actively informing the public of combined sewer overflow (CSO) occurrences and impacts.

Identifying the Affected Public

The District has solicited comments and feedback from the affected public in the development of the CSO Public Notification Plan. The District considers the affected public to include governmental organizations, civic groups, recreational groups or any public citizen with an interest in or responsibility for the condition of the Chicago Area Waterway System (CAWS). Currently, the District identified the following organizations to be among the affected public: the USEPA; the IEPA; the City of Chicago; all municipalities located adjacent to the CAWS; the Friends of the Chicago River; NeighborSpace; the Openlands Project; the Sierra Club; the Civic Federation; the Prairie Rivers Network; the Lake Michigan Federation; and other environmentally based organizations. Other groups which are to be specifically identified include the recreational and commercial users of the CAWS such as canoe or kayak clubs, high school or collegiate rowing teams and owners of marinas. Interested parties of the Use Attainability Analysis that is currently underway for the CAWS will also be identified and included in the District's efforts to include the public in the development of the CSO public notification plan.

The identified affected public was invited to the public meeting held on January 20, 2004. Comments and feedback were solicited at that time. Advisories about the planned public meeting were available on the District's webpage, through news media alerts to all local print and electronic media, and direct notification when possible.

MWRDGC Coordination with the City of Chicago and Suburban TARP Municipalities

The District intends to coordinate the CSO Public Notification Plan with the City of Chicago and all Suburban municipalities with connections to TARP. Upon final approval of the District's plan, it will be transmitted to the referenced municipalities for their use in the preparation of their own respective public notification plans. The District has been in routine contact with the City of Chicago and has informed them that we intend to install signage at the District's 37 CSO Outfall locations (See further information below). Copies of the signs will be transmitted to the TARP municipalities for their use.

In addition, the District will allow the City of Chicago and the suburban TARP municipalities to link to the District's proposed web page described below. Other governments which are concerned with water, health or public safety issues will be encouraged to link their web sites to the District's proposed web

page.

Web Address Book

The District is developing an electronic "Address Book" containing a list of email addresses of interested parties, i.e. the previously identified stakeholders. The Address Book will be updated on an as-needed basis as other members of the affected public are identified and members of the public will be able to sign up to receive e-mail notification of CSO events by accessing the District's website (www.mwrdd.org). These parties will be sent an email alert in the event of a known CSO or diversion to Lake Michigan.

Signage at District CSO Locations

As noted above, the District intends to install signage at our CSO outfall locations. These signs will be two-sided and weatherproof, and will identify the outfall number. The District will install signs in public areas adjacent to the river on District property only.

Notification of Potable Water Supply Agencies

The District will continue to notify suppliers of potable water of CSOs that result in a reversal of the waterways into Lake Michigan at Wilmette harbor, the Chicago River and Controlling Works, and the O'Brien Locks.

Web Page

The District has created a web page on the MWRDGC website to inform the general public of the occurrences of CSOs on the Chicago area waterways system. A color-coded graphic representation of the waterways (copy attached) appears on the web page depicting the occurrence of CSOs and waterway diversions to Lake Michigan. This map will be updated on a daily basis seven days per week. The District includes its web address on all news releases and will also be included on those pertinent to CSOs and/or diversions to Lake Michigan.

The waterways represented on the map includes the following: North Shore Channel, North Branch of the Chicago River (NBCR), Chicago River, Weller Creek, Salt Creek, Addison Creek, Des Plaines River, South Branch of the Chicago River (SBCR), South Fork of SBCR (Bubbly Creek), Chicago Sanitary and Ship Canal (CSSC), Calumet-Sag Channel, Little Calumet River, Calumet River, and the Grand Calumet River. CSO notification will be conducted on a segment-wide basis. The waterway will be divided into 23 segments as follows:

1. North Shore Channel: Lake Michigan to North Side WRP
2. North Shore Channel: North Side WRP to the confluence with the NBCR
3. NBCR: confluence with the North Shore Channel to Wolf Point, including the North Branch Canal east of Goose Island.
4. NBCR: Beckwith Road and West Fork to confluence with the North Shore Channel
5. Chicago River: Wolf Point to Chicago River Controlling Works (CRCW)
6. South Branch of Chicago River: Wolf Point to Damen Avenue
7. South Fork of SBCR (Bubbly Creek)
8. CSSC: Damen Avenue to the Stickney WRP
9. CSSC: Stickney WRP to the confluence with the Calumet-Sag Channel
10. CSSC: from the confluence with the Calumet-Sag Channel to the Lemont WRP
11. CSSC: Lemont WRP to Lockport Lock & Dam
12. Weller Creek
13. Des Plaines River: Weller Creek to Willow-Higgins Creek
14. Des Plaines River: Willow-Higgins Creek to the confluence with Salt Creek
15. Des Plaines River: the confluence with Salt Creek to the confluence with the CSSC

16. Salt Creek: from Addison Creek to the confluence with the Des Plaines River
17. Calumet River: O'Brien Locks to Lake Michigan
18. Grand Calumet River: from confluence with the Little Calumet River to the Indiana state line
19. Little Calumet River: O'Brien Locks to the Calumet-Sag Channel
20. Little Calumet River: Indiana state line to the Calumet-Sag Channel
21. Calumet-Sag Channel
22. Calumet Union Drainage Ditch
23. Addison Creek

Upon occurrence of a CSO in a given waterway segment, the color of the segment shown on the map will be changed from blue to red. The color of several waterway segments downstream of the segment on which a confirmed CSO has occurred will, by default, also be changed to red, indicating that the water quality of that segment may be affected as well. Floodwater discharges to Lake Michigan at the Wilmette Pump Station, the Chicago River Controlling Works and the O'Brien Lock & Dam will also be indicated on the map by a red star at the respective lake outlet.

The on-line map of CSOs will be updated as the information becomes available and will be certified the following day, typically around 8:00 a.m. It will provide the public with a rolling seven-day record of CSO/floodwater discharge events in the Chicago area waterway system. The seven most current daily maps will be retained on the website with the oldest being deleted when a new map is added. A user will be able to select and display any one of the seven maps stored on the web page at a given time. A link will be established to allow users to access a table of CSO events at the North Branch Pump Station, the Racine Avenue Pump Station, and the 95th Street Pump Station extending beyond the seven day period represented on the maps.

In addition to the graphic map display, limited general information regarding CSOs and floodwater discharges to Lake Michigan, along with their implications, will be included for informational purposes.

Questions & Answers

- What is a combined sewer overflow (CSO)? A CSO is a discharge from a combined sewer system directly into a waterway. A combined sewer system is designed to collect a mixture of rainfall runoff, domestic and industrial wastewater in the same pipe for conveyance to a wastewater treatment plant. A CSO may occur during heavy rainfalls when the inflow of combined wastewater exceeds the capacity of the combined sewer system and the wastewater treatment plant. The CSO outfalls to the waterway act as relief points for the excess flow in the sewers, thereby reducing the frequency and severity of sewer backups and flooding.
- What are the impacts of CSOs? Although CSOs may contain highly diluted sewage that could include bacteria which may cause illness, they may also cause temporary water quality degradation in the waterways. Regardless of CSO activity, the Chicago Area Waterways may contain disease-containing bacteria at any time. Therefore, swimming, canoeing, or other activities where immersion in water is possible should be avoided and is not recommended, particularly during and immediately following rainfall.
- Why does the Chicago area have CSOs? Chicago and the older suburbs, typical of other older metropolitan areas, have a combined sewer system, in which both sanitary waste and storm water are conveyed in the same pipe. Suburbs built since 1950 have separate sanitary and storm sewer systems.

- Where do CSOs occur? When CSOs occur, they impact every major waterway in the Chicago area including the following: North Shore Channel, North Branch of the Chicago River, the Chicago River, South Branch of the Chicago River, the South Fork of the South Branch of the Chicago River (Bubbly Creek), the Chicago Sanitary and Ship Canal, the Calumet River, the Grand Calumet River, the Little Calumet River, the Calumet-Sag Channel, the Des Plaines River, Salt Creek and Weller Creek. Due to the heavy urbanization in the Chicago area, CSO discharge points are numerous along these waterways.
- What is being done to reduce the occurrence of CSOs? The MWRDGC's ongoing Tunnel and Reservoir Plan (TARP) Project was implemented to alleviate the polluting effects of CSOs and to provide relief from local flooding by providing holding capacity for 18 billion gallons of combined sewage in its tunnels and reservoirs until it can be pumped to the water reclamation plant for full treatment. Although the reservoir portion of TARP is scheduled for completion in stages between 2013 and 2023, significant benefits have already been realized. It is estimated that since the first of the tunnels went online in 1985 until 2003, more than 741 billion gallons of CSOs have been captured and conveyed to the water reclamation plants for full treatment. Since TARP went online, the waterways have seen an increase in both the fish population and number of species present; basement and street flooding have been reduced; and there are fewer floodwater discharges to Lake Michigan. To date, more than \$2 billion have been spent on the project. In addition to TARP, the District maintains and operates its collection system to maximize storage and optimize transportation of combined sewage to the treatment plants. This is accomplished by conducting a regularly scheduled program of maintenance which includes sewer inspection, cleaning, videotaping activities, and inspection of diversion and bypass structures.
- Why do floodwater discharges to Lake Michigan occur? During extremely heavy rainfall in the Chicagoland Area, storm runoff empties into the waterways system causing the water level to rise. The water level may rise to a level sufficient to submerge the CSO outfalls, thereby reducing the rate of discharge from the outfall. This can result in basement backups and local flooding. The discharge of floodwaters to Lake Michigan occurs when the waterways reach high levels and threaten flooding of structures along the waterway and submergence of CSO outfalls. Since the initial operation of TARP in 1985, the number of times that floodwaters are discharged to Lake Michigan has been reduced. When TARP is fully complete in 2023, the number will decrease further.
- How can the public reduce CSOs? During periods of high flow, every gallon of wastewater and stormwater kept out of the sewer system is a gallon that will not add to a CSO discharge. Examples of ways to reduce the wastewater load include avoiding unnecessary water usage, toilet flushing, dishwashing, clothes washing, and showering. Additionally, individuals and businesses could install rain barrels/cisterns to collect rainwater runoff from their roofs. This water would be used for garden/lawn watering and similar uses, thereby reducing both the impact of heavy rain events and the use for potable water for non-potable uses.