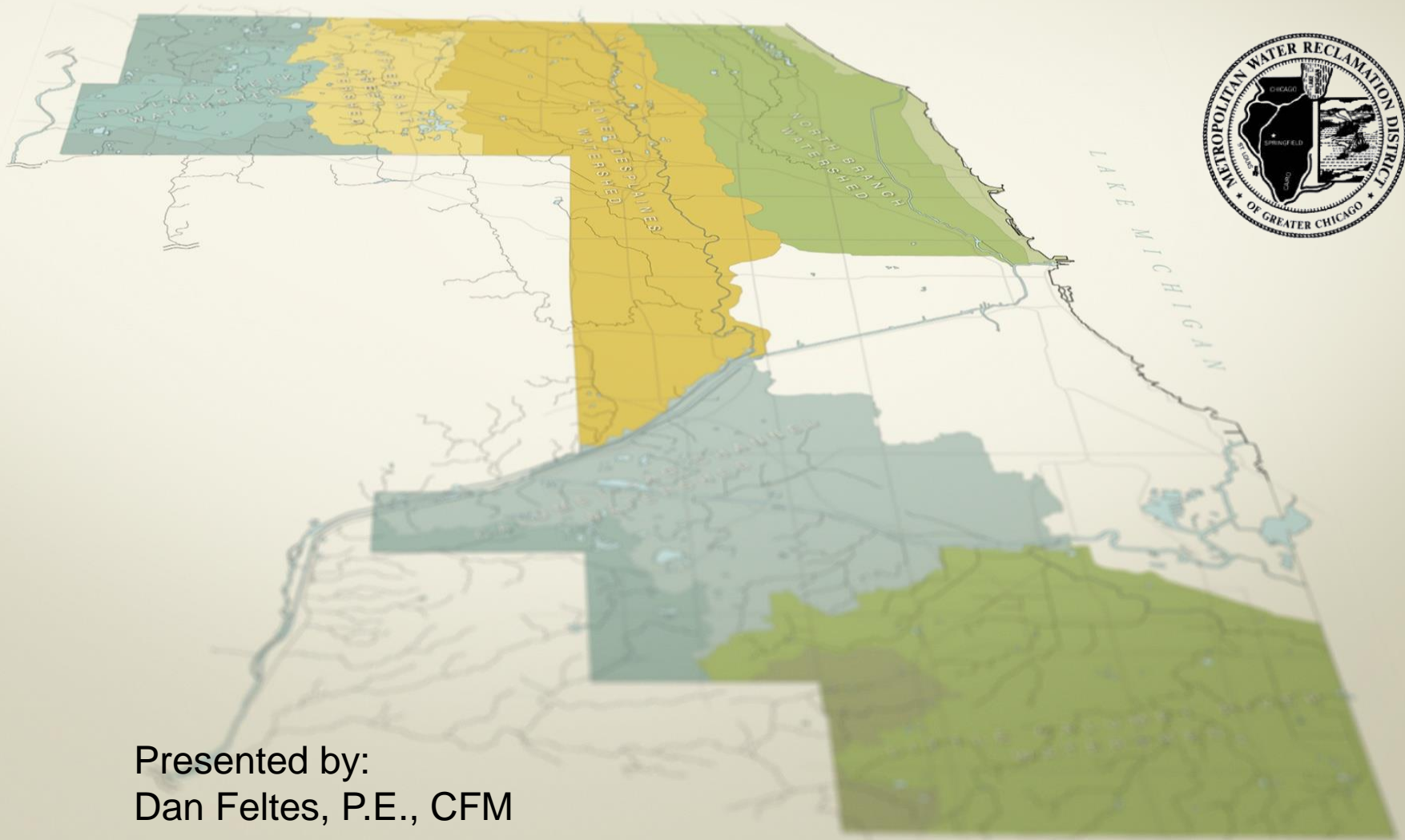


Watershed Management Ordinance (WMO)



Presented by:
Dan Feltes, P.E., CFM



WMO Objective

Establish uniform, minimum, and comprehensive countywide stormwater management regulations

Enabling Legislation

Watershed Management Ordinance

“Stormwater management in Cook County shall be under the general supervision of the Metropolitan Water Reclamation District of Greater Chicago.”

“The District may prescribe by ordinance reasonable rules and regulations for floodplain and stormwater management . . . in Cook County.”

Public Act 093-1049



Sewer Permit Ordinance

- Sanitary Sewers
- Stormwater Detention
 - TP-40 Rainfall Data
 - Modified Rational Method

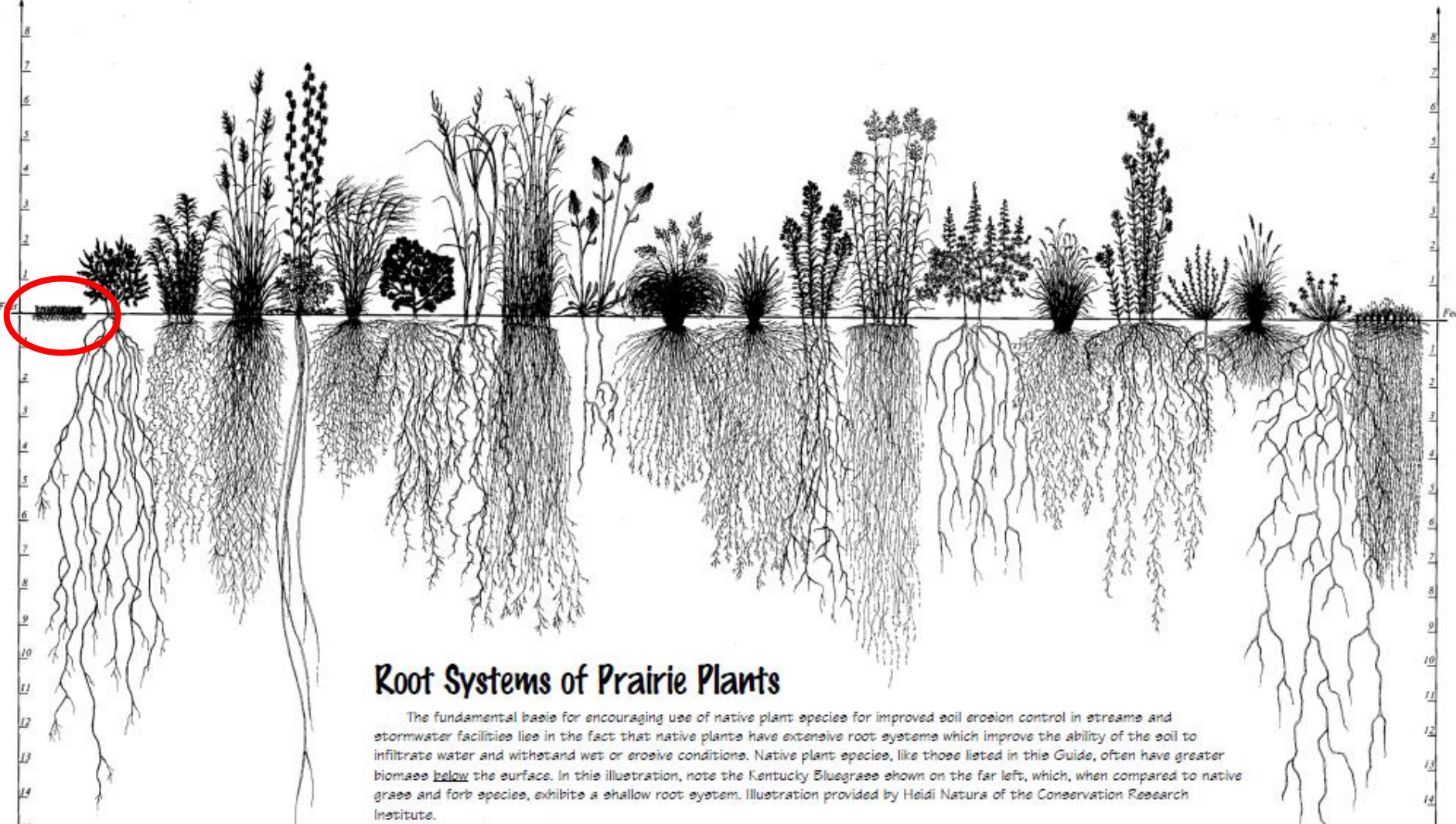
Watershed Management Ordinance

- Sanitary Sewers
- Stormwater Detention
 - Bulletin-70 Rainfall Data
 - Flat Release Rate
 - Hydrograph Method
- Volume Control
- Erosion & Sediment
- Flood Protection Areas
 - Floodplain
 - Floodway
 - Isolated Wetlands
 - Riparian Areas



Green Infrastructure (GI) = Volume Control (VC) (in Consent Decree) (in WMO)





Root Systems of Prairie Plants

The fundamental basis for encouraging use of native plant species for improved soil erosion control in streams and stormwater facilities lies in the fact that native plants have extensive root systems which improve the ability of the soil to infiltrate water and withstand wet or erosive conditions. Native plant species, like those listed in this Guide, often have greater biomass below the surface. In this illustration, note the Kentucky Bluegrass shown on the far left, which, when compared to native grass and forb species, exhibits a shallow root system. Illustration provided by Heidi Natura of the Conservation Research Institute.

- | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|---|---|--|---------------------------------------|---|---|--|---|---|--|---|--|---|---|--|--|--|---|
| Kentucky Blue Grass
<i>Poa pratensis</i> | Lead Plant
<i>Amorpha canescens</i> | Missouri Goldenrod
<i>Solidago missouriensis</i> | Indian Grass
<i>Sorghastrum nutans</i> | Compass Plant
<i>Silphium laciniatum</i> | Panicum Grass
<i>Sphaerostachya spicata</i> | Heath Aster
<i>Aster ericoides</i> | Prairie Cord Grass
<i>Spartina pectinata</i> | Big Blue Stem
<i>Andropogon gerardii</i> | Pale Purple Coneflower
<i>Echinacea pallida</i> | Prairie Dropseed
<i>Sporobolus heterolepis</i> | Side Oats Gramma
<i>Bouteloua curtipendula</i> | Fabe Bonaset
<i>Rubus cuneifolius</i> | Switch Grass
<i>Panicum virgatum</i> | White Wild Indigo
<i>Baptisia leucantha</i> | Little Blue Stem
<i>Andropogon scoparius</i> | Rosin Weed
<i>Silphium perfoliatum</i> | Purple Prairie Clover
<i>Petalostemum purpureum</i> | June Grass
<i>Koeleria cristata</i> | Cylindric Blazing Star
<i>Liatris cylindracea</i> | Buffalo Grass
<i>Bouteloua dactyloides</i> |
|---|--|---|---|---|--|---------------------------------------|---|---|--|---|---|--|---|--|---|---|--|--|--|---|

Root Systems: Turf Grass to Native Plants



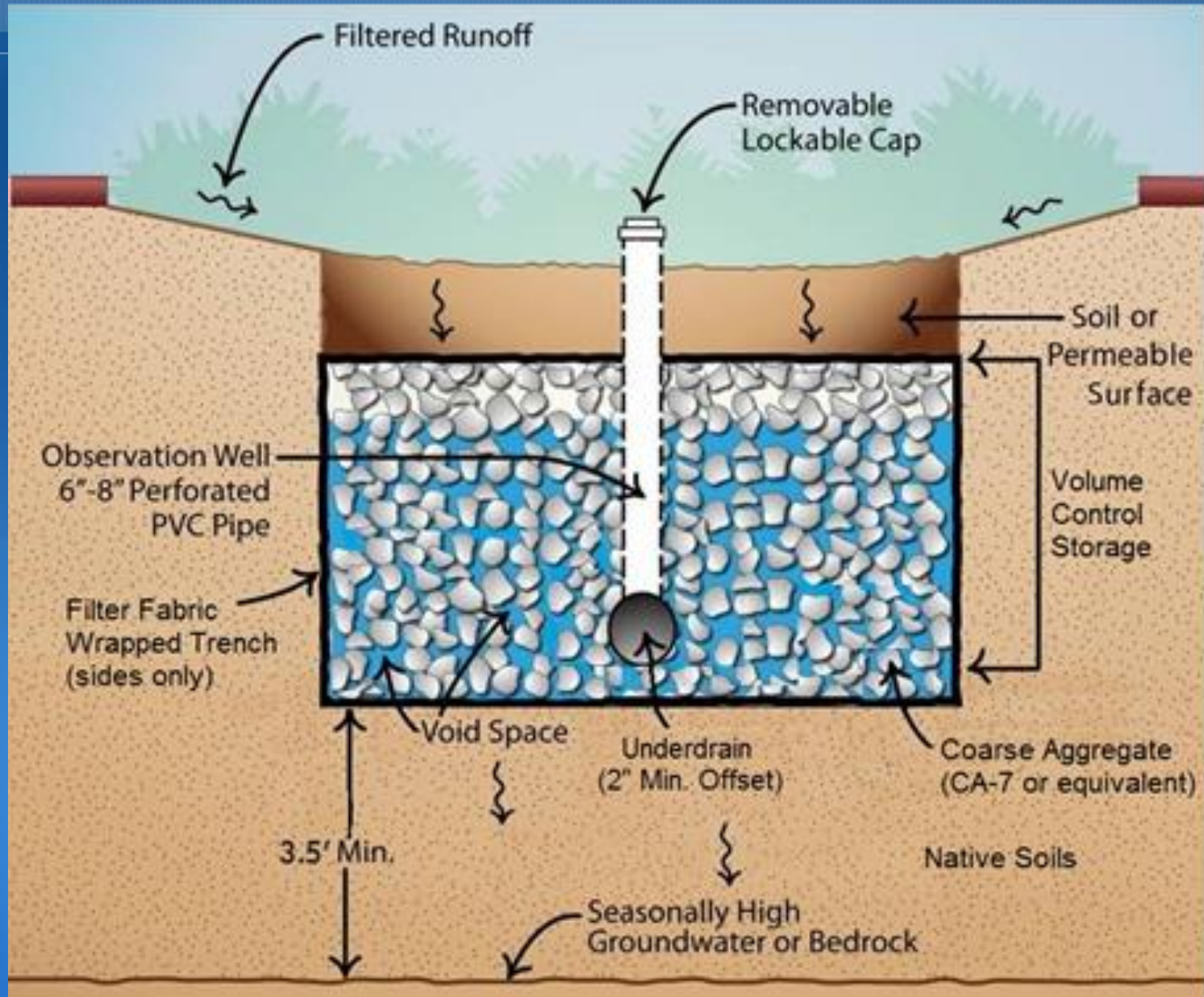
WMO Volume Control Summary

- One inch of volume over total new impervious area
- Can be provided in several ways:
 - Infiltration Trenches
 - Infiltration Basins
 - Porous Pavement (storage in the voids below the pavement)
 - Bio-Retention Systems
 - Dry Wells
 - Cisterns
 - Open Channel Practices Fitted With Check Dams
 - Storage Below the Outlet of a Site Detention Facility
- Credit toward required detention volume (CN reduction)



WMO Volume Control Summary

- When providing storage in void space of aggregate, stone must be angular cut and cleaned/washed free of fines. Different aggregate sizes are acceptable
- Underdrains are required, and must be offset at least 2” above bottom of volume control storage
- Bottom of storage must be above groundwater level
 - 2 feet in separate sewer areas
 - 3.5 ft in combined sewer areas
 - Highest seasonal groundwater level established through soil borings
- One monitoring well per 40,000 ft² of area



Cross Section - Typical Volume Control System



Flow-Through Practices

- Required for portion of volume control not being provided by volume control practices
- Common flow-through practices are:
 - Vegetated Filter Strips
 - Bio Swales
 - Constructed Wetlands
 - Catch Basin Inserts
 - Oil and Grit Separators
- No detention volume credit for flow-through practices



WMO Compliance Flexibility

- Full credit for volume control
- Trading
- Phased release rates
- Existing development plans list
- Legacy development / redevelopment allowance
- Authorized municipalities
- Multi-county municipalities
- Non-qualified development
- Marginal increase in required volume
- Streamlined, practical permit review



Technical Guidance Manual

- Article 2** **Applicability and General Provisions**
- Article 3** **Watershed Management Permit Requirements and Submittals**
- Article 4** **Requirements for Erosion and Sediment Control**
- Article 5** **Requirements for Stormwater Management**
- Article 6** **Requirements for Flood Protection Areas**
- Article 7** **Requirements for Sewer Construction**
- Article 9** **Maintenance**
- Article 10** **Inspection**
- Article 14** **Administration**



Do I need a WMO Permit... ... Even Here?

Permit
Applicability
§201, Table 1

Development
> 0.5 Disturbed
Area



Flood Protection
Areas
Floodplain, Wetlands,
Riparian etc.

Qualified Sewer
Construction

District
Impacts

Stormwater
Requirements
Article 5, Table 2
Ownership

Color Code:

- Cook County,  Chicago
- District Corporate Limits,  Chicago
- Cook County including Chicago

TARP / Interceptors
Waterway Outfalls
Lake Michigan
District Property

New WMO Permit Cover

WATERSHED MANAGEMENT PERMIT DISTRICT Permit No.

**METROPOLITAN WATER RECLAMATION DISTRICT
OF GREATER CHICAGO
100 EAST ERIE, CHICAGO, ILLINOIS, 60611**

<http://www.mwrd.org>

INSTRUCTIONS FOR COMPLETING PERMIT FORM: Submit _____ typed copies of permit application (eight pages) and any required WMO schedules listed below; do not leave any blank spaces; use "X" for checking applicable information. Also submit _____ copies of location map and plans. Submit two copies of specifications, if specifications are not part of the plan sheets. Address all correspondence to the Local Sewer Systems Section; for any inquiries or assistance, telephone (312) 751-3255.

NAME AND LOCATION:

Name of project (as shown on plans): _____

Location of Project (street address or with respect to two major streets): _____

Municipality (Township, if unincorporated) _____

Section _____, Township _____ N, Range _____ E

- | | | |
|--|---|---------------|
| <input type="checkbox"/> Project Information (Required in all cases) | WMO Schedule A ¹ | (Page 4 of 8) |
| <input type="checkbox"/> Sewer Summary (Required in all cases) | WMO Schedule B ¹ | (Page 5 of 8) |
| <input type="checkbox"/> Sewer Connections (Required in all cases) | WMO Schedule C ¹ | (Page 6 of 8) |
| <input type="checkbox"/> Detention & Stormwater Management Facilities (WMO) | WMO Schedule D ² | (_ Pages) |
| <input type="checkbox"/> Detention & Stormwater Management Facilities (Legacy) | WMO Schedule D _{Legacy} ¹ | (_ Pages) |
| <input type="checkbox"/> Lift Station and/or Force Main | WMO Schedule E ¹ | (_ Pages) |
| <input type="checkbox"/> Characteristics of Waste Discharge | WMO Schedule F ¹ | (2 Page) |
| <input type="checkbox"/> Treatment or Pretreatment Facilities | WMO Schedule G ¹ | (2 pages) |
| <input type="checkbox"/> Hazard Areas (Floodplain / Floodway /Riparian Areas) | WMO Schedule H ² | (_ Pages) |
| <input type="checkbox"/> Affidavit Relative to Compliance with Art. _____ | WMO Schedule J ¹ | (1 Page) |
| <input type="checkbox"/> Affidavit of Disclosure of Property Interest | WMO Schedule K ^{1,2} | (2 Pages) |
| <input type="checkbox"/> Notice of Requirements for Storm Water Detention | WMO Schedule L ² | (2 Pages) |
| <input type="checkbox"/> Current Survey of Property Interests | Exhibit A ¹ | |
| <input type="checkbox"/> Outfall, Direct Connection, District Owned or Leased Property | WMO Schedule O ¹ | (1 Pages) |
| <input type="checkbox"/> Erosion Control (Required in all cases) | WMO Schedule P ^{1,2} | (_ Pages) |
| <input type="checkbox"/> Recording and Maintenance | WMO Schedule R ² | (_ Pages) |
| <input type="checkbox"/> Wetlands and Wetland Buffer Areas | WMO Schedule W ² | (_ Pages) |

¹ Submittal elements required to District for qualified sewer construction, outfalls, direct connections to District facilities and development impacting District Property.

² Submittal elements required to Authorized Municipality if development is within the corporate limits of an Authorized Municipality. Submit to District otherwise.

Note: Refer to Table 1 of § 201 of Article 2 of Watershed Management Ordinance for applicable Permitting Authority.

OTHER DOCUMENTS: Indicate title, number of pages and originator: _____

NOTE: ATTACH FEE PAYMENT VOUCHER AND PAYMENT IF APPLICABLE

MWRDGC USE ONLY

Application received: _____ WMO Permit issued: _____ WRP: _____

Issued by: MWRDGC Authorized Municipality



- Home
 - Commissioners
 - Departments
 - Services & Facilities
 - Public Affairs
 - Newsroom
 - Business with Us
 - Reports
 - Employment
- Overview
 - Cook County Stormwater Management Plan (CCSMP)
 - Watershed Management Ordinance (WMO)**
 - Inundation Maps & Hydraulic Profiles
 - Stormwater Annual Reports and Publications
 - Watershed Planning Council
 - WPC Meetings
 - Combined Sewer Communities

Services & Facilities >> Stormwater Management >> Watershed Management Ordinance (WMO)

Watershed Management Ordinance

The Watershed Management Ordinance (WMO) establishes uniform, minimum, countywide stormwater management regulations throughout Cook County. Components which are regulated under the WMO include drainage and detention, volume control, floodplain management, isolated wetland protection, riparian environment protection, and soil erosion and sediment control. The District's Board of Commissioners adopted the Watershed Management Ordinance (WMO) on October 3, 2013, which will become effective on May 1, 2014. The WMO is accessible through the link below.

- » [Watershed Management Ordinance](#) (As amended on April 17, 2014) (7.1MB)
- » [WMO Amendment Doc. Comparison](#) (5.9 MB)

The District is developing a Technical Guidance Manual (TGM), which will serve as a technical reference to the WMO. The draft TGM documents are accessible through the link below.

[Draft Technical Guidance Manual \(TGM\)](#)

The District will conduct training for stakeholders in early 2014 to ease the transition from the Sewer Permit Ordinance to the WMO.

[Training Schedule](#)

Permit Resources:

- » [WMO Permit Forms](#)
- » [WMO Design Calculators](#)
- » [WMO Model Templates](#)
- » [Basic Permit Applicability Chart](#) (525 KB)

Other Resources:

- » [Watershed Management Ordinance: Short Summary](#)
- » [Authorized Municipalities](#)
- » [Multi-County Municipalities](#)
- » [Existing Development Plans List](#)
- » [Frequently Asked Questions \(FAQs\)](#)
- » [Presentations](#)
- » [WMO Advisory Committee Resource Page](#)

If you have any questions about the WMO, contact Mr. John Murray at (312) 751-7918 or john.murray@mwrld.org.



wmo.mwrld.org

WMO Training Schedule

May

Date	Time	Location
Wednesday, May 21, 2014	12:00 p.m. – 4:00 p.m.	South Suburban Mayors and Managers Association 1906 W. 174 th Street, East Hazel Crest, Illinois

June

Date	Time	Location
Tuesday, June 3, 2014	11:00 a.m. – 3:00 p.m.	Lincolnwood Village Hall 6900 N. Lincoln Avenue, Lincolnwood, Illinois
Thursday, June 5, 2014	12:00 p.m. – 4:00 p.m.	Northlake City Hall 55 E. North Avenue, Northlake, Illinois
Wednesday, June 11, 2014	12:00 p.m. – 4:00 p.m.	Palos Hills City Hall City Council Room 10335 South Roberts Road, Palos Hills, Illinois
Tuesday, June 17, 2014	12:00 p.m. – 4:00 p.m.	Prairie Center for the Arts 201 Schaumburg Court, Schaumburg, Illinois



Thank you Questions

Dan Feltes, P.E., CFM

Daniel.Feltes@mwr.org

Metropolitan Water Reclamation District of Greater Chicago

100 E. Erie Street

Chicago, Illinois