



Watershed Management Ordinance

Proposed 2019 Amendment

Study Session
April 18, 2019

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Agenda

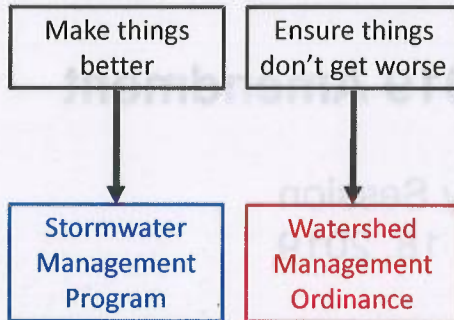
- WMO Background
- Clarifications and document improvements
- Noteworthy changes to the WMO
 - ✓ *GI as non-qualified development*
 - ✓ *Watershed Specific Release Rates*
 - + *Updated Bulletin 70 rainfall data*
 - ✓ *Redevelopment provisions*
 - ✗ *New TGM Appendix H for stormwater trading*
- Public Comments

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WMO Background

- 2004: Public Act 093-1049
 - *MWRDGC has stormwater authority for Cook County*
 - *Reduce flooding across the County*



2007-2013: Development and Public Review

- *Technical Advisory Committee*
- *Public Comments*
- *Economic Impact Study*

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WMO Background

- September 11, 2013: Study Session
 - *Presented staff recommendations in response to Public Comments*
 - *Discussed release rates and need for a study*
- October 3, 2013: Adoption
 - *Officially adopted by Board of Commissioners*
 - *Anticipated necessary non-substantial changes*
- April 17, 2014: Amendment
 - *Non-substantial changes*
 - *Include Sole Permittee provisions*
 - *Include locally constructed detention facilities in redevelopment provisions*



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WMO Background

- May 1, 2014: Effective Date
 - Existing Development Plans List (EDPL) projects exempt for one year
- July 10, 2014: Amendment
 - Infiltration/Inflow Control Program (Article 8)
 - Permit Fees (Appendix F)
- May 1, 2015: EDPL Expired
 - All projects subject to WMO regulation
- Spring, 2015: Prepare to Amend
 - Effective for a couple of years, and staff had gained experience
 - Administrative clarifications needed



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WMO Background

- May, 2015 – July 2016: Review with TAC
 - Proposed conceptual ideas
 - Draft redline changes discussed
 - Updates on Watershed Specific Release Rate Study by Illinois State Water Survey
- November 7, 2016: Public Comment
 - Extended to March 31st to include all first quarter watershed Planning Council Meetings
- October 5, 2017: Study Session
 - Summary of Public Comments
- February 15, 2018: Amendment
 - Clarifications to align with administrative procedures
 - Volume control trading on parcels with site constraints
 - Introduction of Earthwork/Limited Foundation Permit



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WMO Background

Concurrent Activities Outside the Scope of the WMO

- **Stormwater Phase I (DWP) Projects**
 - *Design and construction of regional flood control and streambank stabilization projects*
- **Stormwater Phase II Projects**
 - *Funding of shovel ready projects*
 - *Design of conceptual projects*
- **Green Infrastructure**
 - *Partnership with local communities*
- **Flood-prone property acquisitions**
 - *Voluntary buyouts when no practical engineered solution exists*



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WMO Background

January 17, 2018: Kick-off this Amendment

- *Watershed Specific Release Rates*
- *Consistency for Redevelopment*
- *Additional clarifications and reorganization*
- *New conceptual ideas for meeting regulation*



Development of Proposed Amendment

- *Frequent TAC meetings (eleven since January 2018)*
- *All changes vetted through TAC and Law Department*
- *Public Comment January 7 – February 7, 2019*
- *Discussed Public Comments with TAC at two meetings*

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Technical Advisory Committee

Engineering Firms

- *Baxter & Woodman*
- *Christopher B. Burke Engineering*
- *ERA Consultants*
- *Eriksson Engineering*
- *Gary Weber Associates*
- *Gewalt Hamilton Associates*
- *Manhard Consulting*
- *Robinson Engineering*
- *RWG Engineering*
- *Shabica and Associates*
- *Terra Engineering*

Government Agencies

- *Cook County DOTD*
- *DuPage County Stormwater Management*
- *Forest Preserve District of Cook County*
- *Lake County Stormwater Management*
- *Southwest Conference of Mayors*
- *U.S. Army Corps of Engineers*

Municipalities

- *City of Evanston*
- *Village of Hoffman Estates*
- *Village of Niles*
- *Village of Orland Park*
- *City of Rolling Meadows*
- *Village of Schaumburg*
- *Village of Streamwood*
- *Village of Winnetka*

NGO's

- *Center for Neighborhood Technology*
- *CMAP*
- *Conservation Design Forum*
- *Friends of the Chicago River*
- *Illinois Association of Realtors*
- *Metropolitan Planning Council*
- *The Nature Conservancy*
- *Openlands*
- *Sierra Club*
- *South Suburban Home Builders Assoc*



Proposed WMO Changes

CLARIFICATIONS AND



DOCUMENT IMPROVEMENTS

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Proposed WMO Changes

Redline Review

- Green double-underlined text – Information has been reorganized and moved within the same Article
- **Red or red-strikethrough text:**
 - Moved to/from a different Article or to the TGM
 - Clarification added
 - Redundancy deleted
 - Re-written for ease of understanding
- New provisions and substantial changes annotated in Public Comment Draft on WMO website
- Public Comment changes annotated in BOC Draft

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Proposed WMO Changes

NOTEWORTHY CHANGES



TO THE WMO

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GI as Non-Qualified Development

Article 5 – Stormwater Management

✓ Green Infrastructure as Non-Qualified Development:

- **New § 501.3** – *Green infrastructure that replaces what would otherwise be in-kind maintenance can be considered non-qualified and detention is not required*



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Watershed Specific Release Rates

Article 5 – Stormwater Management:

§ 504 Site Detention Requirements:

3. The **allowable release rate** for a **development** shall be determined at the time a complete **Watershed Management Permit** application is accepted by the **District** and shall be:
 - A. 0.30 cfs/acre of **development** for the **storm event** having a one percent probability of being equaled or exceeded in a given year (**100-year storm event**) until June 5, 2019; and
 - B. Based on a **watershed** specific release rate after and including June 6, 2019, as specified in Appendix B of this **Ordinance**. The **watershed** specific release rate shall not be less than 0.15 cfs/acre of **development**; and
 - C. In compliance with §504.13 of this **Ordinance**.

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Watershed Specific Release Rates

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ILLINOIS

Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

Release rate selection objective:

Determine regulatory release rates that mitigate the impacts of development by maintaining the 1% annual-chance flood event elevations at or below current levels.

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Watershed Specific Release Rates

Date	Technical Advisory Committee Meeting Purpose
November 4, 2015	Proposed Methodology Overview, Pilot Watershed Analysis, QA of Base Conditions Models, Regional Project Incorporation
July 19, 2016	Review of Methodology, Sensitivity Analyses, Analysis Metrics, Land Use Development, Factors that Impact Release Rate Selection, Draft Results for Pilot Watersheds
January 17, 2018	Pilot Watershed Results, Watershed Extents to be Studied, LEAM Analysis
May 9, 2018	Selected Future Development Levels, Watershed Planning Area Modeling Status
December 12, 2018	Watershed Specific Release Rate Study Technical Review

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Watershed Specific Release Rates

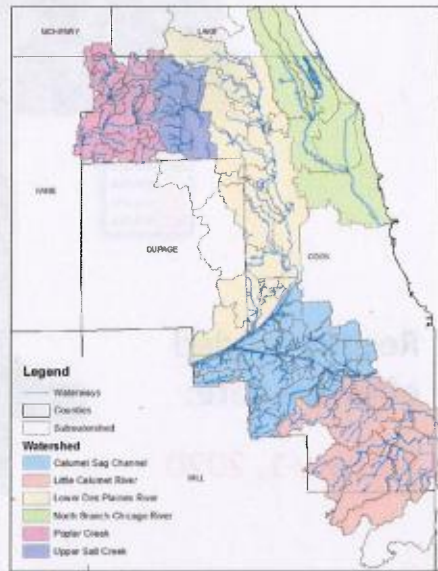
Methodology

Phase I

- Evaluate two pilot study areas
- Develop streamlined methodology and set of assumptions
- Evaluate release rates for pilot study areas and garner technical feedback

Phase II

- Apply the methodology developed in Phase I in each Watershed Management Area
- Evaluate release rates 0.15, 0.20, 0.25, 0.30 cfs/ac



Watershed Specific Release Rates

✓ Appendix B – Watershed Specific Release Rates

(Based on Watershed Planning Areas depicted in Appendix E)

- **Calumet Sag Channel:** 0.30 cfs/acre
- **North Branch:** 0.30 cfs/acre
- **Poplar Creek:** 0.25 cfs/acre
- **Little Calumet River:** 0.25 cfs/acre
- **Upper Salt Creek:** 0.20 cfs/acre
- **Lower Des Plaines:** 0.20 cfs/acre



Watershed Specific Release Rates



Recommended effective date:

January 1, 2020

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Updated Rainfall Data

+ Updated Bulletin 70 Rainfall Data

- Report published by Illinois State Water Survey March 2019
- Will result in more water detained throughout the County

Rainfall Data	Published by	Year Published	100-year 24-hour Rainfall Depth
Technical Paper 40	U.S. Weather Bureau	1961	6.00-inch
Bulletin 70	ISWS	1989	7.58-inch
Updated Bulletin 70	ISWS	2019	8.57-inch

- Recommended effective date: **January 1, 2020**

A reasonable transition time allows project planning already contemplated under current design standards to move forward, smoothly transitioning to new standards without onerous impacts that could require redesign.

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Redevelopment Provisions

Article 5 – Stormwater Management:

§ 505 Development and Redevelopment Tributary to Existing Detention Facilities

Current allowances for existing detention facility:

- Compare proposed and existing impervious areas
- Marginal increase of storage volume 0.10 ac-ft or 2%

Proposed allowances for existing detention facility:

- Requires existing detention facilities release rates be modified on a pro-rated basis based on the Watershed Specific Release Rate
- Require control structure be updated every 40% of detention service area redevelopment or any individual redevelopment that is 25% of the detention service area

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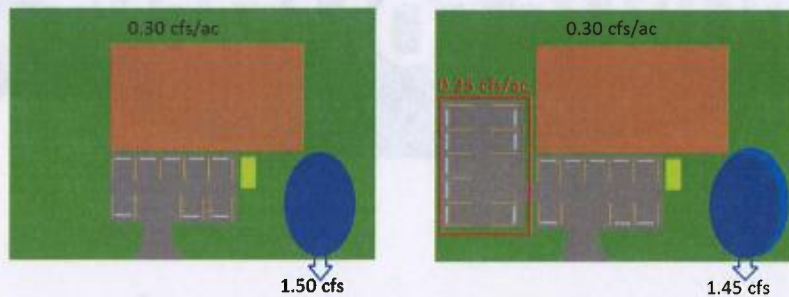


Redevelopment Provisions

Article 5 – Stormwater Management:

Recommended effective date: **January 1, 2020**

Development tributary to an existing detention facility must provide additional detention volume at the **Watershed Specific Release Rate** using **Updated Bulletin 70 rainfall data**



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StormStore™

- WMO allows detention and volume control to be constructed offsite
 - Site limitations and constraints must be demonstrated
 - All conditions outlined in WMO must be met and hierarchy followed
- StormStore™ is a potential stormwater credit trading market in Cook County
 - Feasibility study conducted by the Metropolitan Planning Council (MPC), The Nature Conservancy (TNC), and MWRDGC
 - Study determined there is ample supply and demand for a stormwater credit trading market across the County

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Proposed WMO Changes

PUBLIC COMMENT

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Public Comment Period

Public Comment period: January 7, 2019 – February 7, 2019

- Draft Amendment posted on WMO website (wmo.mwrdr.org)
- Approximately 220 individual comments received from 17 unique entities
- Response letters sent to each entity
- Changes due to comments incorporated into Draft Final Amendment
- Final Amendment to be presented to Board of Commissioners for consideration



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Public Comment Period

Public Comment responses transmitted to Board on 3/15/19

- Comments outside the scope of the WMO
- Comments on the Technical Guidance Manual
- Comments on additional clarifications needed
- Comments on flood protection areas
- Comments on public involvement
- Comments on appeals



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Next Steps

- Proposed changes under this amendment
 - *Recommended clarifications*
 - *New provision to promote green infrastructure widely supported*
 - *Watershed Specific Release Rates*
 - *Updated rainfall data – more intense storms*
 - *Redevelopment provisions*
- Anticipated future amendment will be developed
 - *Potential for opening stormwater trading options*
 - *Revise Article 6 – Flood Protection Areas*
 - *Ensure WMO is consistent with Federal and State regulations*

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Thank You

Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street
Chicago, Illinois

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