



River Ecology & Governance Task Force

September 12, 2023 3:00 PM – 4:30 PM

Agenda

- I. Welcome and Introductions
- II. Task Force Goals and Objectives Refinement
- III. Our Great Rivers Progress
 - I. Coordinated Prevention of Water Pollution / Real-Time Water Quality Information
- IV. Updates: Government Partners and Working Groups
- V. Upcoming Meetings + Adjourn

Task Force Objectives

Transforming Chicago's unique waterway system into a **thriving and ecologically integrated natural asset**, capable of accommodating the needs of people, requires **coordinated planning**, investment and management

Aspire to, and realize no later than 2040, inland waterways in Chicago that are **inviting, productive and living**, that **support wildlife in-stream and on their banks**, and that **contribute to our city's resiliency**

Task Force Goals and Objectives Refinement

Short-Term Goals: 2021 - 2022

1. Create principles for a system-wide and neighborhood focused approach to Chicago's waterways
 - a. Adoption of principles by government partners participating on Steering Committee
2. Review current policies and create recommendations to strengthen them

Short-Term Goals: 2021 - 2022

3. Inform near-term planning opportunities to advance collective priorities
 - a. We Will Chicago
 - b. CDOT Access Study
 - c. USACE PAS Restoration Framework Plan
 - d. Industrial Corridor Modernization Process
4. Develop criteria to prioritize projects for identified funding opportunities
5. Standardize process for reviewing riverfront development projects

Short-Term Goals Revision Recommendations

- **Identify Policies for Goal #2:** Review current policies and create recommendations to strengthen them (*ex. USACE navigable channel recommendations*)
- **Update Opportunities for Goal #3:** Inform near-term planning opportunities to advance collective priorities (*ex. CDOT access study, industrial site guidelines*)
- **Keep Short-term Goal #4 as is:** Develop criteria to prioritize projects for identified funding opportunities

Small Group Discussion and Jam Board Activity

Please take five minutes and fill out the Jam Board for Goal #2's question. Use the other 15 minutes for discussion with your group around Goal #4. We will share responses from Goal #2 Jam Board at the last meeting. We will send a summary of Goal #4 discussion as a meeting follow-up.

Questions

- Goal #2: For which policies should the Task Force review and develop joint recommendations?
- Goal #4: What sources of funds are available? How can we organize/ how are we organizing around funding opportunities? What scale of projects are we/should we be focusing on?

Our Great Rivers Progress

OUR GREAT RIVERS

An aerial photograph of a river park. In the foreground, a paved walkway with large rocks leads to a modern building with a red facade and white columns. A wooden pier extends into the water, where two people are kayaking. The river flows towards a city skyline with various skyscrapers under a clear blue sky. A bridge is visible on the left side of the river.

A vision for the Chicago, Calumet and Des Plaines rivers

Goals of Our Great Rivers



INVITING

GOALS

Activities to draw people to our rivers

Safe rivers and riverfronts

A unified brand and comprehensive wayfinding

Real-time water quality information

Water quality plans for all river stretches

Continuous riverfront trails

Easy access from all neighborhoods

Access for people of all ages and abilities

Fully litter- and odor-free rivers

Goals of Our Great Rivers



PRODUCTIVE

GOALS

New visions for modern working rivers

New tools to support riverfront productivity

A clear path forward for the Port District

Integrated transit on land and water

Local tourism and jobs

Iconic riverfront destinations

Productive use (and reuse) of water

Revitalized and reimagined infrastructure

Goals of Our Great Rivers



LIVING

GOALS

Active stewardship of every park and preserve

Ecologically sensitive shoreline development

Aggressive management of invasive species

Expanded Chicago Park District Natural Areas

Our rivers as parks

Expanded preserves and parks

Coordinated prevention of water pollution

Rivers we can swim in

Thriving river ecosystems

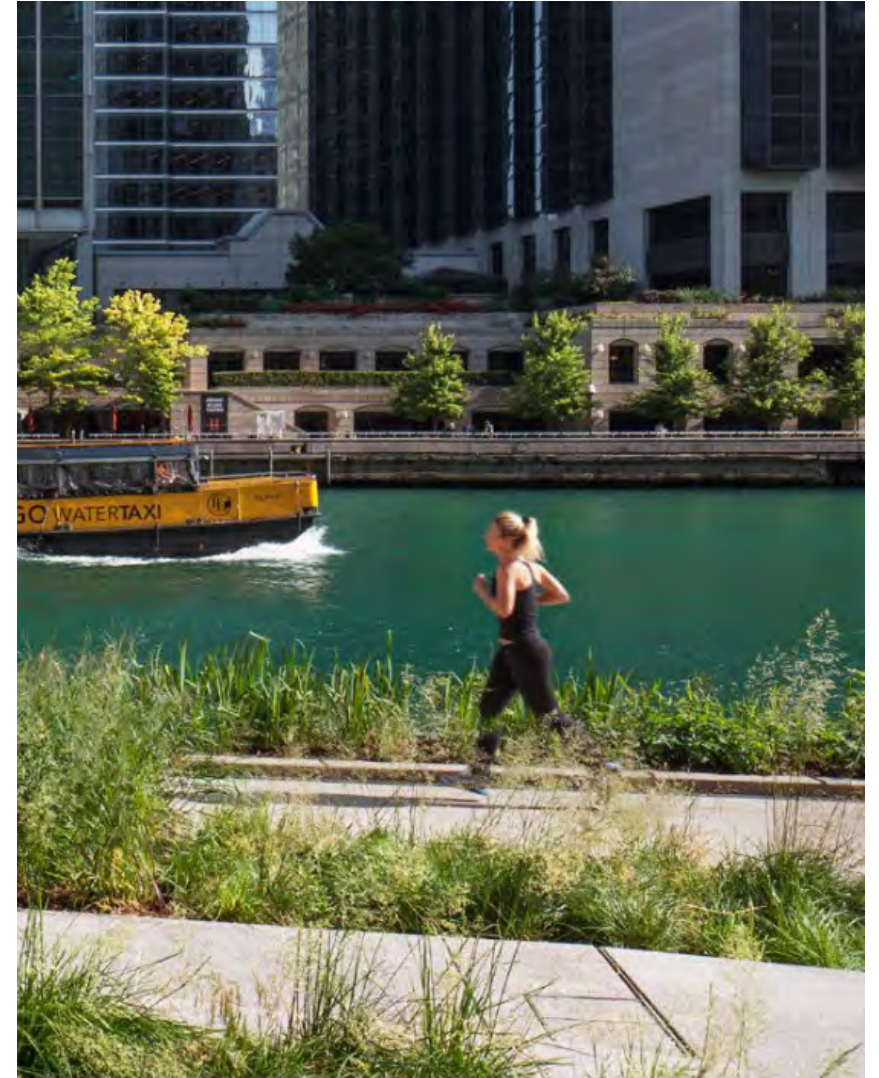
Our Great Rivers: Two Goals for Updates

Inviting Goal

- Real-Time Water Quality Information

Living Goal

- Coordinated Prevention of Water Pollution



Goal Progress Since 2016 (non exhaustive)

- Chicago River Design Guidelines adopted in 2019
- FPDCC ongoing restoration along riverbanks at LaBagh Woods, Forest Glen Woods, Bunker Hill, Whistler and Beaubien Woods.
- GSI efforts at Beaubien Woods Boat Launch with installation of rain garden and decrease in size of parking lot.
- Trail realignment at Caldwell Woods that included installation of a rain garden.
- Restoration, design, and construction of a water control and fish passage system at Powderhorn Lake to reduce area flooding, improve water quality and provide detention.
- McCook Phase I Reservoir came online in 2017 as part of TARP, providing 3.5 billion gallons of storage. As of June 2023, over 102 billion gallons of combined sewage has been captured.
- Dam removal and riverbank restoration along North Branch and Channel.
- Wild Mile implementation with funding through open space impact fees.
- Sustainable Development Policy updated in 2017.
- Settlement agreement reached in 2017 to reduce phosphorous inputs into rivers.
- Disinfection at the Calumet and O'Brien plants when online in 2016. Ribbon cutting for O'Brien was held in March 2016.

Updates and Information

- NPDES Permits and WMO
John Quail, Friends of the Chicago River
- Stormwater Permit Review
Andrew Billing, Mackie Consultants
- H2NOW
Alaina Harkness, Kalindi Parikh, Current



Friends of the Chicago River

City of Chicago
Combined Sewer Outfalls
NPDES Permit



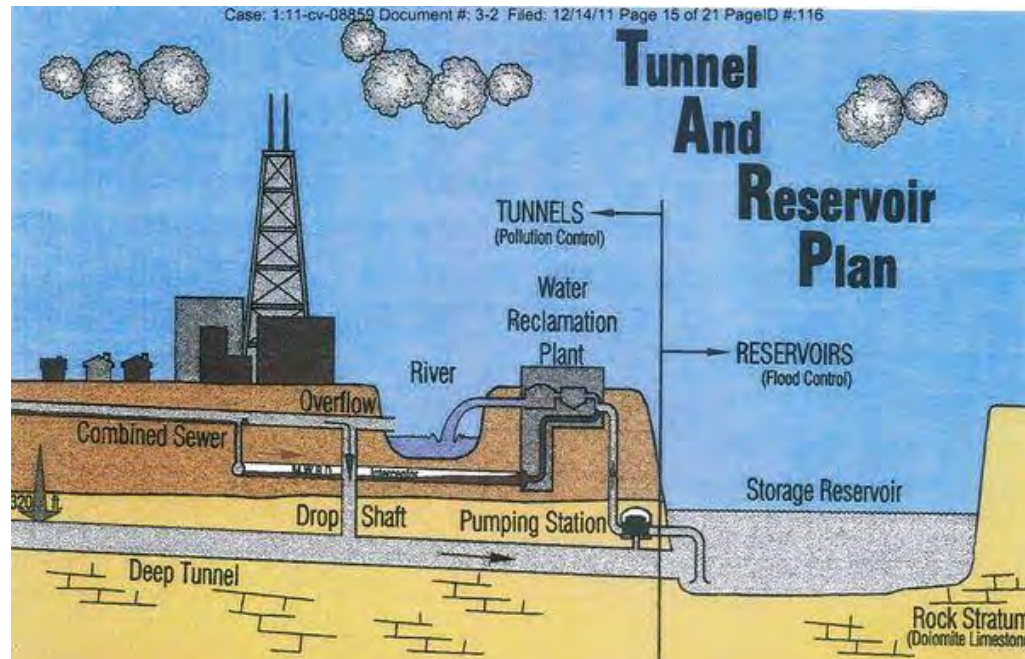
What is an NPDES permit?

- **National Pollutant Discharge Elimination System**
- Set up by the Clean Water Act – fishable and swimmable
- Addresses pollution from point sources – pipes, ditches, feed lot, etc.
- Limits on discharges and monitoring and reporting requirements
- Includes provisions to reduce or eliminate discharges with subsequent permits



Combined Sewer Outfalls

- 184 CSOs that discharge into the Chicago Area Waterways and the Des Plaines River





New monitoring plan on all city CSOs that have discharged in last 3 years

All discharging CSOs every 24 hours:

- BOD5
- Suspended Solids
- pH
- Fecal Coliform
- Total Phosphorous
- Total Nitrogen
- Chloride
- Acute Toxicity
- Dissolved Oxygen

Previously monitored monthly for (grab sample):

- BOD5
- Suspended Solids
- pH



Additional actions required:

- Update 2013 O&M Plan
- Undertake Monitoring Study – effectiveness and scope
- Unmonitored outfalls receive monthly visual inspection and an annual inspection within 24 hours of a rain event
- Establishes a “Stakeholder” group to monitor and assist with the development and implementation of the City’s plan to meet the 9 minimum controls
- Update 2014 Green Stormwater Infrastructure Strategy to include measurable goals with a focus on Sensitive Area and EJ communities
- Purchase and deploy floatable control tech
- Review and revise 2003 Pollution Prevention Plan

Top: Skimmy Dipper - Chicago

Bottom: Lynnyrd Skymmr - Milwaukee



Establishes sensitive areas around 10 city owned CSOs that discharge to a boat launch, park district or forest preserve district property

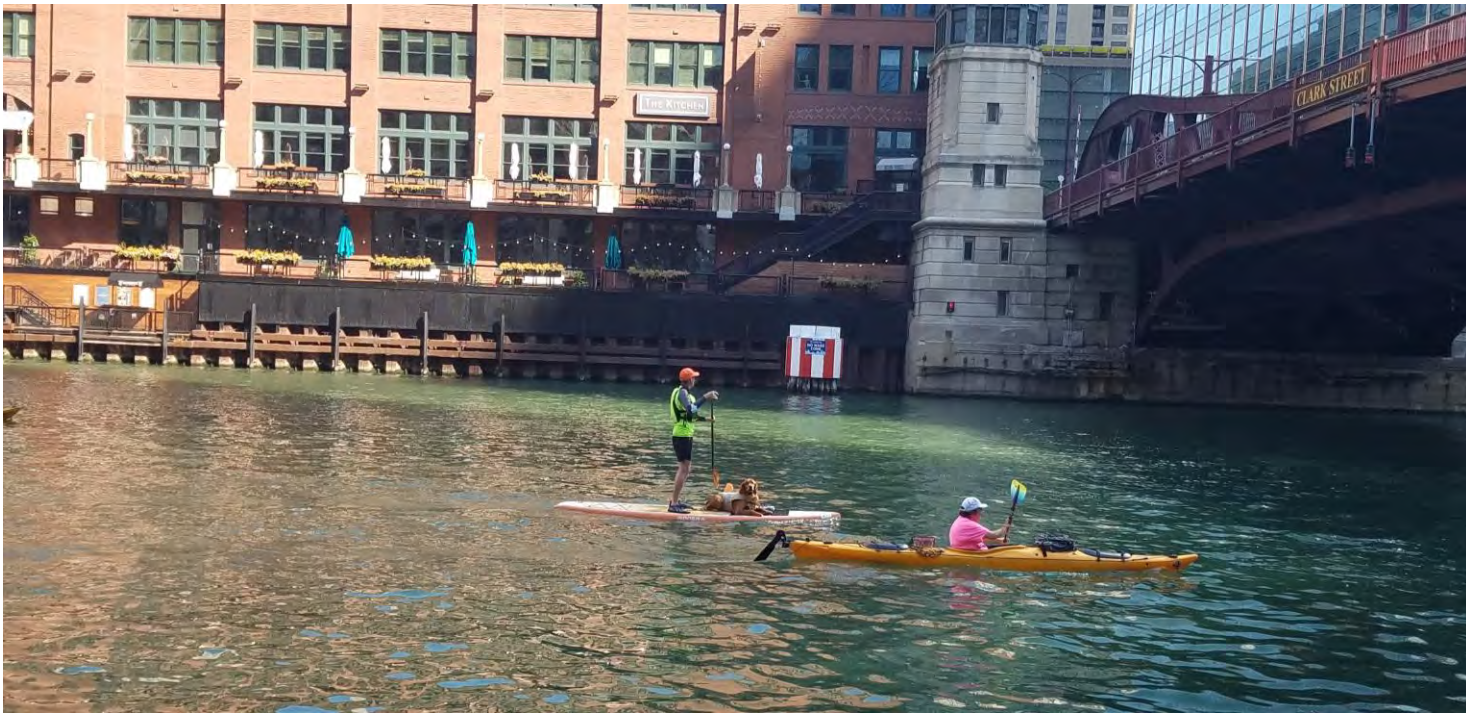
Priority CSOs for improvements mitigation, and ultimately removal

Clark Park Canoe Launch



Work with “Stakeholders” to develop and implement plan for public notification technology at all publicly owned access points along the waterways

Private access will have the ability to opt in



What's Next:

- Permit is under review at IEPA
- IEPA issues permit and it's immediately in effect
- New CSO NPDES permit for City by Jan 1
 - Fingers crossed, knock on wood, etc.



Friends of the Chicago River



411 South Wells Street, Suite 800 • Chicago, Illinois 60607

Questions?

CONNECT WITH US!



www.chicagoriver.org

John Quail

(he/him/his)

Director of Policy and Conservation

Friends of the Chicago River

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Introduction to the Chicago Stormwater Ordinance

By Andrew Billing, PE, CFM,
Lead Stormwater Reviewer

Mackie Consultants, LLC, consultant to
City of Chicago, Department of Buildings

River Ecology and Governance Task Force
September 12, 2023



Chicago Stormwater Ordinance

obligates owners/developers to manage stormwater onsite before runoff reaches the sewer system or downstream waterway

- Passed by City Council in 2006
- Effective January 1, 2008



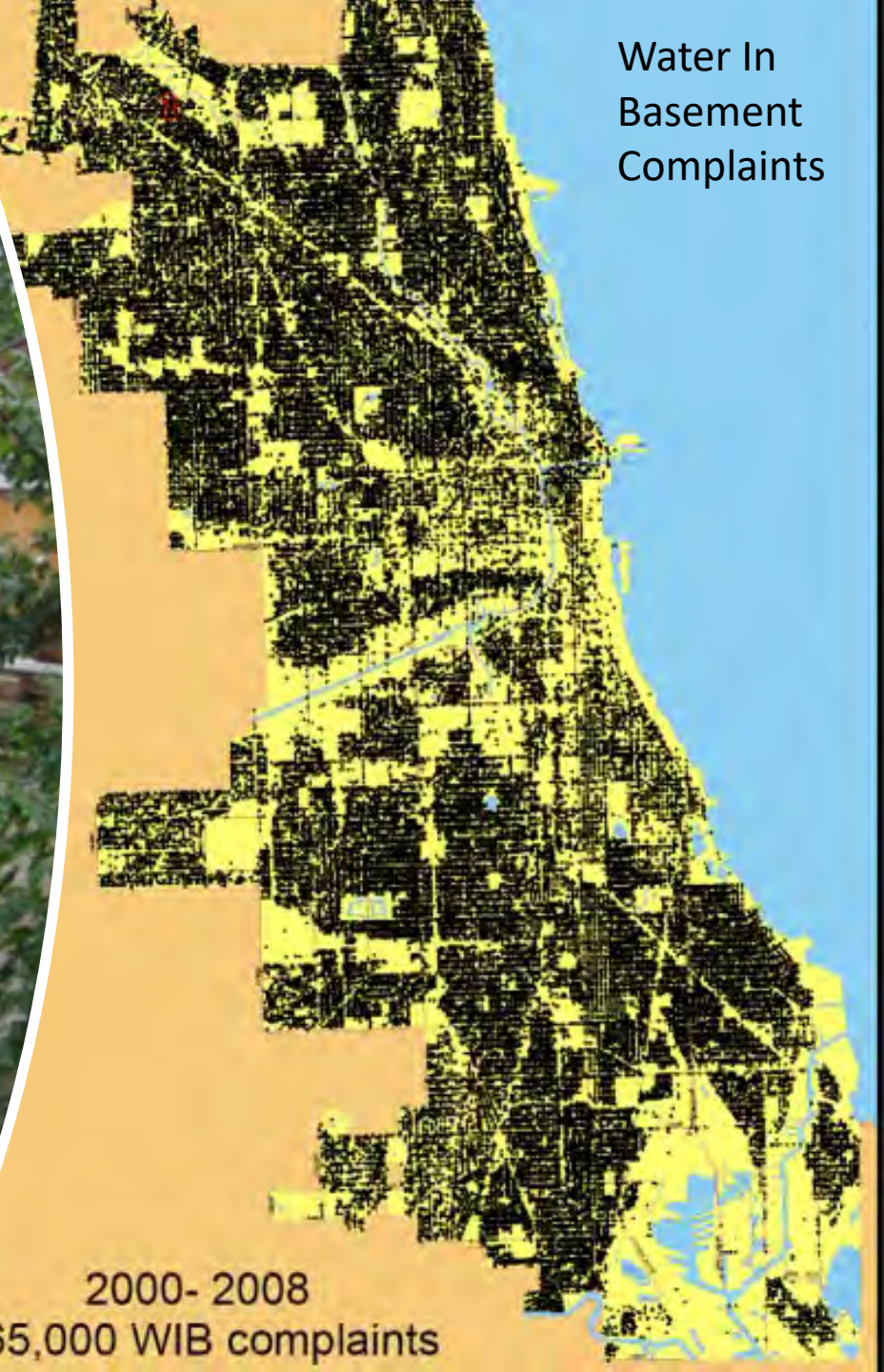
Goals of the Chicago Stormwater Ordinance

- Minimize basement flooding
- Prevent pollution by minimizing combined sewer overflows
- Protect our source of drinking water
- Decrease overland flooding
- Improve sewer infrastructure performance



2000- 2008
>65,000 WIB complaints

Water In
Basement
Complaints



Chicago Stormwater Ordinance

by the numbers

projects per year	200-250
projects since 2008	3,300
project area since 2008	6,100 acres 7% of the developable area in the City
stormwater detention constructed per year	5,000,000 cu ft
green roof area	6,500,000 sq ft

Chicago Stormwater Ordinance Applicability

- A **Regulated Development** is a project that:
 - Disturbs **15,000 sq ft** or more of substantially contiguous land area
 - Creates or reconstructs **7,500 sq ft** or more at-grade impervious area
 - Discharges stormwater to a **waterway** or a storm sewer draining to a waterway
- **Exceptions:**
 - **Residential single-family or two-family detached dwellings.**
 - Stormwater management for **public right-of-way** is designed/reviewed directly by DWM.
 - Rate Control is not required if a project discharges to **Lake Michigan**, Lake Calumet, or Calumet River north of the O'Brien Lock & Dam.
 - **Rooftops discharging directly to waterways** are exempt from Rate & Volume Control.

Understanding Rate Control & Volume Control

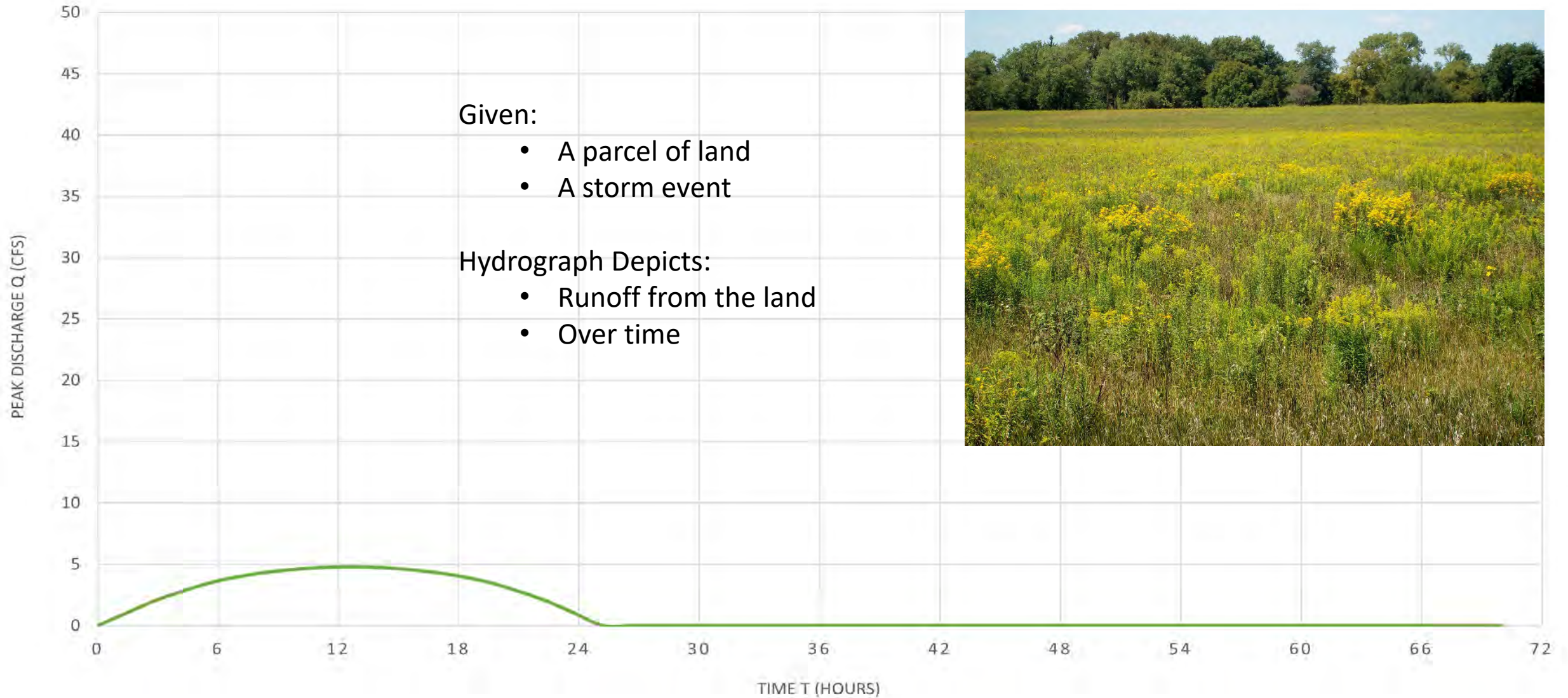
- **Rate Control** limits the peak discharge rate of stormwater
 - Also called “Stormwater Detention”
 - Requires:
 - 1) A restrictor at the downstream end of a drainage system
 - 2) An open volume that can fill with water during a rainstorm

Understanding Rate Control & Volume Control

- **Volume Control** reduces the volume of stormwater runoff
 - Includes various practices such as “Stormwater Retention” or Stormwater Best Management Practices(BMPs), “capture and re-use facilities”
 - Volume Control requirement can be met by:
 - 1) capturing ½ inch of runoff from all impervious surfaces onsite, or
 - 2) achieving a 15% impervious area reduction, for sites that do not discharge to waterways
 - BMPs include:
 - Bioinfiltration Systems
 - Permeable Pavement
 - Infiltration Vault/System
 - Drainage Swales
 - Green Roof

HYDROGRAPH

— PREDEVELOPMENT



Given:

- A parcel of land
- A storm event

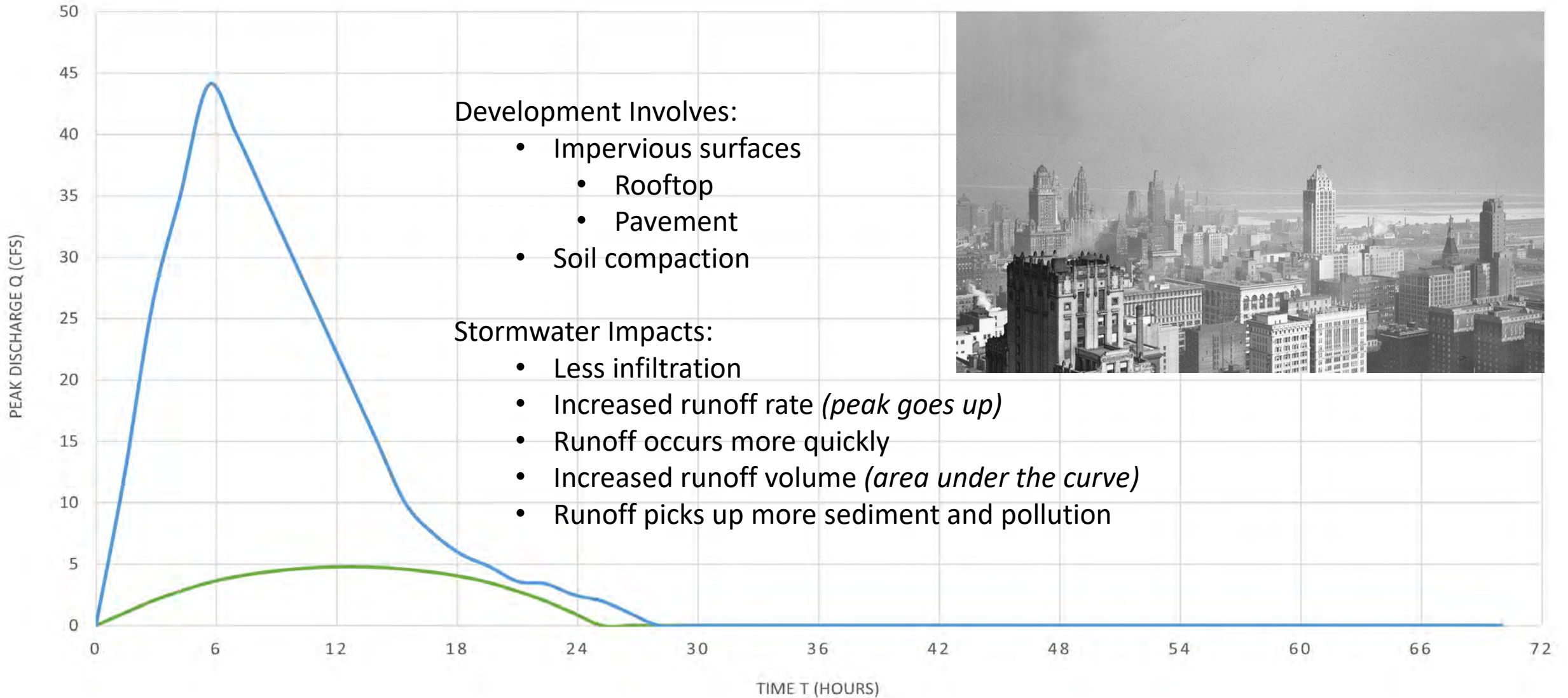
Hydrograph Depicts:

- Runoff from the land
- Over time



HYDROGRAPH

— PREDEVELOPMENT — POSTDEVELOPMENT



Development Involves:

- Impervious surfaces
 - Rooftop
 - Pavement
- Soil compaction

Stormwater Impacts:

- Less infiltration
- Increased runoff rate (*peak goes up*)
- Runoff occurs more quickly
- Increased runoff volume (*area under the curve*)
- Runoff picks up more sediment and pollution

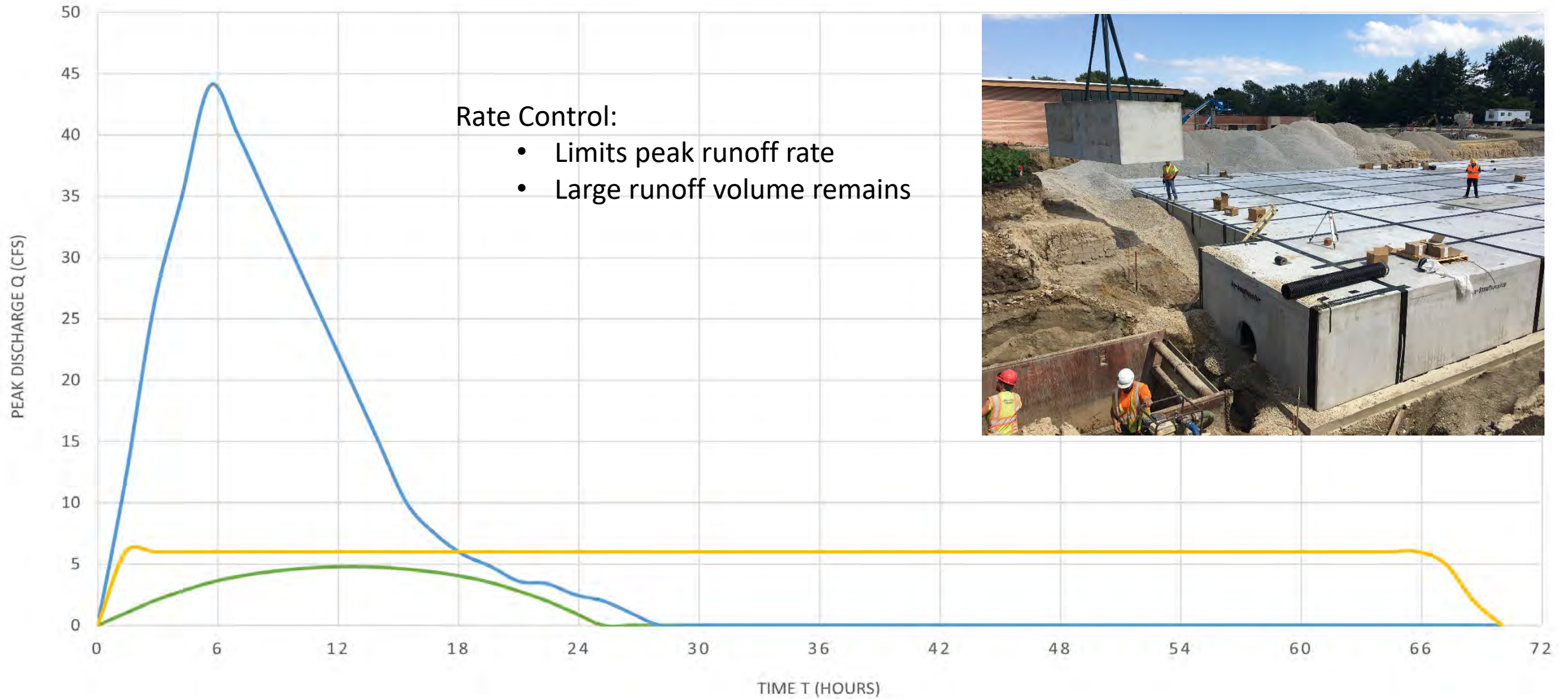


HYDROGRAPH

PREDEVELOPMENT

POSTDEVELOPMENT

WITH RATE CONTROL



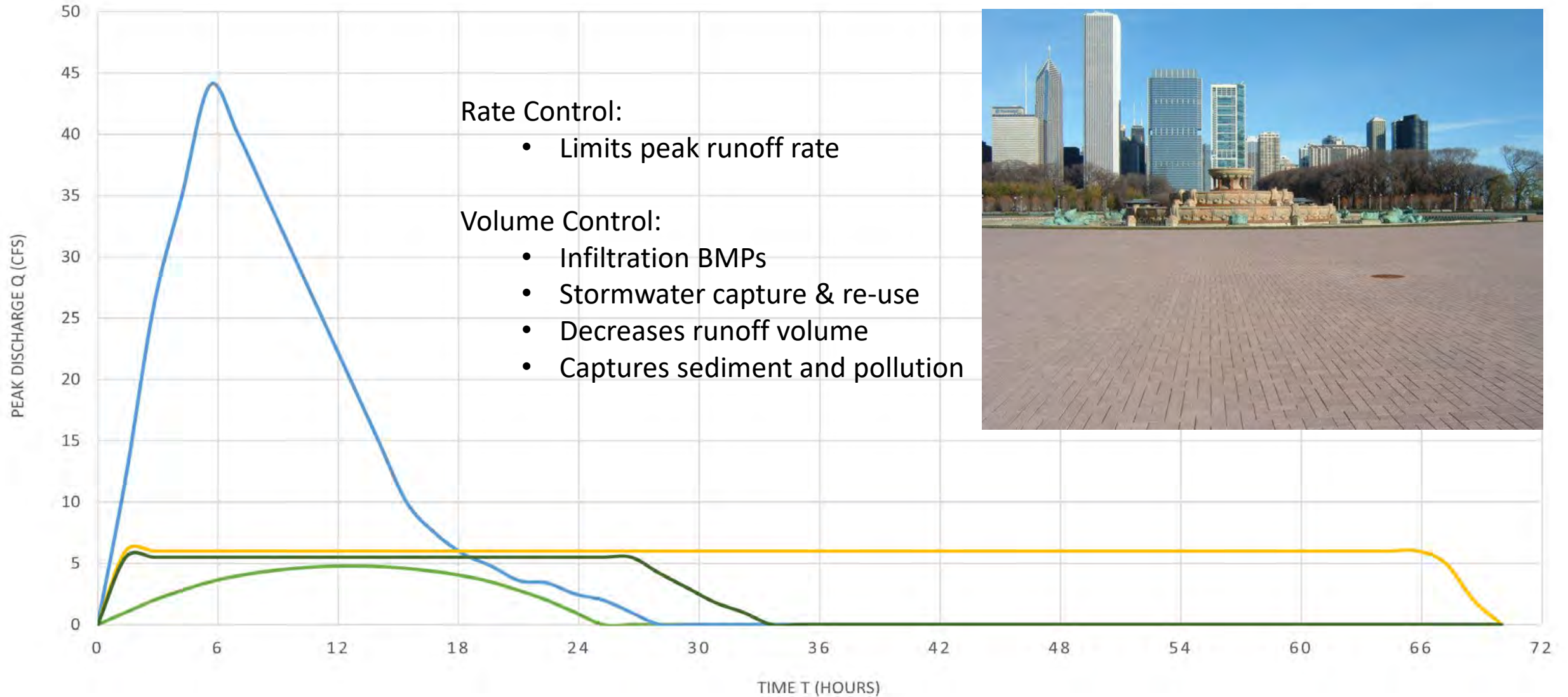
Rate Control:

- Limits peak runoff rate
- Large runoff volume remains



HYDROGRAPH

PREDEVELOPMENT POSTDEVELOPMENT WITH RATE CONTROL WITH RATE & VOLUME CONTROL



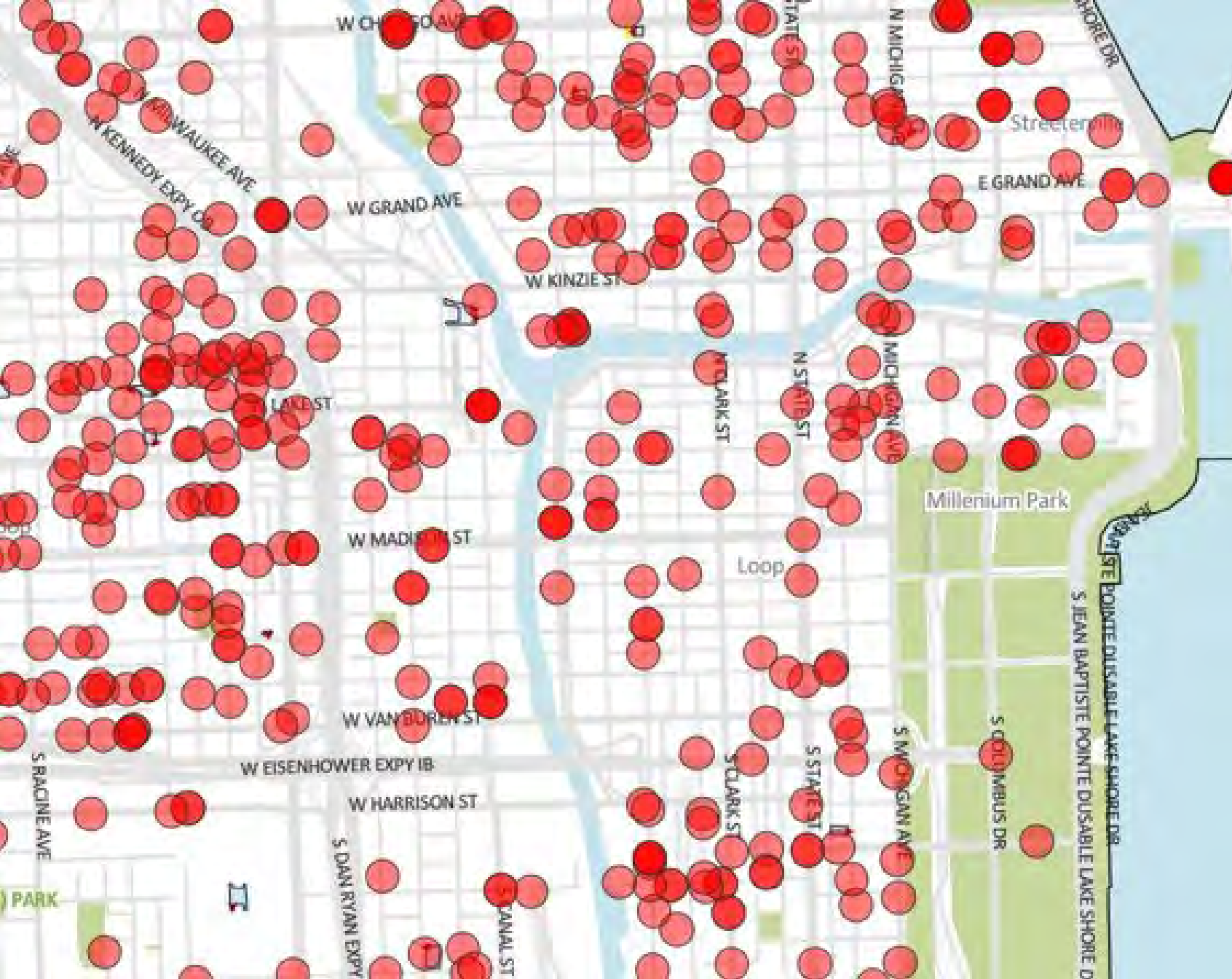
Rate Control:

- Limits peak runoff rate

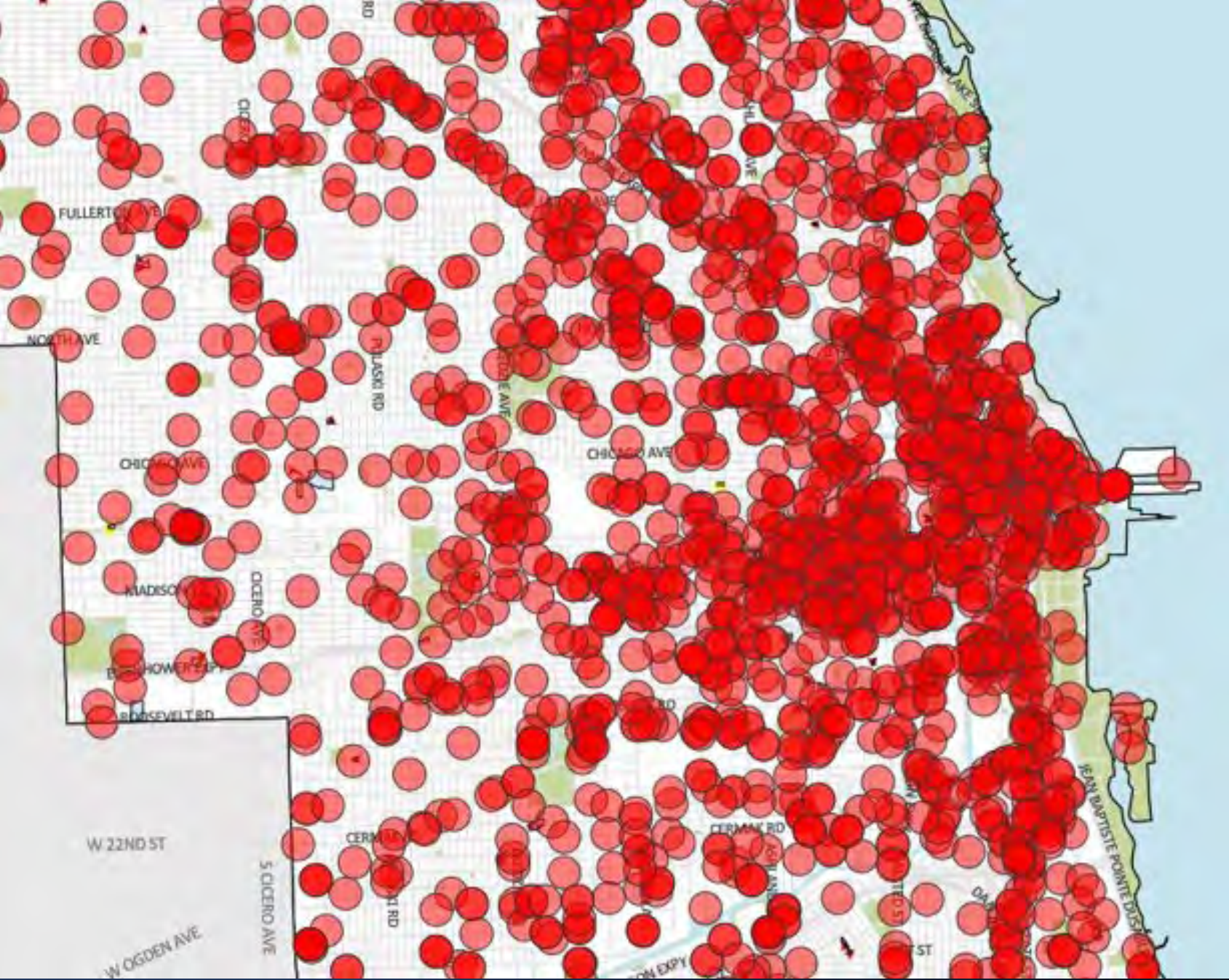
Volume Control:

- Infiltration BMPs
- Stormwater capture & re-use
- Decreases runoff volume
- Captures sediment and pollution

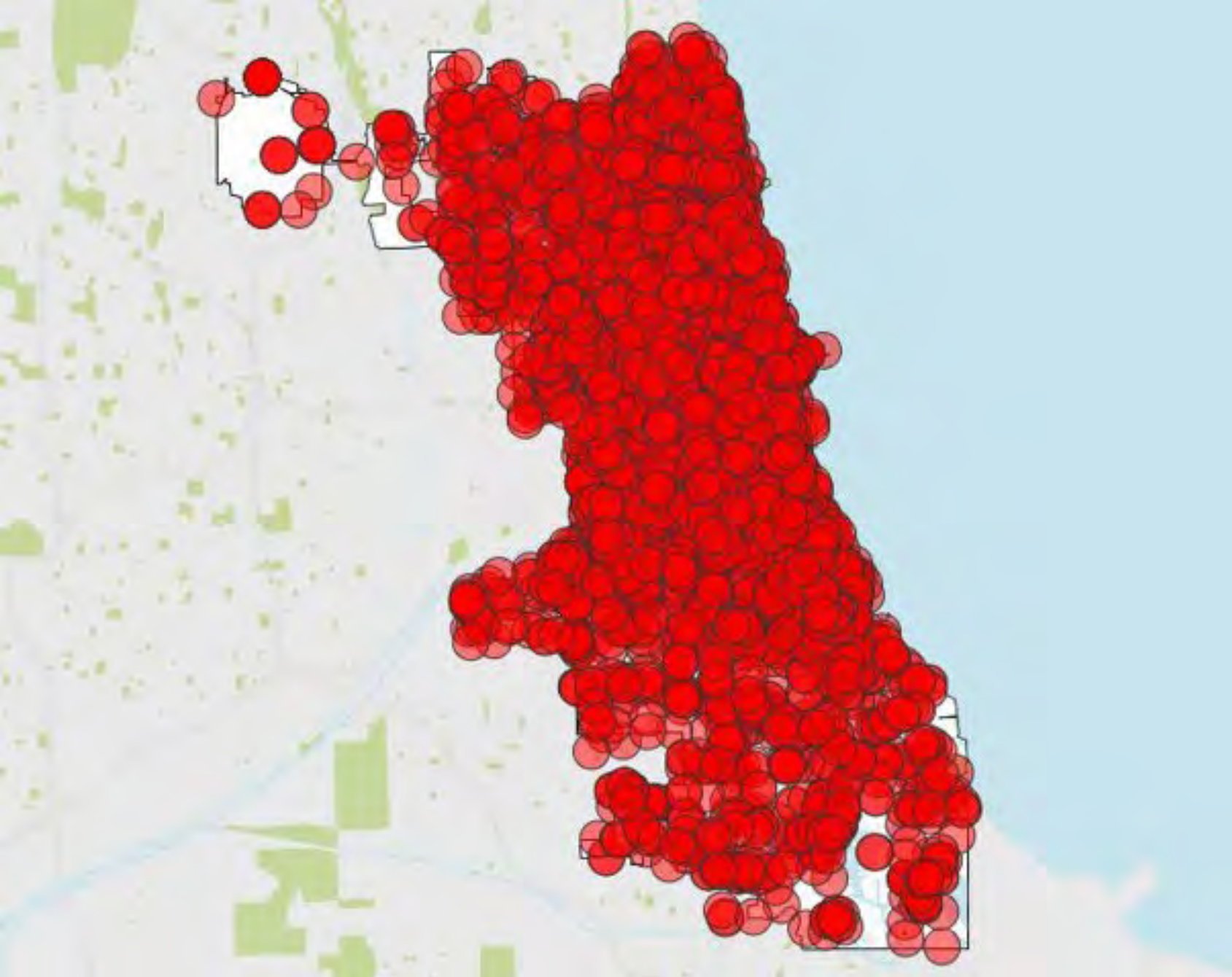




Where are regulated developments?



Where are regulated developments?



Where are regulated developments?

- Over 3,300 projects since 2008
- In every neighborhood



Detention Basins



Permeable
Pavement &
Bioinfiltration
Systems





Artificial
Turf
Fields

Green Roofs





Green Roofs



Chicago Stormwater Ordinance Benefits to River Ecology

- Reduces combined sewer overflows
- Limits peak runoff rate
- Decreases runoff volume
- Increases stormwater infiltration
- Reduces sediment and pollution in runoff



H2NOW Chicago Timeline



Current

Branching Out



H2NOW
CHICAGO
WATERWAY MONITORING

Project Expansion by Year

KEY

-  H2NOW Testing Probe
-  Lake Michigan Water Entry Points (Wilmette PS and CRCW)
-  Partner Facilities



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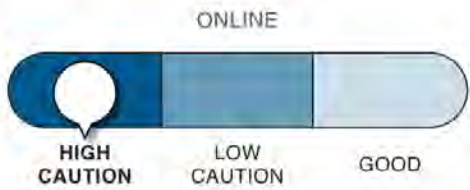
H2NOW has a new field site at the 78

H2NOW Chicago Gauges



Main Stem
Near Michigan Avenue

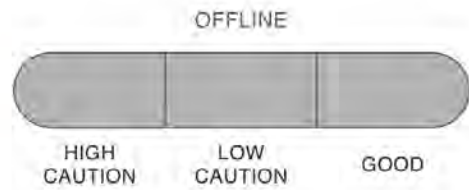
HIGH CAUTION



2:15 p.m., September 12

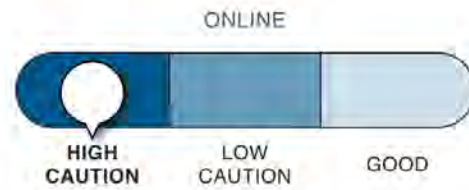
North Branch
Near Goose Island

UNDER CONSTRUCTION



South Branch
Near Eleanor Boat House

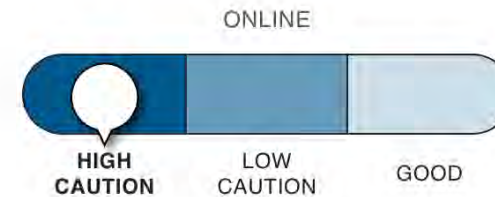
HIGH CAUTION



2:30 p.m., September 12

Calumet River
Near Blue Island

HIGH CAUTION



2:15 p.m., September 12



Chicago Tribune



Idalia slams Gulf

Wrecking ball's work over years in Florida and Georgia threatens, leaving in its wake large swaths of beachfronts nearly half million without power

By Bruce Bennett
WASHINGTON
The U.S. Commerce Dept. is warning that the American challenge to the Gulf Stream cable will be a high-stakes battle. The department says that the cable, which carries data for the world's financial markets, is a critical link in the global financial system. It says that the cable is a key component of the world's financial infrastructure and that its disruption could have serious consequences for global markets.

Work permit priority sought

Johnson says city needs federal help to sustain support

By Mike Ma...
and Steve...
and others

Chicago Mayor Richard Daley's office is looking for ways to get a federal permit to allow the city to build a new water treatment plant. The city is currently in the process of applying for the permit, which is a key step in the city's plan to build the plant. The city is currently in the process of applying for the permit, which is a key step in the city's plan to build the plant.



Headed out to the Chicago or Calumet River for some rest and relaxation this Labor Day weekend? Find out how much bacteria is in the water before you go

Waste watchers

By Andrew...
Chicago Tribune

Looking over a water guardrail, the Lake Michigan shoreline is a beautiful sight. But it's not always what it seems. A recent study found that the water is contaminated with bacteria. The study found that the water is contaminated with bacteria, which can cause illness. The study found that the water is contaminated with bacteria, which can cause illness.



A person uses a device to collect water samples from the water at a beach. The device is a water sampling device that is used to collect water samples from the water at a beach.

Control helps publicizing the results of the study, which was done by the city of Chicago. The study found that the water is contaminated with bacteria, which can cause illness. The study found that the water is contaminated with bacteria, which can cause illness.

It was the fact that the city is currently in the process of applying for the permit, which is a key step in the city's plan to build the plant. The city is currently in the process of applying for the permit, which is a key step in the city's plan to build the plant.

CHICAGO SPORTS Cubs inch closer to first place

The Cubs have a shot of winning another National League pennant. The Cubs have a shot of winning another National League pennant.

Despite conviction, Mapes collecting big pension

By Ray...
and Steve...
Chicago Tribune

Despite a conviction for a crime, a former Chicago official is collecting a large pension. The former official is collecting a large pension, which is a key part of his retirement plan. The former official is collecting a large pension, which is a key part of his retirement plan.

H2NOW on the front page of the Chicago Tribune 8/31



Blue EDU

- Current achieved strong learning outcomes with our Infinity STEM HS program. Of 30 students, 68% reported deep awareness of water quality and over half reported strong interest in science careers.
- We are building our Mobile Lab to bring H2NOW to schools and communities.





Stay tuned for
Chicago Water Week
Spring 2024

Contact for more info:
Aaron Rubens
arubens@currentwater.org

Updates: Government Partners and Working Groups

Waterways Restoration Framework Plan

- Published in early August 2023
- Includes a report, map of Opportunity Sites, and a GIS Storymap
- Government partners included Chicago Dept. of Planning and Development, Metropolitan Water Reclamation District of Greater Chicago, Forest Preserve District of Cook County, and the Chicago Park District
- Significant input from the River Ecology and Governance Task Force

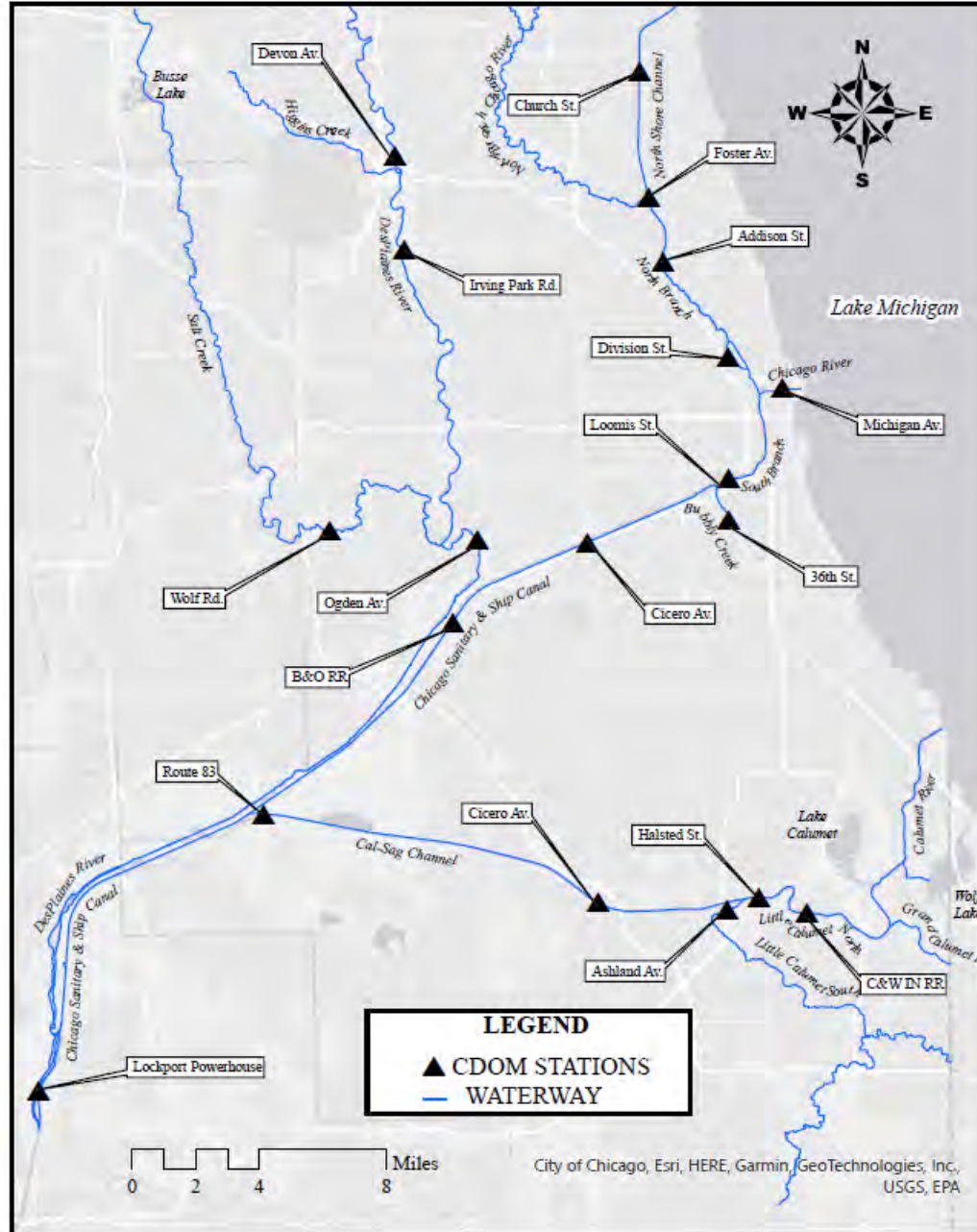
Waterways Restoration Framework Plan Highlights

- Recognizes role of Task Force in advancing innovations and improvements for Chicago's rivers
- Documents and compiles future project concepts and opportunities discussed over the years. For example, brings together trail connections with habitat/ecosystem improvement strategies
- Clarifies role of various agencies in advancing work and alignment with goals
- Compiles barriers and opportunities for each reach to inform next steps in scoping and planning
- Outlines next steps to advance future phases of river edge improvements

Project Updates

- Dept. of Planning and Development
 - Sustainable Development Policy is moving towards a public draft with a consultant team working on the design of the document and incorporating initial feedback. Goal is to begin implementation in early 2024.
 - Task Order to bring on a consultant team to work on revising the Calumet Design Guidelines as well as to start research on industrial guidelines.
- Dept. of Transportation
 - Waiting on Notice to Proceed for Chicago River Edge Access study.
 - Wrapped up stakeholder survey for the South Branch Parks Access Study. Next step includes reviewing results and meeting with Park District and alderpersons.
- MWRD
 - Added 10 telemetry sites as part of the continuous dissolved oxygen monitoring program. There are 19 real time monitoring stations throughout the system.
 - Conducted biological monitoring during the summer.
 - US EPA is conducting a CERCLA Preliminary Assessment of the Collateral Channel after being contacted by the Little Village Environmental Justice Organization.
 - Illinois Coastal Management Program is looking at water quality trends for Lake Michigan coastal waterways. <https://www.ideals.illinois.edu/items/121293>

TELEMETRY CONTINUOUS DISSOLVED OXYGEN MONITORING STATIONS



Project Updates

- Forest Preserves
 - Completed art project at Beaubien Woods called Prairie Boat. Working to connect Beaubien with other stretches of the river.
 - Paddling task force to prioritize sites and make it easier for residents to access via signage.
 - Gateway to highlight engagement with nature with prominent signage and directional signage for Caldwell.
- Park District
 - Public meetings in September for TIF funded park projects, including Legion, Ronan, and Kiwanis. Funding is for restoration and maintenance.
 - Park 571 – restoration setbacks due to river flooding.
 - Nature play space development in progress at Park 571 & Gompers (2nd & 3rd River-adjacent nature play)
 - Heavy use of steps to river, river access, and fishing stations at Canal Origins and Park 571.
- Dept. of Public Health
 - Cumulative Impact Assessment Report.
 - Environmental Justice Action Plans for City of Chicago departments.

Systems Plans Working Group Update

2023 Goals:

1. Compile river segment specific and current opportunities, constraints, and issues
2. Collect more resources and information to share with developers



Work Plan – 2023

- ✓ April: Northwest Zone
- ✓ July: North Branch Zone
- October: Loop Zone
- South Branch Zone
- Southwest Zone
- Bubbly Creek Zone

Framing the Discussion / Getting Started:

If a project was proposed within this stretch of the river, what would you want the developer / property owner / agency to know?

Example June Discussion Outcomes:



North Branch (S of Fullerton)



River Segment Notes:

- Ozinga – last barge user in this zone
- Where are the barge users? They have special requirements and will restrict the river access. Mapping these would be helpful.
- The turning basin is very important for wintering waterfowl
- How do we advocate for putting vacant land in conservation? There should be a public access & nature buffer along river everywhere as a long-term goal
- Add Lincoln Yards bridges (added)
- Add Ashland Webster – aeration station

Note: outcomes to be reformatted and compiled into summary document

Development Review Working Group Update

- No meetings hosted from late June – early September
- Prepared draft materials to be provided to developer teams with Working Group meeting expectations and overall process for presenting, receiving, and responding to feedback

2023 Meeting Dates + Adjourn

2023 Upcoming Task Force Meeting Dates

- Development Review Working Group:
 - October 3, 2023: 6 pm – 7:30 pm
- System Plans Working Group:
 - October 18, 2023: noon – 1 pm
- Task Force Meeting
 - December 5, 2023: 3 pm – 4:30 pm