

**Committee on Environmental
Protection & Energy**

Subject Matter Hearing on Urban Flooding

September 1st, 2026

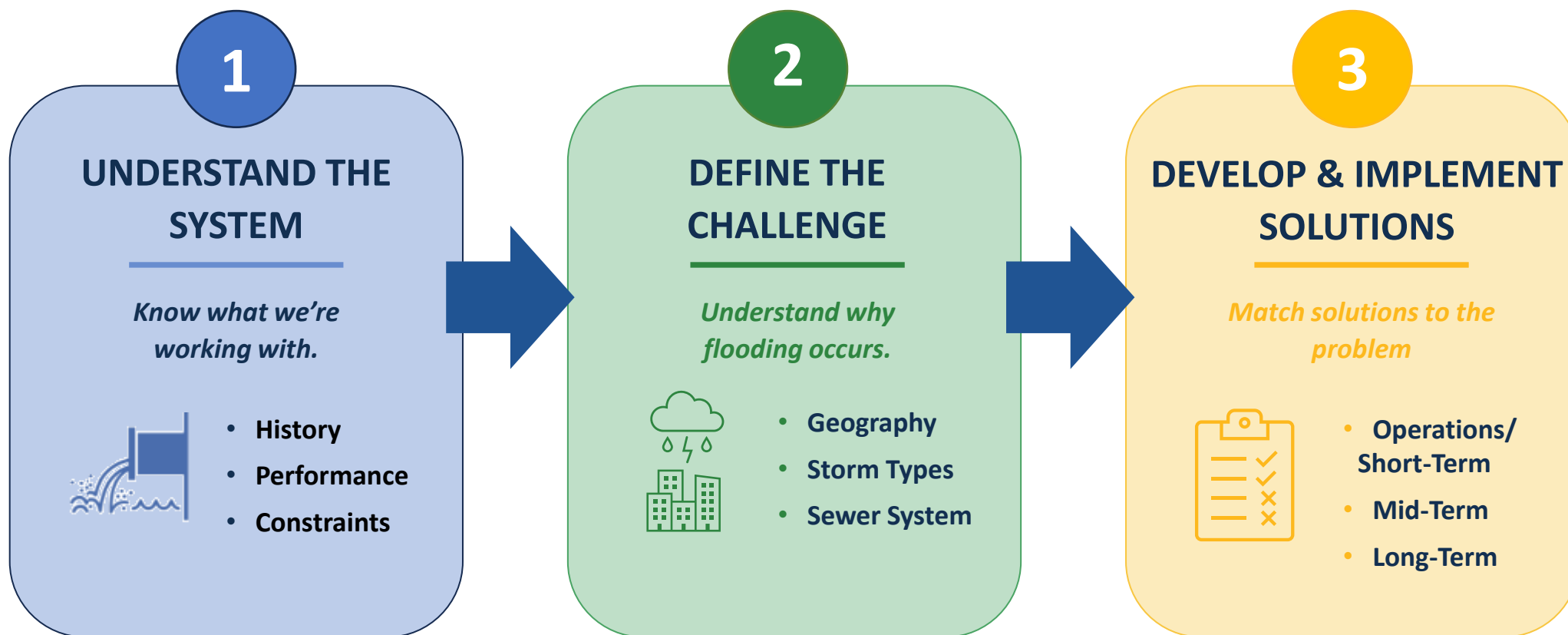
Department of Water Management





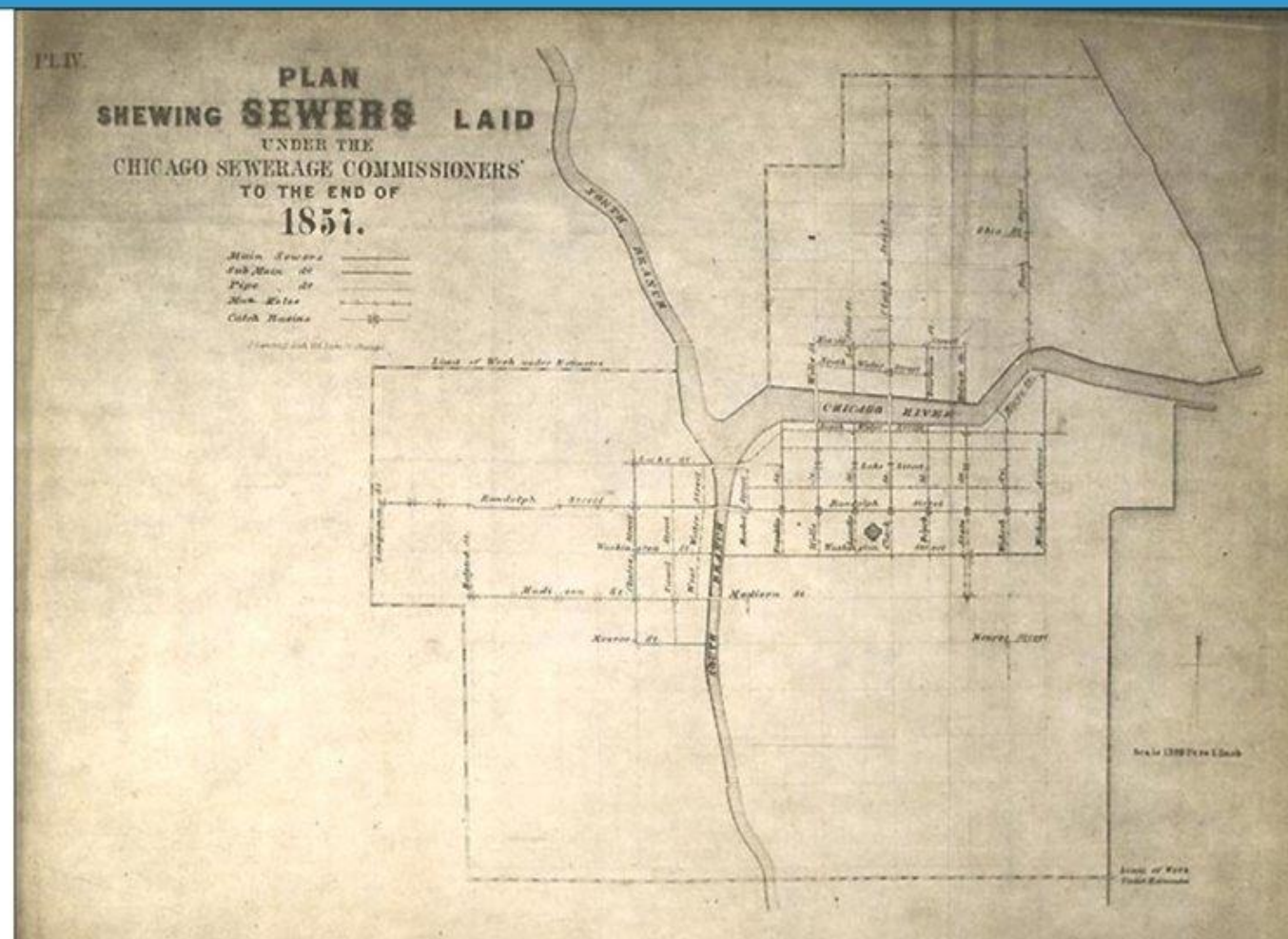
DWM's Approach to Urban Flooding

A data-driven, systematic approach to managing urban flooding



CDWM Sewer System History

- * Construction began in 1857
- * Goal – conveyance of storm and sanitary flow to the Chicago River

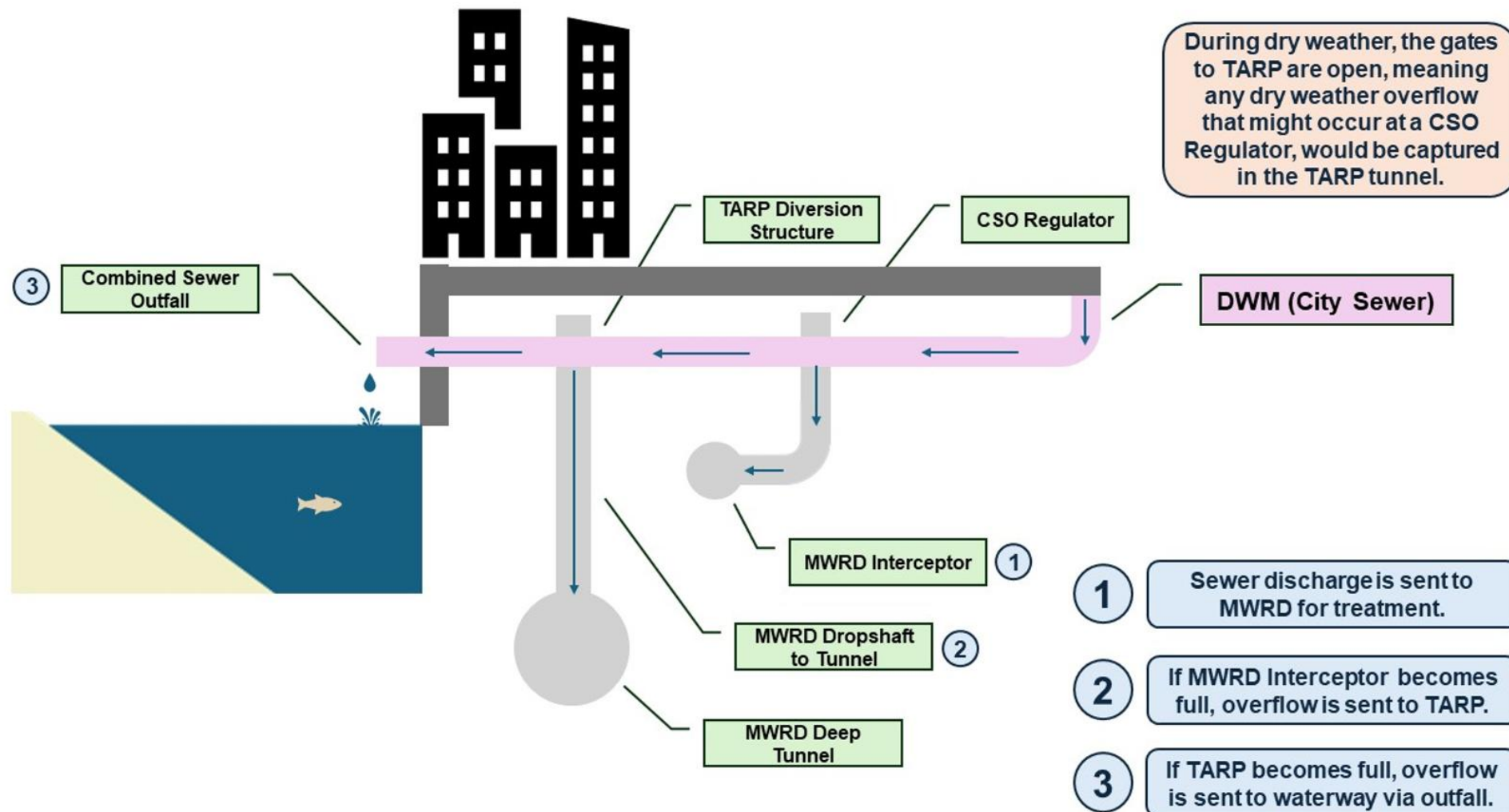


Systemwide Statistics

- ~100% combined (sanitary and storm sewage in same pipe)
- 220 mi² drainage area
- 4,400+ miles of sewer
- 183 Combined Sewer Overflows (CSOs)
- Serves 2.8 million people
- Sewer diameters: 8 inches to 21.5 feet
- DWF discharges to MWRDGC interceptors

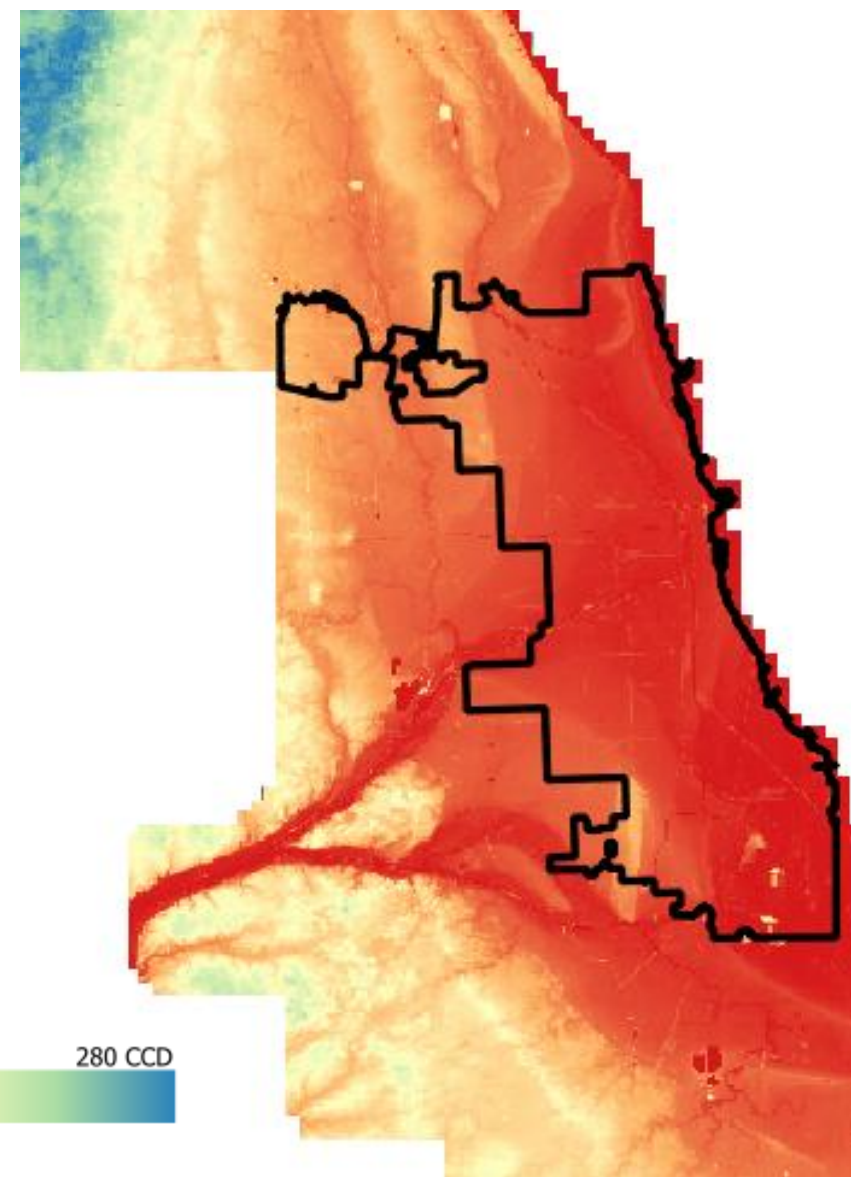


Chicago's Sewer System Overview

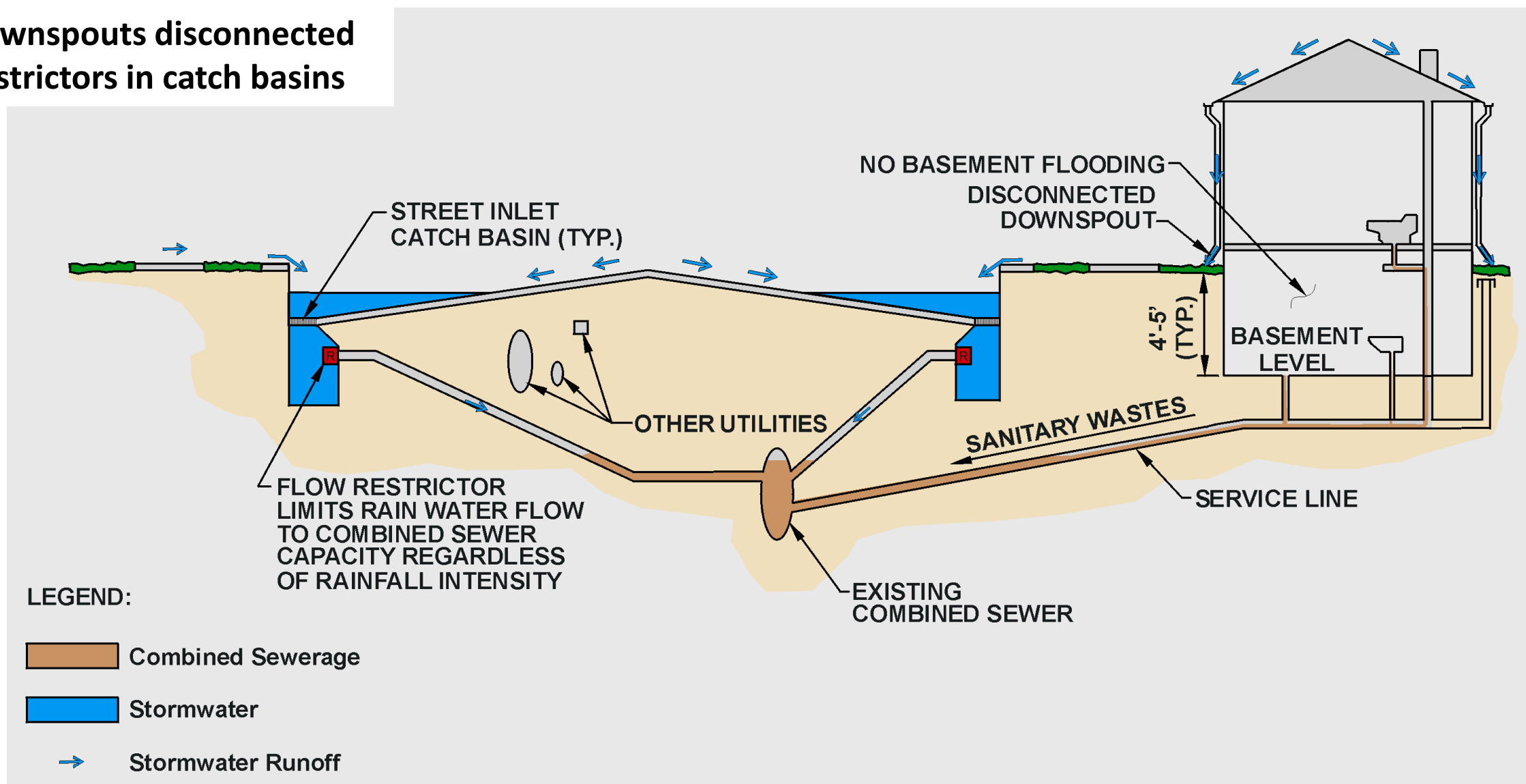


Chicago's Topography

- Very little change in ground elevation
- Chicago's topography is shaped by its position along Lake Michigan, resulting in a consistently low and flat landscape
- Because water doesn't move efficiently across flat terrain, the sewer system must handle **almost all stormwater drainage**

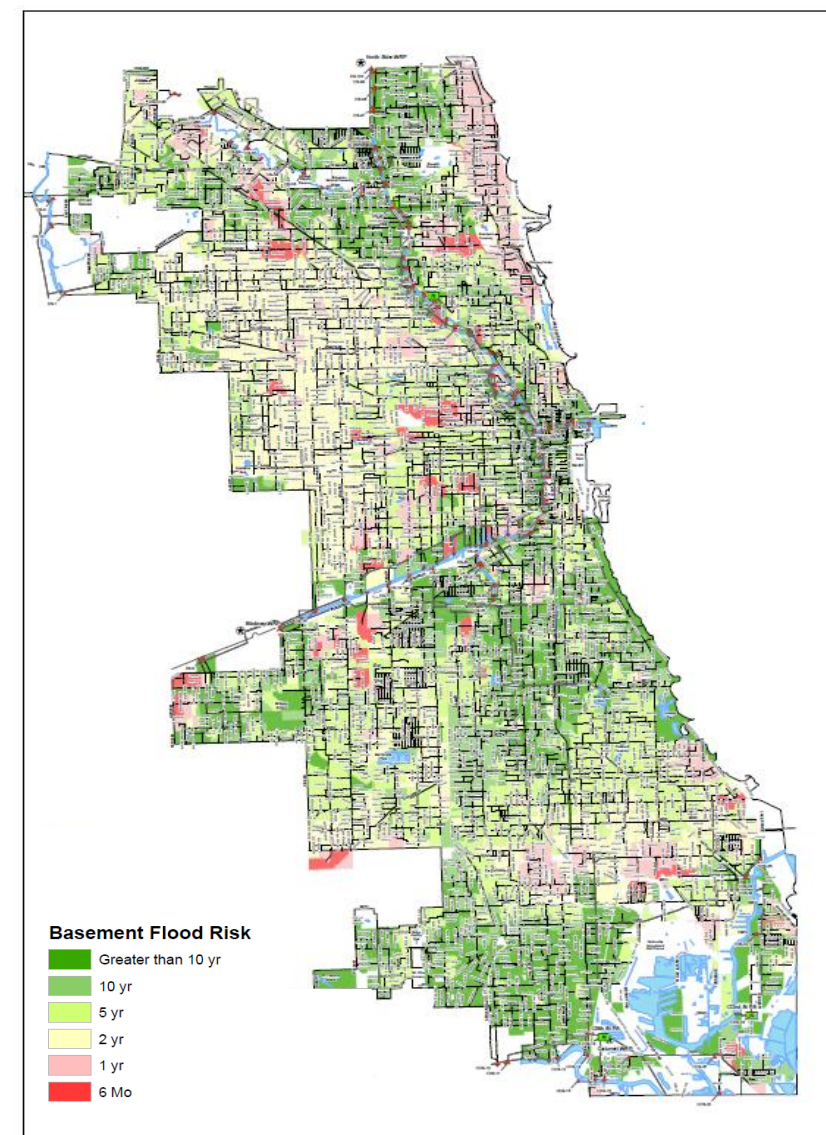


- Downspouts disconnected
- Restrictors in catch basins



Chicago Sewer Modeling

- Chicago maintains a detailed hydraulic sewer model
- Chicago sewer system
 - Over 4,400 miles of combined sewer
 - Local, Interceptor and Tunnel Systems
 - 4 hydraulically distinct areas
- Model results and 311 data drive decision making
 - Sewer main replacement recommendations
 - Sewer lining recommendations



Implementing Wing Storage Projects Across Chicago

To date, DWM has two Wing Storage projects in progress, and is working on identifying additional areas throughout the city



Right-of-Way

DWM is implementing wing storage projects across Chicago in the public right-of-way to reduce sewer overflows.

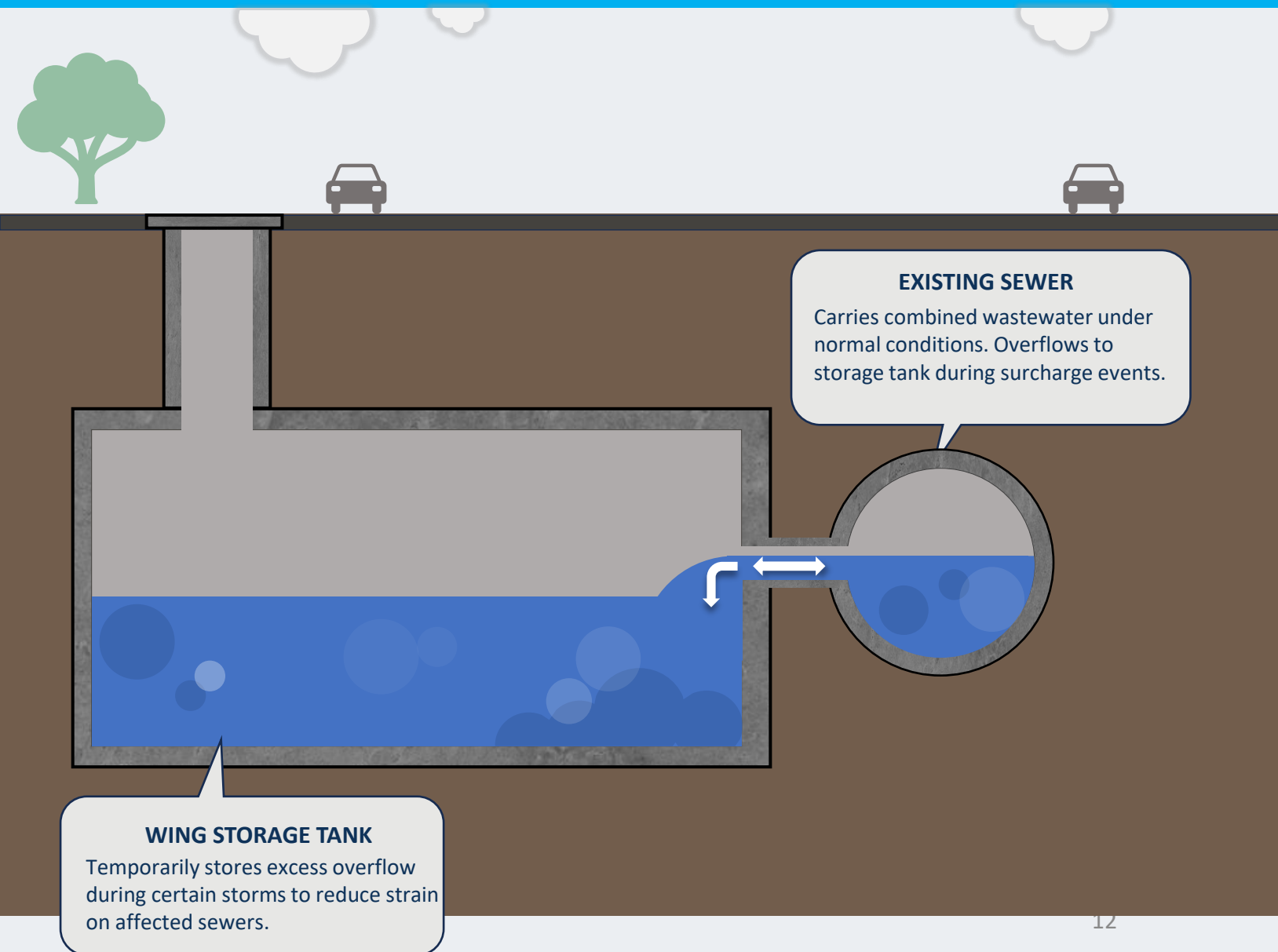


Strategic Partnerships

Partnering with other City agencies, such as Parks & School campuses to maximize community value and shared investments.

Tank Examples





HOW IT WORKS



During certain storms, the sewer system can become overwhelmed



When that happens, excess flow is diverted from surcharged sewers into connected wing storage tanks.



Overflow is stored temporarily and released back to the sewer once capacity is available.

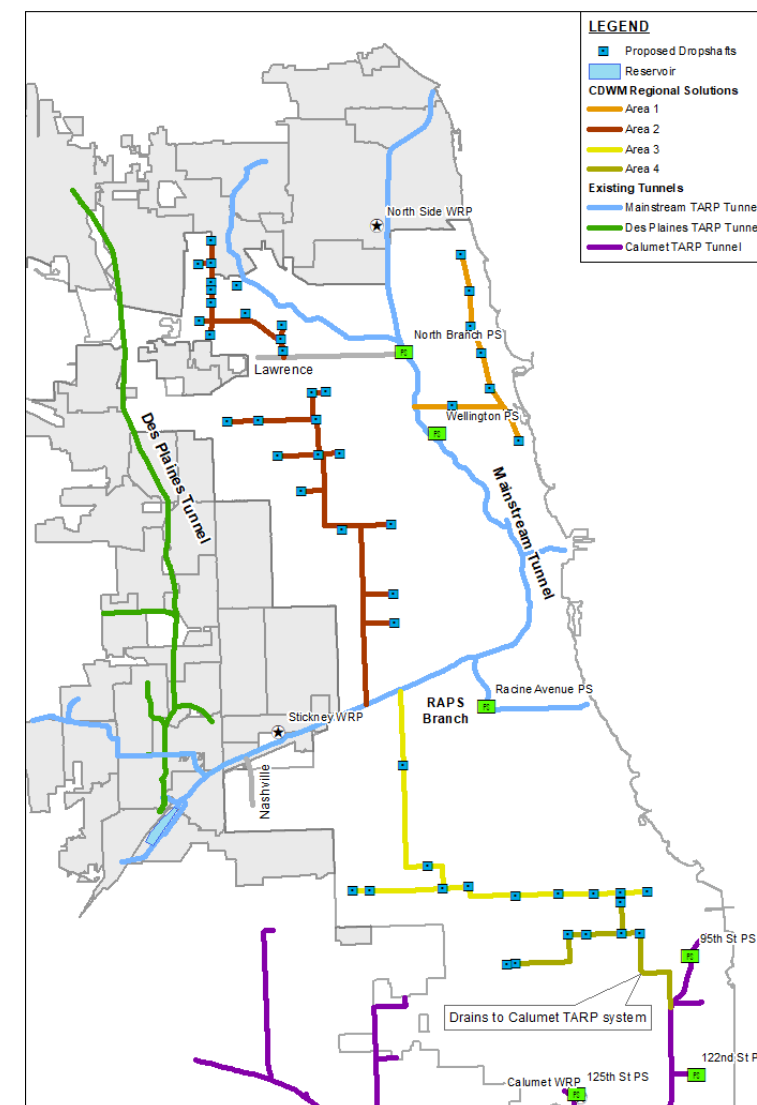


These projects help capture & store excess overflow, supporting DWM's ongoing flood management efforts.

Ongoing Long Term Regional Planning

- **TARP Integration:** Leveraging the MWRD's TARP Plan to extend massive deep-rock overflow tunnels to convey excess runoff.

Tunnel	Proposed Length	Proposed Size Range
Area 1	7.8 mi	14' – 16'
Area 2	27 mi	7' - 26'
Area 3	15 mi	14' - 25'
Area 4	8 mi	10' – 18'



DWM Programs to Address Flooding

Sewer Improvement Projects

- Replacement of undersized sewer mains, improves flow capacity
- Improves flow capacity

Sewer Lining

- New pipe within the existing sewer
- Extends the useful life of the sewer 50+ years

Downspout Disconnection Pilot

- Provide downspout disconnection service for participants
- Clean nearby catch basin & ensure vortex restrictors are present

Structure Lining

- Replacement of undersized sewer mains, improves flow capacity
- All lined structures receive a new restrictor

Restrictor Replacement

- New pipe within the existing sewer
- Extends the useful life of the sewer 50+ years

Space to Grow

- Transforms CPS schoolyards into, flood-resilient community spaces that also support play and outdoor learning
- Features green infrastructure elements that reduce load on combined sewers and neighborhood flooding

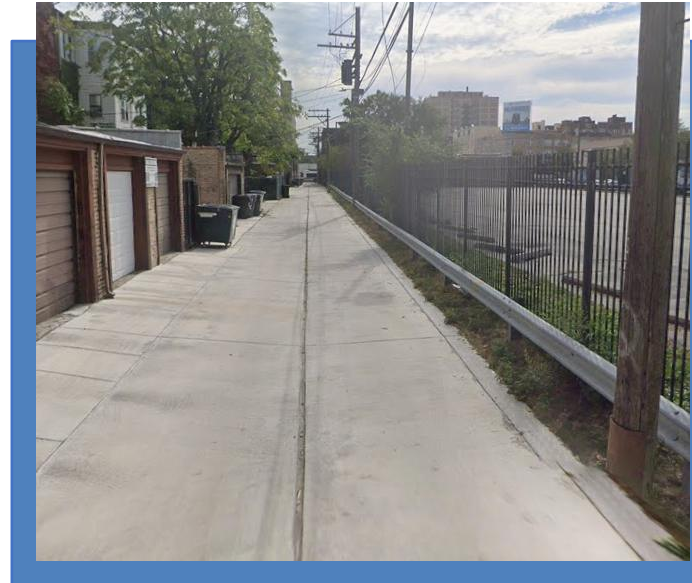
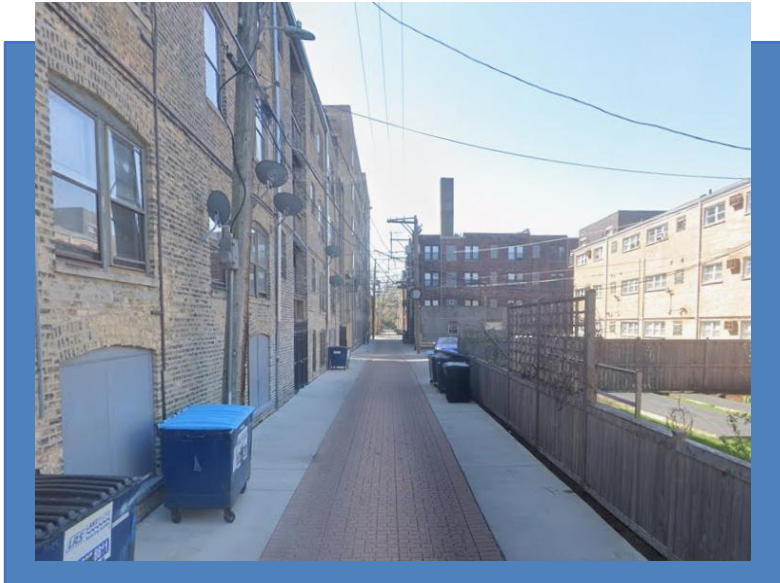


Chicago Department of Transportation



CDOT - Green Alleys

- Goals and Features
 - Drainage system to alleviate flooding
 - Permeable pavers
 - Underground detention to store rainwater
 - Proper grading and pitch to facilitate drainage

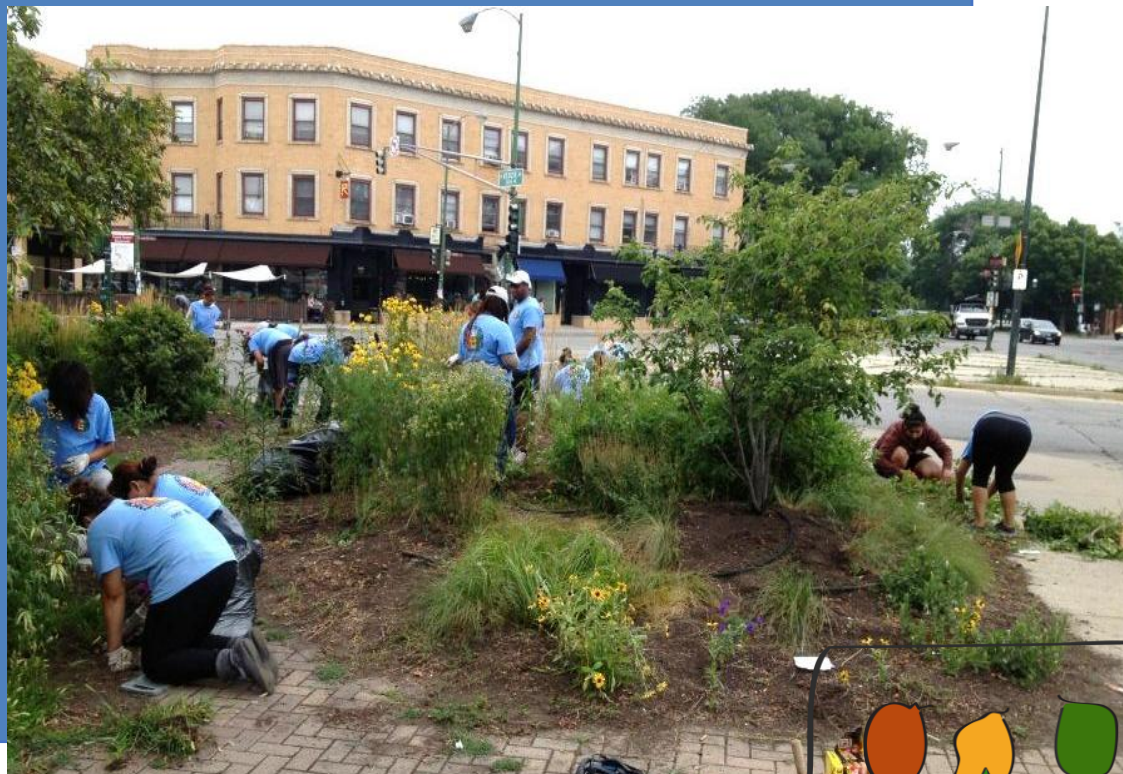


★ CDOT - Green Alleys

- 1900+ miles of alleys in total across the City of Chicago
- 500+ green alleys constructed between 2007-2025
- Yearly capital bond green alley selection per ward since 2021
- Informed selections: 311 reporting, pavement condition, etc.
- Unique designs, utility due diligence, multiple paths to construction



Greencorps Chicago



- Greencorps Chicago (GC) is the city's green job training program for individuals with barriers to employment
- For over 30 years, GC has trained and provided credentials to 750 Chicagoans
- Curriculum includes GSI training for native plants, rain gardens and other GSI technology
- CDOT is partnering with DWM on a downspout disconnection pilot in the Chatham community to reduce runoff draining directly to the combined sewer

CHICAGO OFFICE OF EMERGENCY MANAGEMENT AND COMMUNICATIONS



OEMC

Office of Emergency Management
& Communications

Climate Change / Flooding - Ongoing Planning Efforts

- **Annual Workshops:** Every year, OEMC hosts a Spring (and Winter) Weather Workshop bringing City departments together to plan and prepare for the upcoming season and to review departmental roles & responsibilities during extreme weather events.
- **City of Chicago Emergency Operations Plan:** Updated every 3 years, reflects City roles & responsibilities for disaster response broken out by agency.
- **Chicago Climate Action Plan**
- **Cook County Multi-Jurisdictional Hazard Mitigation Plan**
- **Chicago Shoreline Advisory Board:** Lakeshore flooding response, hazard mitigation, sustainability, and climate resiliency.

Extreme Weather Coordination

- **Daily Citywide Coordination Calls:** These take place every morning and afternoon with agencies across the City, coordinated by OEMC, for situational awareness on events happening throughout the city, including weather-related events.
- **9-1-1/3-1-1 Calls:** Ongoing review of incoming 9-1-1/3-1-1 data during extreme weather events.
- **Operations Center:** 24/7/365 monitoring and information sharing. Can activate Emergency Operations Center when conditions warrant.



Extreme Weather Notification Platforms

- OEMC coordinates both internal (City departments) and external (residents/the public) messaging related to forecasted extreme weather in close coordination with the National Weather Service.
- Notify Chicago / ChiLake notifications
- OEMC App
- OEMC social media pages
- Reverse 9-1-1 calls/Wireless Emergency Alerts to designated populations
- Media advisories – sent to all aldermanic offices
- Digital billboard messages along expressways
- Press conferences
- Emergency preparedness campaigns
- FEMA and SBA graphics and flyers are available in English and Spanish



Flood Recovery – Post Incident

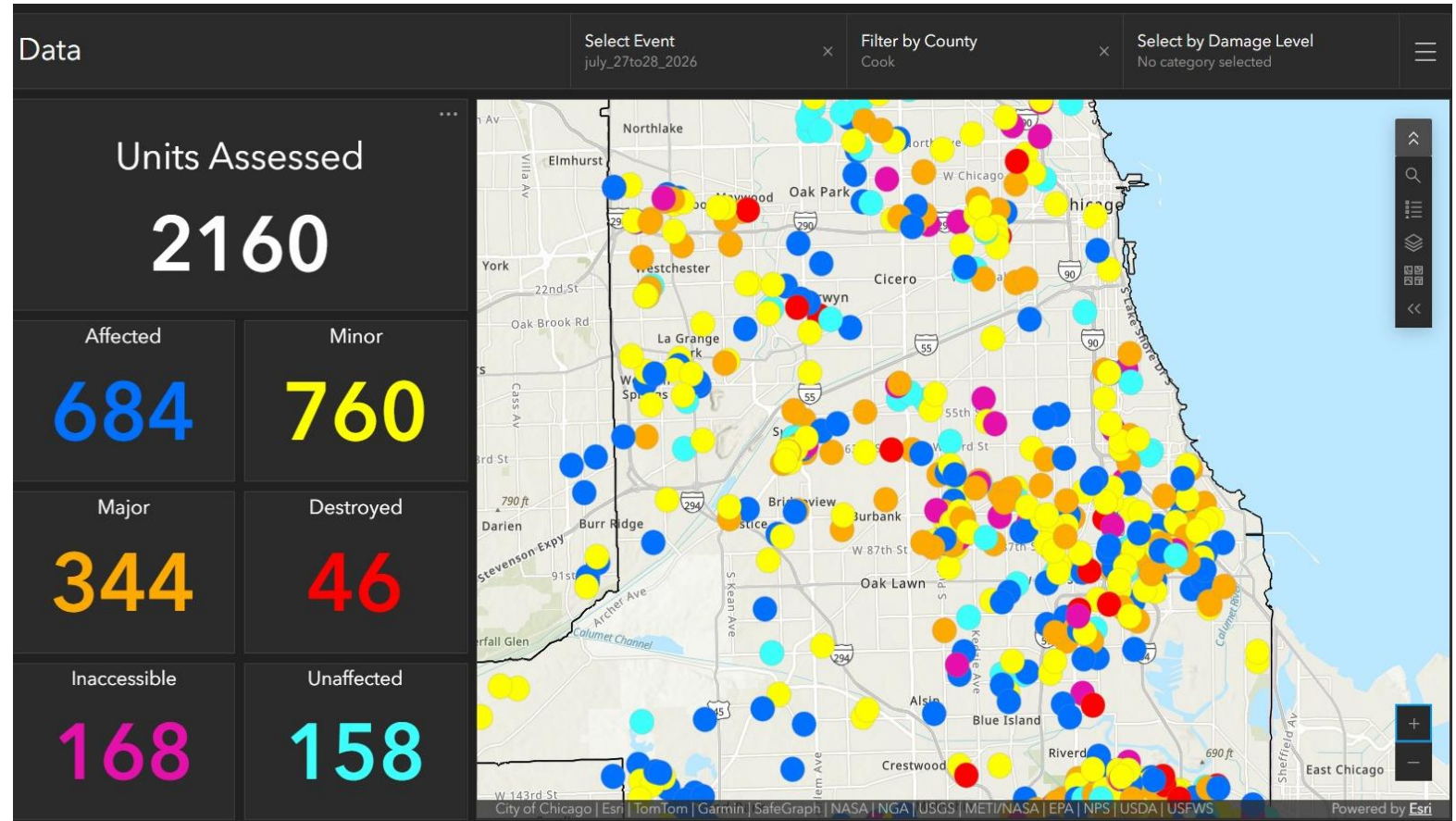
- Windshield damage assessments
- Analyzing 311 data & IEMA Surveys w/ State and County
- Joint Preliminary Damage Assessments w/ FEMA, SBA, IEMA, & Cook County EMRS
- Establishing Disaster Recovery Centers w/ FEMA & IEMA
- Available Assistance (if qualified):
 - FEMA Individual Assistance (IA) and Public Assistance (PA)
 - Small Business Administration (SBA)
 - State of Illinois (e.g., Home Equity Flood Rebate)
 - Cook County (e.g., 2025 Resident Storm Relief Project)

Summer 2025 Storms and Disaster Assistance

- The City of Chicago, Cook County, IEMA, FEMA, and SBA conducted Joint Preliminary Damage Assessments following severe storms, high winds, and heavy flooding that struck Illinois between July 25–28 and Aug 16–19, 2025
- In coordination with the City and County, Gov. Pritzker then requested federal disaster assistance; the requests were denied by President Trump in October 2025
- In November 2025, additional damage assessments were conducted, and the Governor's Office appealed the original decision. The appeal was also denied.
- A small amount of SBA assistance was approved for these two storm events – SBA accepted low-interest loan applications over a 12-week period in Spring 2026

★ Self-Assessment Example: July 27, 2026 Storms

- 458 individual City Surveys received
- Most Impacted Areas: Chatham, Roseland, Calumet Heights
- SBA Assistance Approved – currently at CPL Pullman Branch until Sept 3rd.
- Data shared with Red Cross to address Unmet Needs
- The Survey is available in multiple languages.



OBM: About CDBG-DR in the City of Chicago



\$426.6 Million

Awarded in CDBG-DR funds to the City of Chicago



\$97 Million

Additional Local Funding Committed



8

Total Recovery Projects



2025 – 2031

Grant Program Period

- In 2025, the City of Chicago was awarded \$426.6M in HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) to catalyze sustainable communal and economic recovery from severe storms and flooding in 2023 and 2024.
- The City developed a plan designed to drive transformational change to implement lasting recovery and encourage resiliency across City infrastructure, economic revitalization efforts, public services, and housing repair and assistance.
- In 2026, programs began developing their business plans to ensure compliance with HUD guidelines and maximize spend on the grant.



City of Chicago Green Infrastructure Strategy

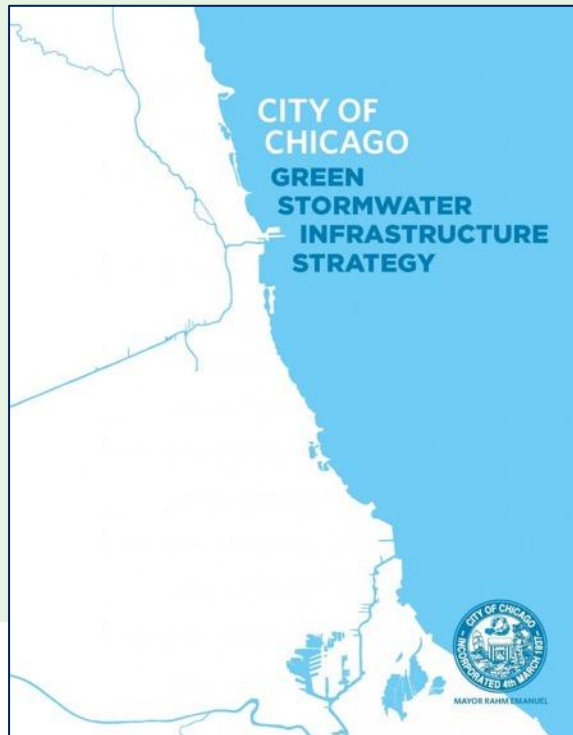
2026

City of Chicago Green Infrastructure Strategy

The 2026 Green Infrastructure Strategy is the City of Chicago's roadmap for managing stormwater in ways that reduce flooding, strengthen climate resilience, and deliver community benefits across neighborhoods.

This strategy outlines how the City will coordinate across departments, invest in long-term maintenance, and center equity to ensure these solutions serve residents most impacted by flooding, heat, and environmental disinvestment.

Framework



Chicago's Stormwater Challenges



- **66% of our city is impervious to stormwater**
- Urban flooding and combined sewer overflows can occur during heavy rain events
- Climate impacts are intensifying the frequency of heavy rain events

What Can be Done?

The stormwater solution includes both **Gray** and **Green**

Gray
infrastructure
directs
stormwater
somewhere else.

*Examples:
Storm sewer
systems,
water treatment
plants*



Green
infrastructure
keeps rain where
it falls, allowing it
to soak into the
ground.

*Examples:
Rain gardens,
bioswales,
green roofs*

What is Green Infrastructure?

**Nature-based solutions that
manage water where it falls
by mimicking natural systems.**

Common Types of Green Infrastructure



Stormwater Planter



Subsurface Storage



Stormwater Trees



Permeable Pavement



Stormwater Bump Outs



Rain Garden / Bioretention Basin



Green Roofs



Cisterns/Rain Barrels

 Co-Benefits

Heat mitigation	Water quality	Cost reductions
Air quality	Public health	Job creation
Habitat restoration	Community engagement	Climate resilience

Existing Programs

Green alleys (CDOT)

- Climate-resilient alleys

Greencorps Chicago (CDOT)

- Building Chicago's green workforce

Climate Infrastructure Fund (DOE)

- Funding community-led green infrastructure projects

Space to Grow (City / CPS / MWRD)

- Green, resilient schoolyards

Our Roots Chicago (DSS / DOE)

- Equitable tree-planting across the city



Areas for Growth

Streamlined coordination

Clear maintenance responsibilities

Dedicated funding streams

Equity-based approach

Community Vision of a Greener Chicago Includes

Equity & Justice

“Green Alleys for South and West Side”

“Indigenous Knowledge!”



Community Health & Space

“Easier community access to vacant lots”

“Slower traffic, green calming”



Nature & Biodiversity

“Fostering more regenerative ecosystems with diversity of plants, insects, soils and animals.”

“More park/gathering spaces”



Jobs & Education

“More green jobs”

“Consistent environmental education for adults and kids alike”



Key Priorities Moving Forward

Cross-Agency Coordination



Maintenance



Equity and Engagement



Cross-Agency Coordination



Establishing clear roles, shared goals, and interdepartmental coordination to integrate green infrastructure more seamlessly into the City's broader infrastructure systems.



Developing pathways for sustained, well-funded maintenance programs and citywide asset management systems that ensure green infrastructure performs over time.

★ Equity and Engagement



Embedding equity across planning, implementation, and maintenance, ensuring that communities most burdened by flooding and heat also benefit the most from green infrastructure investments.



Next Steps



- **Build inventory**



- **Secure funding**



- **Establish leadership**



- **Engage community**



- **Set measurable goals**



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