

EVANSTON ILLINOIS

Stormwater Master Plan Update

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City of
Evanston™

BACKGROUND

- Long Range Sewer Improvement Program
 - Essentially eliminated basement backups
- Climate Action and Resiliency Plan (CARP)
 - Addresses need for resilient stormwater management in the face of future climate change
- Stormwater Management Guide (2019)
 - Calls for development of Stormwater Master Plan
- Stormwater Master Plan (SWMP)
 - Awarded to Hey and Associates April 27, 2020
 - Work to be completed March 2022

CARP – CLIMATE RESILIENCE

The task of evaluating the changing climate and preparing the community for anticipated changes and the impact they will have on the community and its infrastructure

Evanston Climate Hazards

Climate Hazard	By Mid-Century 2050	By End-Century 2075	Summary
Extreme Heat	↑	↑↑	Increase in extremely hot days, over 95°F and 100°F
Shorter Winters	↓	↓↓	Decrease in number of days below freezing
Storms	↑	↑↑	Increase in extreme precipitation events
Drought	?	↑	Increase in drought conditions

Evanston Climate Impacts

Climate Impact	By Mid-Century 2050	By End-Century 2075	Summary
Infrastructure Stress	↑	↑↑	With increased heat and sever storms physical infrastructure will be tested
Human Migration	?	?	The Chicago region may see an influx of climate refugees
Flooding	↑	↑↑	Higher risk of flooding and associated damage
Invasive Species/ Pests	↑	↑	Increase in invasive species and pests
Air Pollution	↑	↑	Poor air quality and increase in aeroallergens

Climate Resilience Focus Areas

Green Infrastructure

Health Impacts of Extreme Heat

Resilience Regulations

Community Networks and Education

Emergency Preparedness and Management

Vulnerable Populations



SWMP OBJECTIVE

Develop hydrologic and hydraulic model of the City's stormwater system (combined, relief, and storm sewers) to identify and define needed system improvements under existing and future storm conditions

SWMP TASKS

- Data Collection
- Model Build
- Flow Monitoring
- Calibration
- System Evaluation
- Improvement Development

SWMP PROGRESS

- Data Collection
 - Reviewed all available data and performed field investigations to fill gaps in missing data

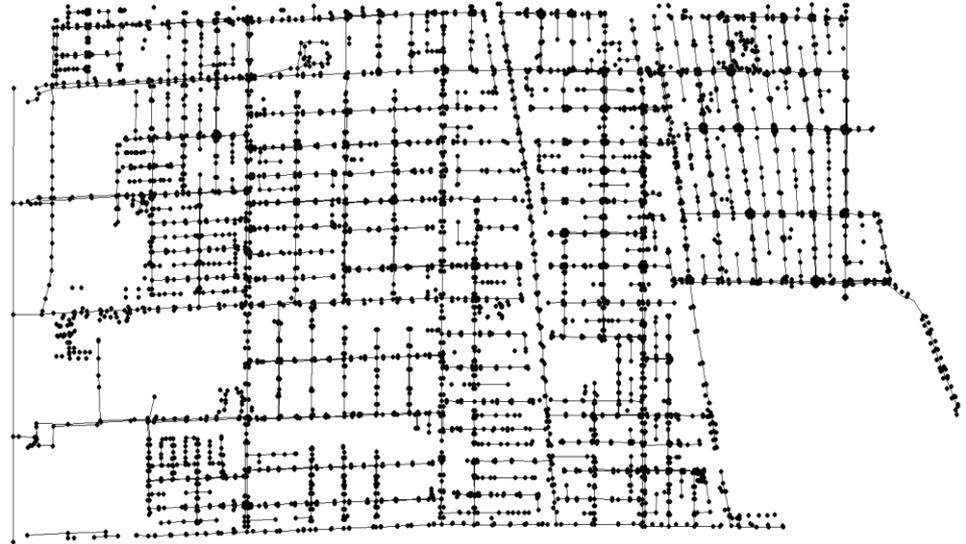
Surveyed
~425
Structures



SWMP PROGRESS

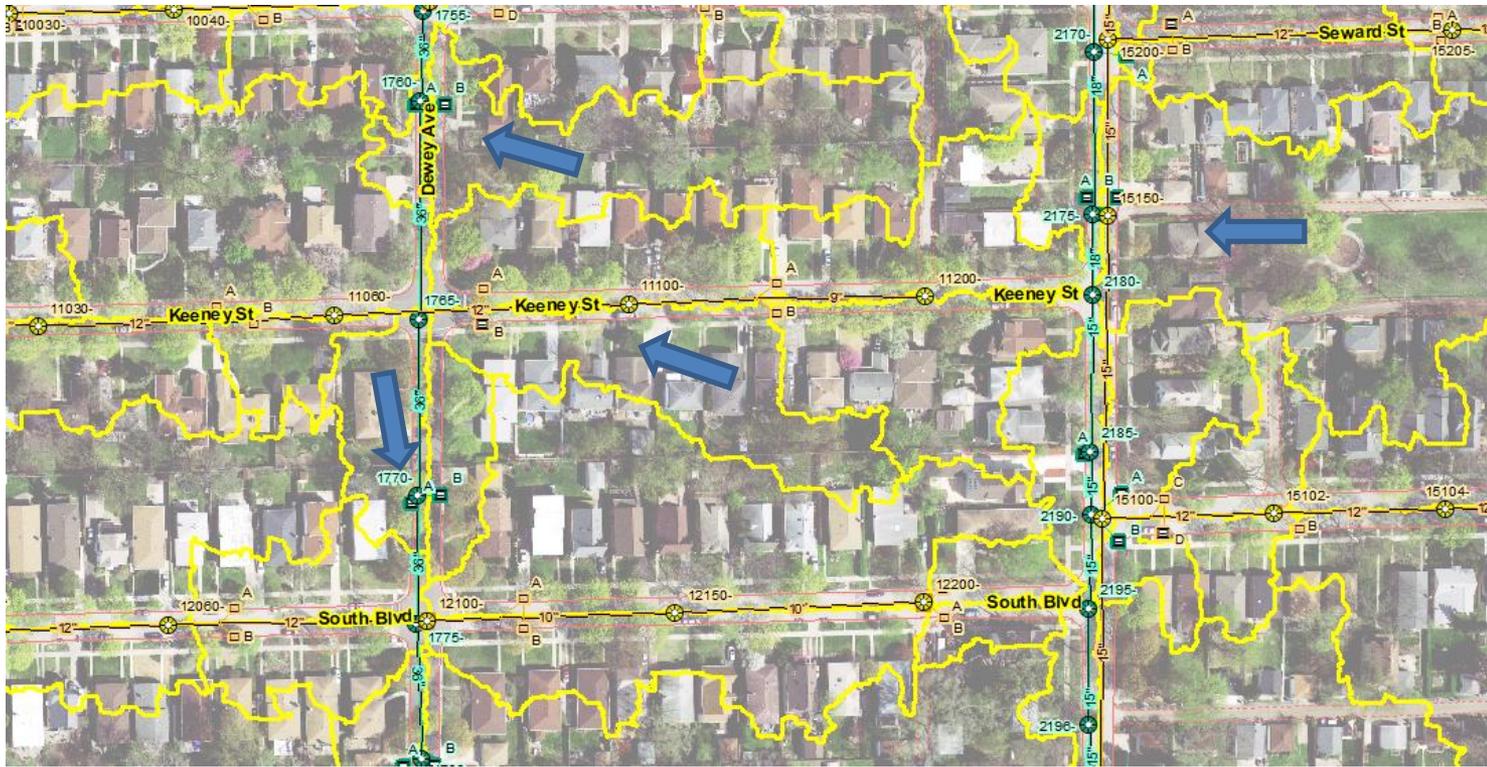
- Model Build
 - Completed backbone of entire system

6,900 Nodes
233 Miles of Pipe



SWMP PROGRESS

- Model Build
 - Subbasin Delineation



SWMP PROGRESS

- Flow Monitoring
 - May to July Monitoring Period

23 Flow Monitors
2 Rain Gauges
2 Level Meters



LOOKING AHEAD...

Task	Expected Completion
Data Collection	January 2021
Model Build	July 2021
Flow Monitoring	September 2021
Calibration	December 2021
System Evaluation	December 2021
Improvement Development and Final Report	April 2022