PREPARING FOR CLIMATE CHANGE THROUGH EDUCATION AND ACTION

Syracuse New York

NEW YORK STATE Department of Environmental Conservation

C&S COMPANIES®

EDR

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CITY OF SYRACUSE
DIVISION OF PLANNING AND SUSTAINABILITY

SUSTAINABLE SYRACUSE INITIATIVE

***Engage, educate**, and **empower** the Syracuse Community with tools to reduce their carbon footprint, mitigate the effects of climate change, and improve quality of life for all, while preserving the prosperity of future generations.*

Climate Action Plan (CAP)

Consolidated Community & Municipal Climate Action Plan

Phase 1: Engage
Internal and External Stakeholders

Phase 2: Educate
Greenhouse Gas Inventory and Climate Action Plan

Phase 3: Empower
Implementation of Long-Term Planning

COMMUNITY IMPACT OF CLIMATE ACTION

Sustained Impact is present across community and municipal functions.

TODAY'S THEME: HEAT ISLANDS & TREES

AGENDA

- Climate Change – What is Happening?
- Topical Guest Speaker(s)
- Community Engagement
- Closing Statements

Energy Use & Efficiency

THU. OCT. 16 | 5:30 - 7:00 PM

Soule Branch Library, 101 Springfield Rd.

Transportation & Smart Growth

THU. OCT. 30 | 5:30 - 7:00 PM

STEAM at Dr. King, 416 E. Raynor Ave.

Climate Change & Syracuse

Introduction

"Climate change is **reshaping Syracuse's weather patterns**, the City is experiencing the impacts of a changing climate, including **warmer temperatures, increased precipitation, and more frequent extreme weather events.** While some experts have suggested that Syracuse could be a climate haven due to its northern location and water resources, the City still faces **risks from increased heat, flooding, and potential disruptions to local ecosystems."**

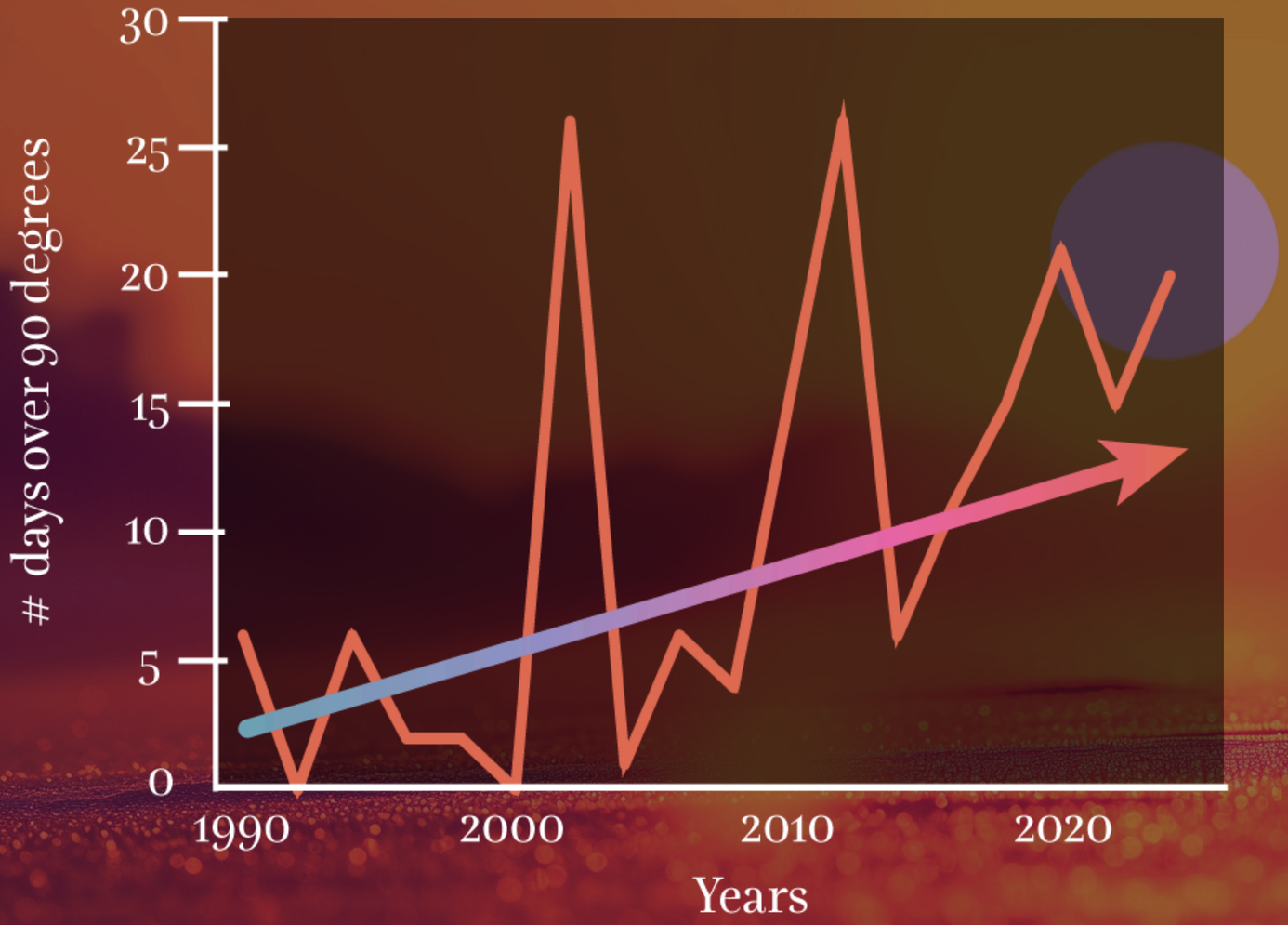
- Excerpt from the Syracuse Comprehensive Plan 2025

Key Points:

- **Syracuse is already experiencing hotter summers, shorter winters, and heavier rains.**
- **By 2050: 20–40 days above 90°F each year (vs. 9 days historically).**
- **Winter days below freezing projected to decline by half.**
- **More heavy storms results in flooding, sewer backups, strain on infrastructure**

Extreme Heat & Syracuse

Public Meeting #2

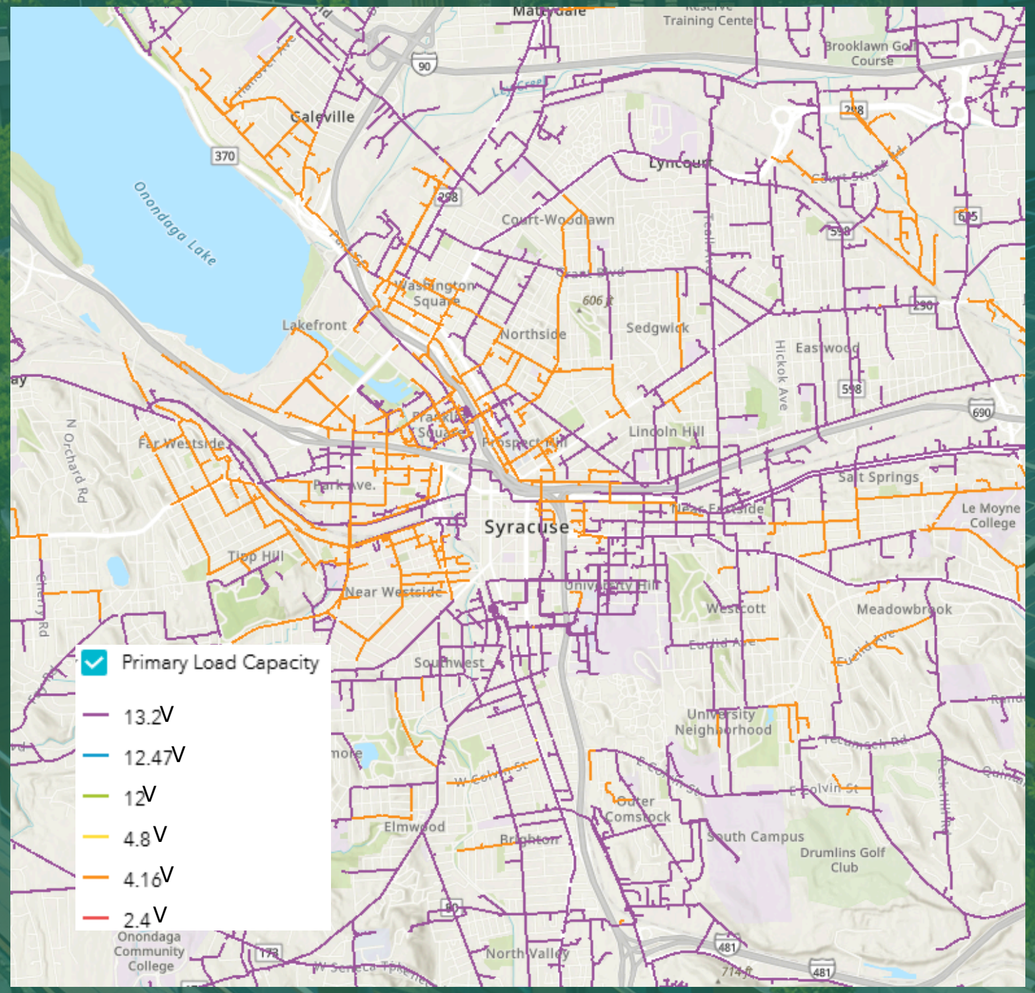


Key Points:

- Extreme heat = #1 weather-related health risk in New York.
- Syracuse projected to see 3–7x more 90°F+ days by 2080s.
- Urban heat island makes some neighborhoods hotter than others.
- Impacts: Public health, outdoor recreation, electricity demand.

Energy & Syracuse

Public Meeting #3



Electrification Capacity

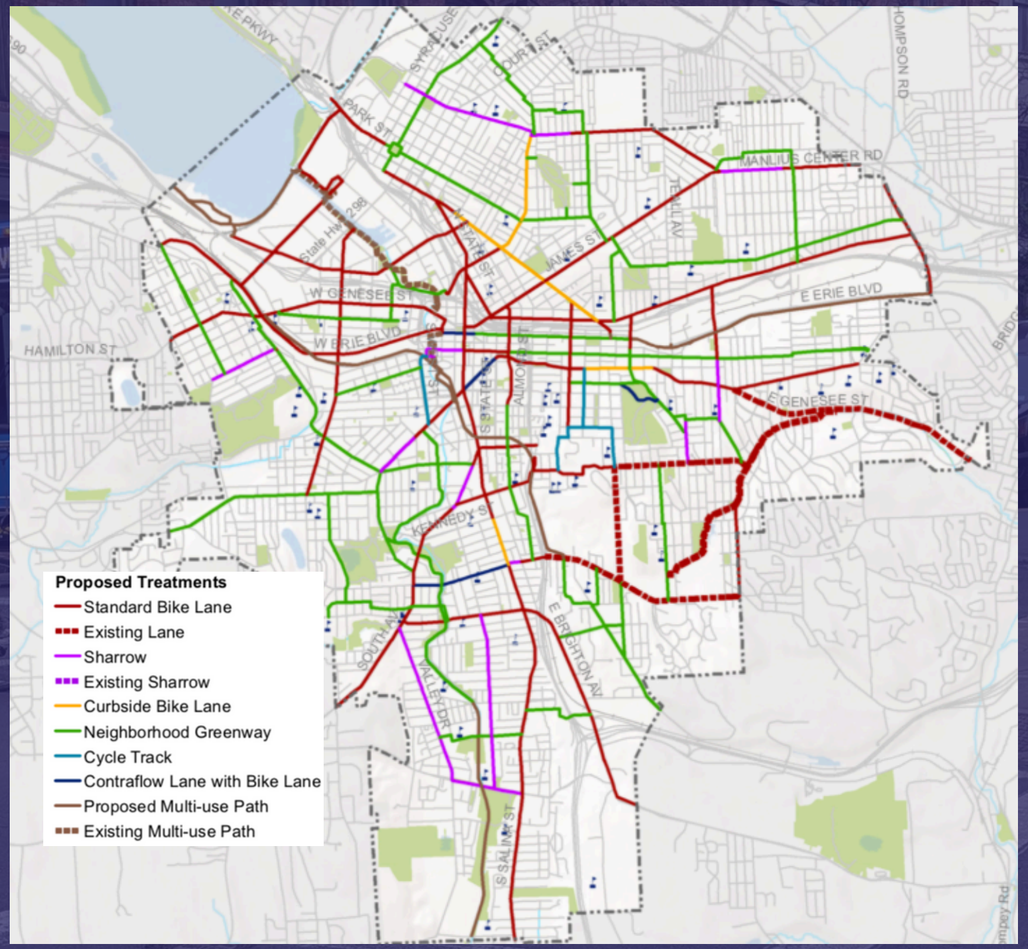
National Grid

Key Points:

- Syracuse's electricity demand is rising after decades of decline.
- Drivers: Micron chip fab, data centers, EVs, air conditioning, heat pumps.
- Grid congestion and aging infrastructure pose challenges.
- Opportunities: renewable energy, efficiency retrofits, modern grid upgrades.

Transportation & Syracuse

Public Meeting #4



Syracuse Bike Plan

Proposed Bicycle Network Treatments

Key Points:

- Transportation is a major contributor to greenhouse gas emissions.
- Warmer, wetter weather impacts roads, sidewalks, and transit reliability.
- More heat + storms = greater wear on streets, more maintenance costs.
- Opportunities: EV adoption, bike/pedestrian infrastructure, safer transit.

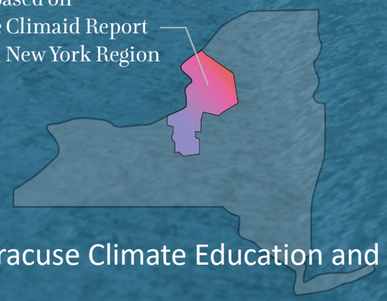
Flooding & Syracuse

Public Meeting #1

Change in Precipitation (%) *

	Low Estimate	Medium Estimate	High Estimate
2020	0%	4%	8%
2050	2%	7%	13%
2080	3%	9%	15%
2100	1%	14%	26%

* Predictions based on New York State Climaid Report for the Central New York Region



Key Points:

- Annual precipitation up 10–20% since 1901; projected to increase further.
- Heavy downpours more frequent and intense results in stormwater & sewer overflow risks.
- Neighborhood “nuisance flooding” already disrupts homes & businesses.
- Linked to Onondaga County Hazard Mitigation Plan.

Group Engagement

Audience Icebreaker

What brought you to this meeting? How would you explain your interest to your neighbor?

Phase 1: Engage
Internal and External Stakeholders

Phase 2: Educate
Greenhouse Gas Inventory and Climate Action Plan

Phase 3: Empower
Implementation of Long-Term Planning

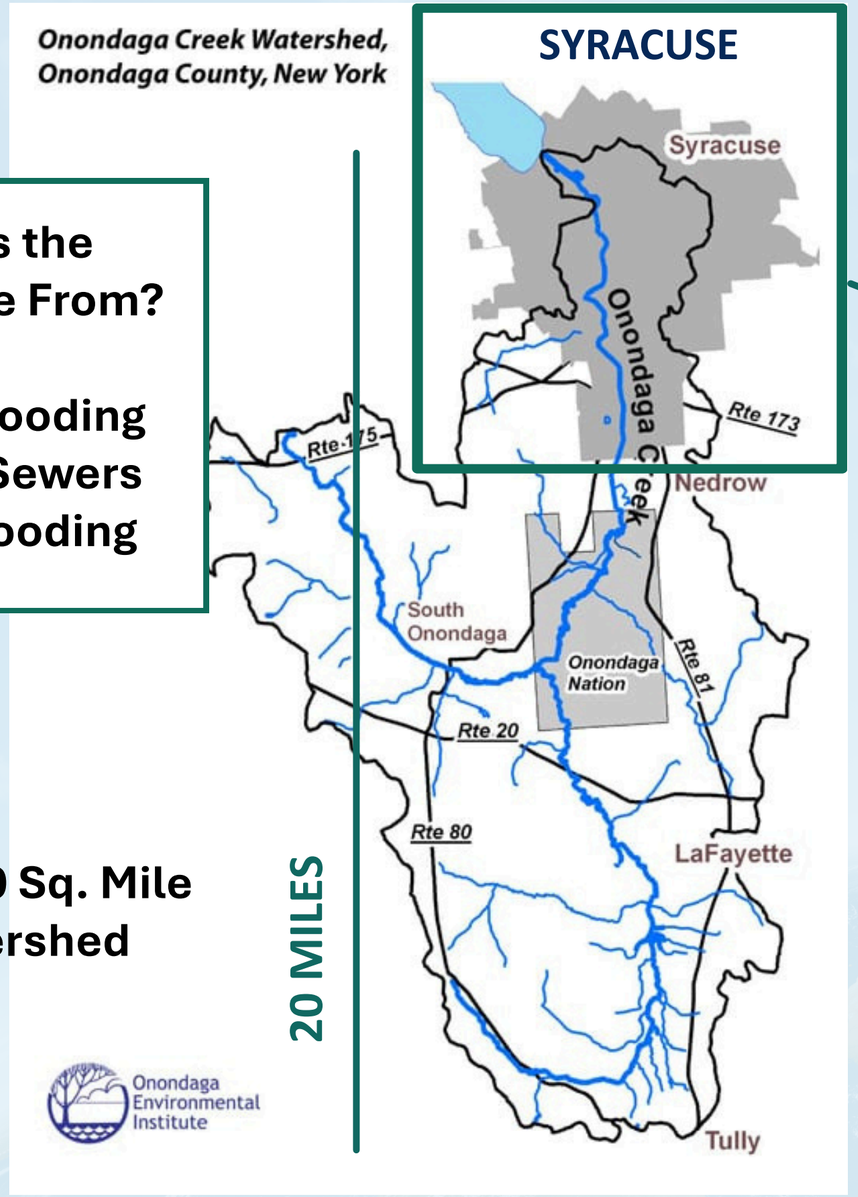
COMMUNITY LEADERS - FLOOD MITIGATION

Russ Houck, City of Syracuse & Elizabeth Martin, Onondaga County

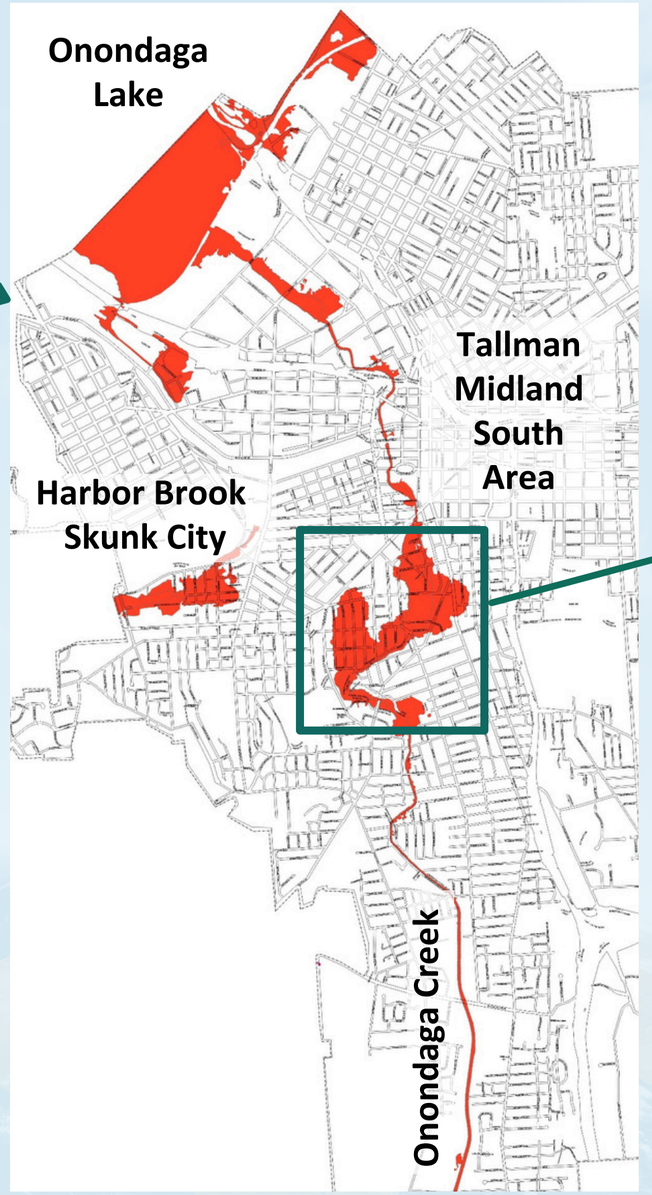
- What do flooding conditions look like? – Where does the water come from? Where does flooding happen?
- What has or is being done to reduce flooding?
- Flooding-related elements of Onondaga County's Hazard Mitigation Plan

Where Does the Water Come From?

- Flash Flooding
- Roads/Sewers
- River Flooding



Over 100 Sq. Mile Watershed



2016 FEMA Floodmap Revision Syracuse

Tallman – Midland – South Area Homes Added to Floodplain with New Maps

Sterling / Hudson Street Area – South Side
1,000 People Evacuated

Last Major Flood
July 1974
Onondaga Creek

50-Year Event
(2% chance of happening in any year)

Well,
that was
50 years ago…

August 2021
Onondaga Creek
Kirk Park
10 Year Event
(10% Chance of happening in any Year)

**Water Flooded into Kirk Park,
Lower Onondaga Park
and Backyards on Cheney St.**

2 Months later - Oct 2021
Another 10-Year Event at Kirk Park
Water Over Banks

Three 10-Year Events in last 10 Yrs
10 Year events top the banks
50 and 100-year Events will flood Neighborhoods

Flood Impacts on Syracuse

Elevated New Tiny Home for Good on Rich Street
First Floor is 2 Feet above Flood Elevation

1. **Flood Risks to People and Property**

2. **Flood Insurance Costs**
   - 200-300 flood insurance policies in Syracuse; $500 to $2,000 year
   - Most in lower-income neighborhoods

3. **Higher Building / Renovation Costs**
   - **New homes** – Raise first floor 2 feet above flood elevation; added cost
   - **Renovations** > 50% of house value treated same as new home; Discourages investment in low-market value homes
   - **New Commercial** buildings must be raised or floodproofed
   - City looking at Assessment Methods re Floodplain building regulations

WHAT ARE THE CITY / COUNTY DOING?

Flood Mitigation Efforts:

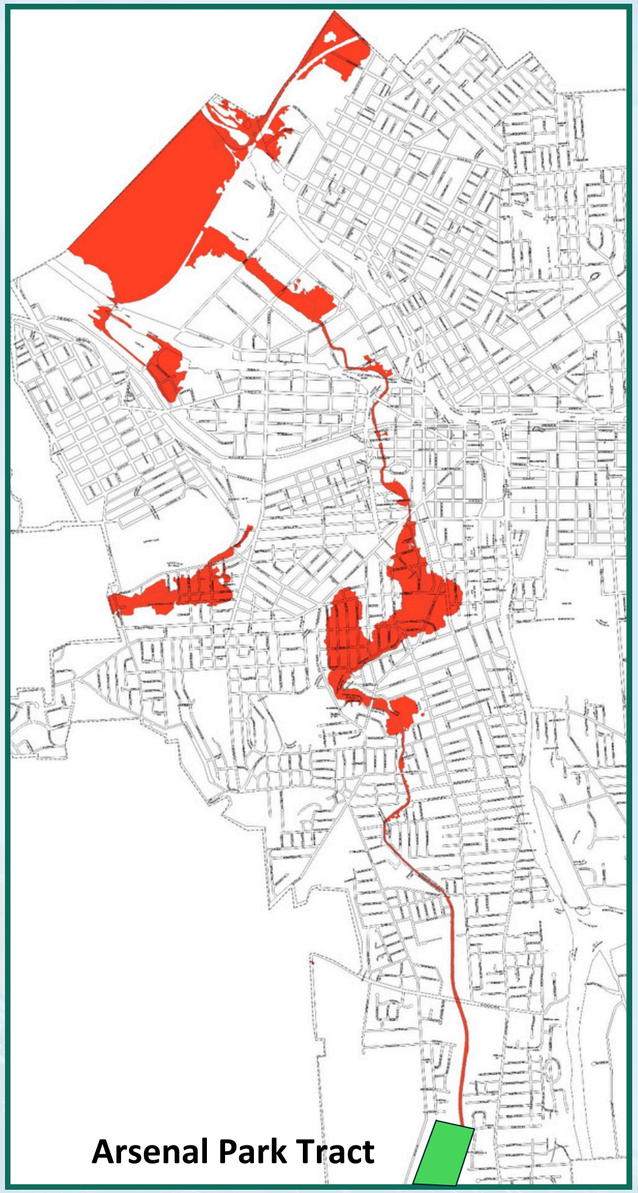
- Creek previously **channelized** from 1900 – 1960; 1949 **dam** on Onondaga Nation
- County Stormwater **Detention Basins** at Meadowbrook, Harbor Brk, Hopper Brk
- **Save the Rain** – Reduced runoff to city streams; Reduced CSO events
- **Storm Sewer separations and improvements** to reduce flash flooding at city
- **FEMA CRS** – Floodplain Mgt/Outreach ⟶ 15% Flood insurance Discount

Recent Flood Studies:

- **Onondaga Creek Channel Improvement Rpt 2014**
  - Looked at Dredging, Channel Changes, Dam Modification
  - High Cost; Environmental impacts
- **Arsenal Park Study 2025** – Flood Storage on 40 acres near Dorwin Ave.
  - High Cost ($20 – $40 Million); Low Benefit to Cost ratio
  - Shows we need more and larger storage areas; reduce costs
- **Eastwood Stormsewer Studies** upcoming

More to Do:

- Utilize NY and federal grants for flood mitigation/open space pres.
- Hazard Mitigation Plan initiatives
- Improve outreach



THANK YOU!

For More Information:

City Floodplain Management Webpage:
syr.gov/floodplains

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COMMUNITY QUESTIONS - GROUP ENGAGEMENT

Working Session / Facilitated Discussion

What is your understanding of flooding and climate change?

Where is flooding happening around you today? How does it impact you?

What do you want to see occur in relation to flooding concerns? How can the Syracuse Community act forward?