ARCADIS

Onondaga County Department of WATER ENVIRONMENT PROTECTION

Save the Rain

Walton Street - CSO 029 Reduction & Conveyance Modifications Project

Community Meeting
September 29, 2021

J. Ryan McMahon, II
County Executive

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Agenda

1. Introductions
2. Save the Rain Program Overview
3. CSO 029 Project Overview
4. Construction Overview
5. Road and sidewalk closures
6. Parking Impacts
7. Open Discussion
8. Closing

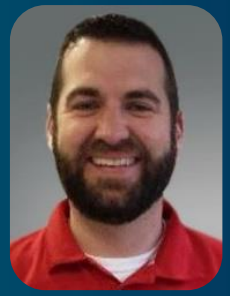
Introductions

Adam Woodburn, RLA

Program Coordinator,
Stormwater Management
Onondaga Department of
Water Environment Protection

Jed Walsh

Project Coordinator,
Save the Rain Program
Onondaga Department of
Water Environment Protection



Benjamin Tillotson, PE

Project Manager

Arcadis

Benjamin Taylor, EIT

Project Engineer

Arcadis

Program Overview

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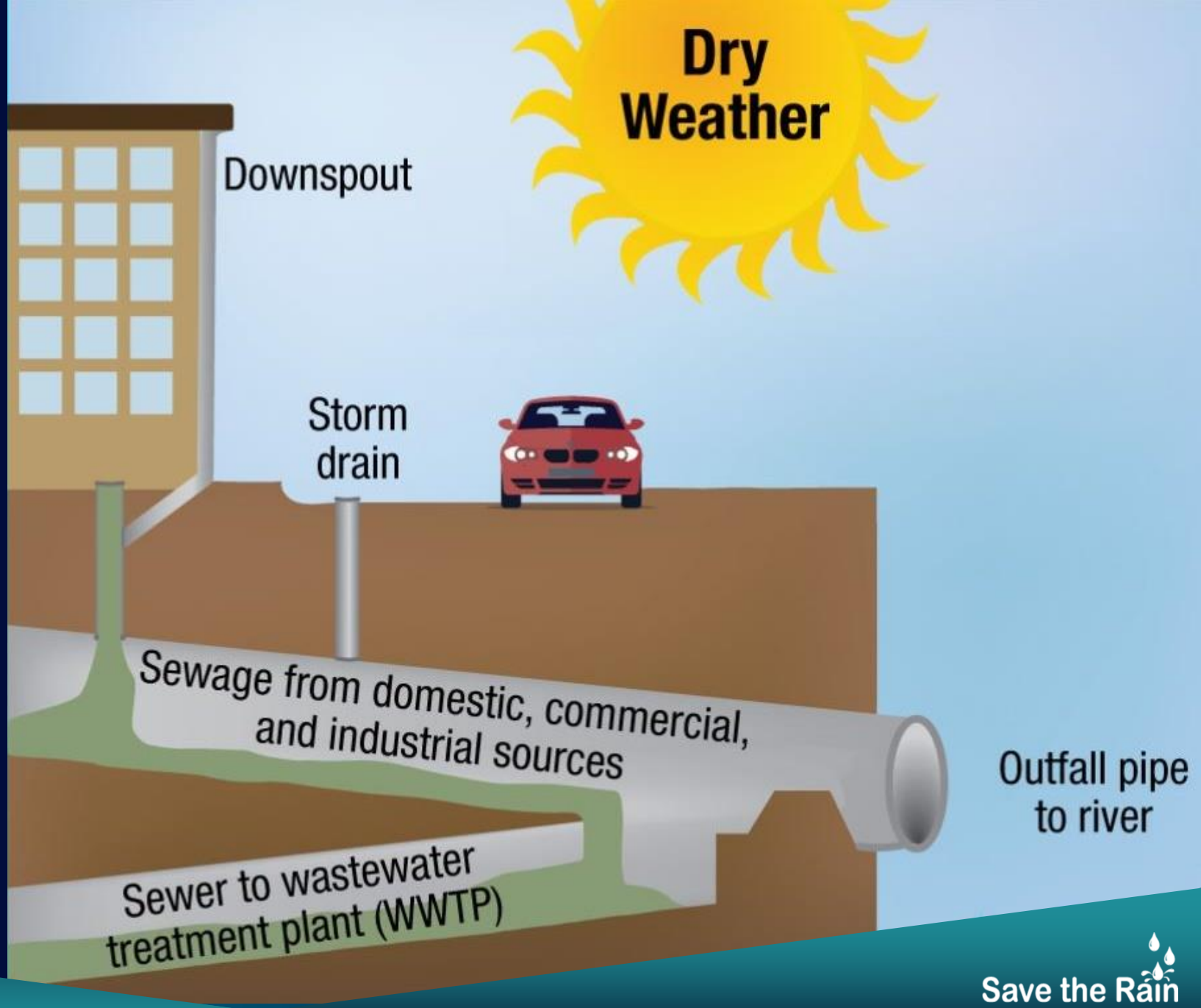
Combined Sewer System

- Infrastructure dates back to 1800s

Combined Sewer Overflows

- CSOs occur when stormwater enters the combined sewer system causing system overload. During these overloads, the system releases this excess flow into waterbodies.



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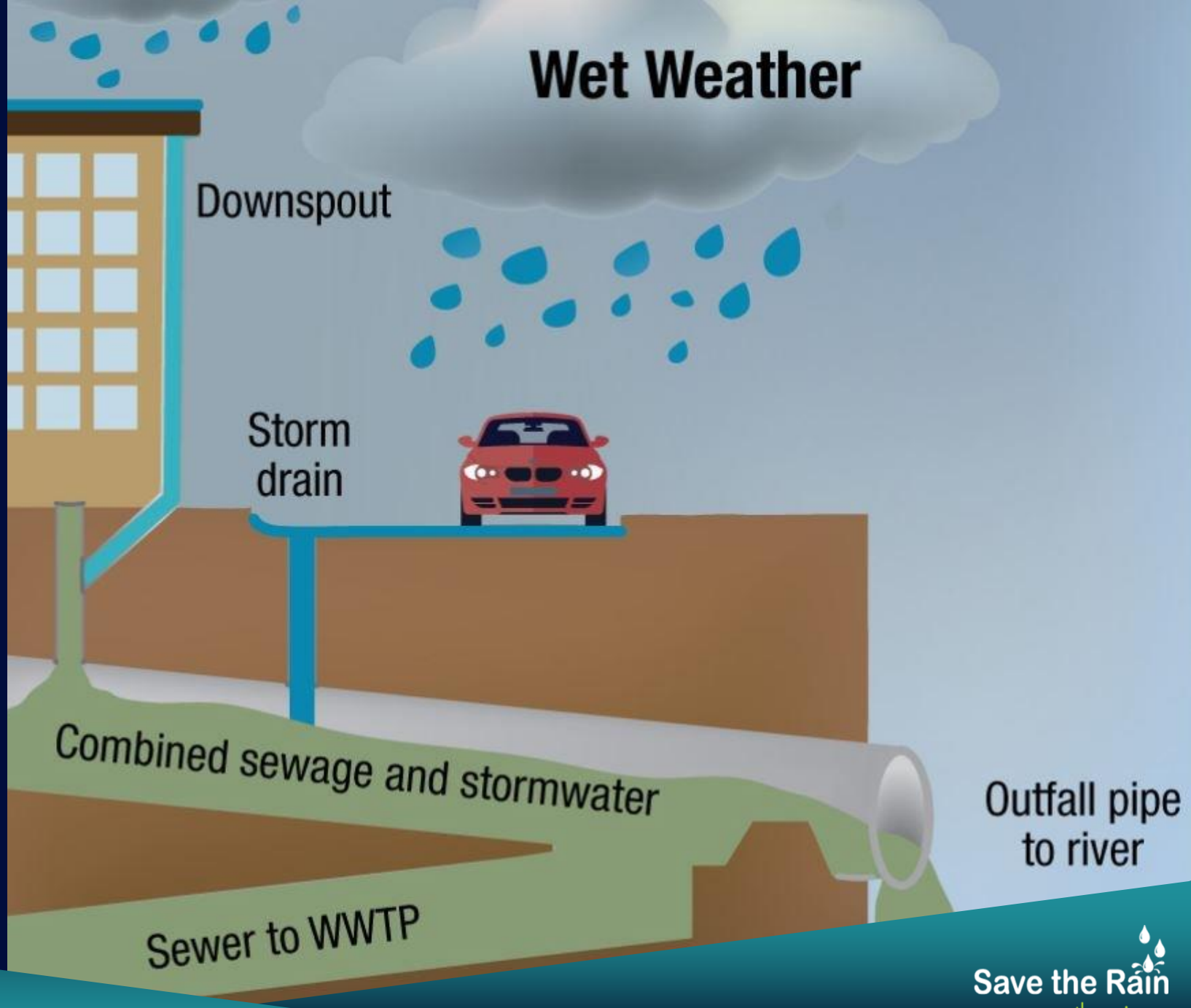

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Combined Sewer System

- CSOs Impact Onondaga Lake and Tributaries

GREEN

GRAY

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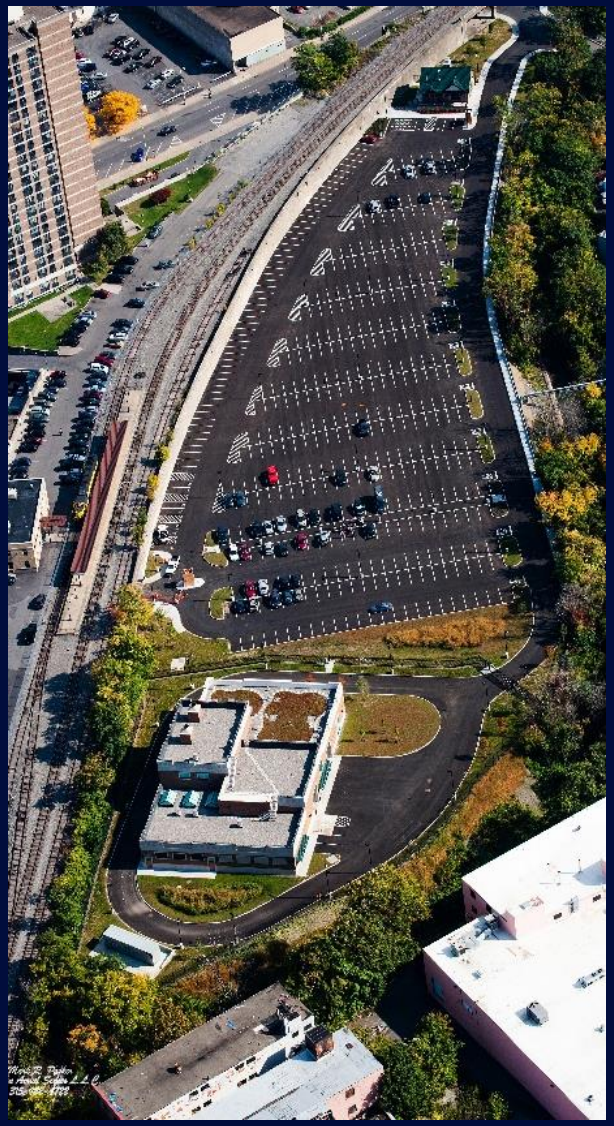
Gray Infrastructure

- Consists of modification of sewer and water treatment infrastructure (i.e. sewer reconfiguration, sewer separation, and storage facilities) to divert water away from CSO-prone areas.

Gray Infrastructure Accomplishments

$469 MILLION
SPENT ON GRAY

312 MILLION GAL
CAPTURED BY GRAY



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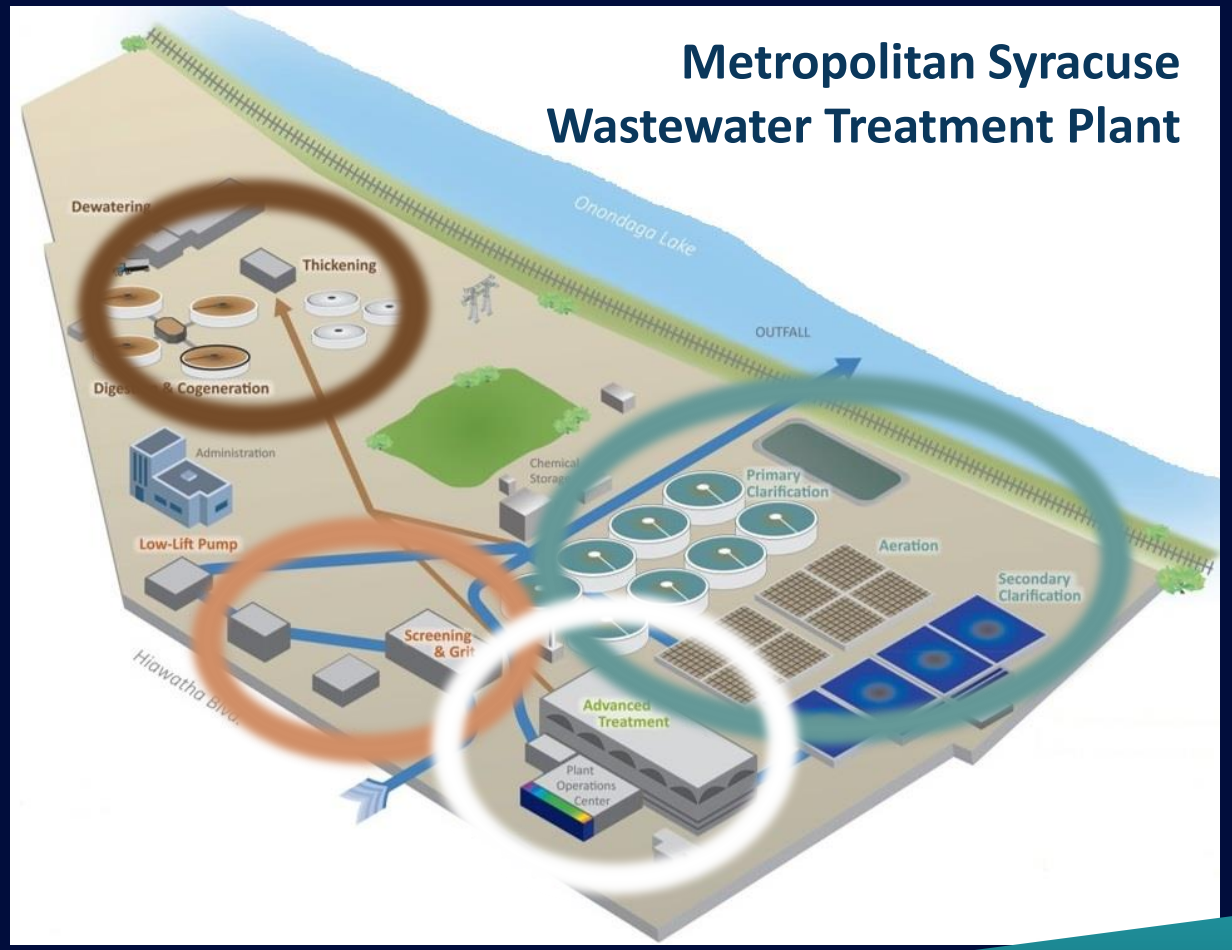
Gray Infrastructure Processes

STEP 1: Preliminary Treatment
- Screening & Grit Removal
- Low-lift Pump

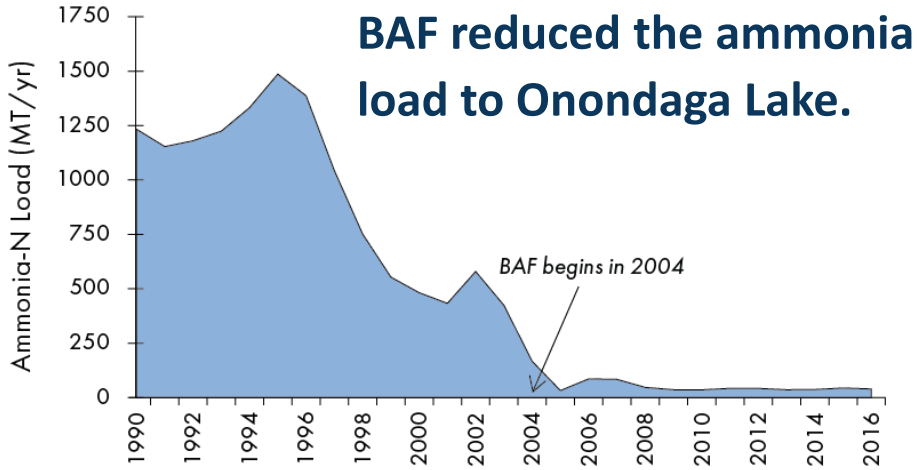
STEP 2: Primary & Secondary Treatment
- Primary Clarification
- Aeration
- Secondary Clarification

STEP 3: Advanced Treatment
- Biological Aerated Filtration
- High-Rate Flocculated Settling
- Ultraviolet Disinfection

Solids Treatment & Disposal
- Thickening
- Anaerobic Digestion
- Energy Recovery



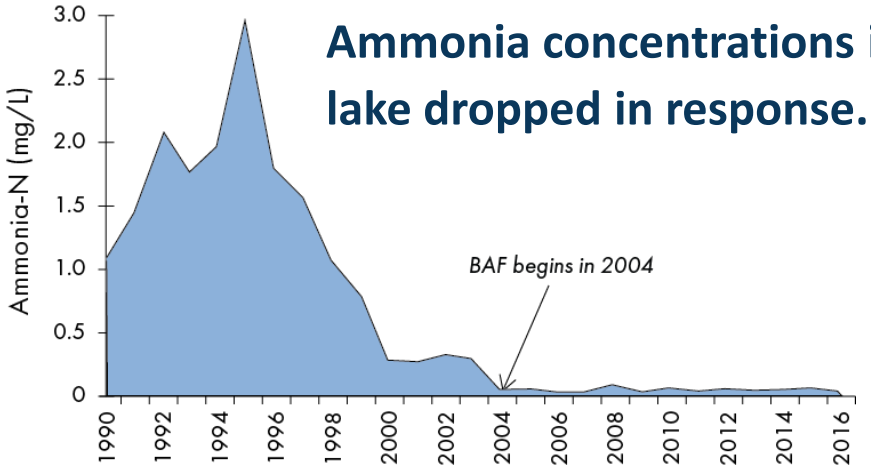
METRO



BAF reduced the ammonia load to Onondaga Lake.

AMMONIA

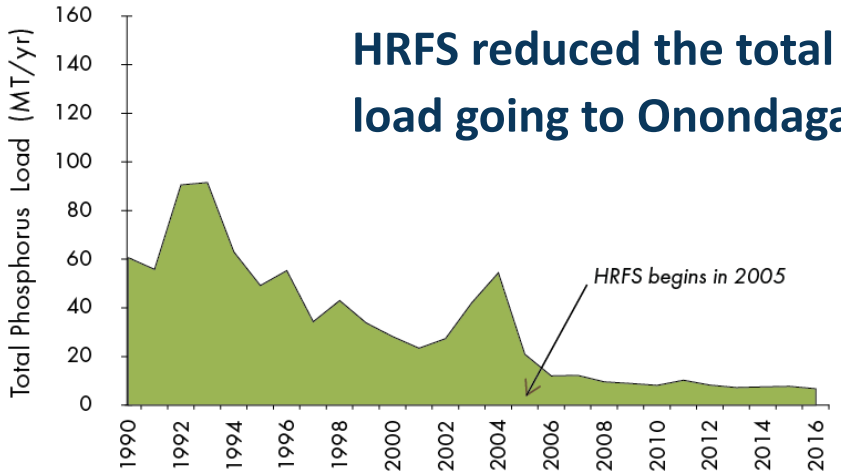
ONONDAGA LAKE



Ammonia concentrations in the lake dropped in response.

***Summer avg., upper waters**

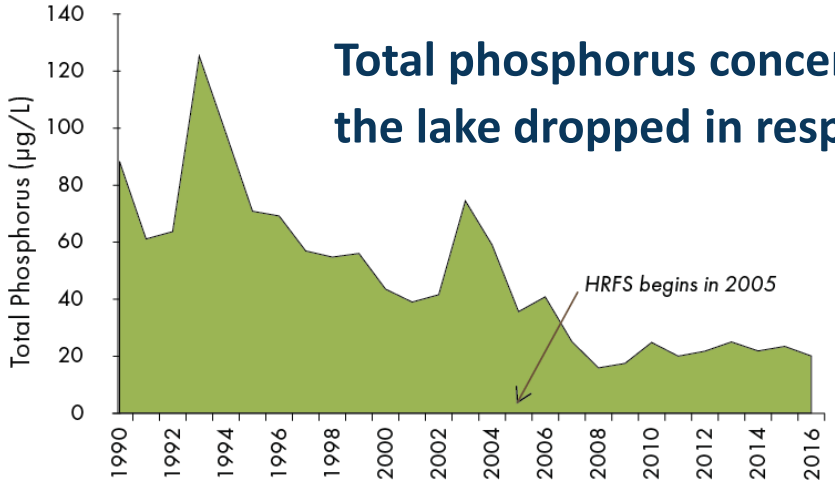
METRO



HRFS reduced the total phosphorus load going to Onondaga Lake.

TOTAL PHOSPHORUS

ONONDAGA LAKE



Total phosphorus concentrations in the lake dropped in response.

***Summer avg., upper waters**

Green Infrastructure

- Consists of bioretention areas, porous pavers/pavement, rain gardens, rain barrels/rainwater trenches and green roofs. These practices typically capture stormwater and infiltrate it back into the soil before it can enter the combined sewer system.

Green Infrastructure Accomplishments

$ 83 MILLION
SPENT ON GREEN

157 MILLION GAL
CAPTURED BY GREEN

225 PROJECTS
COMPLETED

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Project Overview

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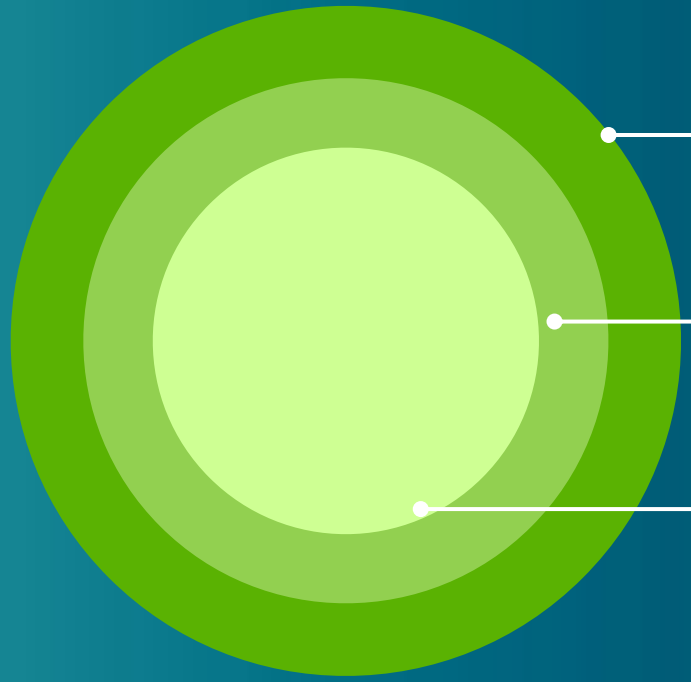
Project Goals



- Reduce combined sewer overflow entering Onondaga Creek
- Improve water quality in Onondaga Lake
- Improve quality of life and business in Downtown Syracuse

Project Timeline

Project Timeline

September 2021

Stakeholder Meetings

- Technical & Emergency Services
- Businesses
- Public

100% Design

October 2021

November 2021

Bidding

Construction

April 2022

August 2022

Substantial Completion

Project Scope Adjustment & Value Engineering

2019-2020

Original Alternative

New regulator structure at Franklin St. & Walton St. Bridge

Spring 2021

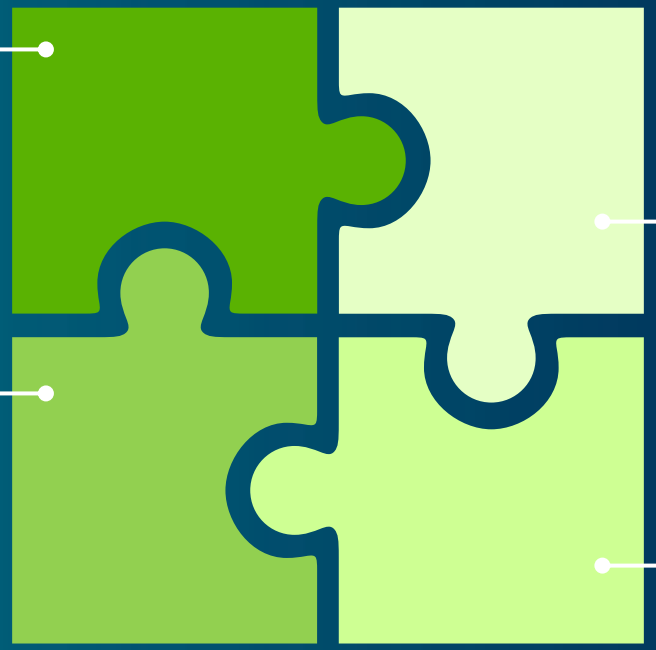
New Alternative

Calibrated model (Jacobs) shows comparable CSO overflow volume reduction as previous alternative

New regulator structure only at Walton St. Bridge

Major Project Elements

Replace regulator structure near Walton Street bridge



Raise and widen weir within regulator structure

Replace adjacent piping and manhole

Sidewalk, ADA ramp, & asphalt improvements

Figures

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Overall Site

- Work on Walton Street in downtown Syracuse

KEY

- Construction area boundary
- Temporary construction fenceline
- Security guard post

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New Regulator Structure

- 10-ft diameter
- Completely underground
- New piping to and from new regulator structure
- Also replacing nearby manhole “MH-2”

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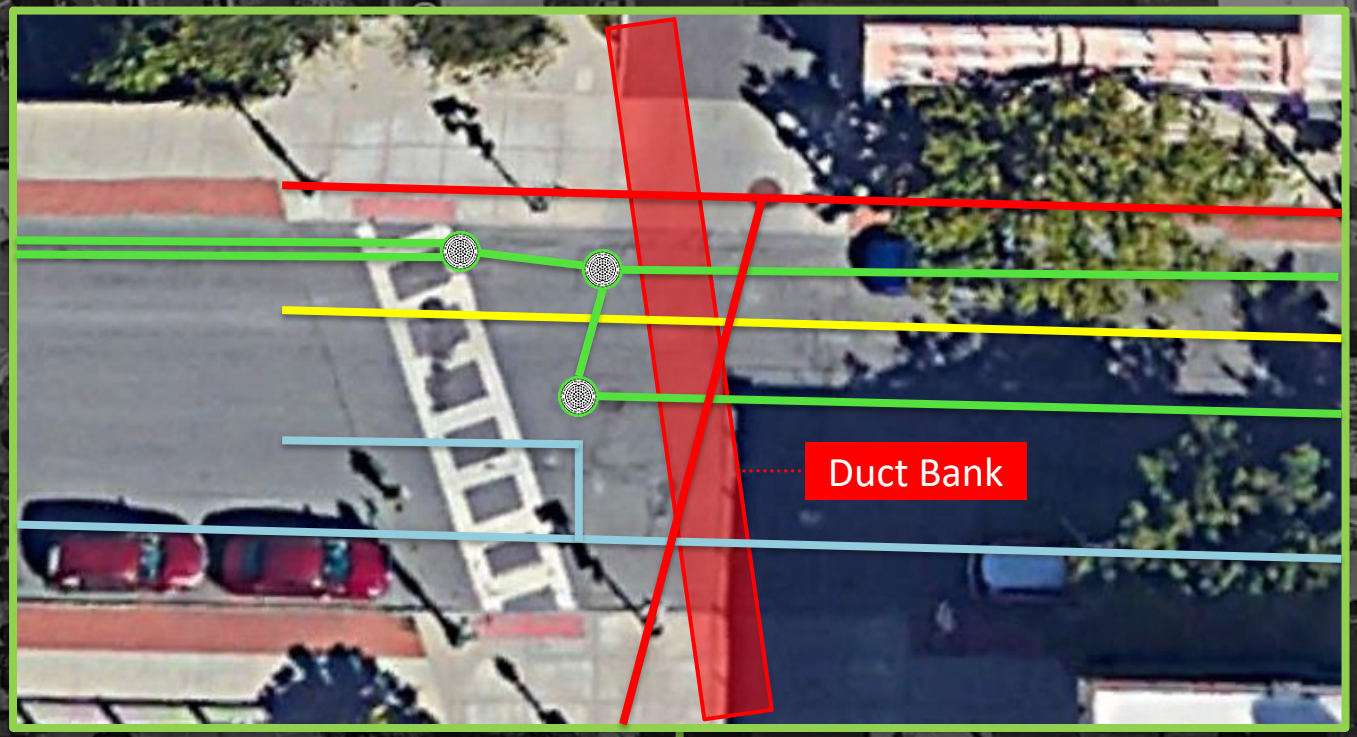
Utilities

- National Grid duct bank
- National Grid gas line
- City of Syracuse water line

KEY

- Electric
- Comb Sewer
- Water
- Gas



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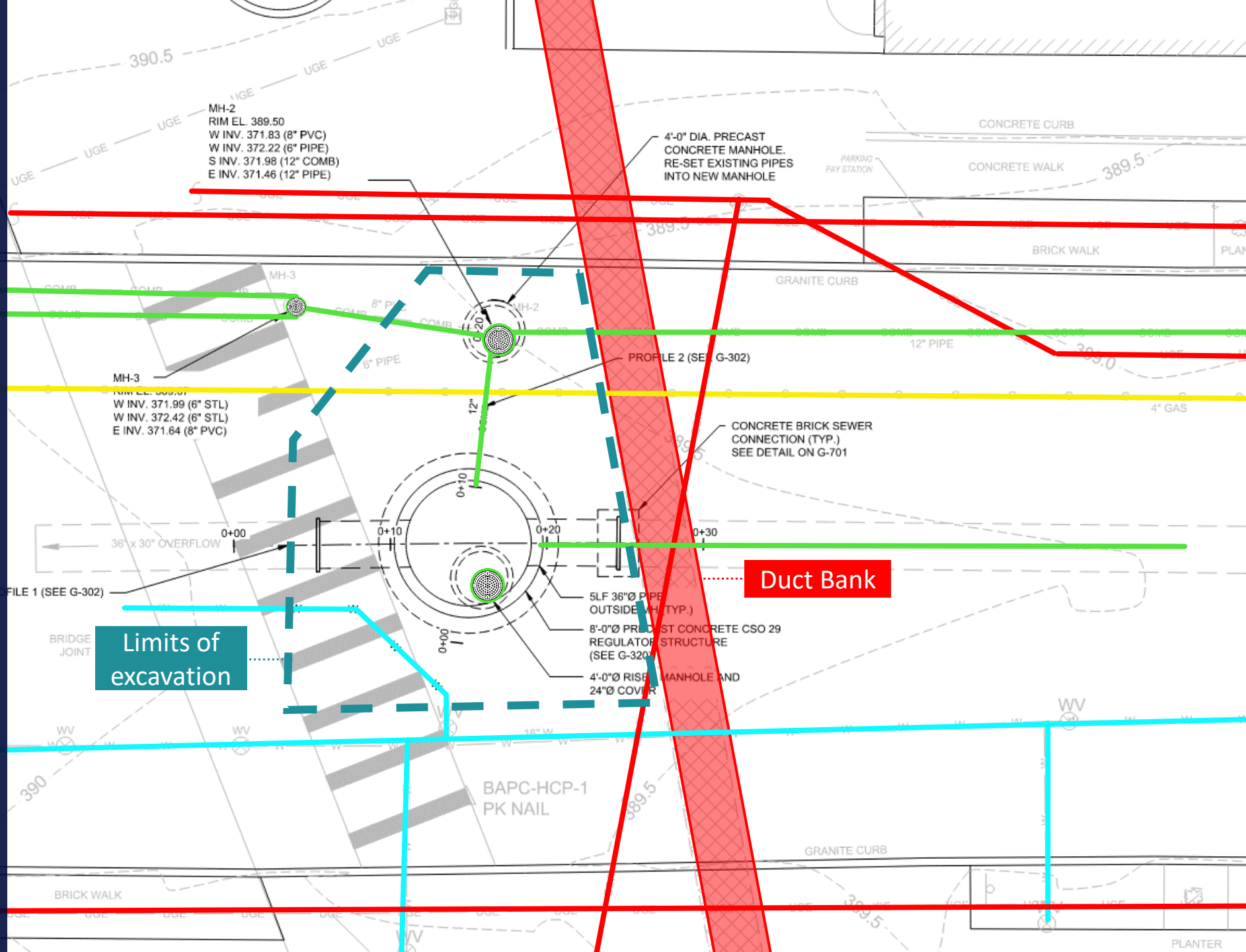


Construction Sequence

4 WEEKS

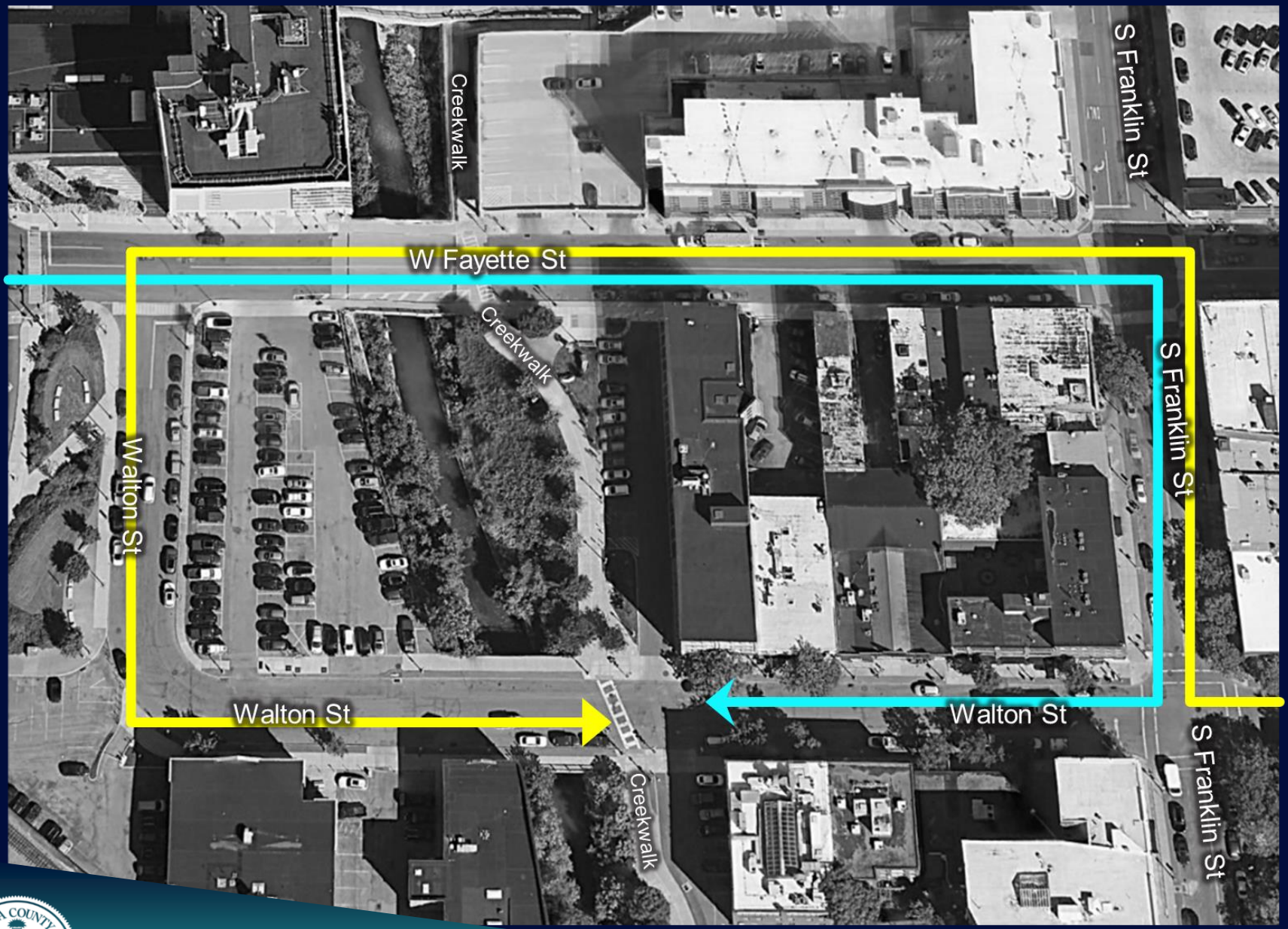
- Excavation Protection (Sheeting)
- Bypass Pumping Setup
- Water Line Blowoff Relocation

8 WEEKS

- Manhole Demolition
- Helical pile installation
- Manhole and piping install

5 WEEKS

- Backfill and compaction
- Sidewalk, ADA Ramp, and asphalt restoration



Full Road Closures

- Anticipated 4 months of closure of the Walton St. Bridge Area
- Detour signs along W Fayette, S Franklin, Walton

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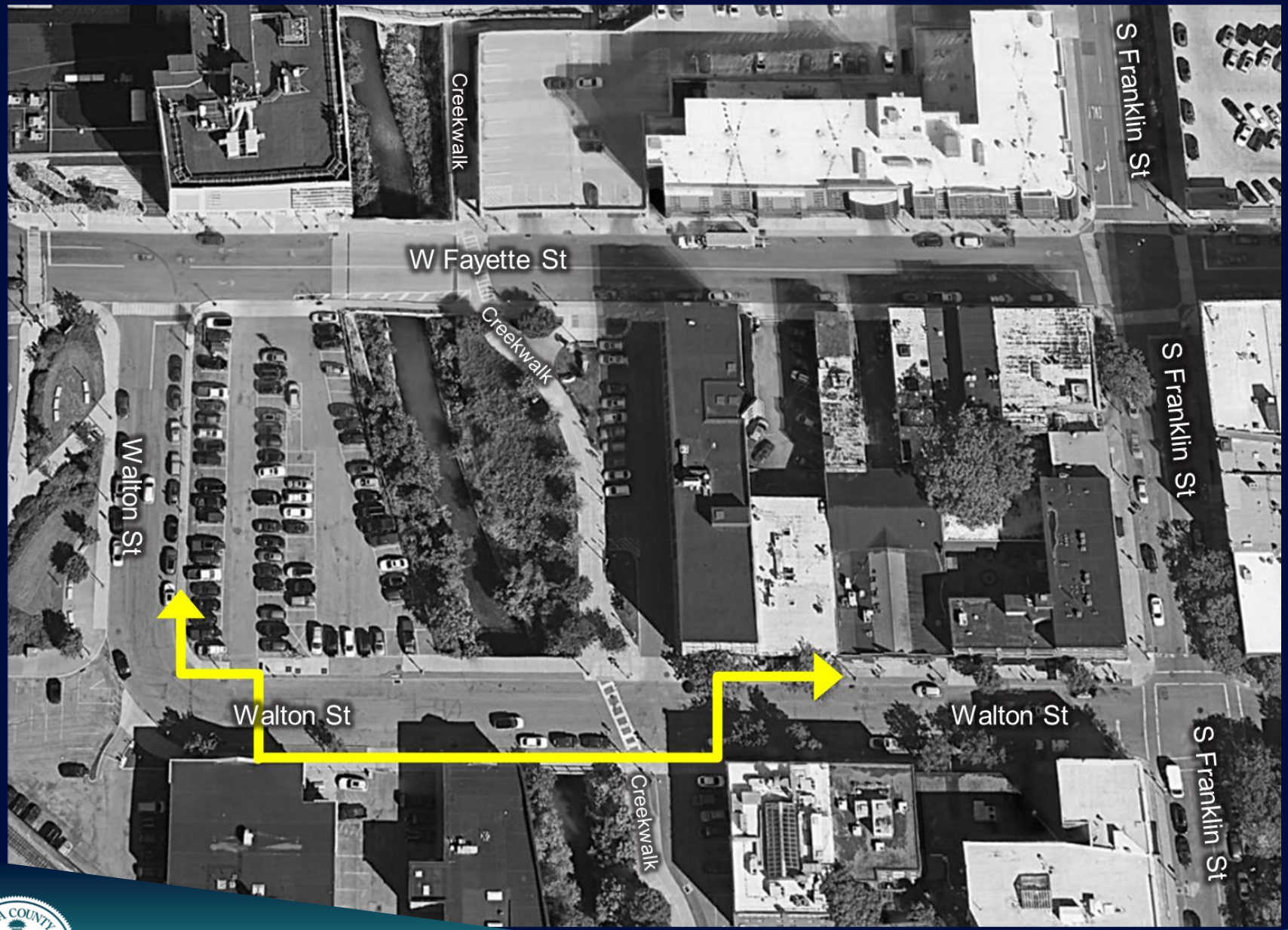
Creekwalk Closure

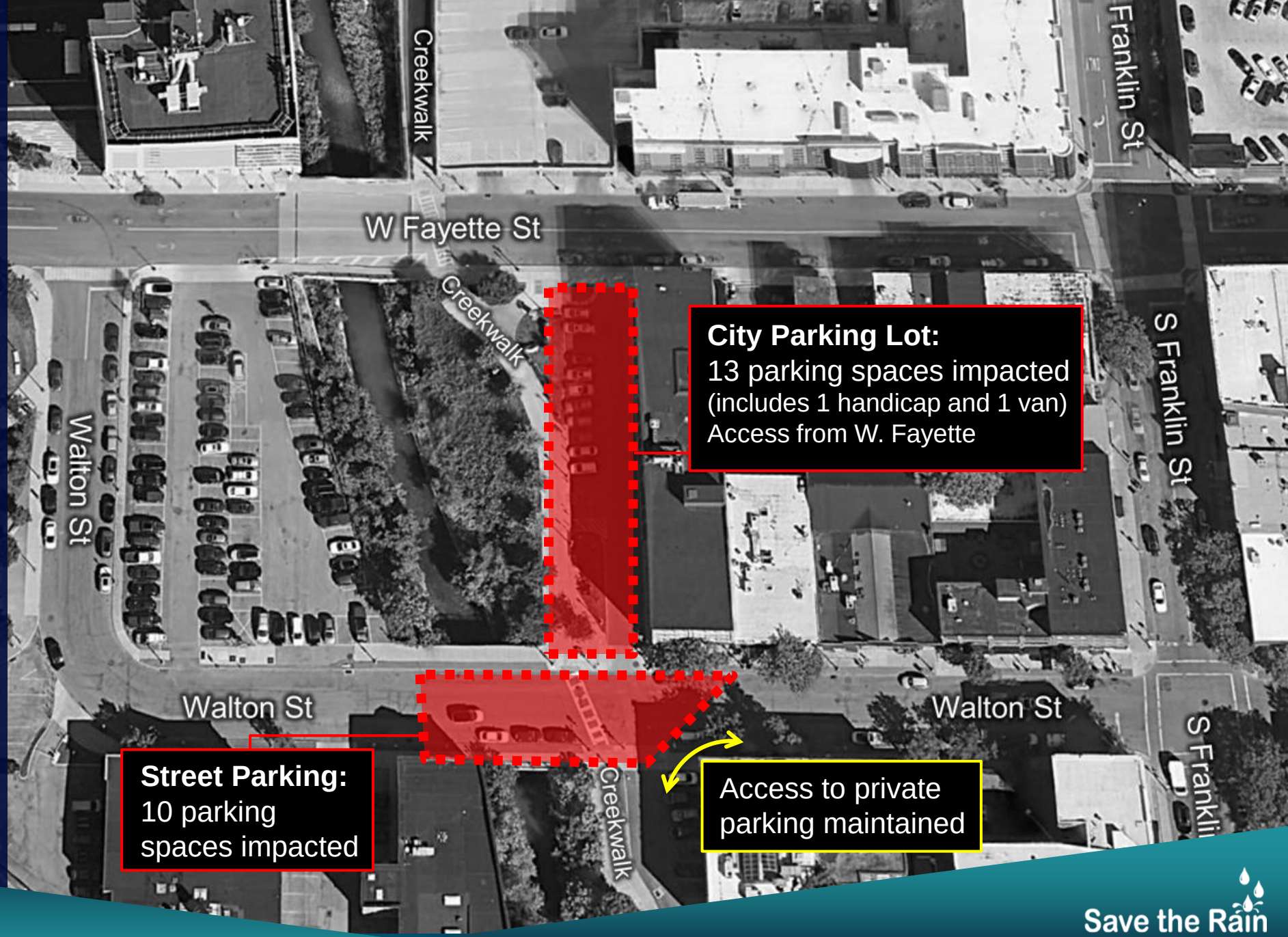
- Pedestrian/Bike signs posted on Creekwalk to divert traffic to the west



Sidewalk Closures

- Pedestrian signs posted on sidewalks to divert traffic to the south of Walton St.

Parking Impacts (During full closure)



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Open Discussion

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FOLLOW SAVE THE RAIN

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Save the Rain Program

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