



Sewer System Improvement Program

May 16, 2017

*Photo of
Lake Erie*



Overview

Background – Lou McMahon

**Cleveland Heights Sewer Collection System Summary
– Kevin VanderTuig**

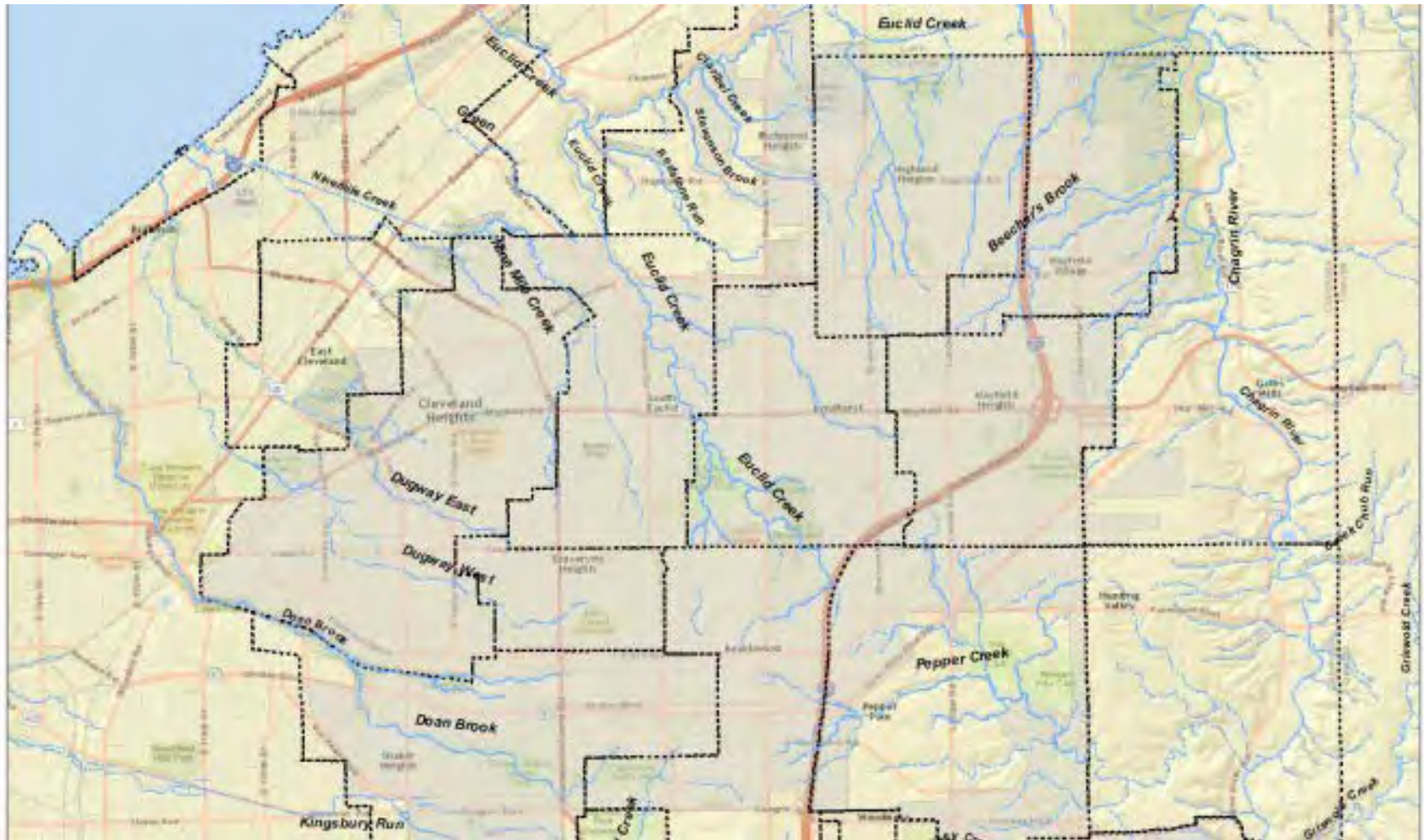
Statement from USEPA – Jim Vinch & Tom Benson

Recap & Moving Forward-Tanisha Briley

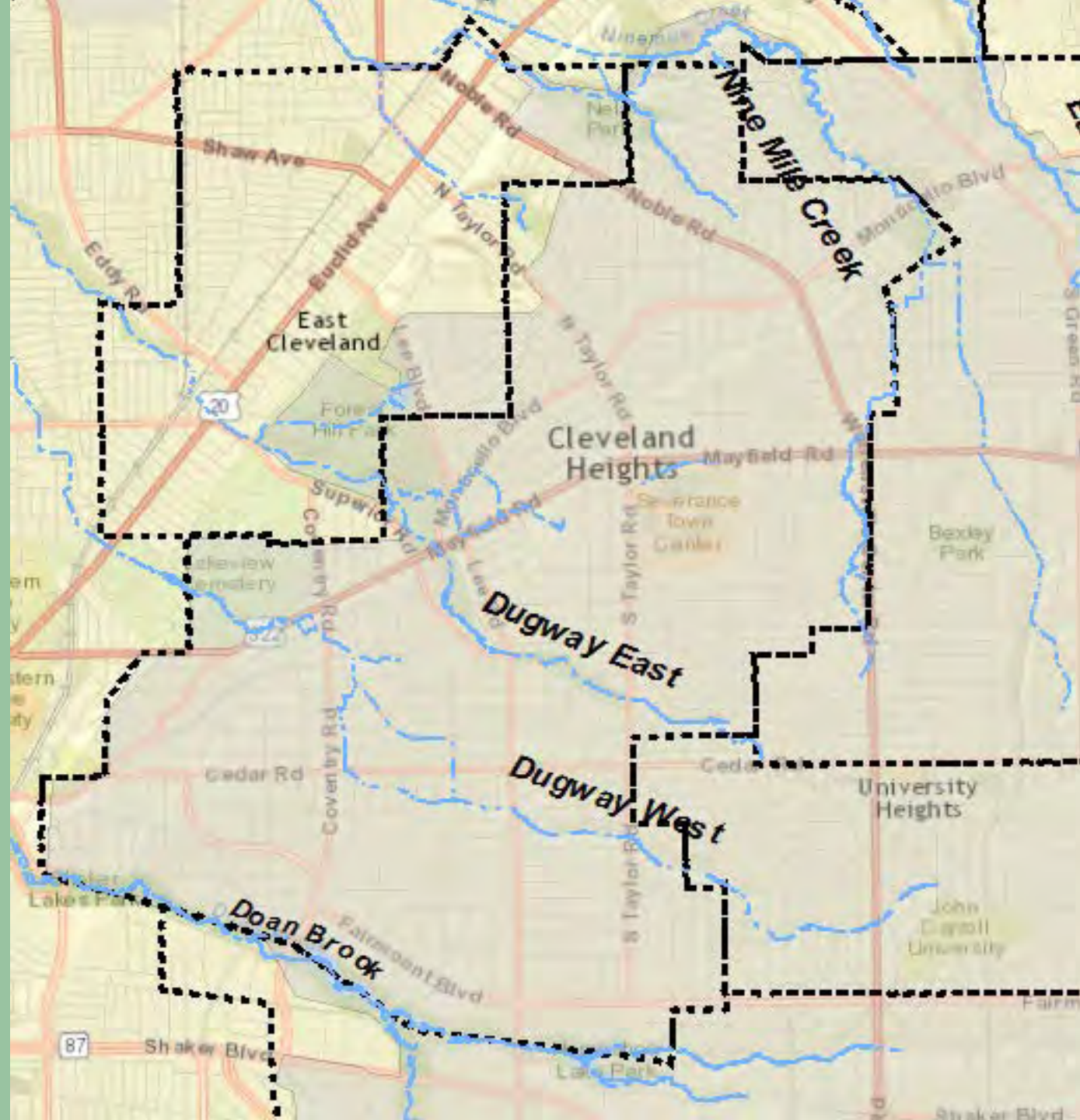
Q & A - Panel



Lake Erie Tributaries in Cleveland Heights



Lake Erie Tributaries in Cleveland Heights



Lake Erie from Garfield Memorial





The Case for Updating the System

Early 20th Century Sewer System still being fully investigated

- Unique design approaches
- Acceptable but non–standard construction practices
- Aging affects performance

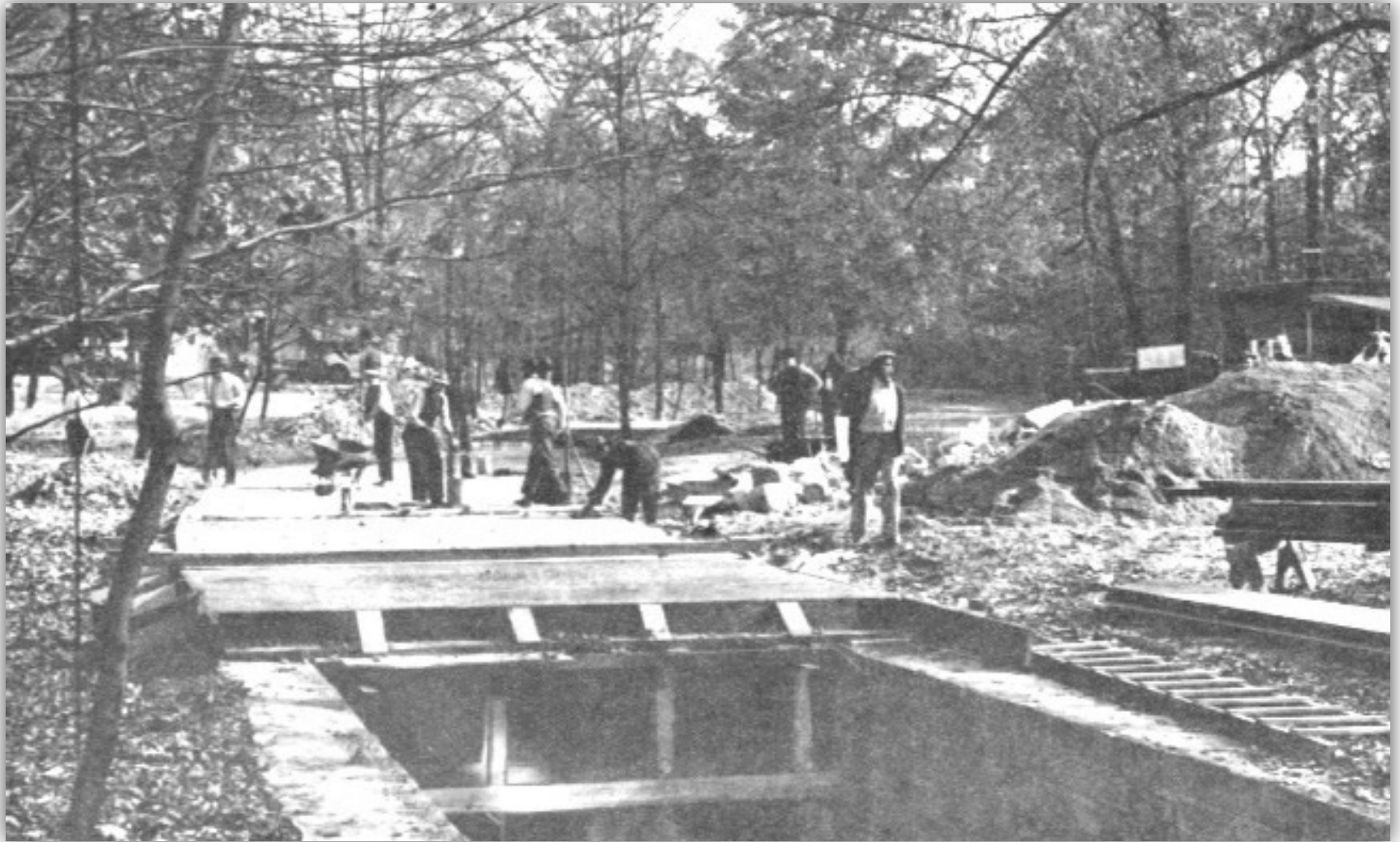
The Cleveland Heights System is a unique combination of sewer types, not amenable to standard solutions to meet modern requirements

North Park Blvd. c. 1900



Cleveland Heights Historical Society

Cain Park WPA Project, 1930s



Cleveland Heights Historical Society

Cain Park Today





Clean Water Act and Enforcement

1972 Federal Water Pollution Control Act (Clean Water Act/ CWA)

CWA requires that systems like the Cleveland Heights sanitary collection system must operate without the overflows that currently occur in wet weather.

Additional scrutiny to protect Lake Erie

- **In 2012, the United States and Canada signed a binational agreement to cut phosphorus discharges into Lake Erie by 40%- Great Lakes Water Quality Agreement.**



Enforcement

[Enforcement Home](#)

[Enforcement Basics](#)

[National Enforcement Initiatives](#)

[Air Enforcement](#)

[Water Enforcement](#)

[Waste, Chemical and Cleanup Enforcement](#)

[Criminal Enforcement](#)

[Enforcement at Federal Facilities](#)

[Data and Results](#)

[Policy, Guidance and Publications](#)

National Enforcement Initiative: Keeping Raw Sewage and Contaminated Stormwater Out of Our Nation's Waters

Problem

Raw sewage overflows and inadequately controlled stormwater discharges from municipal sewer systems introduce a variety of harmful pollutants, including disease causing organisms, metals and nutrients that threaten our communities' water quality and can contribute to disease outbreaks, beach and shellfish bed closings, flooding, stream scouring, fishing advisories and basement backups of sewage.

EPA is taking enforcement action at municipal sewer systems with Clean Water Act violations to reduce pollution and volume of stormwater runoff and to reduce unlawful discharges of raw sewage that degrade water quality in communities.



Boom captures litter and other debris carried by stormwater.

Fast Fact

Green infrastructure helps reduce the water quality impacts of stormwater runoff.

Sanitary Sewer Systems with flow greater than 10million gallons/day





Consent Decree Negotiations

Key elements included:

- Updating early 20th century sewers
- Seeking custom approach to maximize effectiveness, efficiencies and rate impact
- Protect Lake Erie and watershed
- Comply with Clean Water Act of 1972



Proposed Consent Decree

Consent Decree: a judicially enforceable agreement without admission or finding of liability that provides agreed path to regulatory compliance

Proposed Consent Decree

- Many standard provisions
- Uncommon “phased” approach

Phase 1 (2017-2021)

- Optimizing current system performance
- Continue full investigation of collection system
- Analyze alternatives for improvements
- Develop schedule for overflow control

Phase 2 (2021 and beyond)

- Continue management, operations and maintenance activities
- Implement overflow control plan





Taking Advantage of NEORSD's Investments

Identify CWA problems

- SSOs, basement flooding
- Common trench sewer cross flows
- Failing septic tanks and illicit discharges

Determine cost-effective capital, maintenance and policy recommendations

Prioritize capital projects

Share information



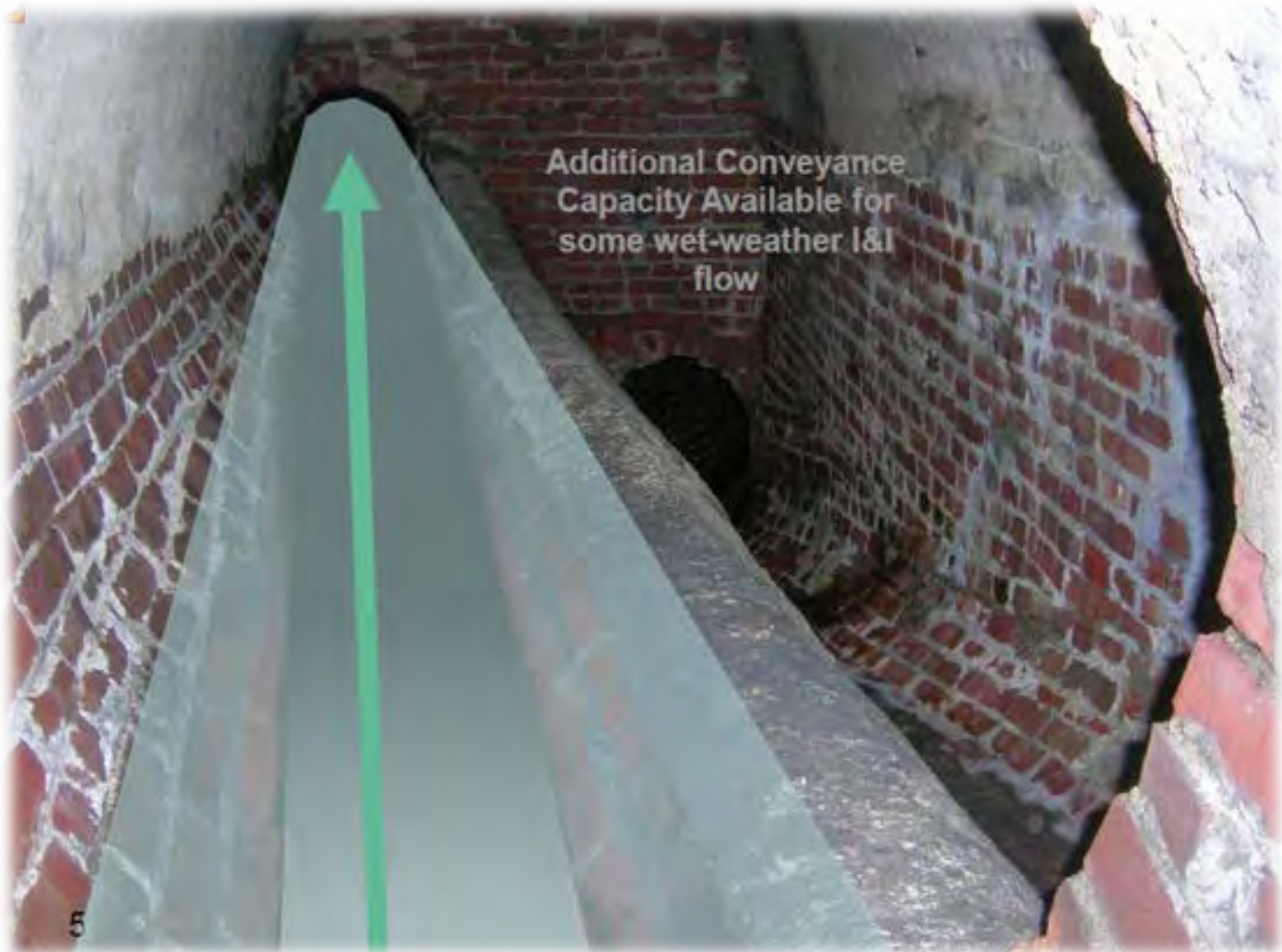
CWA Issues

Sanitary Sewer Overflow (SSO) Structures



CWA Issues

Sanitary Sewer Overflow (SSO) Structures



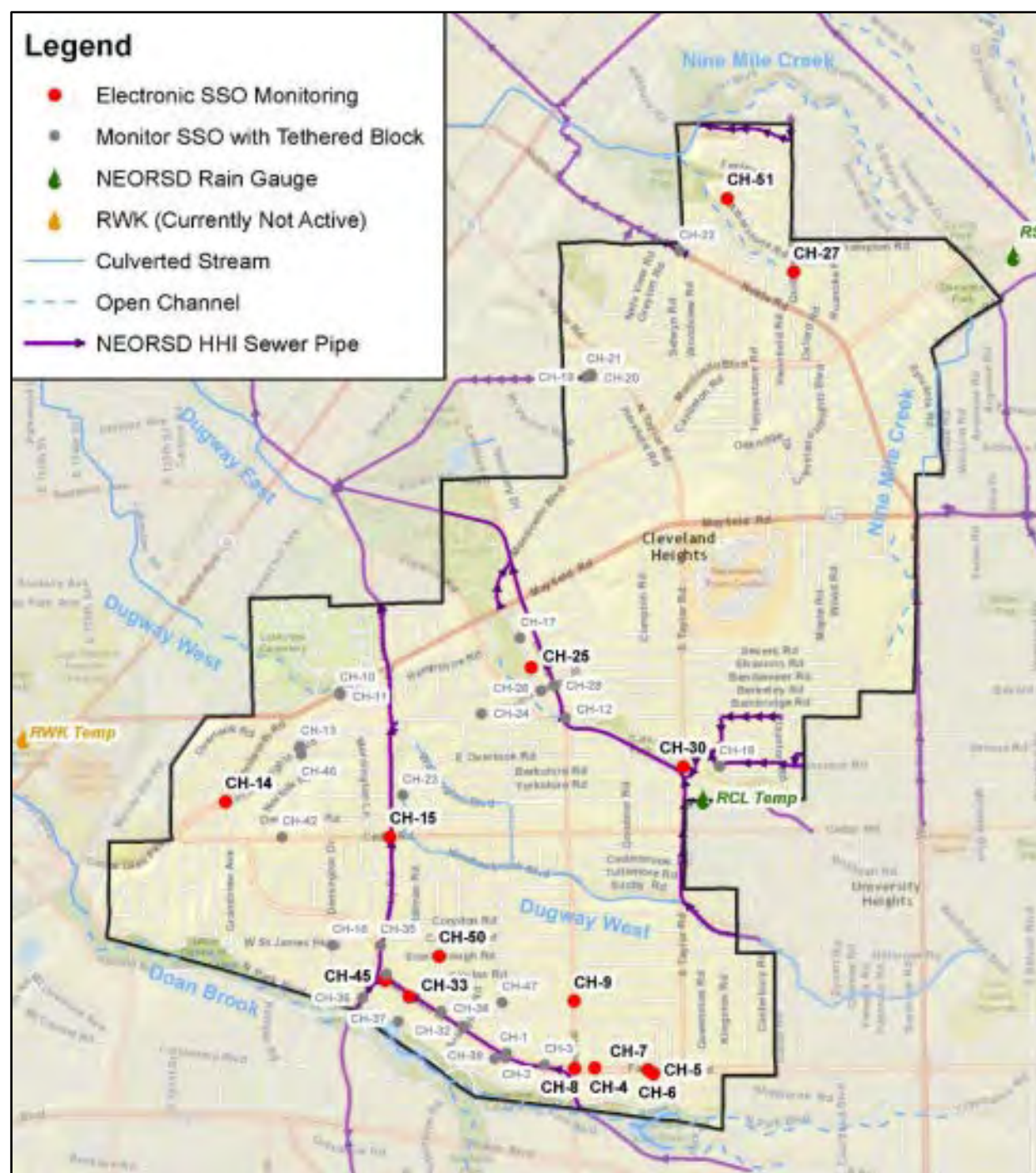
CWA Issues

Sanitary Sewer Overflow (SSO) Structures



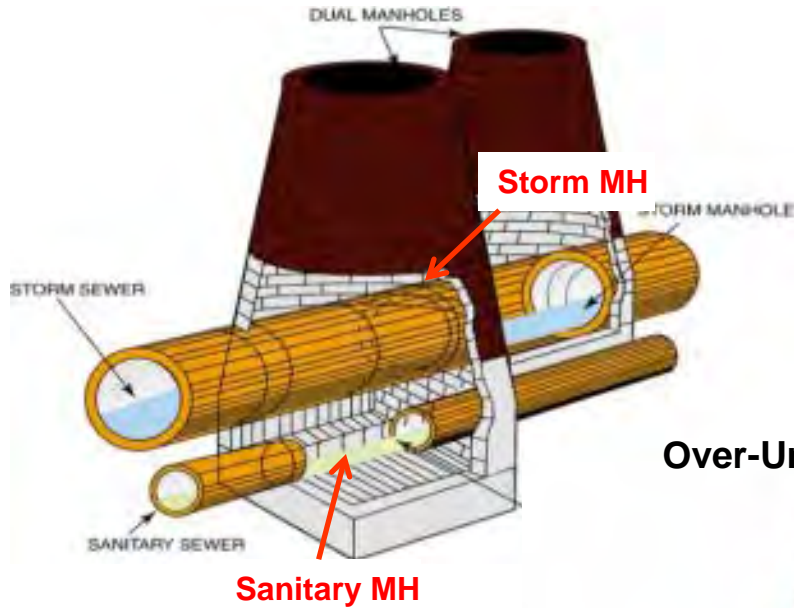
Known SSO Locations

- NEORSD HHI System (84-05) improved local system performance
- Many SSOs are Rarely Active

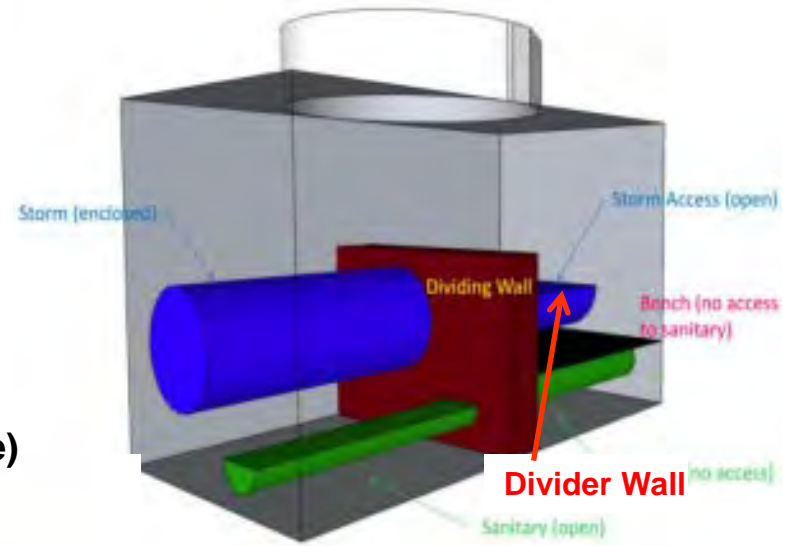


Cleveland Heights system has a variety of Trench Sewer Designs

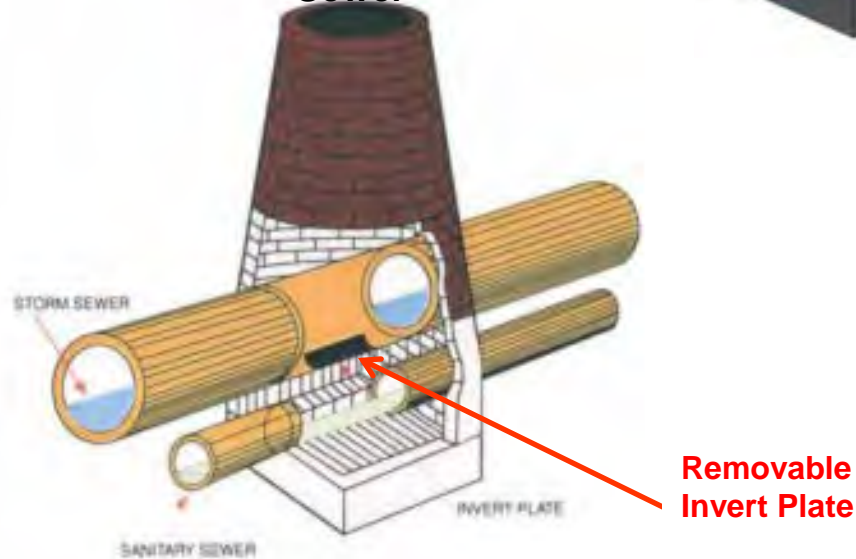
Dual Manhole Sewers



Dividing Wall Manhole



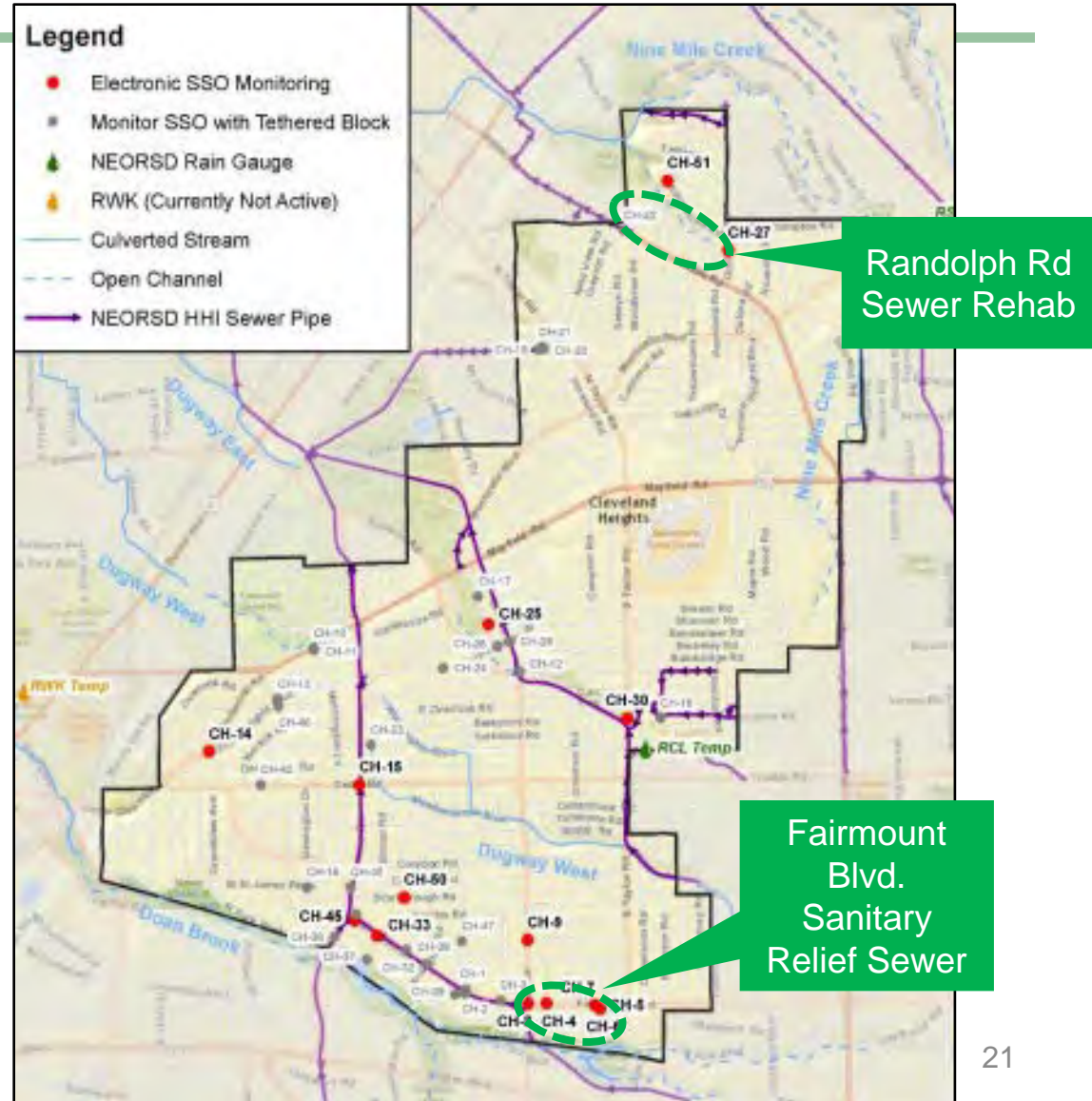
Over-Under (Invert Plate) Sewer





Early Action Projects Completed Fall 2016

- Randolph Road – sewer system rehabilitation to improve performance
- Fairmount Blvd. Sanitary Relief Sewer – new sewer to control SSOs





Solving the Problem

Optimize current system performance:

- **Management**
 - Information systems, training
- **Operations**
 - Overflow response, condition assessment, and inspections
- **Maintenance**
 - Regular cleaning, televising, and repair



Solving the Problem

Determine existing system connectivity, performance and problems

Develop feasible solution alternatives

- Compare costs and benefits

Develop Overflow Control Master Plan

- Recommend cost-effective improvements
- Determine feasible implementation schedule

Implement Master Plan over time



Proposed Consent Decree Phase 1 Timeline

Activities	Purpose	Schedule
Early Action Projects	Start solving problems	Completed fall 2016
Capacity, Management Operation and Maintenance Program (CMOM)	Enhance system performance	Starting 2017
Flow/rainfall monitoring and system model, capacity assessment	Define problems to be solved	2017 – March 2020
Sewer System Evaluation Survey (SSES)	Define existing system	2018 – June 2021
Alternatives analysis	Compare solutions, costs & benefits	March 2020 – June 2021
Integrated Overflow Control Master Plan	Document proposed work, cost & schedule	

Statement from USEPA Officials



Recap and Looking Forward

The City is committed to resolving the aging system's SSO problem

Early action steps have already been completed

Phase 1 – Define system problems and develop a master plan

Phase 2 – Negotiated with EPA based on Phase 1 recommendations

The CD will fit into Cleveland Heights' progress

- Consistent with capital planning
- Will integrate with city master planning
- Through planned efforts, expect to maximize
 - Efficiencies from City projects
 - Leverage stormwater improvements in large private redevelopments
 - Prioritize capital spending for most environmental improvement
 - Improve system performance and community resiliency
 - Protect our freshwater resources



Recap and looking forward

Cost

- Phase 1—\$12 million will be funded by adjusting current sewer fees
- Based on usage
 - i.e. smaller homes and seniors will pay less because they use less
 - The average Cleveland Heights resident will see an increase of \$18.73 on their sewer bill
- Rates will go into effect in October with first bills arriving in January 2018

Payment assistance program

- The city understands that this is a significant increase and not everyone has the capacity to pay an extra sewer fee.
- Prior to the rates being implemented, we will introduce a needs-based payment assistance program to help the most vulnerable in our community



Next Steps

- **City Council Action**
 - **First reading for Consent Decree and rate increase 6/5/17**
 - **Second readings expected 6/19**
- **Consent Decree execution by all parties**
- **Federal Judge Review**
 - **30-day Public Comment Period**



Follow Up Information

To get more information:

- This presentation, fact sheet and other materials will be posted on our website:
 - www.ClevelandHeights.com
- We will be making future announcements on progress and the payment assistance program in public meetings, through the media and online as they become available.