



# ALCOSAN & The Clean Water Plan

*Just Where DOES It Go When You Flush?*

# Today's Agenda

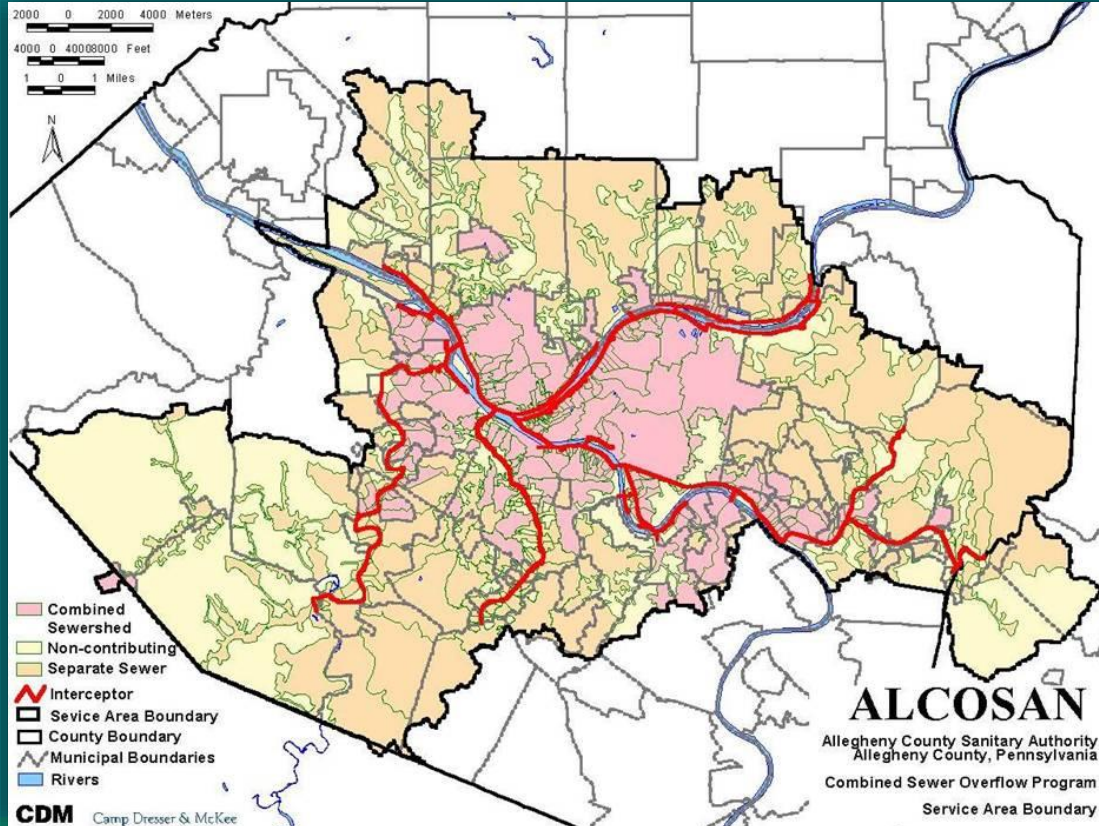
- Who is ALCOSAN and why are we important?
- Clean Water Plan
  - Wastewater Treatment Plant expansion
  - Regionalization
  - GROW/Source Control
  - Regional Tunnel System
  - Q&A

# Allegheny County Sanitary Authority (ALCOSAN)



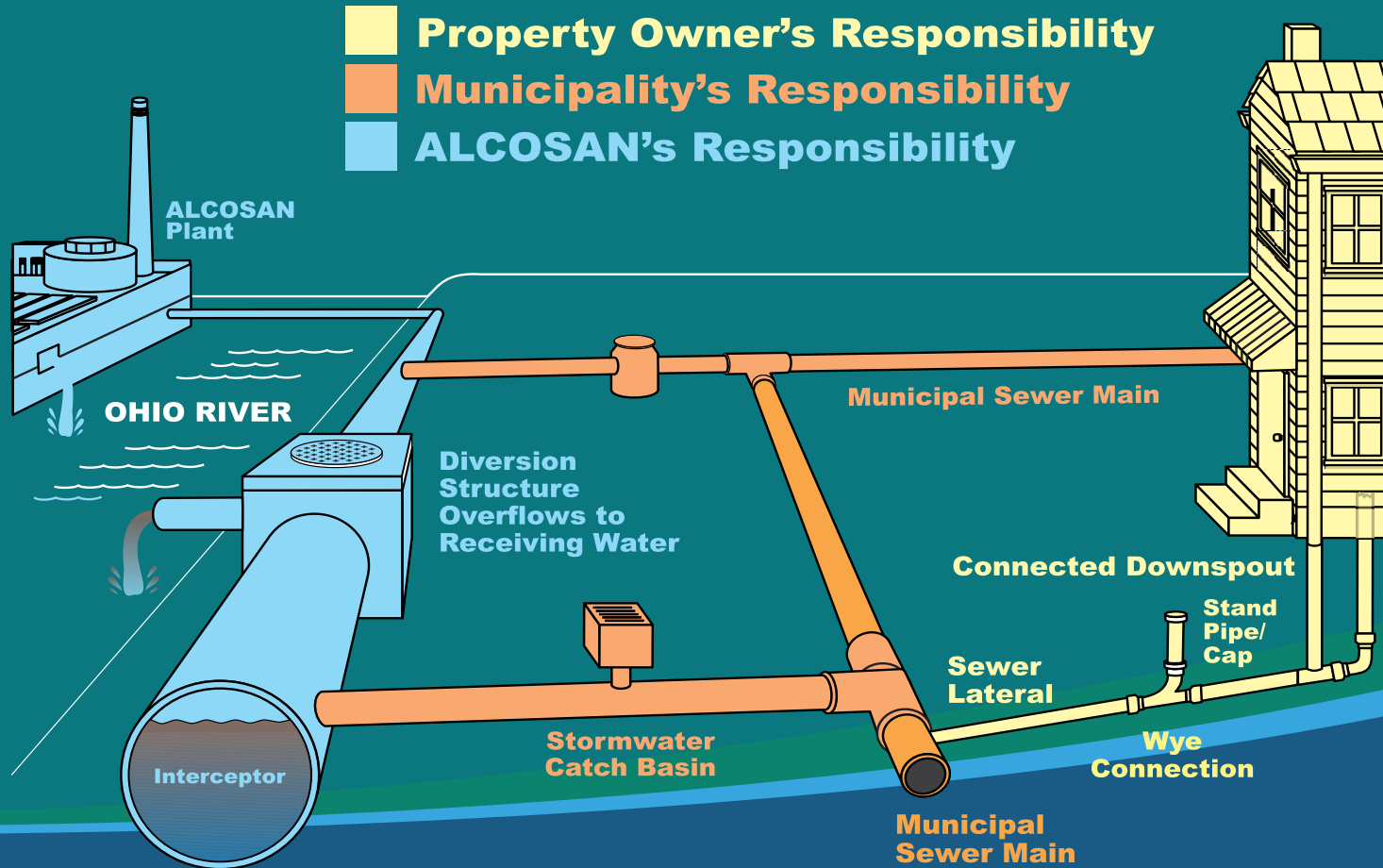
- ALCOSAN provides wastewater treatment services to 83 communities in Allegheny County, including the City of Pittsburgh
- 59-acre wastewater treatment plant – 250 million gallons per day treatment capacity
- Operates 24 hours/day, 365 days/year
- Funded completely by ratepayers

# ALCOSAN Service Area



- Although only 20% of the service area have combined sewer systems, the area is populated by 50% of the customer base
- ALCOSAN owns ONLY 90 miles of interceptors; the rest is municipal/authority owned

# Sewer Systems Today: A Shared Responsibility







# The Problem...

During rainstorms or snow melts, stormwater overwhelms the system and diluted, untreated wastewater spills into rivers and streams.

- As little as 1/10" of rain can cause overflows.
- Nine billion gallons per year overflow from the system.

# ALCOSAN'S CLEAN WATER PLAN

- Approved in 2020
- First phase projects must be completed by the end of 2036
- Involves \$2 billion\* in investment
- Reduce overflows for improved water quality
- Other benefits to region include jobs

\* 2010 dollars.



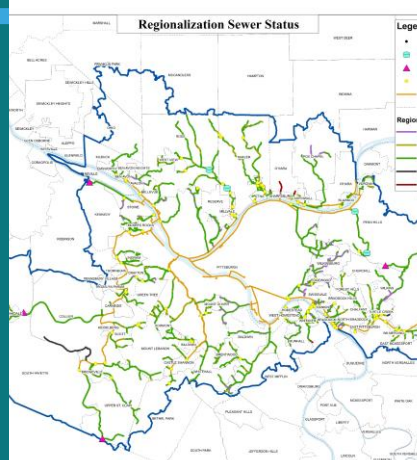
# The CWP includes 4 components

## Plant Expansion



Started  
construction

## Regionalization



75% of  
repairs complete or  
under construction

## GROW/Source Control



Grants offered  
to 136 projects in  
2016 - 2021

## Regional Tunnel System



Finalizing planning;  
moving into design



# Wastewater Treatment Plant Expansion



# Wastewater Treatment Plant Expansion



Upgrades throughout the plant, once completed, will allow ALCOSAN to:

- Provide 600 million gallons a day (MGD) of primary treatment (storms)
- Provide 295 MGD of secondary treatment
- East Headworks
- New Electrical
- New Lab
- Parking Garage
- North End

# Regionalization

Working with our municipal customers to assume ownership and maintenance of multi-municipal sewer lines 10 inches or larger in diameter.



**265** Miles of sewer

**8** Wet weather control facilities

**6,200** Manholes

**77** Diversion structures

Numerous municipal customers are in the process of transferring



# GROW/Source Control Statistics



- 6 cycles
- Potentially more than 200 million gallons of overflow reduction
- Excess of \$60 million in grants
- Approximately 140 active projects
- 51 completed projects
- *Currently reviewing Cycle 7 applications*

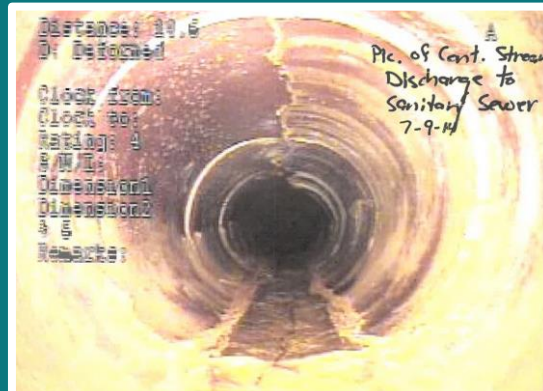


# GROW/Source Control Eligible Project Types

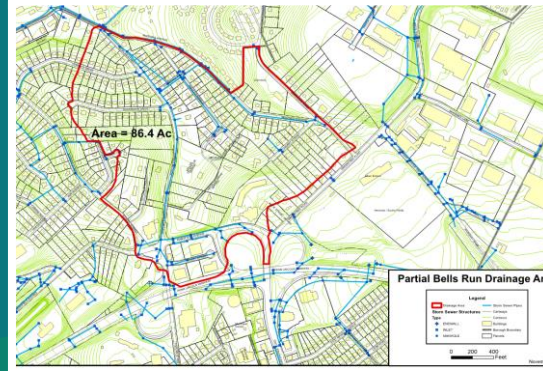
# Green Stormwater Infrastructure (GSI)



## Direct Stream Inflow Removal (DSIR)

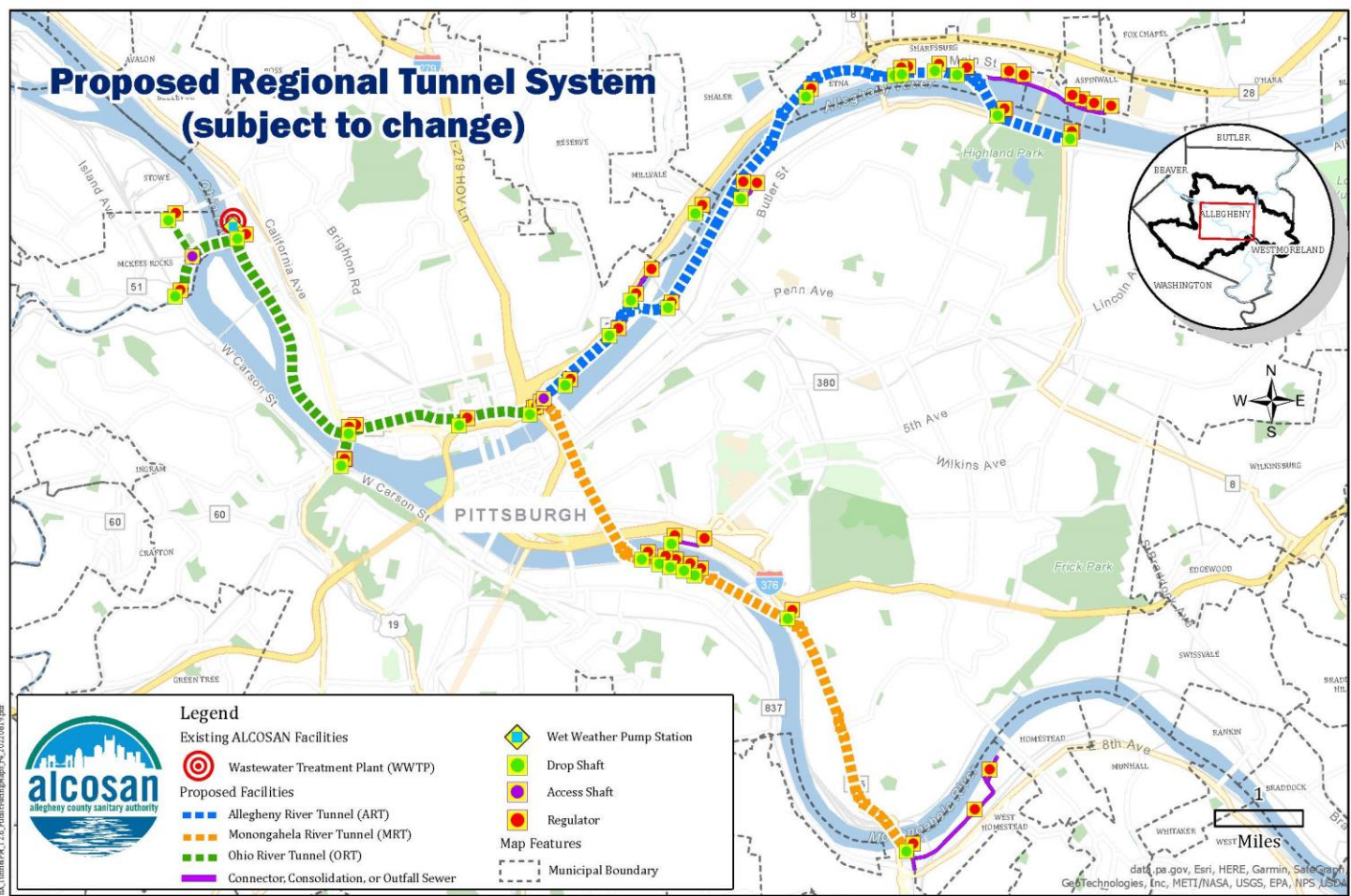


Inflow and Infiltration reduction (I/I)

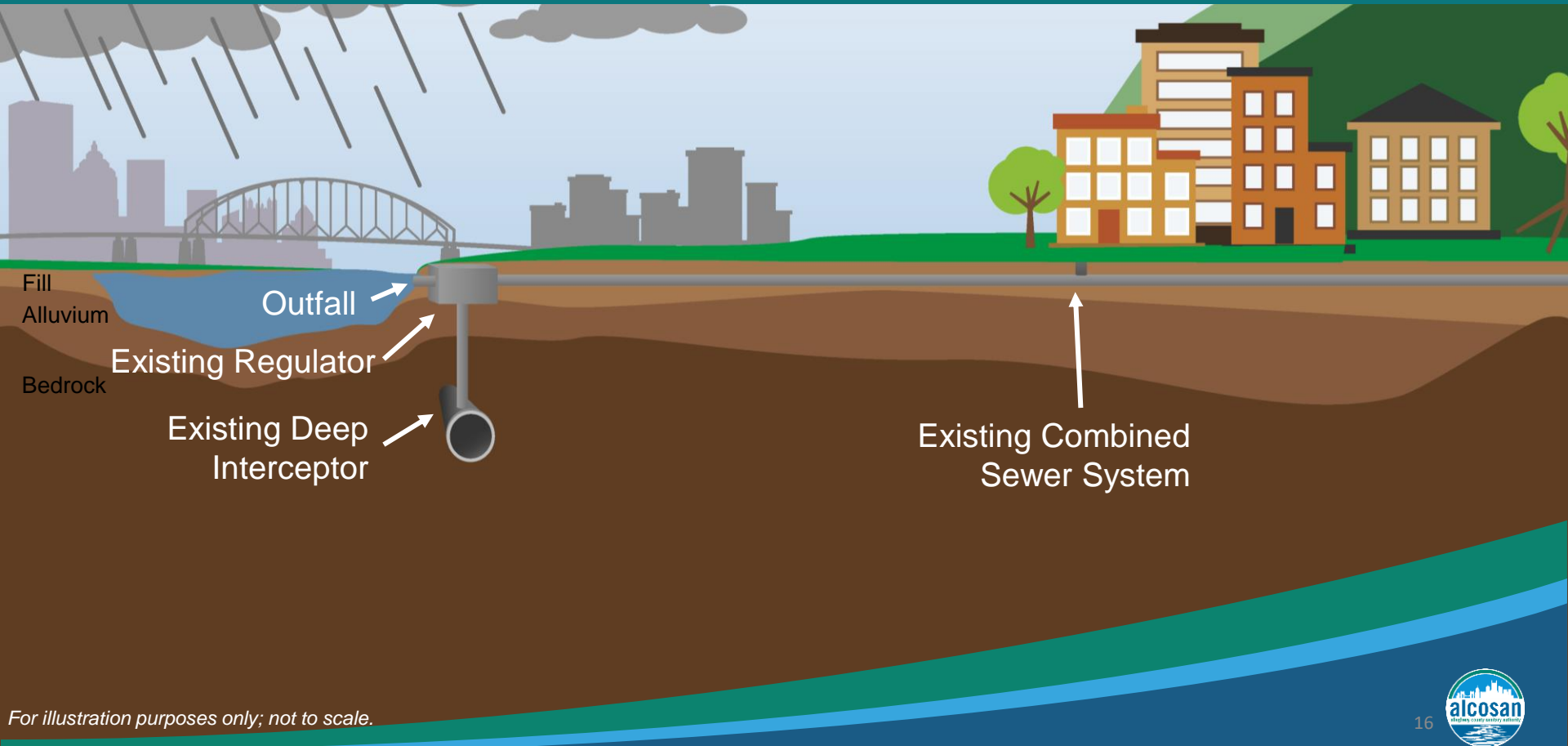


## Sewer Separation (SS)

# Proposed Regional Tunnel System

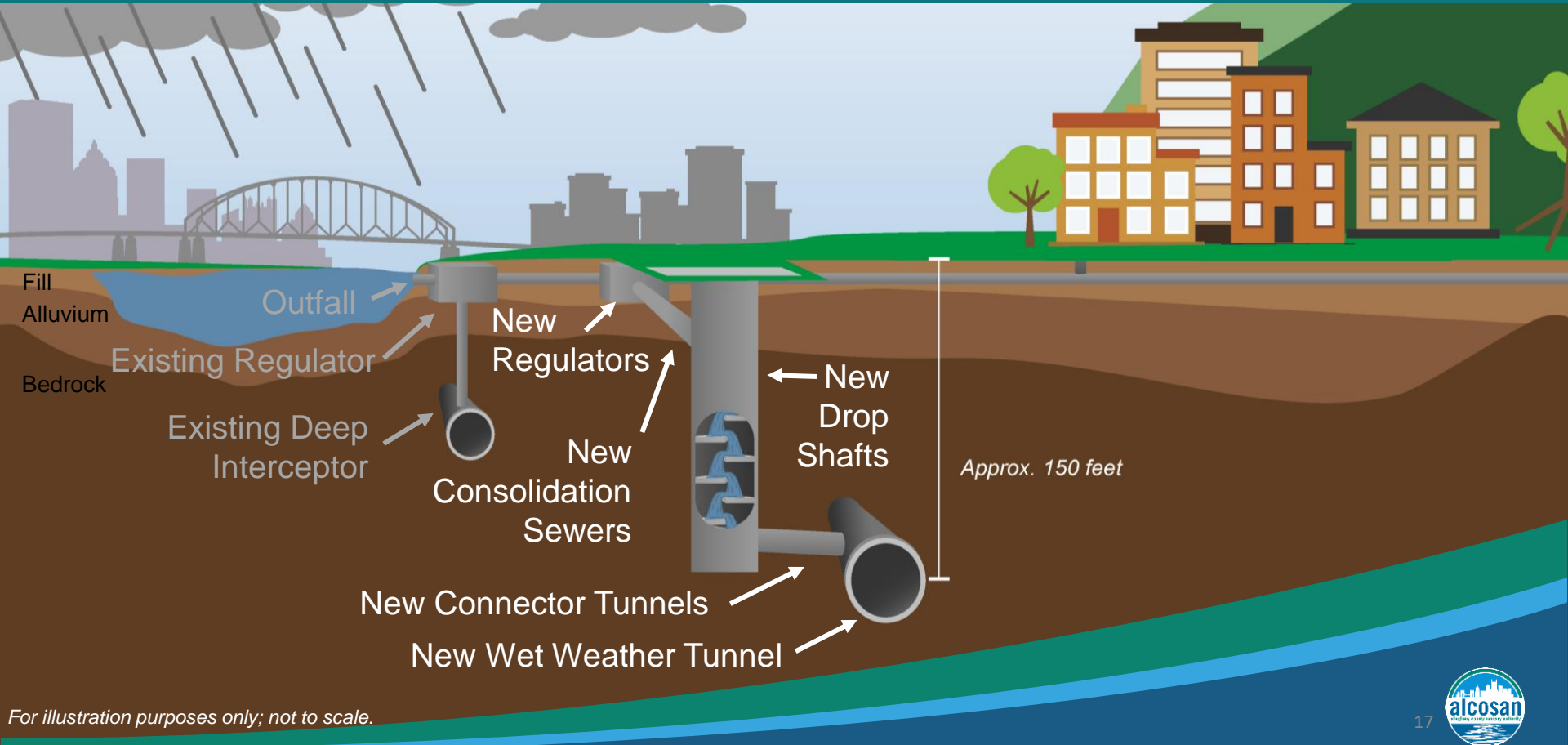


# Existing Infrastructure





# Proposed Infrastructure





# Regional Tunnel System

## Deep Underground Tunnels

The proposed main tunnels will be 14 feet to 18 feet in diameter depending on sections.



Courtesy of City of Portland, OR; Tideway Media and Press Centre, UK

# Regional Tunnel System Near Surface Facilities

## Regulators



Courtesy of City of Fort Wayne, IN

## Consolidation Sewers



Courtesy of Portland Bureau of Environmental Services, OR

## Shafts



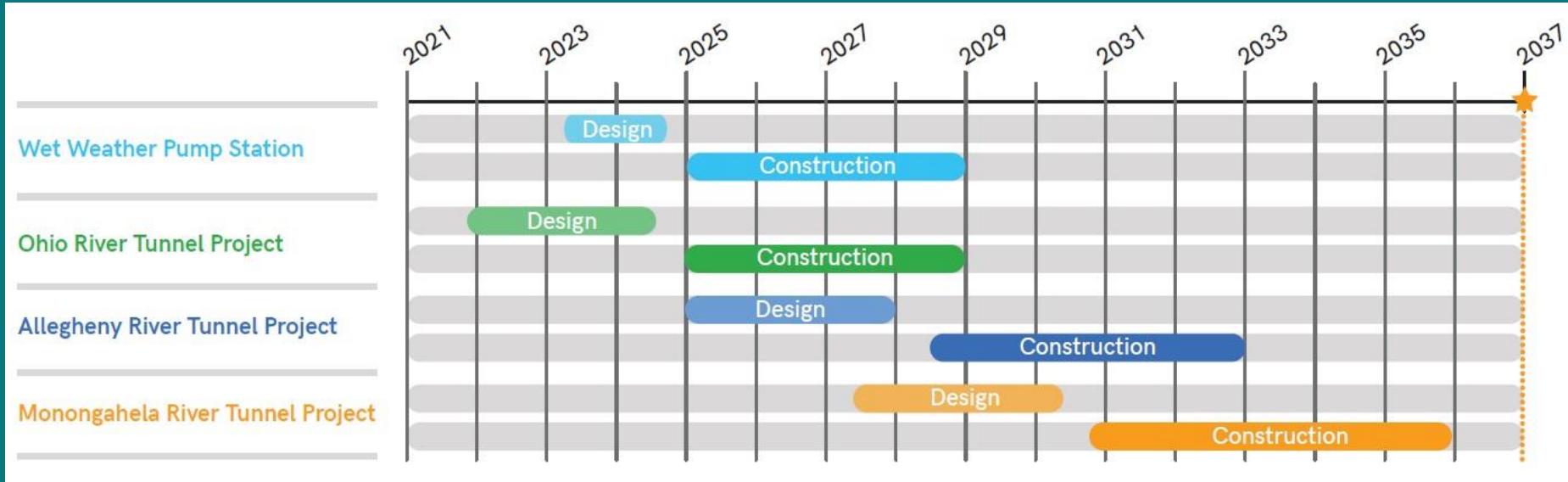
Courtesy of Tideway Media and Press Centre

**After construction, sites will be restored and allow for ongoing maintenance and access to critical infrastructure.**



Google Earth

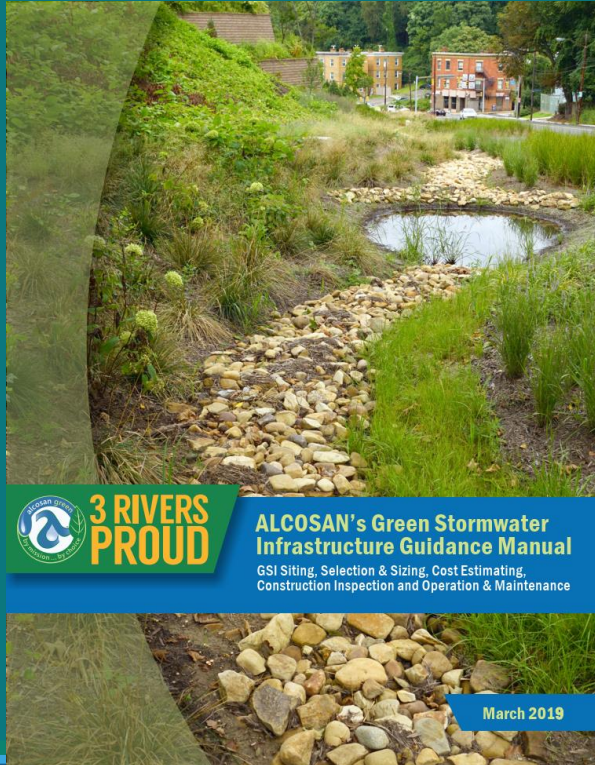
# Implementation will span 15 years



Overall schedule driven by Modified Consent Decree schedule. Final completion by December 31, 2036, including commissioning. Interim deadlines drive the schedule for design and construction; **subject to change.**



# Adaptive Management Provisions are Continuous and Ongoing



## ALCOSAN will:

- Use best available data from green infrastructure and other flow-reduction measures to inform other projects.
- Other measures must be impactful in cost-effectively reducing overflows.



# Follow Our Progress



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# 2022 Open House – Saturday, Sept. 10



**FREE and open  
to the public!**

Save the Date for ALCOSAN's Award-Winning Annual  
**OPEN HOUSE**



**Saturday, September 10, 2022 - Open 9 a.m. to 4 p.m., Rain or Shine!**



# Thank you!

## Questions & Answers?

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