Neighborhood Leadership Academy

Tuesday, February 2, 2030

Capital Budgets, Projects, and Infrastructure

Tonight's Itinerary

- **City Capital Budget** - Brian Gay, Supervising Management Analyst
- **Department of Transportation and Engineering (DOTE)** - Jennifer Russell, Supervising Engineer

BREAK

- **Greater Cincinnati Water Works (GCWW) –** Jonathan Peters, Asst. Treatment Superintendent
- **Stormwater Management Utility (SMU)** - Eric Saylor, Stormwater Management Engineer

BREAK

- **Metropolitan Sewer District of Greater Cincinnati (MSD) -** Diana Christy, Director
- **Office of Environment and Sustainability (OES) -** Larry Falkin, Director

BREAK

- **Panel Discussion (Budget, GCWW, SMU, MSD, OES)**

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The City's Capital Budget

Brian Gay, Budget and Evaluation, Office of the City Manager

Agenda

- What constitutes a capital expenditure?
- Current Restricted Funds and General Capital Budgets
- How are capital projects financed?
- How can the community engage with the Capital Budget?
- Overview of the City's capital budget process

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What constitutes a capital expenditure?

- Purchase or improvement of a City asset with a minimum five-year useful life
- Capital expenditures can include:
  - Construction or rehabilitation of infrastructure such as streets, bridges, building facilities, parks, etc.
  - Acquisition of major equipment, fleet vehicles, information technology (IT)
  - Environmental remediation, Economic Development, and Housing Development

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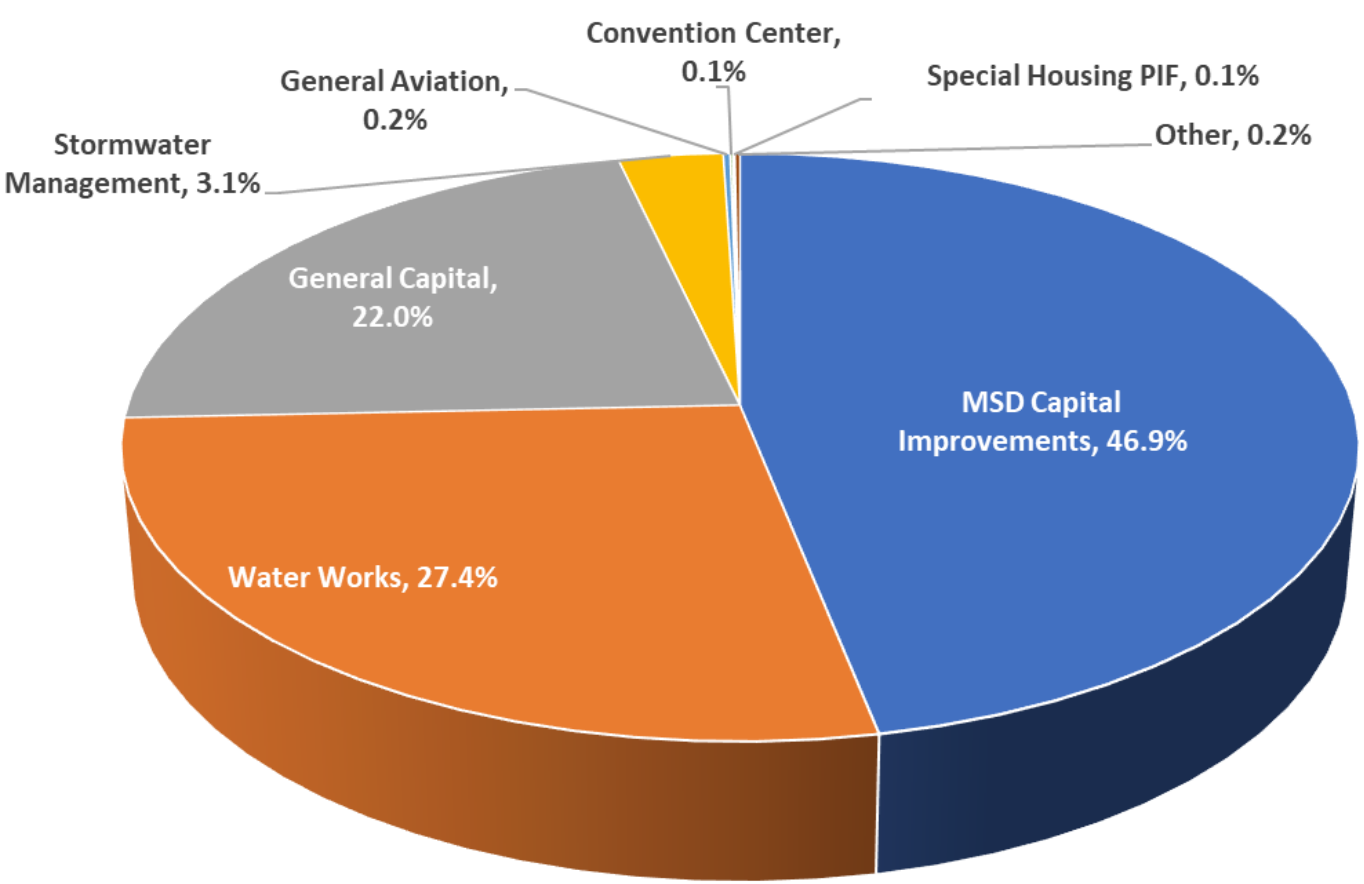
All Funds Capital Budget, FY 2020 $288.1 million*



"Other" funds include: Parking System Facilities, Income Tax – Transit, Telecommunications Services, Municipal Golf, Downtown/OTR West TIF, Downtown South/Riverfront TIF

*Excludes Capital Grant Resources

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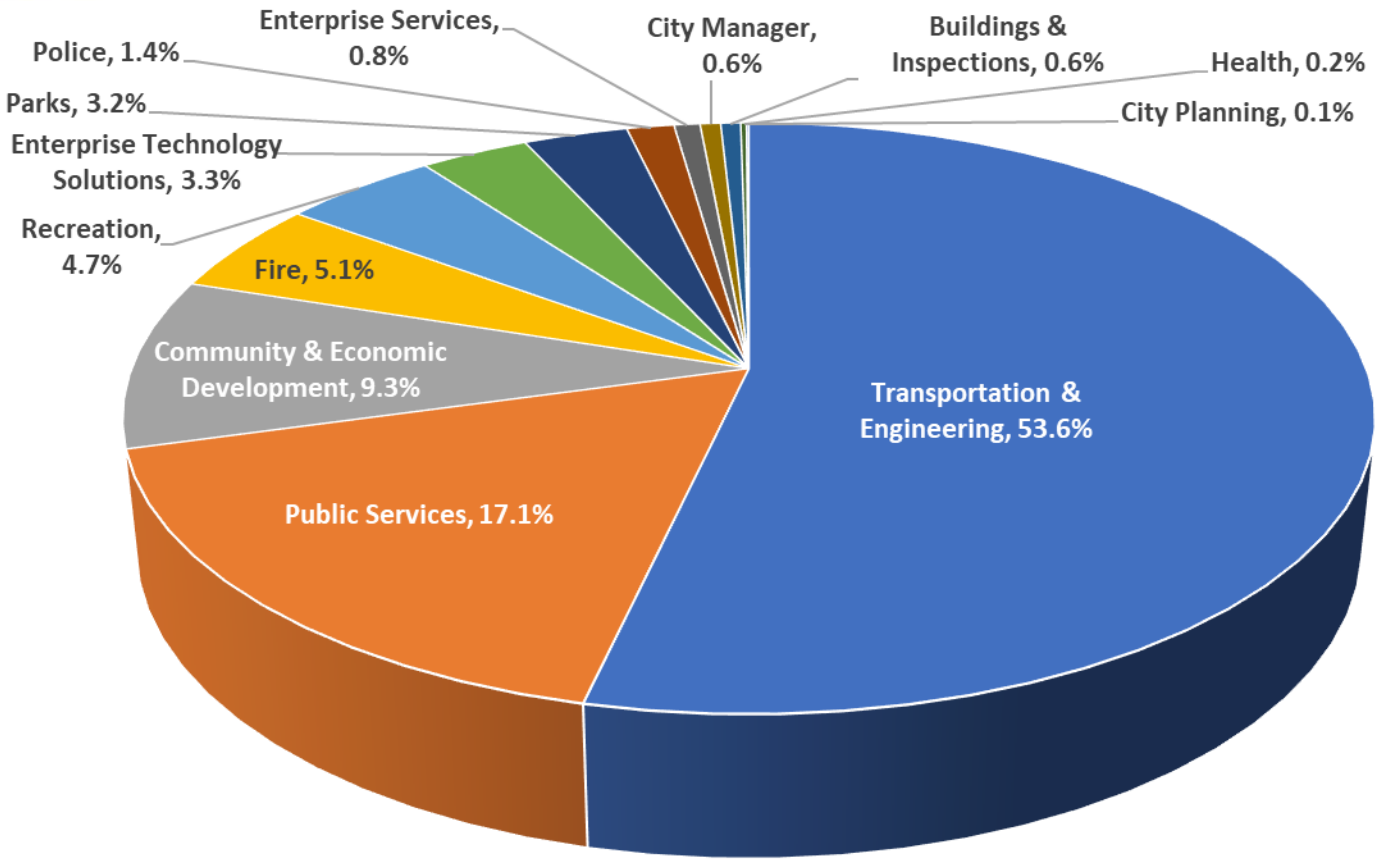
General Capital Budget, FY 2020 $63.5 million



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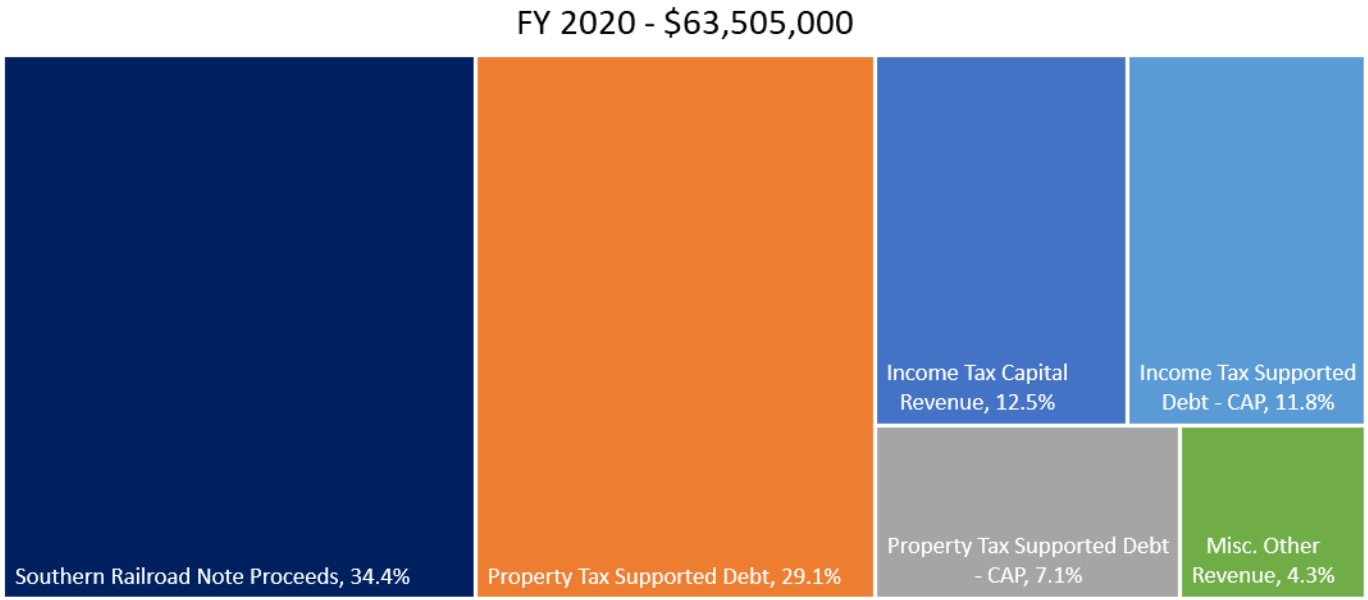
How are General Capital projects financed?

- Property Tax-Supported Bonds
- Income Tax Receipts
- Southern Railway Note Proceeds
- Other (miscellaneous, typically one-time resources)
- Reprogramming



Not shown: Reprogramming, 0.7%

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General Capital Sources Defined

- Property Tax-Supported Bonds
  - The assessed valuation of property within the City subject to ad valorem taxes includes real property and public utilities property.
  - Debt cannot be issued unless there are sufficient tax proceeds for the payment of the debt service on the bonds. The estimate for Property Tax Supported Bonds (unvoted bonds) will allow the City to maintain the sufficient property tax millage to meet the debt service requirements.
  - Per State law, some general obligation debt may be issued without a vote of the public. The City is within the unvoted statutory debt limitation of 5.5% of assessed value in the City.
- Income Tax Receipts
  - The City Income Tax is a locally levied tax applied to gross salaries, wages, and other personal compensation, and net profits earned by all City residents and to earnings of nonresidents working within the City limits.
  - Note: The City's 2.1% income tax is subdivided into four components: general operations (1.55%), transit (0.3%), infrastructure (0.1%), and capital (0.15%).

General Capital Sources Defined (continued)

- Southern Railway Note Proceeds 
  - The City owns the Cincinnati Southern Railway and leases its use.
  - The City Council endorsed a policy by resolution to dedicate funds generated by the Southern Railway to infrastructure projects. The notes issued and interest income provides a resource for infrastructure projects.
- Other (miscellaneous, typically one-time resources)
  - Recent example – resources from the sale of the former Blue Ash Airport property
- Reprogramming
  - Reprogramming resources are unused funds typically recaptured from projects that are completed.
  - The remaining balances are used to provide resources for new projects.

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How are Restricted Capital projects financed?

- Restricted Funds resources are primarily generated from user fees and charges for services
- Capital can be cash or debt financed from restricted fund sources after operating costs, reserves, and debt service obligations are met.
- Enterprise Fund Operations (i.e. Water Works, Sewers, Stormwater, Parking, Convention Center, Aviation)
  - $224.2 million in FY 2020
- Special Revenues (i.e. SHPIF, TIF Districts)
  - $390,000 in FY 2020
- Grants (i.e. Federal Aviation, Alternate Transportation, Roads/Bridges, Safety Improvements)
  - $7.9 million in FY 2020

Opportunities for Community Engagement

- Up to three **Community Budget Requests (CBRs)** are obtained from each Community Council for the biennial budget, every two years, and are part of the Budget process (See Week 2 Presentation for additional details)

- The **Neighborhood Project Suggestion (NPS) form** allows any citizen to request neighborhood projects, also every two years- projects not submitted through the CBR process still are reviewed(See Week 2 Presentation for additional details)

- Most CBR/NPS forms received are for capital expenditures

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Capital Budget Process Overview

FY Schedule: July 1, 2021 – June 30, 2023

- **May – Sept 18, 2020**: Community Councils work with City Departments provide assistance to Community Councils during the project selection process of Community Budget Requests (CBRs)

- **Sept 18, 2020:** CBRs online submissions due

Capital Budget Process Overview

FY Schedule: July 1, 2021 – June 30, 2023

- **Fall 2020**
  - Departments Assess and Review Capital Needs
    - Evaluate Community Budget Requests
    - Submit project scopes to Department of City Planning to determine the level of consistency with Plan Cincinnati, the City's Comprehensive Plan.
  - December 2020: Departments submit Capital Budget Requests to Budget Office

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Capital Budget Process Overview

(FY Schedule: July 1, 2021 – June 30, 2023)

- **Spring 2021**
  - Office of Budget and Evaluation prepares and presents Capital Budget Recommendation to the City Manager for consideration
  - City Manager reviews the recommendation from Budget and Evaluation and amends the recommendation

- **May 2021**
  - Formal disposition report released online within the City Manager's Recommended FY 2021-2022 Biennial Budget
  - Mayor transmits the Budget to City Council within 15 days, including any amendments

Capital Budget Process Overview

2022 – 2023 Community Budget Request Process

(FY Schedule: July 1, 2021 – June 30, 2023)

- **Late May/June 2021:**
  - City Council deliberates the Capital Budget
  - Public Hearings provide for community input
  - City Council Votes on Capital Budget with any Proposed Changes

- **June 30, 2021:** Deadline for City Council to Approve FY 2021-2022 Biennial Budget

- **July 2021:** Approved FY 2022-2023 Biennial Budget document published

Department of Transportation and Engineering (DOTE)

Jennifer Russell, Supervising Engineer

Department of Transportation & Engineering (DOTE)

- Responsible for upgrading and maintaining the City's transportation infrastructure
- Responsible for applying for and obtaining outside funding to supplement project budget needs
- Funding sources/agencies available include
  - ODOT (federal $ include FHWA, OKI, Safe Routes to School)
  - Ohio Public Works Commission (OPWC) (state funds)
  - Municipal Road Fund (MRF) (county, license plates)
  - 2020 Census (federal $ distributed to the county)

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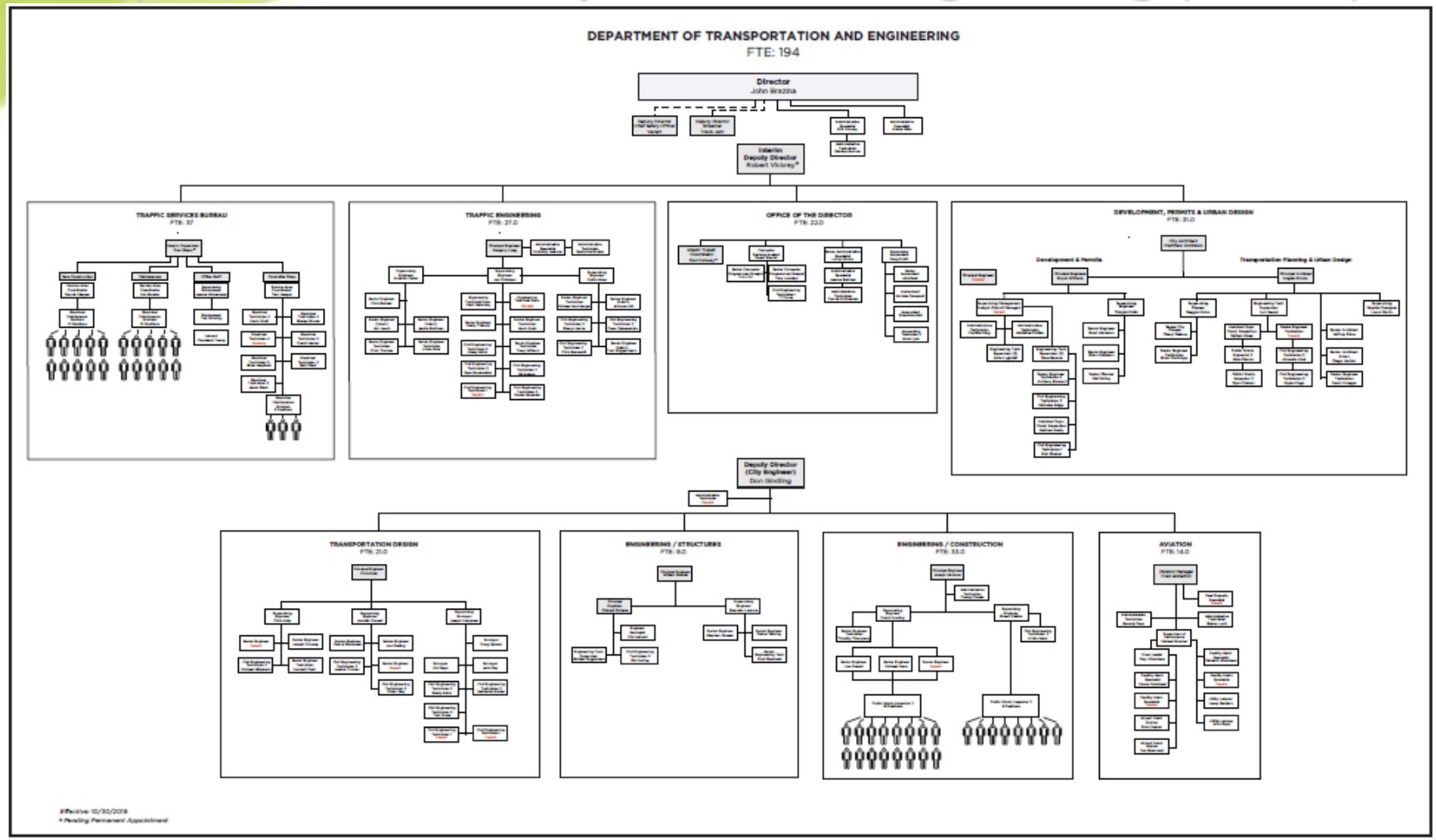
Department of Transportation & Engineering (DOTE)



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Department of Transportation & Engineering (DOTE)

- In-house staff includes (194)
  - Engineers – 40
  - Surveyors – 4
  - Architects – 4
  - Planners – 3
  - Graphic Designer – 1
  - Technicians – 55
  - Inspectors – 28
  - Maintenance Workers/Laborers – 34
  - Support Staff (HR, IT, Accounting, Admins) – 25

Department of Transportation & Engineering (DOTE)

- Transportation Infrastructure
  - Streets (985 Centerline Miles)
  - Sidewalks (1,700 Miles)
  - Bridges (71 City + 8 Wasson Way + 26 County)
  - Walls and Landslide Correction (1,530 City Retaining Walls)
  - Hillside Steps (482 Hillside Stairways)
  - Pedestrian Safety Improvements
  - Bicycle Facilities (46 miles)
  - Traffic Signals (800 signals + 100 flashers/beacons)
  - Traffic Control Devices (Signs and Striping)
  - Street Lights (21,000 Duke + 10,000 City)

Streets – Maintained Through

- Street Rehabilitation Program
  - Pavement and Curb Repairs
  - “Grind and Pave” or “Mill and Fill”
  - Public Streets Only, No Private Streets
- Preventive Maintenance Program
  - Pavement Repairs
  - Surface Treatments
- Street Improvement Program
  - Safety and Capacity Improvements
- Public Services (Not DOTE)
  - Potholes and Temporary Repairs

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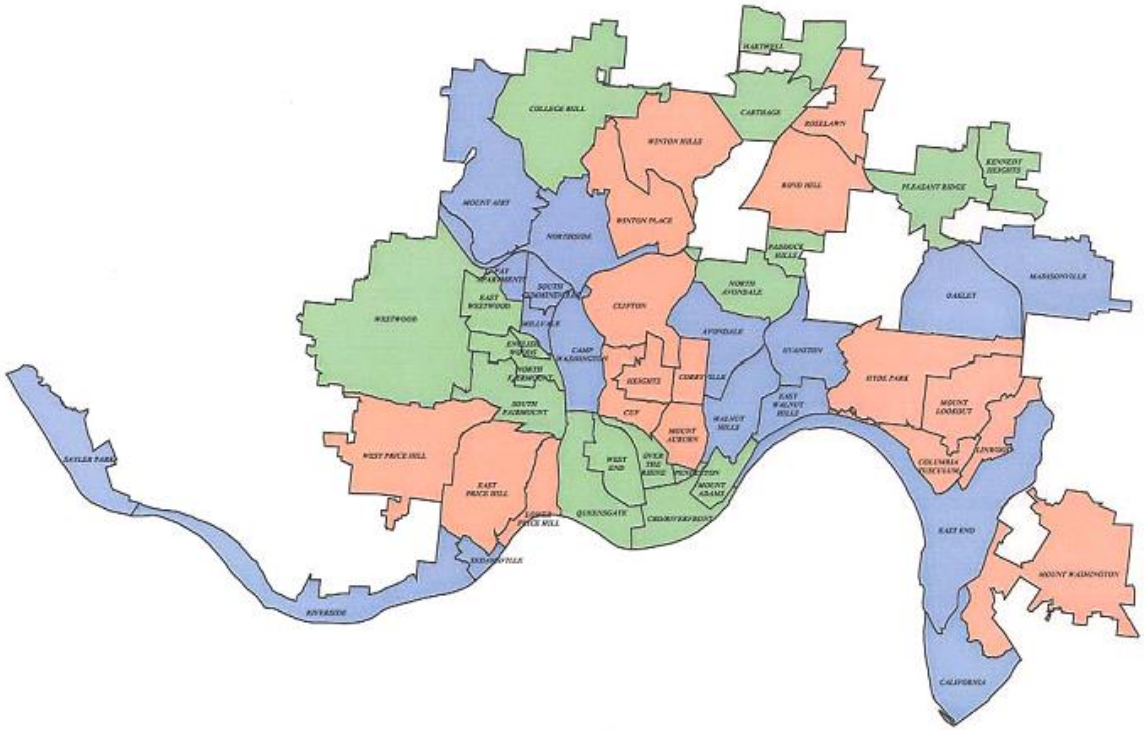
Streets – Yearly Program Selection Process

- Triennial Cycle
  - Streets Reviewed in Each Neighborhood Every 3 Years



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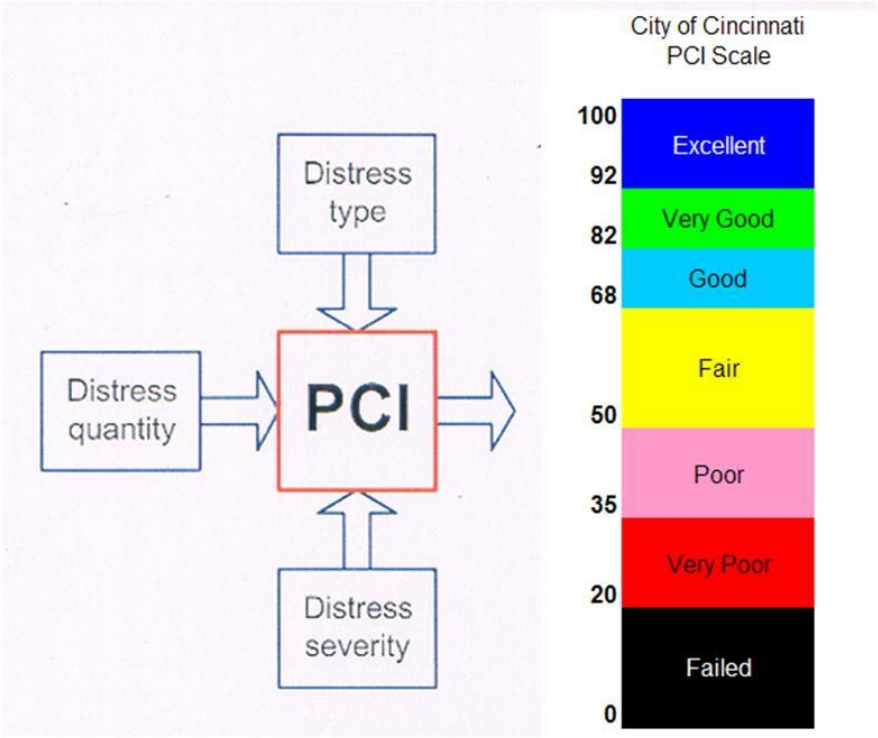
Streets – Yearly Program Selection Process

- Pavement Condition Index (PCI) Rating
  - Consultant Using a “Laser Van” Scans the Pavement
  - Calculate a Number Through MicroPaver Program



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Streets – Yearly Program Selection Process

- Utility Project Coordination
- Community Budget Request (CBR) – Every 2 Years
  - AKA Community Priority Request (CPR)
- Neighborhood Enhancement Program (NEP) – 2 Per Year
- Citizen Concerns
- Street Petitions Through Community Council
- Economic Development Project Partnership

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Sidewalks – Maintained Through

- Sidewalk Safety Program
  - Program priorities
    - Emergency accessibility issues
    - Neighborhood sidewalk replacement programs
- Cincinnati Municipal Code, Chapter 721 – Streets and Sidewalks, Establishment and Maintenance
- Section 721-147 – Owners of Abutting Property to Maintain Sidewalk
- Cincinnati Accessibility Board of Advisors (CABA)
  - Advisory board to discuss access and Americans with Disabilities Act (ADA) issues

Sidewalks – Inspections

- Sidewalk inspections are triggered by Customer Service Requests, CABA, community councils or citizen concerns
  - Emergency access inspections
    - Limited to specific and immediate area
  - Neighborhood program inspections
    - Broad review and all-inclusive condemnation of sidewalks along both sides of the street along one block of roadway
    - Sidewalk is condemnable with 5/8” sidewalk vertical offset

Sidewalks – Neighborhood Programs

- Neighborhood Sidewalk Replacement Programs
  - Require a lot of planning
    - Utility coordination
    - Street Rehabilitation Program coordination
  - Resolution from Council
  - After inspections, property owners are notified of non-compliance and given time to
    - Hire a licensed contractor to complete the required work

      OR
    - City can complete the required work and bill the property owner once complete

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Sidewalks – Shared Responsibility

- Per CMC 721-147, the adjacent property owner is responsible for causing the sidewalk to be kept in repair and free from nuisance
- Exceptions – City Shares Responsibility for Safety
  - Curb ramps
  - Bus stops
  - City facilities
  - For a corner lot residential property serving 3 family dwellings or smaller; the non-driveway, non-address side
  - City responsibility work will be planned as part of a larger project

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Bridges – What Are They?

- Any structure over 10 feet in length
- Any structure that carries traffic over something else
- Any structure that crosses over a road

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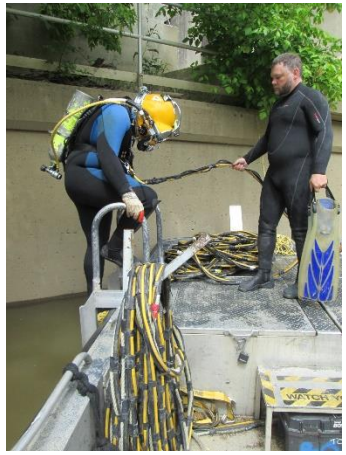
Bridges – Step #1 – Inspection

- City inspects on average 235 bridges every year
  - Every bridge within City limits except for interstate and state route bridges
  - Owned by City, ODOT, County, private and special bridges
- All bridges are inspected yearly, but additional inspections are required in some instances
  - Special Bridges
    - Span over water with substructures (like piers) in the water
    - Inspected every 5 years with a diver



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Bridges – Step #1 – Inspection

- Fracture Critical Bridges
  - Carries highway traffic
  - Steel structure
  - Tension structure
  - Non-redundant structure
  - Inspected every 24 months – up close and personal inspection within arm's reach

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Bridges – Step #1 – Inspections

- Safety Inspections
  - Completed for railroad and privately owned bridges
- Other Types of Inspections
  - Bridges damaged due to accidents
  - Bridges known to have issues due to nature
    - Flooding, debris build up, earthquakes
  - Construction warranty checks

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Bridges – Step #2 – Ratings

- Generate a detailed report for each bridge that includes a number and letter rating based on a weighted average
- Numbers are used for condition rating scale
  - 0 = Failed
  - 9 = Excellent
- Letters are for load rating designation
  - A = Open to traffic
  - P = Posted for loading
  - R = Restricted

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Bridges – Step #3 – Recommendation & Maintenance

- Recommended maintenance provided in inspection report
- Maintain a 6-year capital plan for maintenance and replacements
- Public Services complete minor maintenance tasks like chipping loose concrete or patching
- Contractors complete major maintenance tasks or replacements

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Walls and Landslide Correction – What Are They?

- Retaining Walls
  - Wall network that protects roadways, sidewalks and stairways from landslides and hillside slippage
  - Owned by City, ODOT, County, private and unknown
  - Does NOT include flood walls (maintained by SMU)
  - Inventoried in the Retaining Wall Database (RWD)

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Walls and Landslide Correction – What Are They?

- Landslide Correction
  - Stabilization of landslides and hillside slippage within the public right-of-way

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Walls and Landslide Correction – Step #1 – Inspection

- Retaining Walls
  - City is divided into 6 inspection districts and each district is inspected once every 6 years, but additional inspections are required in some instances
  - Other Types of Inspections
    - Walls rated in poor or critical condition are inspected yearly
    - Walls damaged by vehicular accidents
    - Citizen initiated concerns

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Walls and Landslide Correction – Step #1 – Inspection

- Landslide Correction
  - Chronic or recurring landslide areas are monitored for movement with in-ground inclinometers
  - Problem areas are monitored for movement during periods of heavy rain events and flooding
  - Falling and sliding debris in some locations is monitored until it can be effectively removed
  - Citizen initiated concerns

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Walls and Landslide Correction – Step #2 – Ratings

- Retaining Walls
  - Generate a detailed report for each wall that includes a number rating
  - Numbers are used for condition rating scale
    - 0 = Excellent
    - 4 = Critical (in danger of failing)
- Landslide Correction
  - No rating system
  - Maintained on an emergency basis until a permanent solution can be funded

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Walls and Landslide Correction – Step #3 – Recommendation & Maintenance

- Recommended maintenance provided in inspection report
- Maintain a 6-year capital plan for maintenance and replacements
- Landslides are considered emergencies and take priority over retaining wall replacements and upgrades
- Public Services complete minor maintenance tasks like chipping loose concrete, patching or debris removal
- Contractors complete major maintenance tasks, replacements, construction and major debris removal

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Walls and Landslide Correction – Private Side

- Private Retaining Walls and Landslide Corrections
  - DOTE only gets involved when privately owned structures or land fail and block the public right-of-way
  - DOTE works with B & I to work with private owners for corrective measures

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Hillside Steps

- Hillside Stairway Rehabilitation Program
  - Hillside steps are inventoried in the Cincinnati Hillside Stairway Information System (CHISIS)
  - Funding for this program is very limited at this time
    - Only minor emergency repair work can be done
    - If major repair work is required, the stairway is closed
    - In high crimes areas, the stairways can be removed, the land vacated and property transferred to abutting property owners
      - This is typically a response to a community request

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Hillside Steps

- Inspections were completed on a 4-year cycle
  - Last full inventory inspections were done in 2012
  - Special, heavily utilized steps are inspected regularly
    - Mt. Adams – Church of the Immaculata
  - Citizen initiated concerns
- Program Priorities
  - Highly utilized steps
  - Condition of steps
  - Council and Community requests
- Ongoing Problems
  - Vegetation overgrowth
  - Steel hand railing theft

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Pedestrian Safety Improvements

- Newly formalized program
- Crosswalk striping upgrades
- Curb ramp upgrades
- Signage and flashing beacon installation
- Focus on three main areas
  - Top 10 pedestrian crash corridors
  - Neighborhood Business Districts
  - Schools and recreation centers

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Bicycle Facilities

- On-street bike lanes = 26 miles
- Shared use paths = 20 miles
- This is an emerging program, growing infrastructure
- Maintenance as needed or requested by citizens
  - Sweeping and clearing
    - 70% Public Services, 30% Contractor
  - Working towards a formalized plan

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Traffic Signals

- Governed by the Ohio Manual of Uniform Traffic Control Devices (OMUTCD)
- Operation
  - City owned signals
  - Pedestrian crossing flashers (RRFB's)
  - ODOT signals at access ramps
  - City of Norwood and Hamilton County signals with agreement
  - Some private signals with agreement

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Traffic Signals

- Maintenance
  - Completed in-house with Traffic Services Bureau
    - Signal timing changes
    - Equipment replacements as required
    - Vehicular accident damage
    - Storm damage

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Traffic Signals

- Replacement and Upgrades
  - Signal life is 30 years
  - Signal lens life is 6 to 7 years
    - All signal lenses are LED
  - Expanding the interconnect communication system
    - Better communication between signals
    - Better traffic flow

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Traffic Control Signs

- Governed by the Ohio Manual of Uniform Traffic Control Devices (OMUTCD)
- All public roadway signs
- Maintenance
  - Sign life is 15 years
  - Completed in-house with Public Services (Traffic Aids)
    - Sign face fabrication
    - Sign replacements (damaged, faded, missing)
    - New sign installations

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Traffic Control Signs

- Replacement and Upgrades
  - Completed in-house with Public Services (Traffic Aids)
  - Completed with a contractor on larger City project

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Traffic Control Pavement Markings

- Governed by the Ohio Manual of Uniform Traffic Control Devices (OMUTCD)
- All public roadways
  - Paint life is 6 months to 2 years
  - Thermoplastic striping life is 5 to 7 years
- Maintenance
  - Public Services (Traffic Aids)
    - As needed or per citizen concern
- Replacement and Upgrades
  - Street Rehabilitation Program contractor

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Street Lights

- Electric street lights – 21,000 Duke Energy owned street lights on wood poles and 9,000 City owned lights on different style metal poles
- Gas street lights – 1,000 street lights found on residential streets in 14 neighborhoods
- Maintenance
  - Duke Energy maintains their electric street lighting
  - City electric street lighting maintained by Traffic Services Bureau
  - City gas street lighting maintained by contractor

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Contacting DOTE

- Department Website
  - https://www.cincinnati-oh.gov/dote/
- Service Request
  - Website
    - https://cagismaps.hamilton-co.org/csr/cincinnati
    - OR type 5916000.com in your search engine
  - By Phone
    - (513) 591-6000

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Questions?

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BREAK

Up Next

- **Greater Cincinnati Water Works (GCWW) –** Jonathan Peters, Asst. Treatment Superintendent
- **Storm Water Management Utility (SMU)** - Eric Saylor,

BREAK

- **Metropolitan Sewer District of Greater Cincinnati (MSD) -** Diana Christy, Director
- **Office of Environment and Sustainability (OES) -** Larry Falkin, Director

BREAK

- **Panel Discussion (Budget, GCWW, SMU, MSD, OES)**

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GREATER CINCINNATI
WATER WORKS

A Service of The City of Cincinnati

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PLANNING & BUILDINGS

GREATER CINCINNATI
WATER WORKS

A Service of The City of Cincinnati

- Mission – Provide Customers with a plentiful supply of high-quality water, support environmental sustainability, and deliver excellent services in a financially responsible manner.

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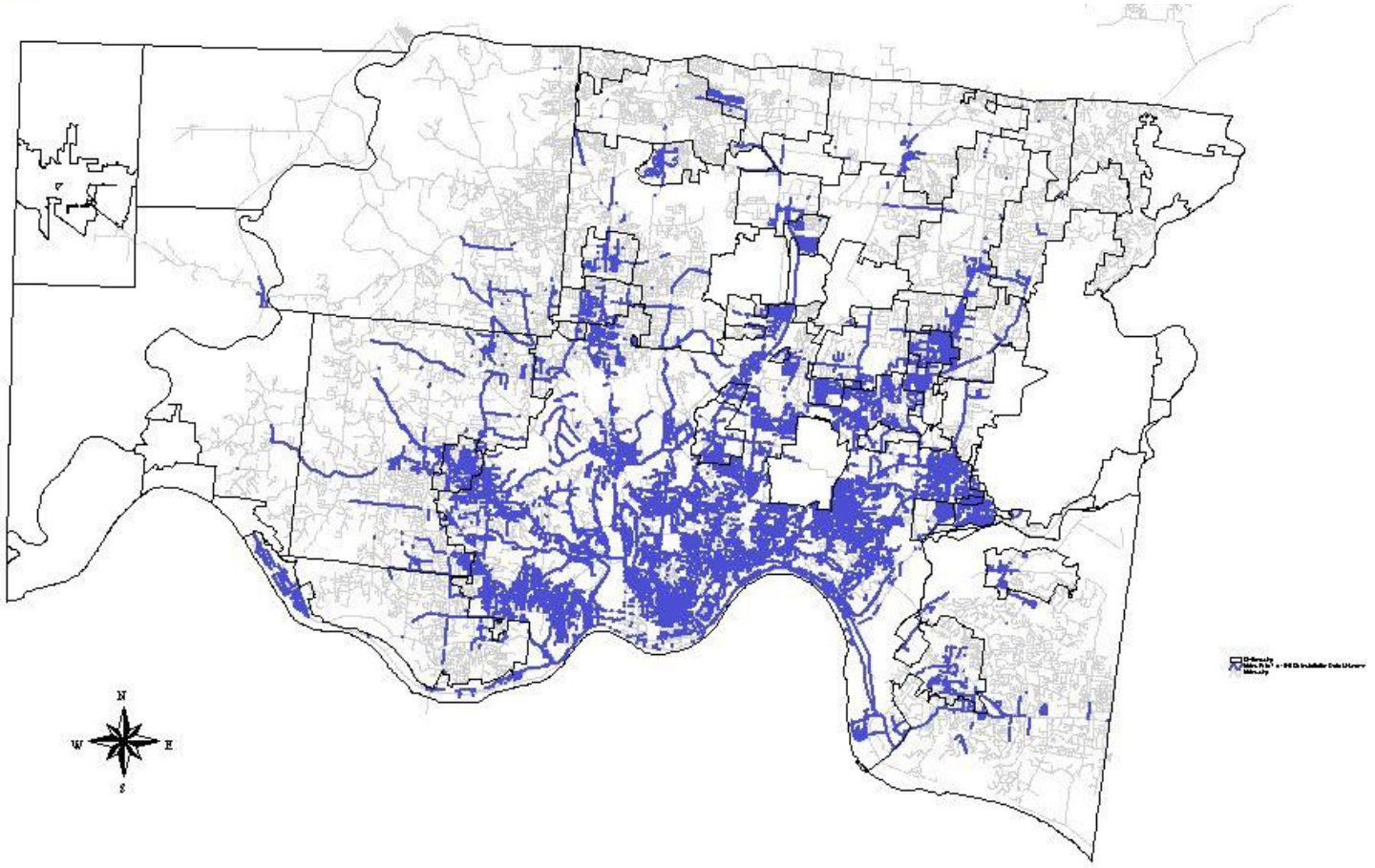
Water Distribution System up to 1940



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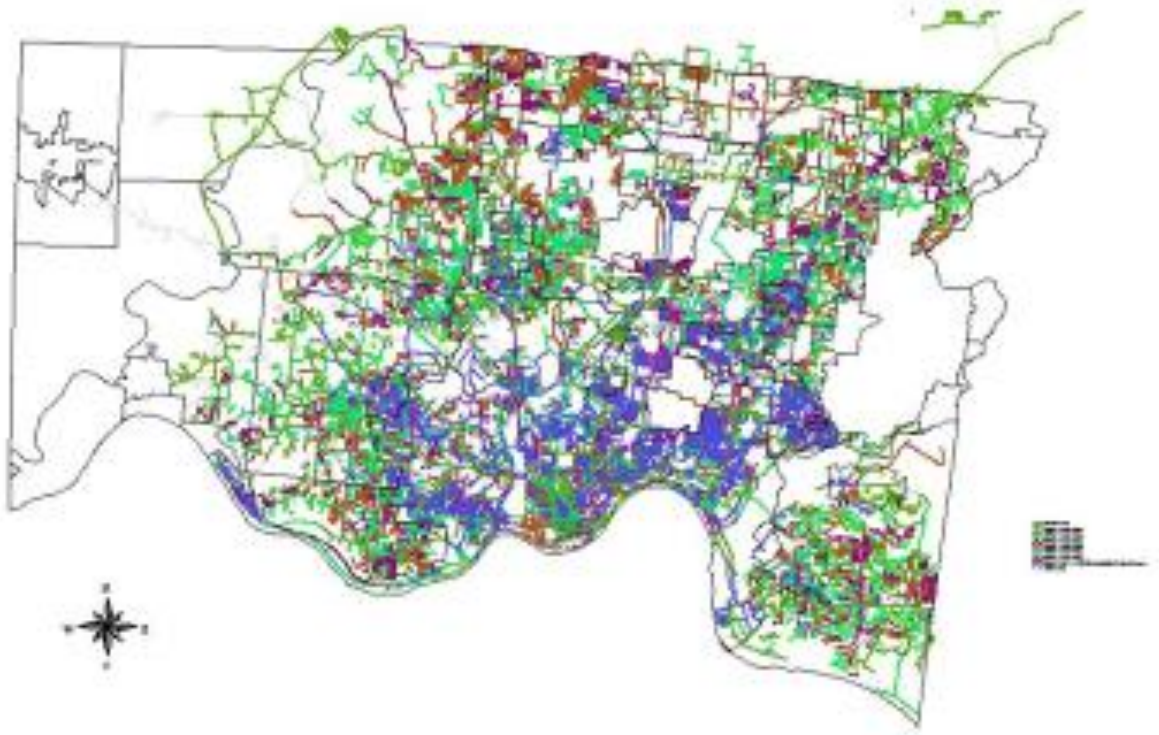
Water Distribution System up to 2000



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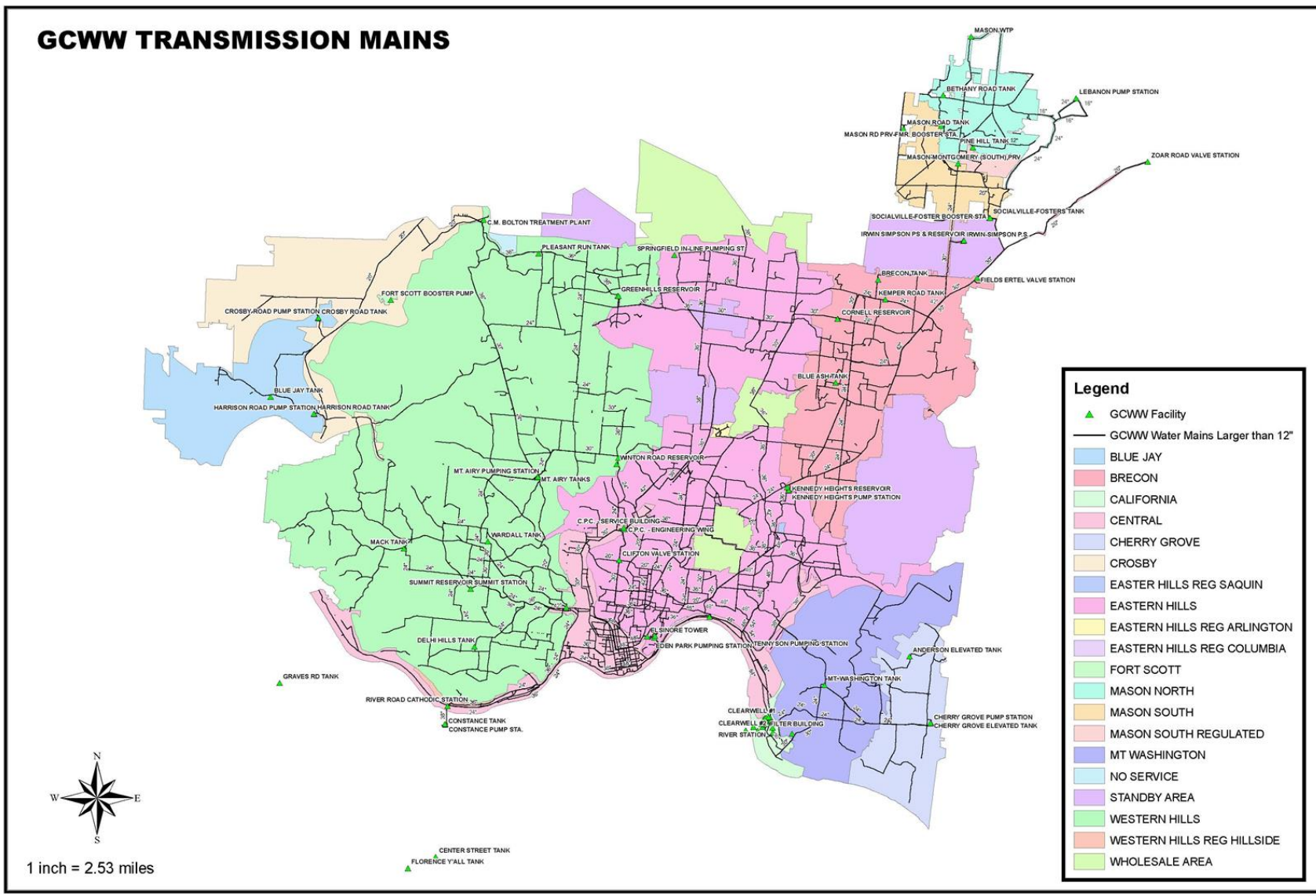
GCWW TRANSMISSION MAINS



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Greater Cincinnati Water Works
Map of Service Area

A Service of The City of Cincinnati
GREATER CINCINNATI WATER WORKS

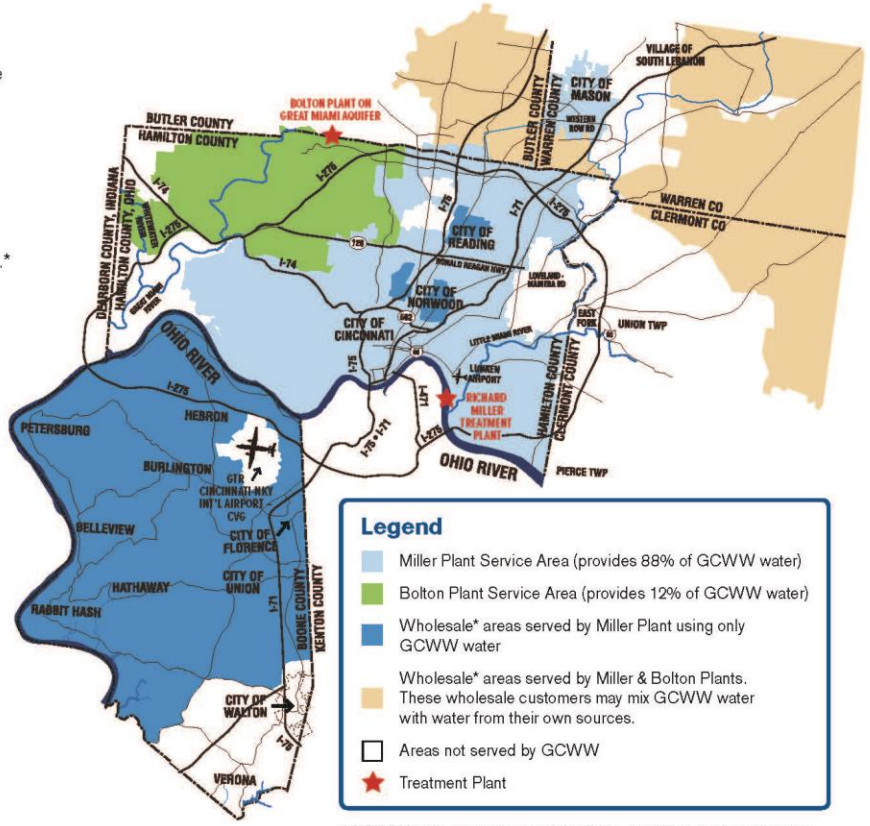
Ohio River Service Area

Amberley Village
Anderson Twp.
Avondale
Blue Ash*
Bond Hill
California
Cherry Grove
Cheviot*
Clifton
Corryville
Covedale
Cumminsville
Deer Park
Delhi & Delhi Twp.
Downtown
East End
Elmwood Place
Evanston
Evendale
Fairfax
Golf Manor
Green Twp.*
Greenhills*
Hyde Park
Kennedy Heights
Kenwood
Lincoln Heights
Mack*
Madeira
Madisonville
Mariemont
Mason*
Miami Heights*
Montgomery
Mt. Airy*
Mt. Auburn
Mt. Lookout
Mt. Washington
Newtown
Northside
Oakley
Pleasant Ridge
Price Hill
Roselawn
St. Bernard
Sayler Park
Sharonville*
Silverton
Springdale*
Sycamore Twp.*
Symmes Twp.
Walnut Hills
West End
Western Hills*
Westwood*
Winton Place
Woodlawn

Great Miami Aquifer Service Area

Blue Jay
Colerain Twp.
College Hill*
Crosby Twp.
Dent*
Finneytown*
Forest Park*
Miamitown
Monfort Heights*
Mt. Healthy*
New Burlington
North College Hill
Northgate
Pleasant Run
Springfield Twp.
Venice Gardens
White Oak*
White Water Twp.

These communities may get water from both the Miller and Bolton Plants.



GCWW sells water to municipalities, counties and rural water association who distribute, meter and bill for the water.

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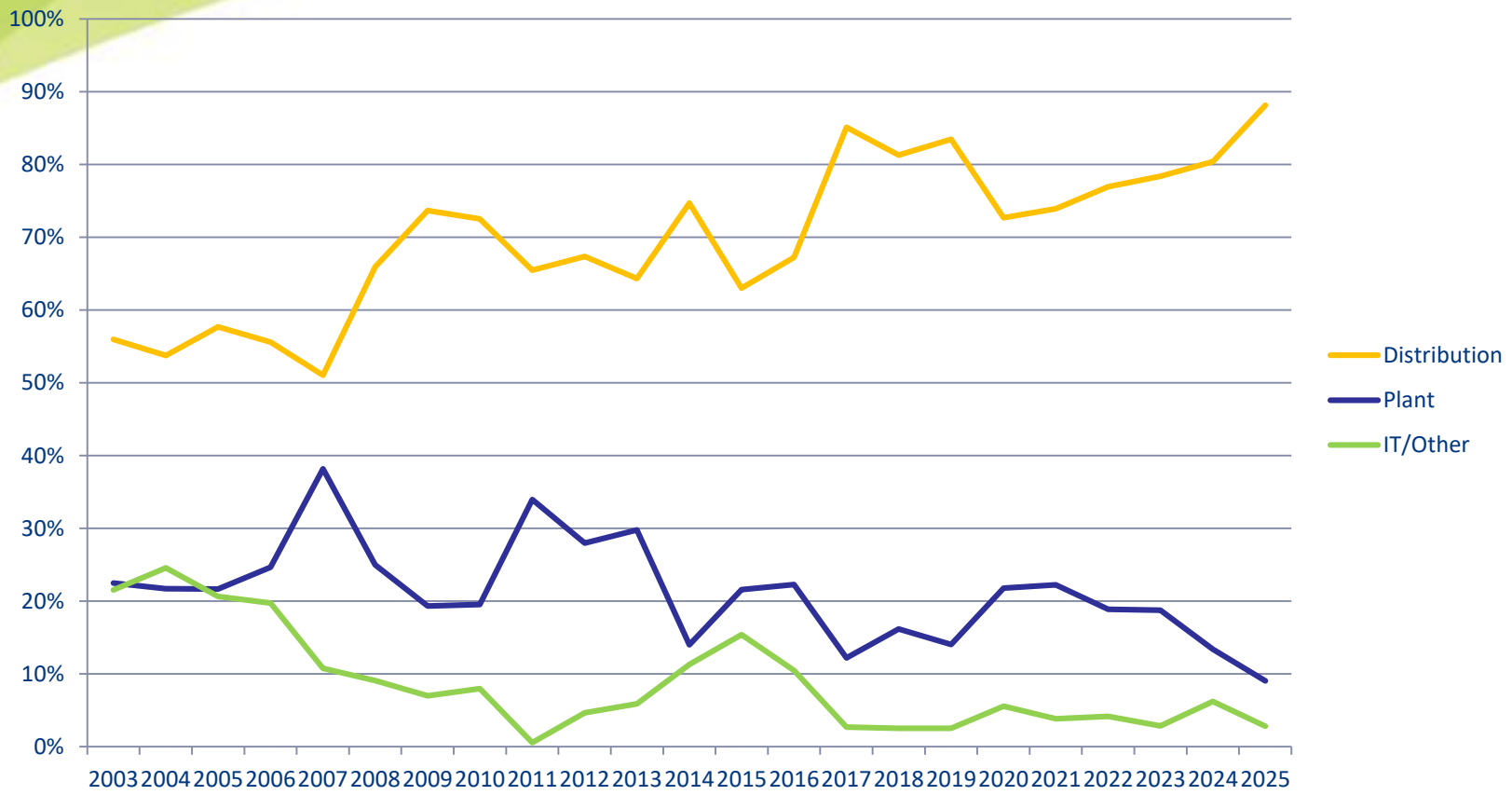
CIP Expenditures by Category



FY 2020 CIP Budget is $79 Mil

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GREATER CINCINNATI
WATER WORKS

A Service of The City of Cincinnati

Questions?

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PLANNING & BUILDINGS

STORMWATER

MANAGEMENT UTILITY

A Division of Greater Cincinnati Water Works

SMU's Role

Protect the lives and property of the citizens of Cincinnati by capturing, controlling, and conveying stormwater safely and efficiently and providing flood protection in the City of Cincinnati.

Design, construct, and maintain our stormwater drainage and flood protection assets located in the within the City of Cincinnati.

SMU's Collection System Infrastructure

320 miles of storm sewers

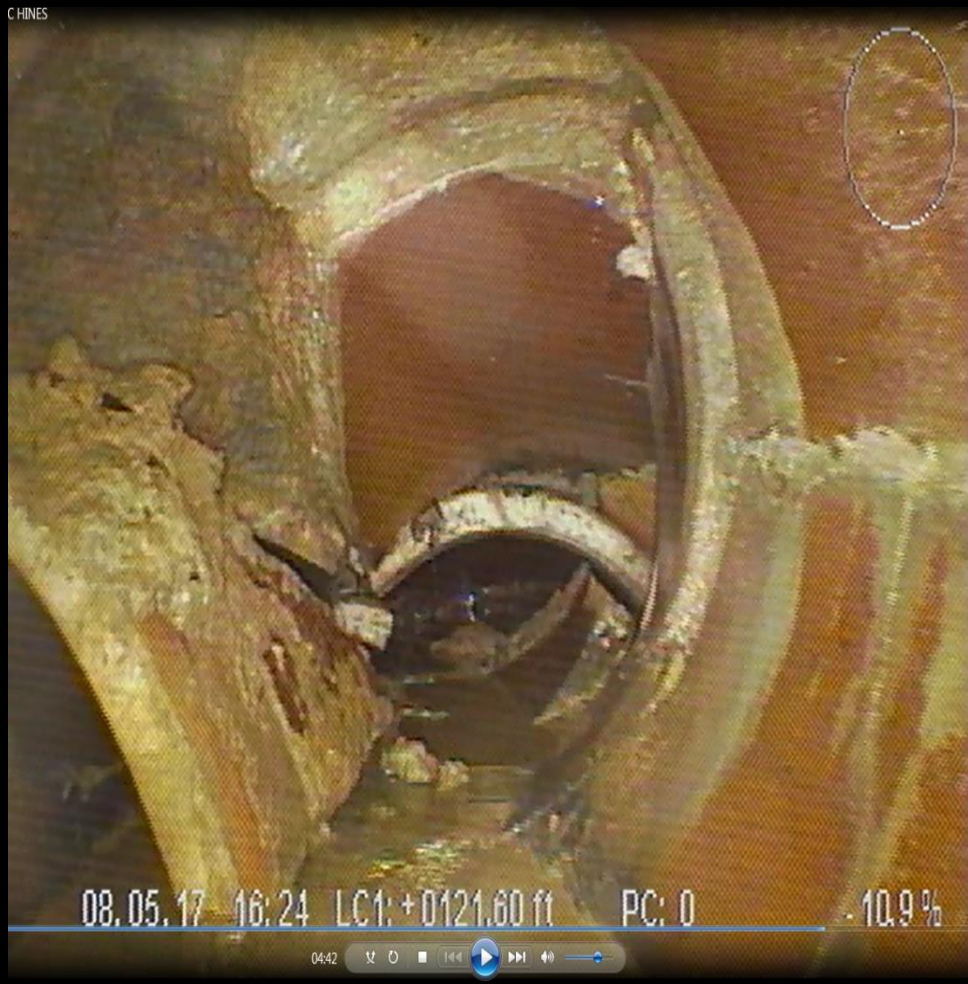
30,000 inlets & intakes

1,000 manholes

550 miles of ditches

4 pump stations

Reduce Risk
by Proactively Assessing the Condition, Maintaining, and Repairing our Infrastructure




LUNCH
DRINK
Coca-Cola
DENVER SANDWICH
BLACKS GARAGE SERVICE

1.5 Miles of Floodwall and 14 Floodgates in the Queensgate Area

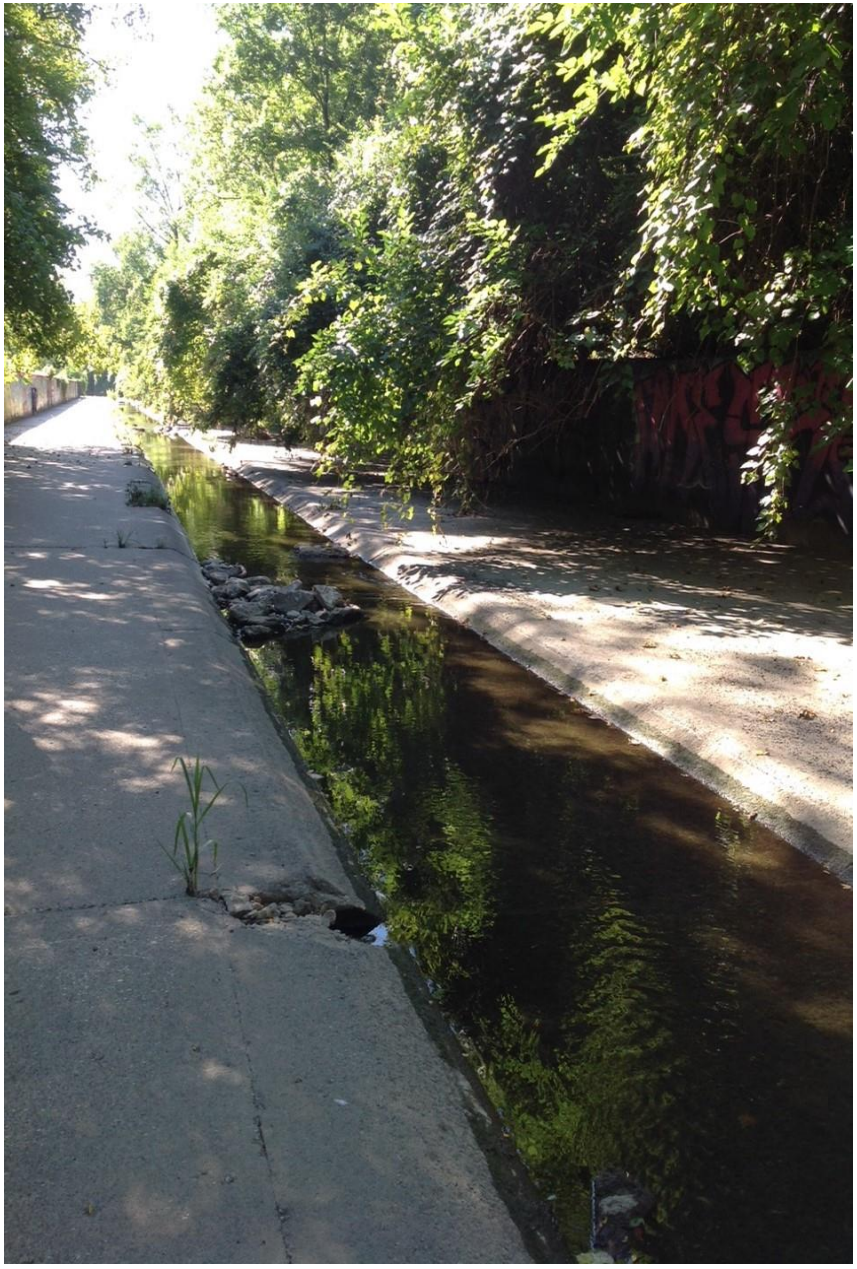

16' 6"

Mill Creek Barrier Dam

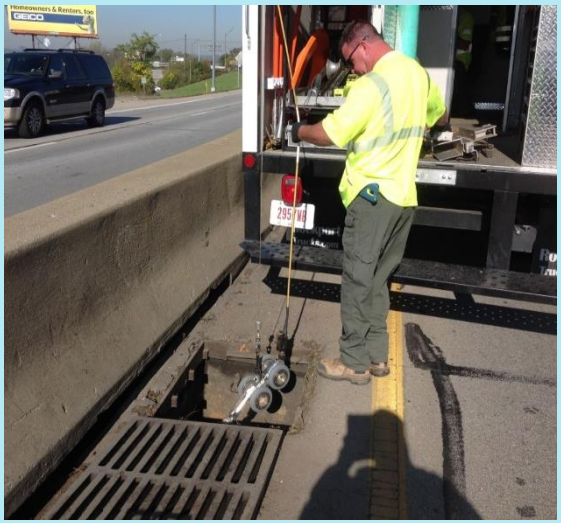
Mill Creek Barrier Dam

Guerley Road Dam/Detention

Channelized Creeks



Annual Operating Budget = $11M
Average Annual Capital Budget = $7M



Thank You!

STORMWATER
MANAGEMENT UTILITY

A Division of Greater Cincinnati Water Works

BREAK

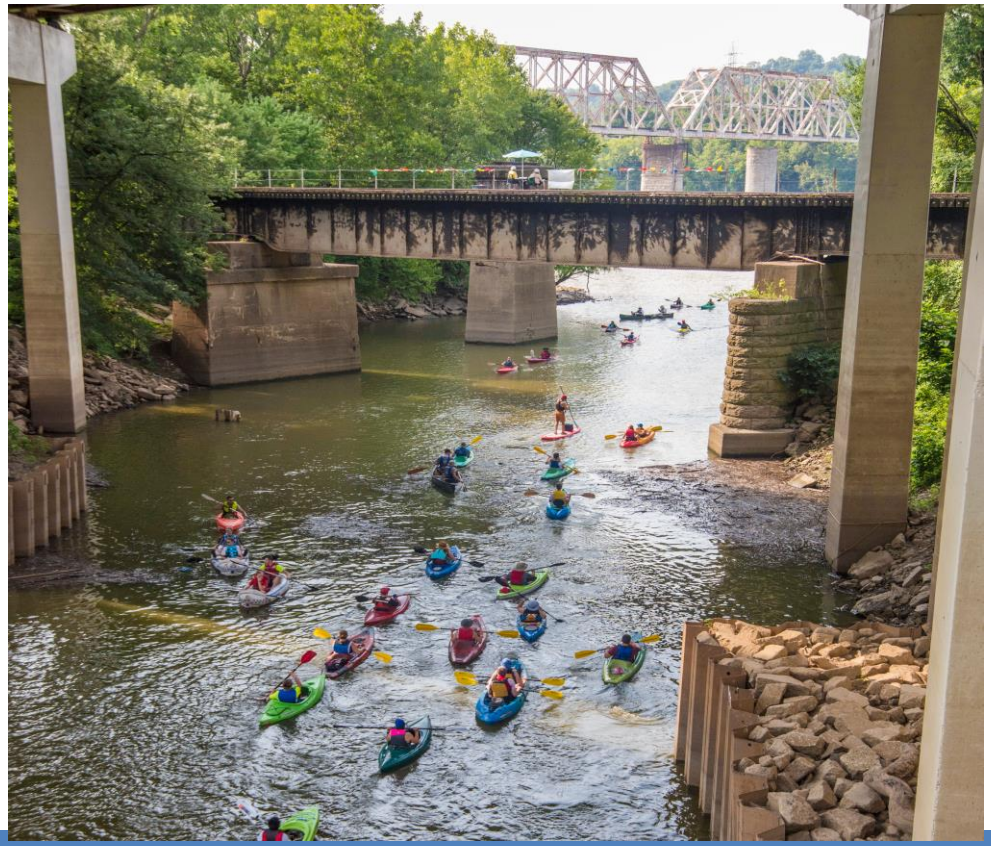
Up next

- **Metropolitan Sewer District of Greater Cincinnati (MSD) -** Diana Christy, Director
- **Office of Environment and Sustainability (OES) -** Larry Falkin, Director

BREAK

- **Panel Discussion (Budget, GCWW, SMU, MSD, OES)**

city of CINCINNATI



Neighborhood Leadership Academy METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

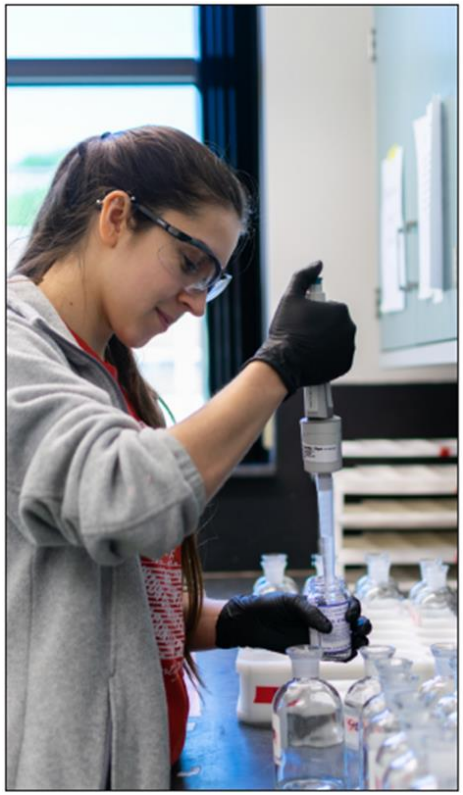
February 4, 2020

Presenter: Diana Christy, Director, MSD

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

MISSION

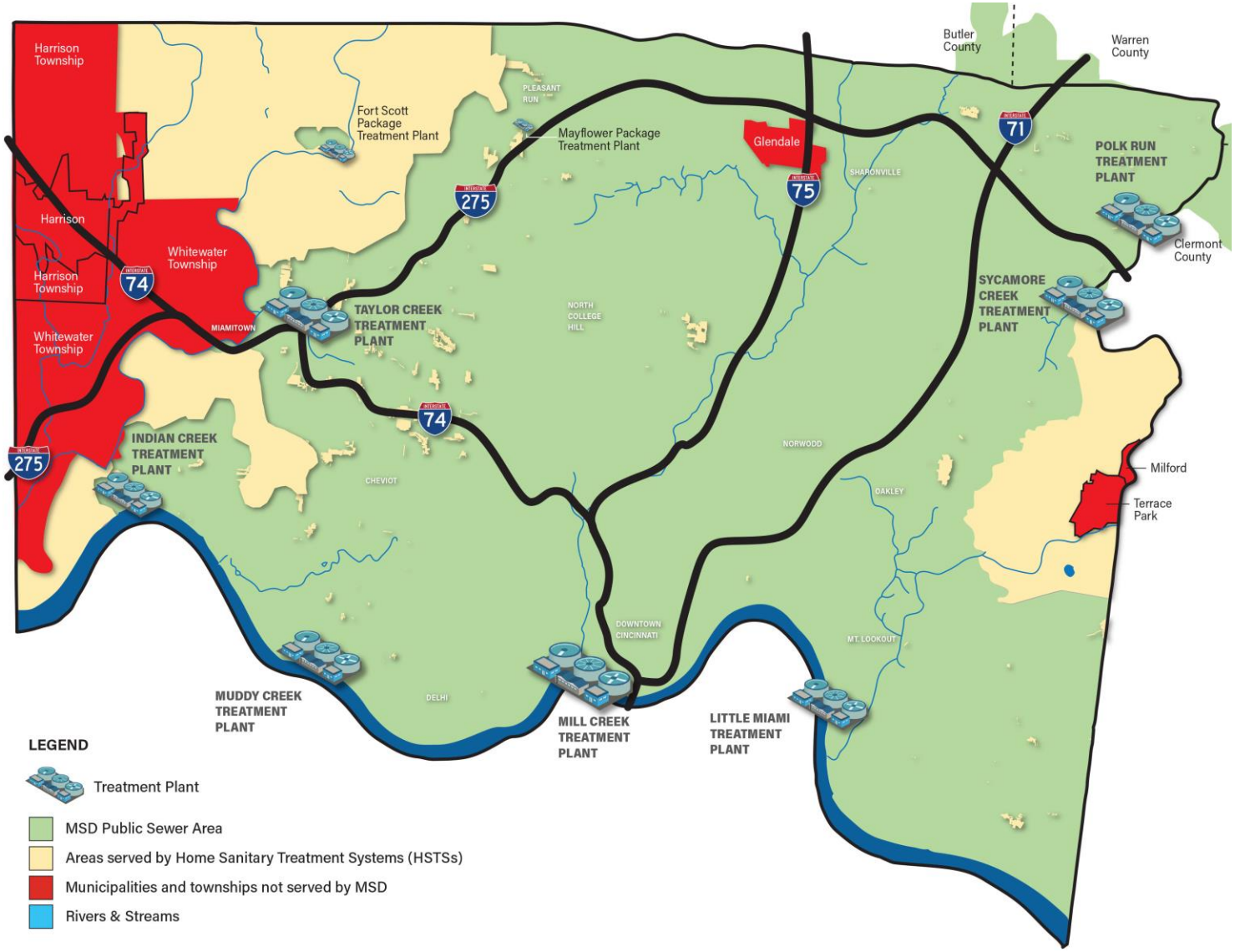
MSD collects, treats, and manages wastewater from Greater Cincinnati communities, protecting the environment and public health by returning clean water to local rivers and streams.



What You Need to Know

1. **Aging Infrastructure**
2. **Overflows and the Consent Decree**
3. **Green Infrastructure Partnerships**
4. **Private versus Public**
5. **Sewer Backups**

SERVICE AREA



AGING INFRASTRUCTURE

Collection system is comprised of 3,000 miles of sewers

- Approximately 50% of sewers are combined sewers
- Some combined sewers are 150 years old
- 140 miles of sewers with less than five years remaining life
- 2014: Shields Street collapsed when 100-year old sewer broke

Consent Decree

- U.S. EPA has mandated that MSD significantly reduce the combined sewer overflows (CSOs) and eliminate sanitary sewer overflows SSOs.
- The MSD service area receives about 41 inches of rain annually, equal to about 180 billion gallons of rain.
- About 21 billion gallons of rain enters the combined sewer system. A much smaller amount enters the sanitary sewer system.
- In an average year, about 11.5 billion gallons a year of sewage and stormwater overflow into our environment.

Consent Decree

MSD is reducing or eliminating sewer overflows by using different strategies:

- **Capacity:** Larger sewers and CSO storage tanks or tunnels
- **Upgraded Treatment Plants:** Upgraded treatment plants and enhanced high-rate treatment facilities
- **Green Solutions:** Solutions that control stormwater and keep it out of the combined sewer system. These solutions include storm water detention basins, bioswales, stream restoration, bioinfiltration basins, etc.

Phased Approach: Work is being conducted in phases over multiple years due to its size, complexity, and cost.

$3.2 Billion

Consent Decree

Phase 1 Accomplishments (2009-2018)

6 billion gallons
of sewer overflows eliminated

$129 million under budget
$1.011B as compared to $1.14B

51 CSOs and 44 SSOs
eliminated or reduced

No sewer rate increases
since 2015

47 → 8
reduction in overflow events at SSO 700

94% of projects
completed to date (125 of 133)

Improved water quality
in local streams

60,000+ reports
of sewer backups investigated

900+ properties
protected from sewer backups

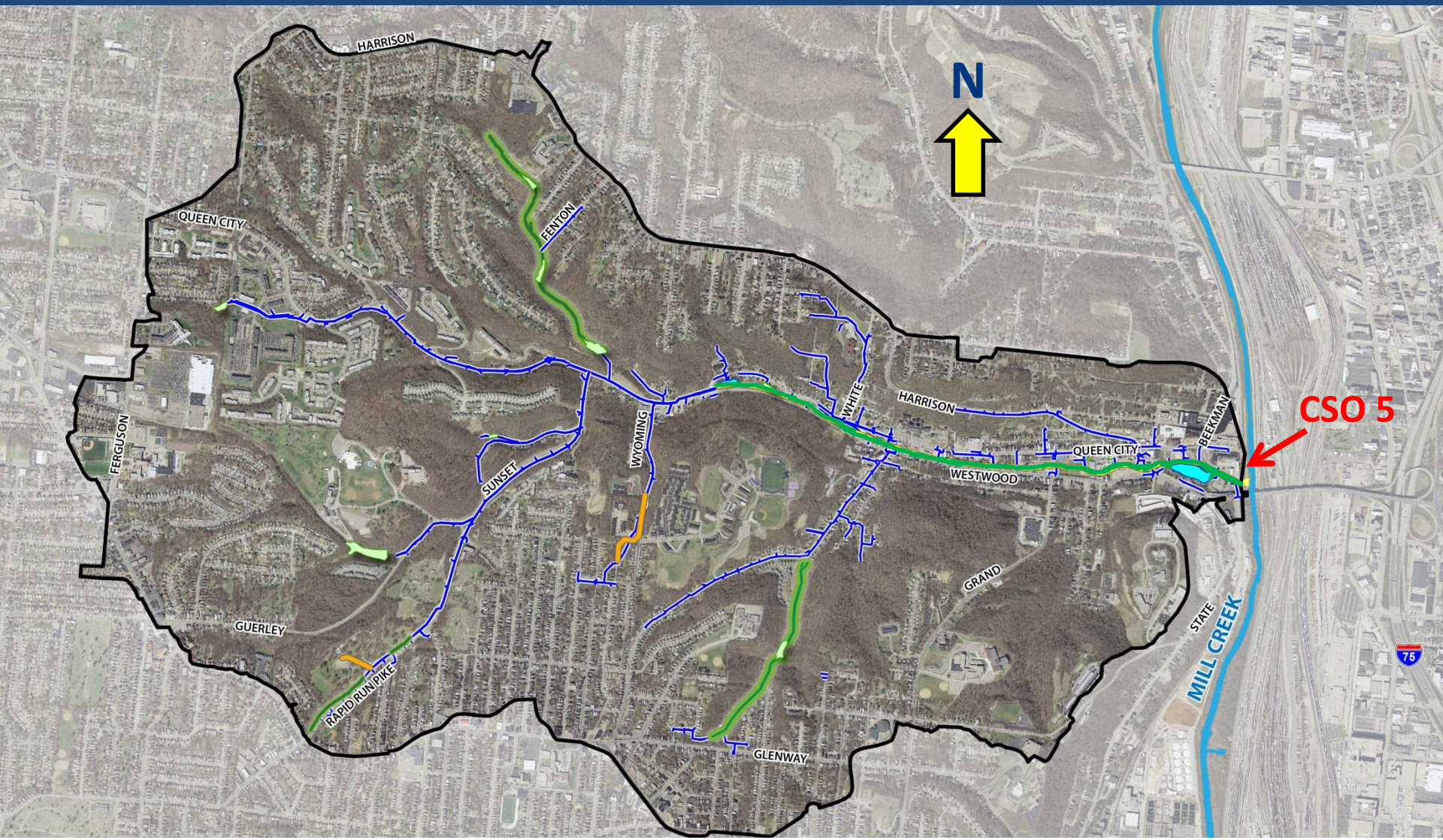
Lick Run Project

Construction of new storm sewers and green features to collect and carry stormwater from the Lick Run Watershed to the Mill Creek

- Significantly reduces sewer overflows into the Mill Creek from CSO 5 outfall and improves water quality

- Reduces volume treated at the Mill Creek treatment plant

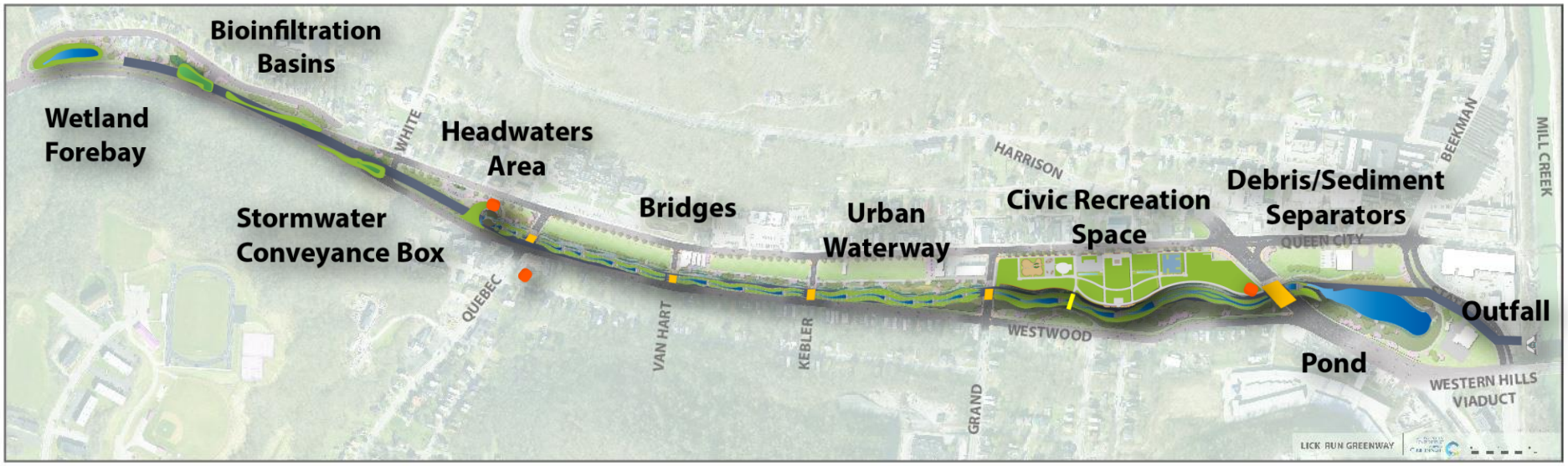
Lick Run Project Map



Blue = underground storm sewers **Orange** = sanitary sewers

Green = aboveground green features (e.g., detention basins, bioswales, strea

Lick Run Valley Conveyance System



- Mile-long meandering creek
- Pond
- Outfall into Mill Creek
- Stormwater conveyance box to handle large rainstorms
- Wetland forebay, bioinfiltration basins, and stormwater planters

Renderings

Partnerships

MSD has partnered with local organizations to evaluate the effectiveness of smaller-scale stormwater controls.

- Permeable pavement
- Rain gardens
- Rainwater harvesting
- Bioswales
- Green roofs

Partners include:

- Cincinnati Zoo
- Cincinnati State
- Civic Garden Center
- Cincinnati Museum Center
- Parks & Recreation
- Cincinnati Public Schools

Partnerships – Cincinnati Zoo

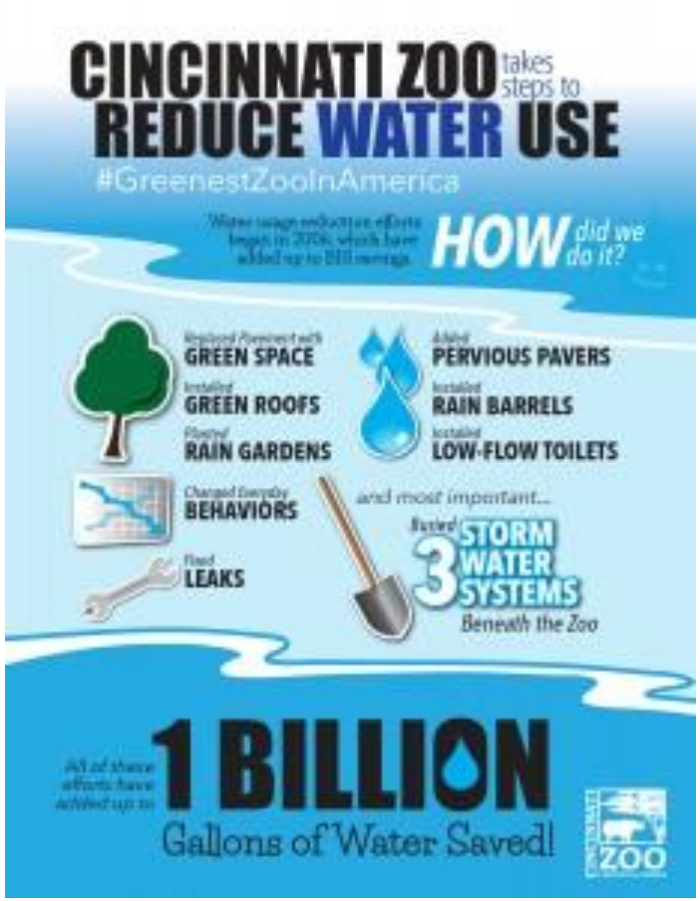
Africa Project:

- Storm water tanks and enhanced turf
- Keeps 13 million gallons of water out of the combined sewer system annually

Main Entry Project:

- Pervious Pavers, Infiltration, Rain Gardens
- Keeps another 1 million gallons of water out of the combined sewer system annually

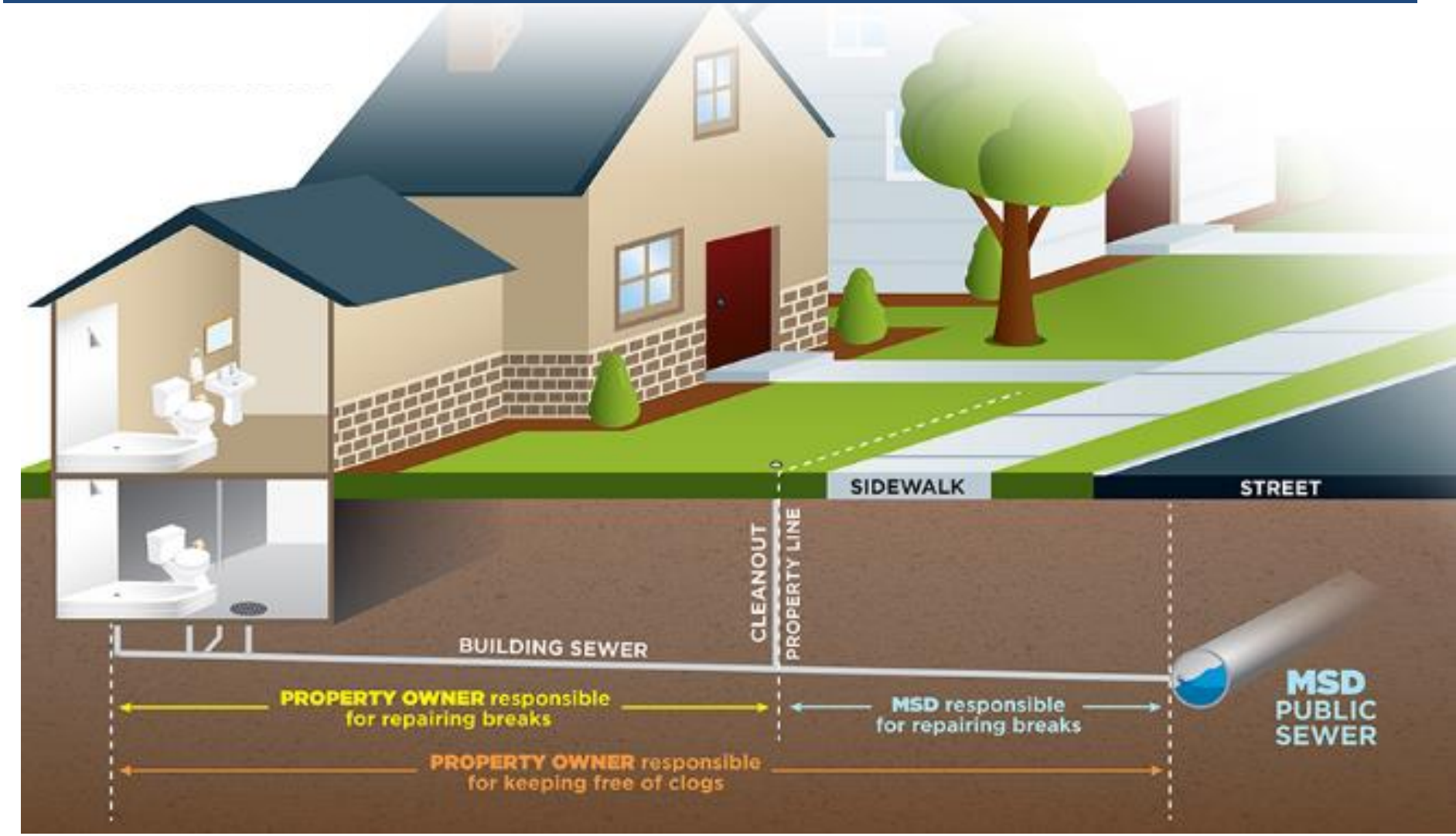
"Diverting water from the sewer system has saved tax payers money by reducing issues caused by flooding, erosion and pollution."



Private Building Sewers

- If you own a building, you also own the building sewer (aka laterals).
- Building sewers extend from the building to the point of connection with the public sewer.
- Property owners own the entire pipe, even the parts that lie under the publicly owned sidewalk and street.

Private Building Sewers



Sewer Backups

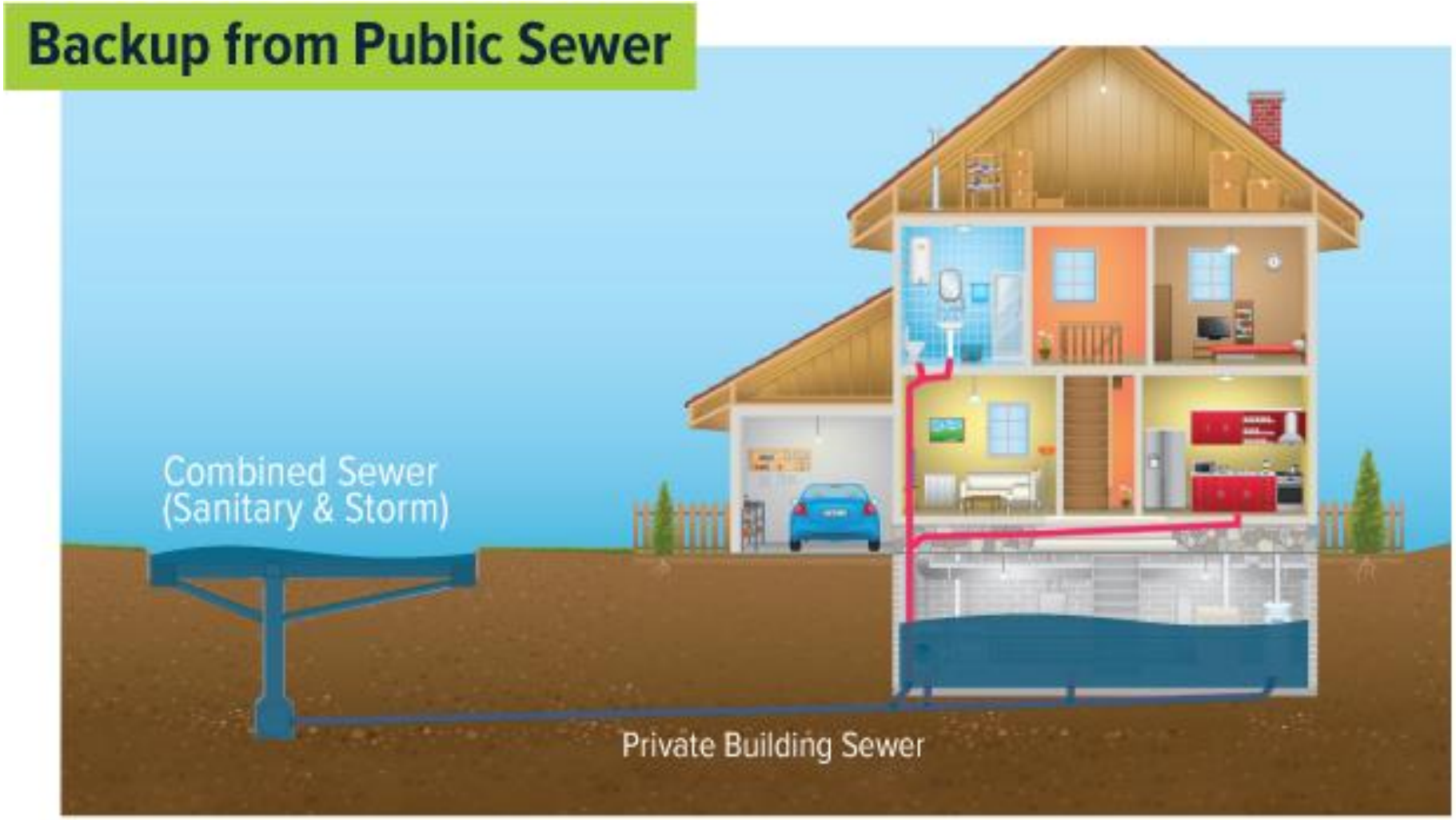
Sewer backups occur when wastewater backs up into properties through a floor drain or plumbing fixtures.

MSD offers a Sewer Backup (SBU) Response Program for customers who have experienced a sewer backup from the public sewer.

CALL (513) 352-4900 or REPORT at sbu.msdgc.org 24/7

- Investigation of backup
- Cleaning services
- Claims reimbursement
- Prevention for recurring backups

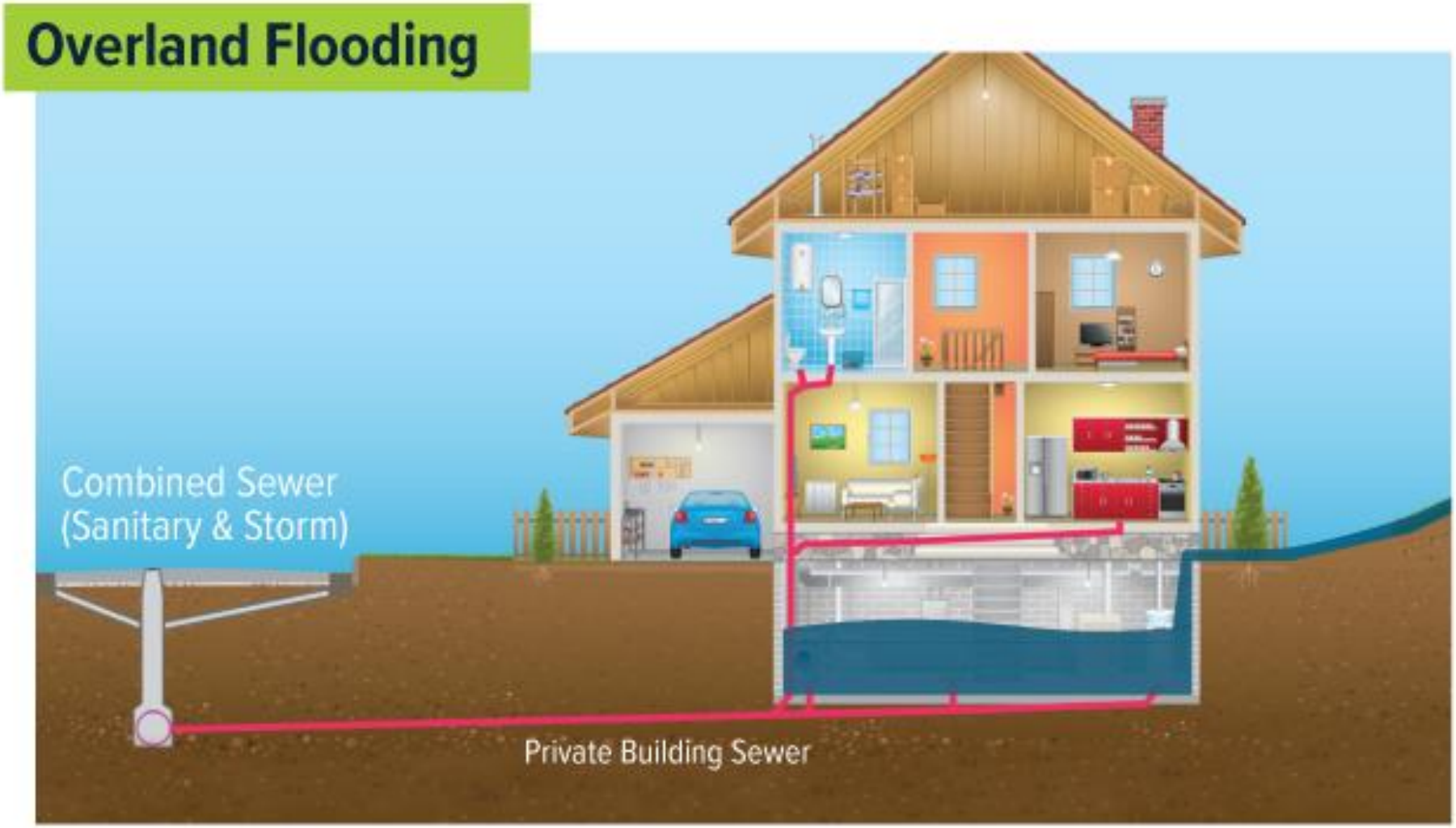
Covered by the Program



NOT Covered


Private Building Sewer or Indoor Plumbing Issues
Combined Sewer
(Sanitary & Storm)
Clog/breaks due to tree
roots, grease, etc.
Private Building Sewer

NOT Covered


Overland Flooding
Combined Sewer
(Sanitary & Storm)
Private Building Sewer

Want to know more?

www.msdgc.org

Twitter: @CincinnatiMSD

Facebook: Metropolitan Sewer District of Greater Cincinnati - MSD

METROPOLITAN SEWER DISTRICT of greater CINCINNATI

Climate Change in Cincinnati

Cincinnati
Climate Risks and Responses

- Not:
  - Sea Level Rise
  - Coastal Storms
  - Droughts
  - Wildfires

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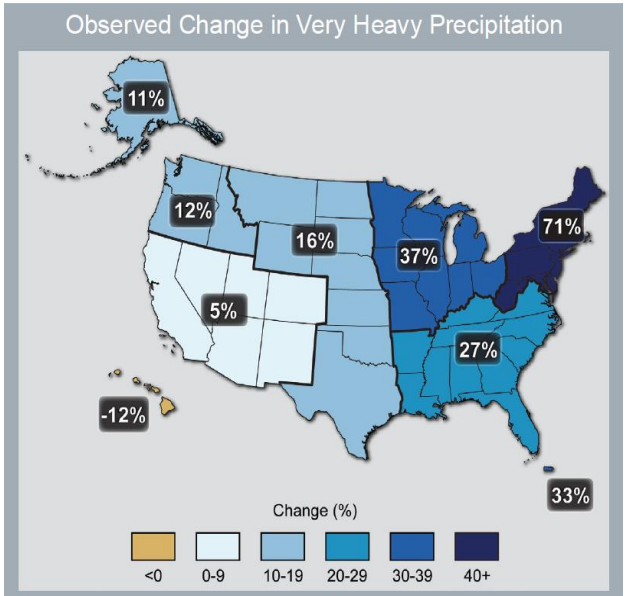
Cincinnati
Climate Risks and Responses

- Flash Floods

Cincinnati
Climate Risks and Responses

- Flash Flood Risk

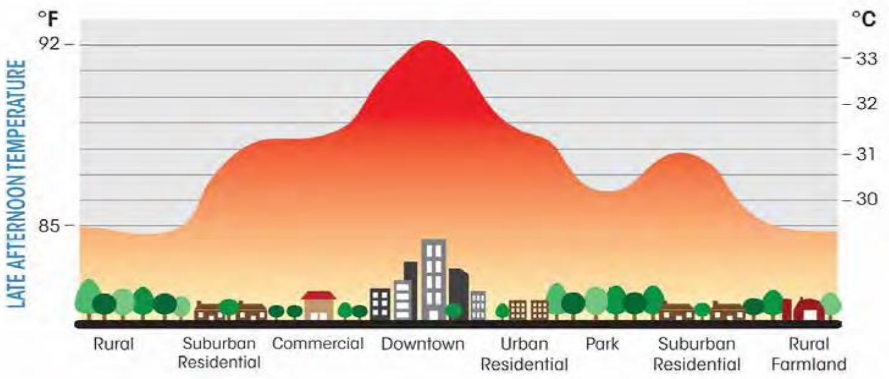


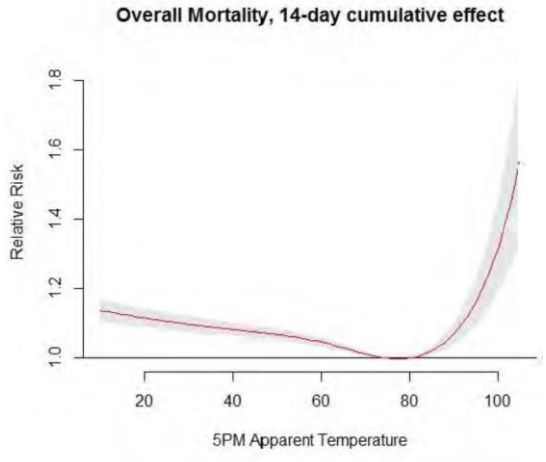
Percent changes in the amount of precipitation falling in very heavy events (the heaviest 1%) from 1958 to 2012 for each region. There is a clear national trend toward a greater amount of precipitation being concentrated in very heavy events, particularly in the Northeast and Midwest. (Figure source: updated from Karl et al. 2009[c]).

- Flash Flood Response
  - Hardening Infrastructure
  - Improving Warning Systems
  - Common Sense Preparations
    - Slope Ground Away from Foundation
    - Service Sump Pumps
    - Basement Storage Off the Floor and Waterproof
  - Financial Reserves

Cincinnati
Climate Risks and Responses

- Heat Wave Risk





- Heat Wave Response
  - Increase Tree Canopy
  - Open Cooling Shelters
  - Create “Caring Network”
  - Require AC in All Homes

Cincinnati
Climate Risks and Responses

- Mud Slide Risks

- Mud Slide Responses
  - Don’t Build on Slopes
  - Retaining Walls
  - Financial Reserves

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Cincinnati
Climate Risks and Responses

- In Migration Risk

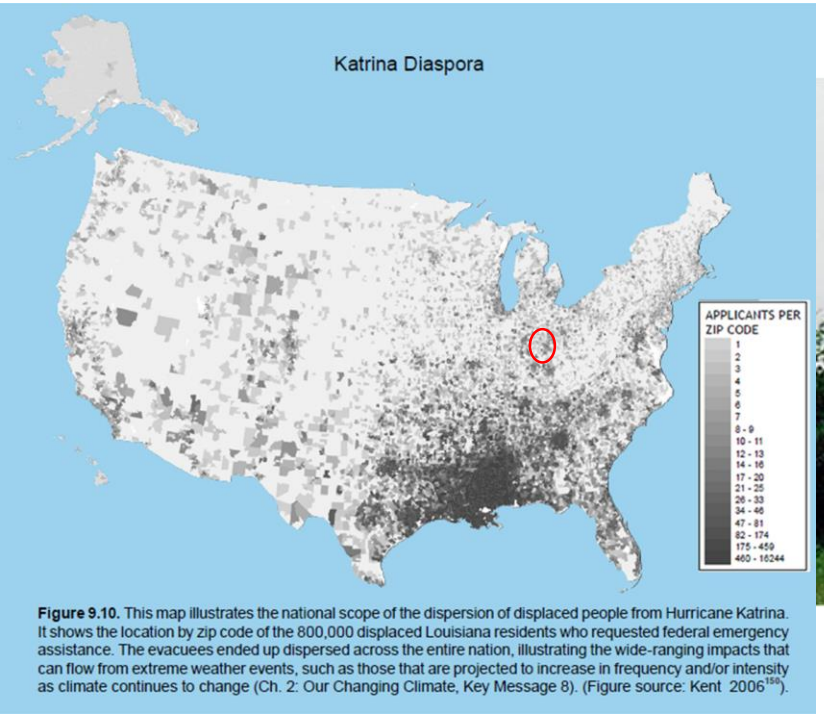
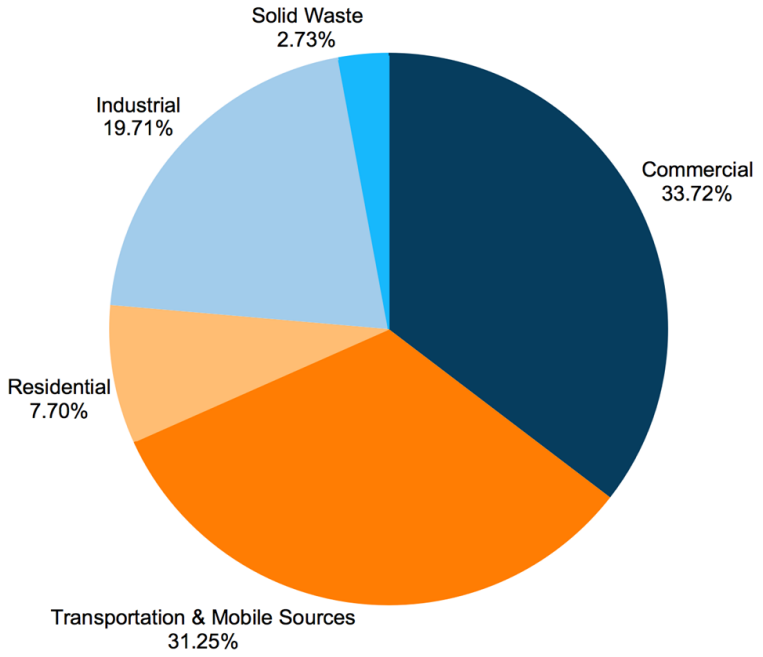


Figure 9.10. This map illustrates the national scope of the dispersion of displaced people from Hurricane Katrina. It shows the location by zip code of the 800,000 displaced Louisiana residents who requested federal emergency assistance. The evacuees ended up dispersed across the entire nation, illustrating the wide-ranging impacts that can flow from extreme weather events, such as those that are projected to increase in frequency and/or intensity as climate continues to change (Ch. 2: Our Changing Climate, Key Message 8). (Figure source: Kent 2006[155]).

- In Migration Response

Eliminating Greenhouse Gas Emissions



-18.4%

Reduction in Community Carbon Emissions since 2006

-36.3%

Reduction in Govt. Carbon Emissions since 2006

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Eliminating Greenhouse Gas Emissions

Goal: 100% Renewable Energy for Buildings

- To Date:
  - 100 MW Power Purchase Agreement
  - Solar on 26 City Buildings
  - Energy Retrofits on All City Buildings
  - Solarize Cincinnati – Installed Solar on 150 homes
  - Aggregation Program – 100% Renewable Energy for 60,000 homes.
  - Reduced Coal from 86% to 47%

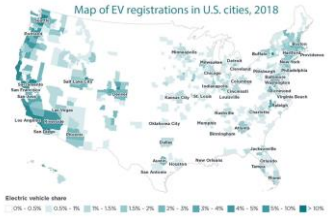
- Going Forward:
  - Large Scale Solar for Businesses
  - Utility Scale Solar for the Grid
  - Phase Out of Coal and Natural Gas

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

Eliminating Greenhouse Gas Emissions

Goal: 100% Renewable Energy for Mobility

- To Date:
  - Free Parking for Electric Vehicles (600 Registered)
  - Multiple New Modes of Travel: Bike Share; Car Share; Ride Share; Scooter; etc.
  - 3 Electric Vehicles in City Fleet
- Going Forward:
  - 20 More EVs in City Fleet by 2020
  - 165 EV Chargers by 2020
  - Regional Funding for Transit by 2020
  - City Fleet 100% Electric by 2035



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Eliminating Greenhouse Gas Emissions

Goal: More People Eating Plant Based & Local Food

- To Date:
  - Revised Zoning to Support Urban Agriculture
  - 40 Food Gardens on City-Owned Land
  - 2 Local Food Hubs
  - Mini-Grants to Promote Local Food
  - 3 Indoor Agriculture Businesses
- Going Forward
  - More Indoor Agriculture
  - More Local and Plant Based Foods
  - More Garden and Urban Farm Sites

Eliminating Greenhouse Gas Emissions

Goal: Zero Waste to Landfill

- To Date:
  - Curbside Recycling with 70% Participation
  - Yard Waste Collection and Composting
  - Food Waste Reduction Campaign
  - Barriers to Composting Eliminated

- Going Forward
  - Waste Reduction Partnership with Chamber of Commerce
  - Create Markets for Reclaimed Feedstocks
  - Establish Anaerobic Digesters for Food Waste

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

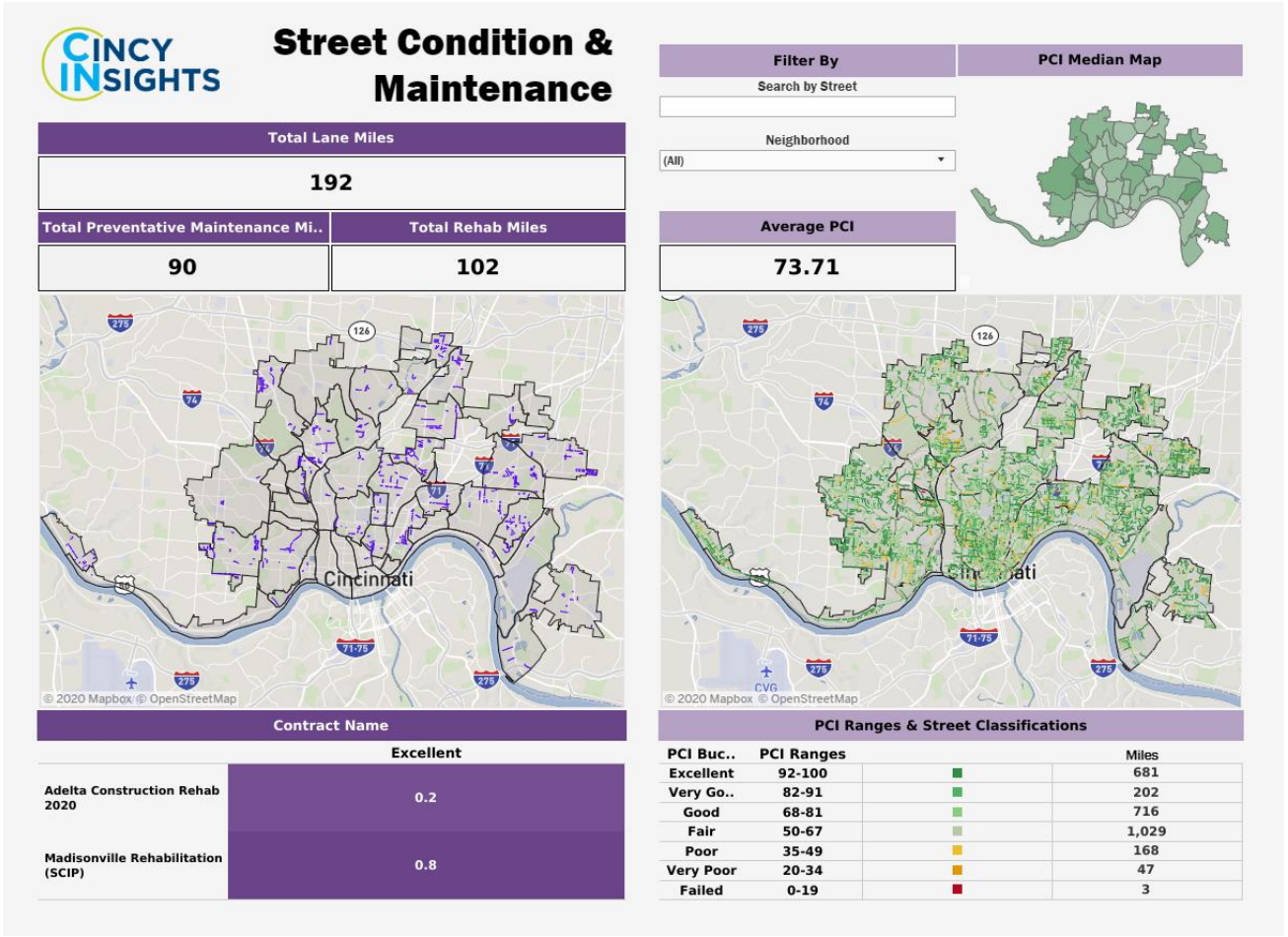
Opportunities for Residents

- **Green Your Lifestyle**: change your diet; plant a garden; walk and bike; install LED bulbs; etc.
- **Volunteer**: many local non-profits have jobs available for volunteers.
- **Study**: the green economy is booming. Prepare for a career doing what you believe in.
- **Advocate**: Make your views known, through public speaking, phone calls, emails, social media, etc.

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

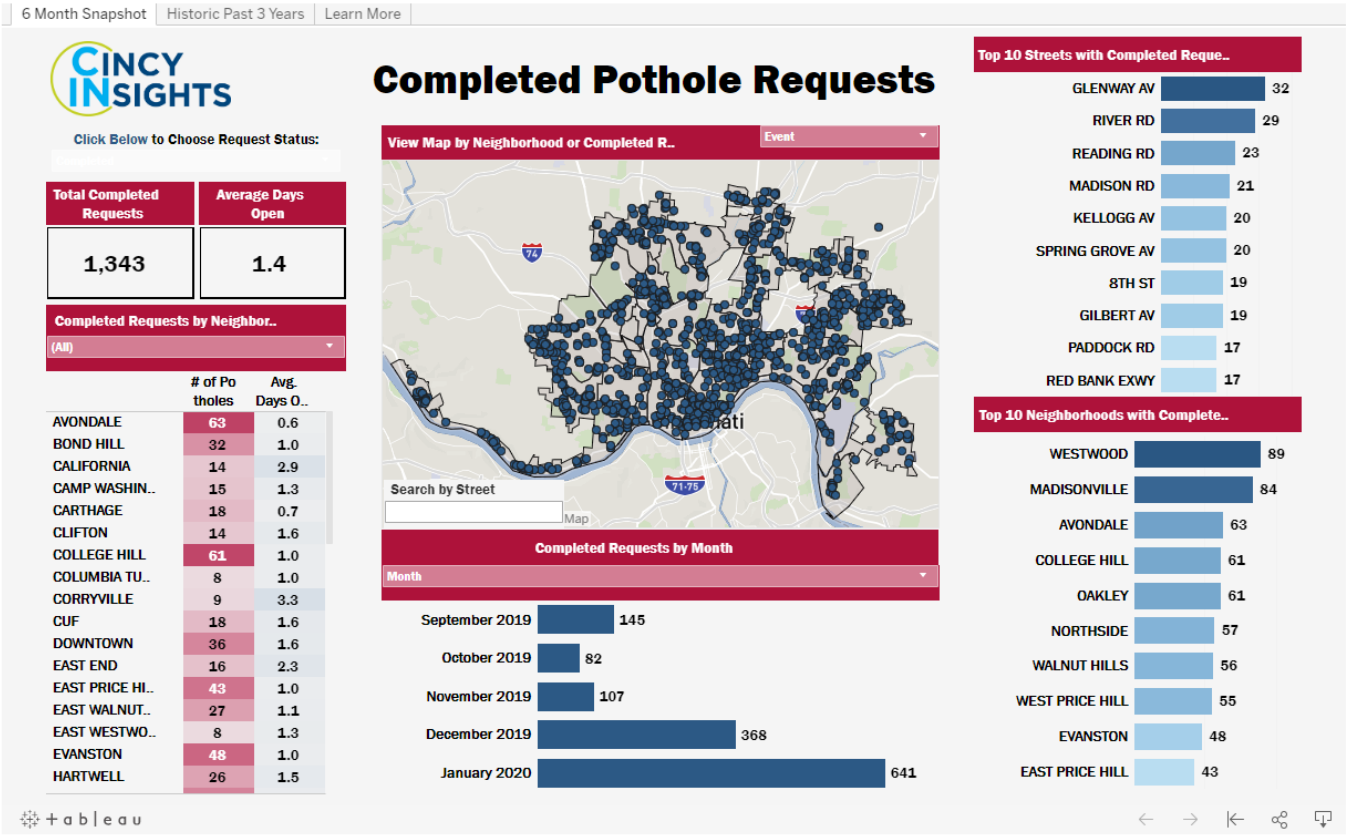
CincyInsights Open Data Additional Tools

INFRASTRUCTURE & CAPITAL PROJECTS



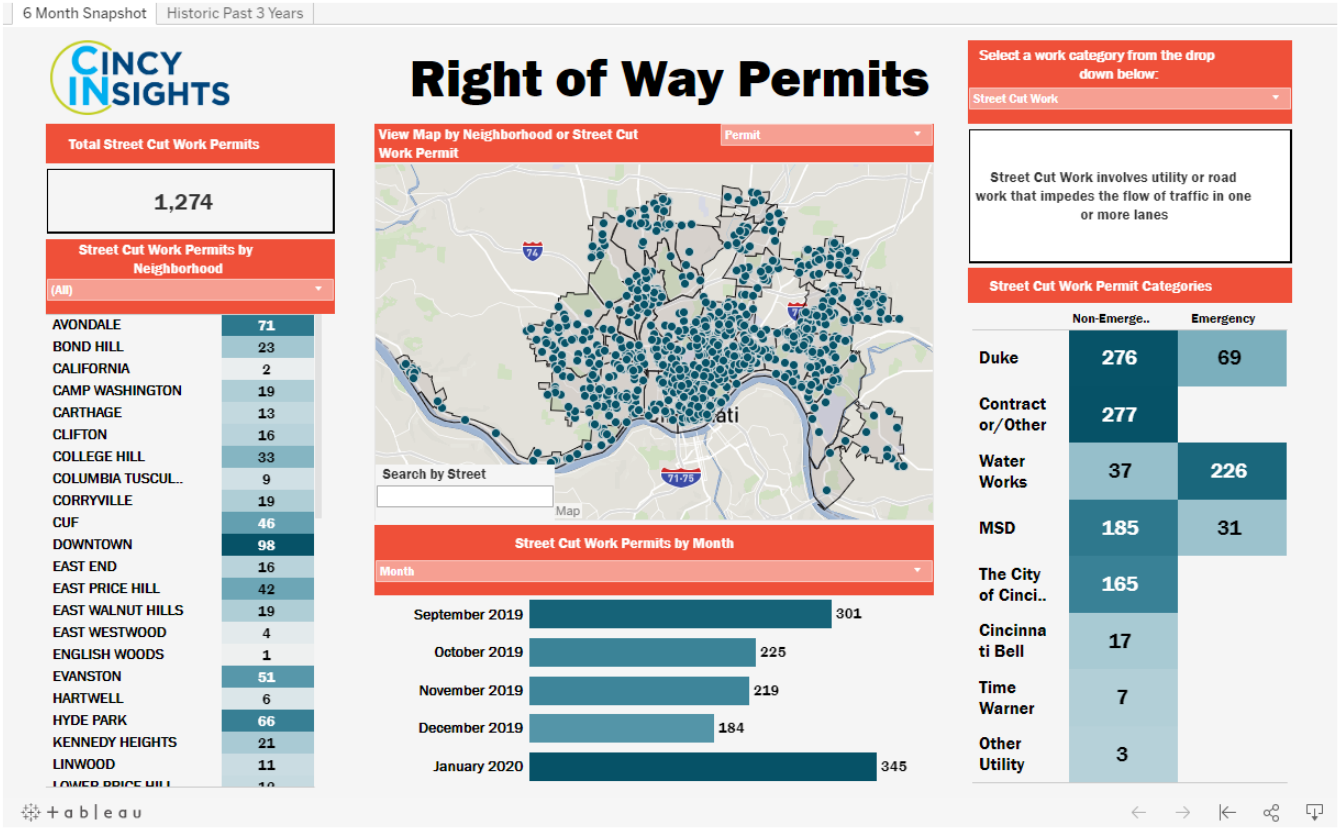
Street Condition & Maintenance

CINCY INSIGHTS



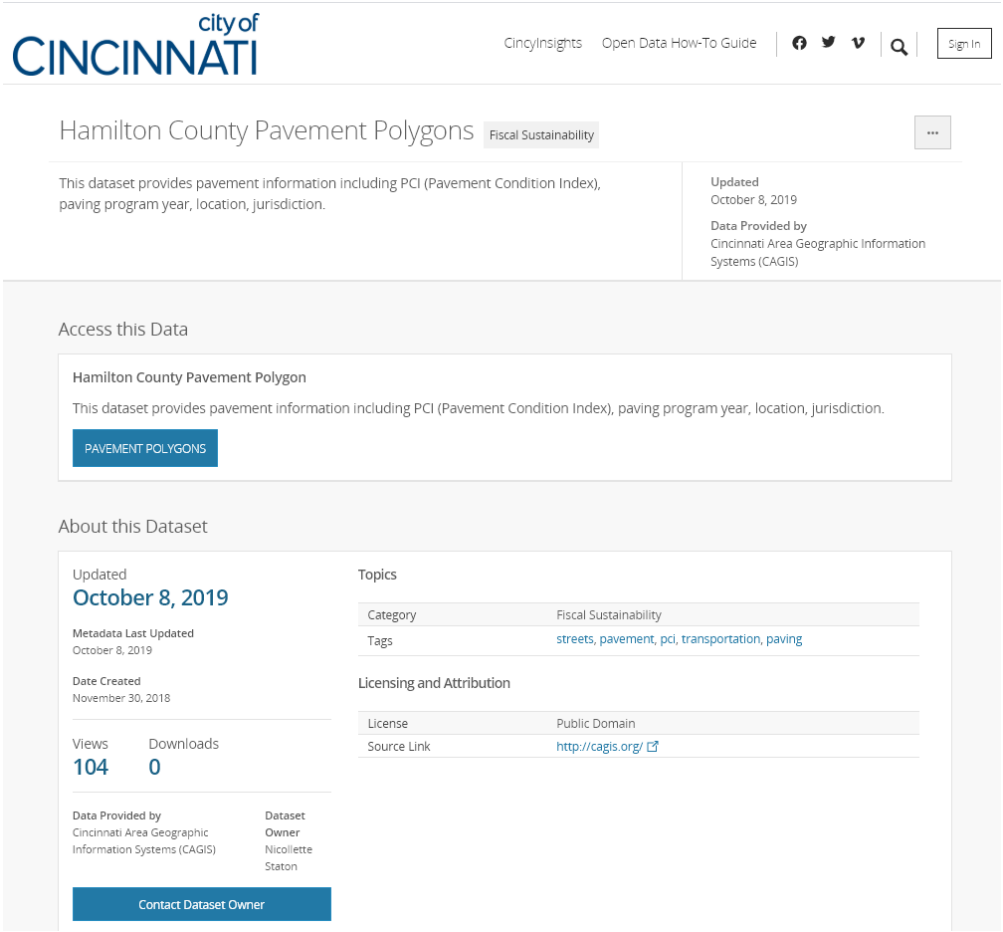
Potholes

CINCY INSIGHTS



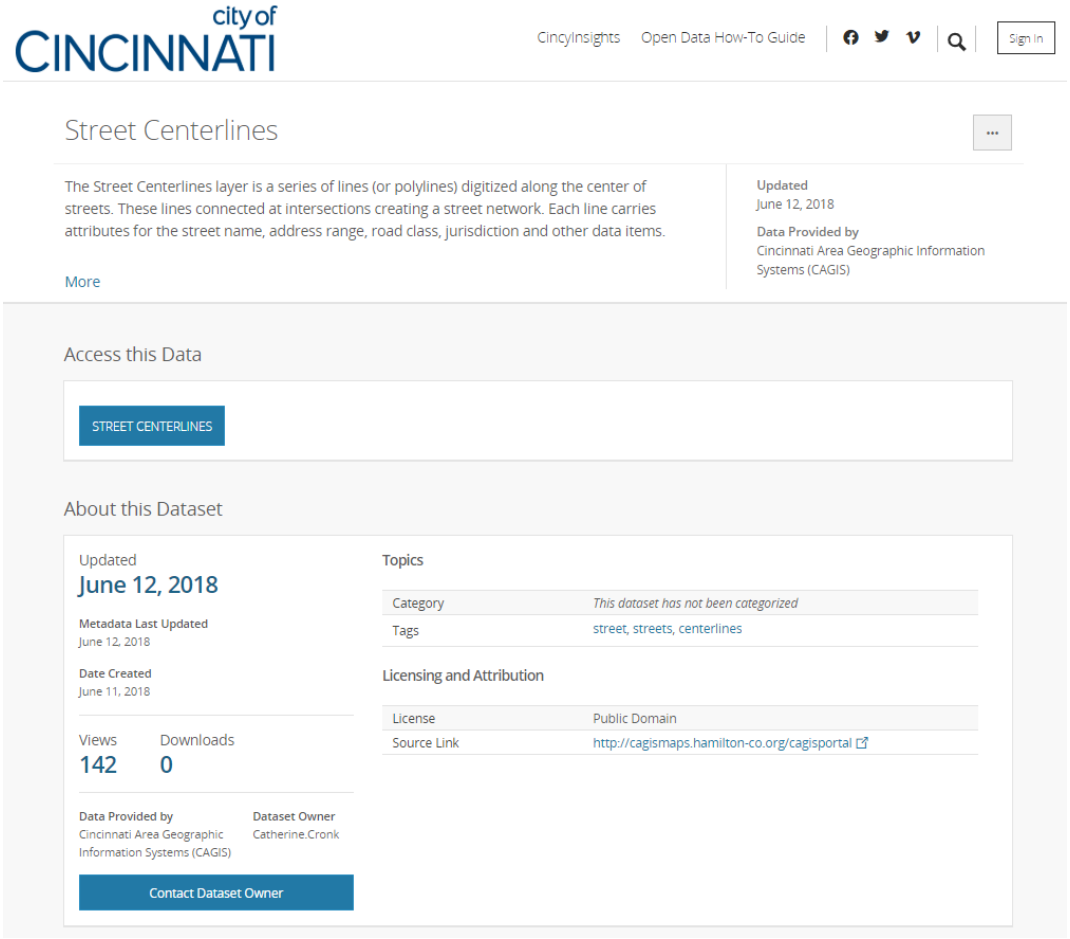
Right of Way Permits

CINCY INSIGHTS



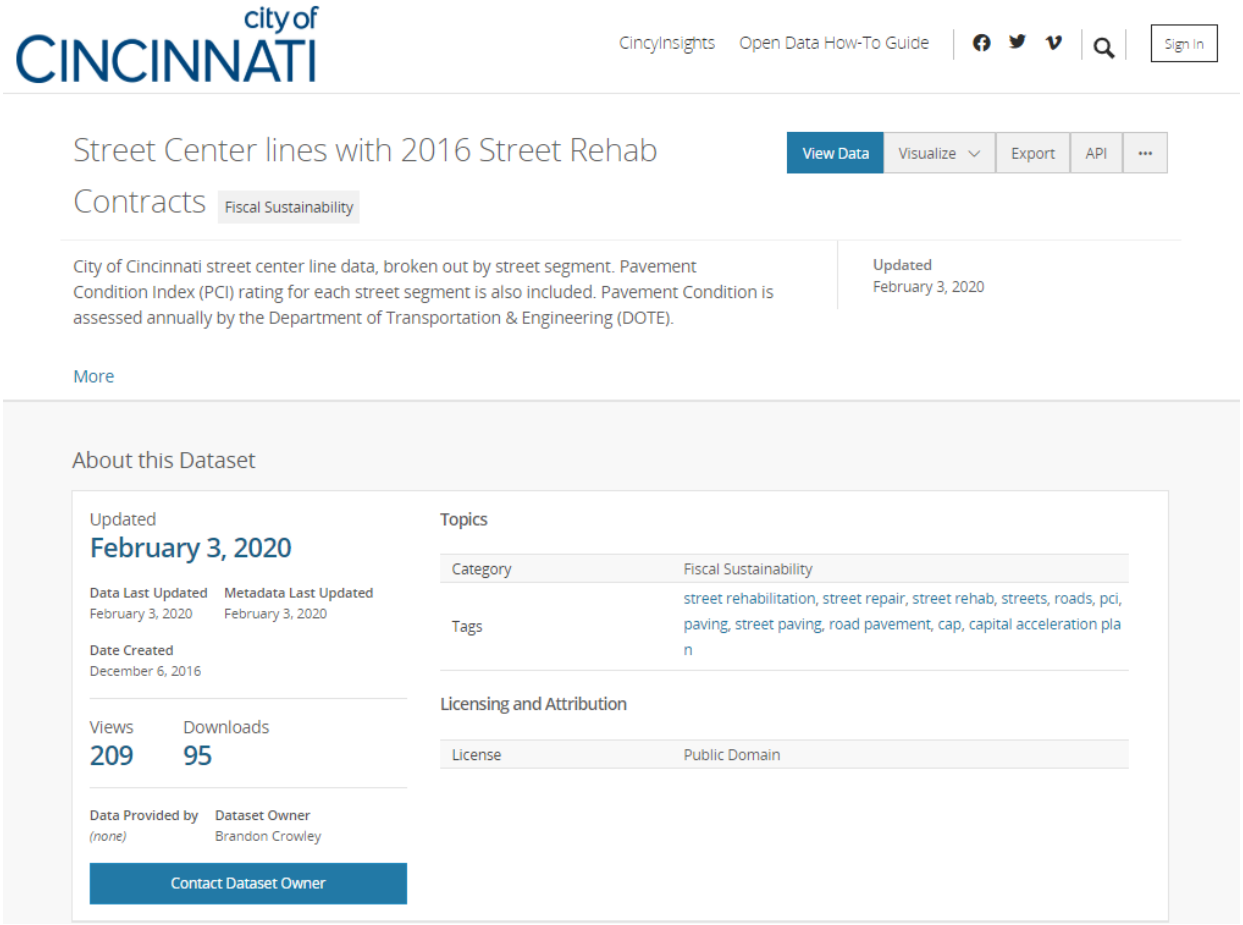
Hamilton County Pavement Polygons

OPEN DATA



Street Centerlines

OPEN DATA



Street Centerlines, 2016 Street Rehab Contracts

OPEN DATA