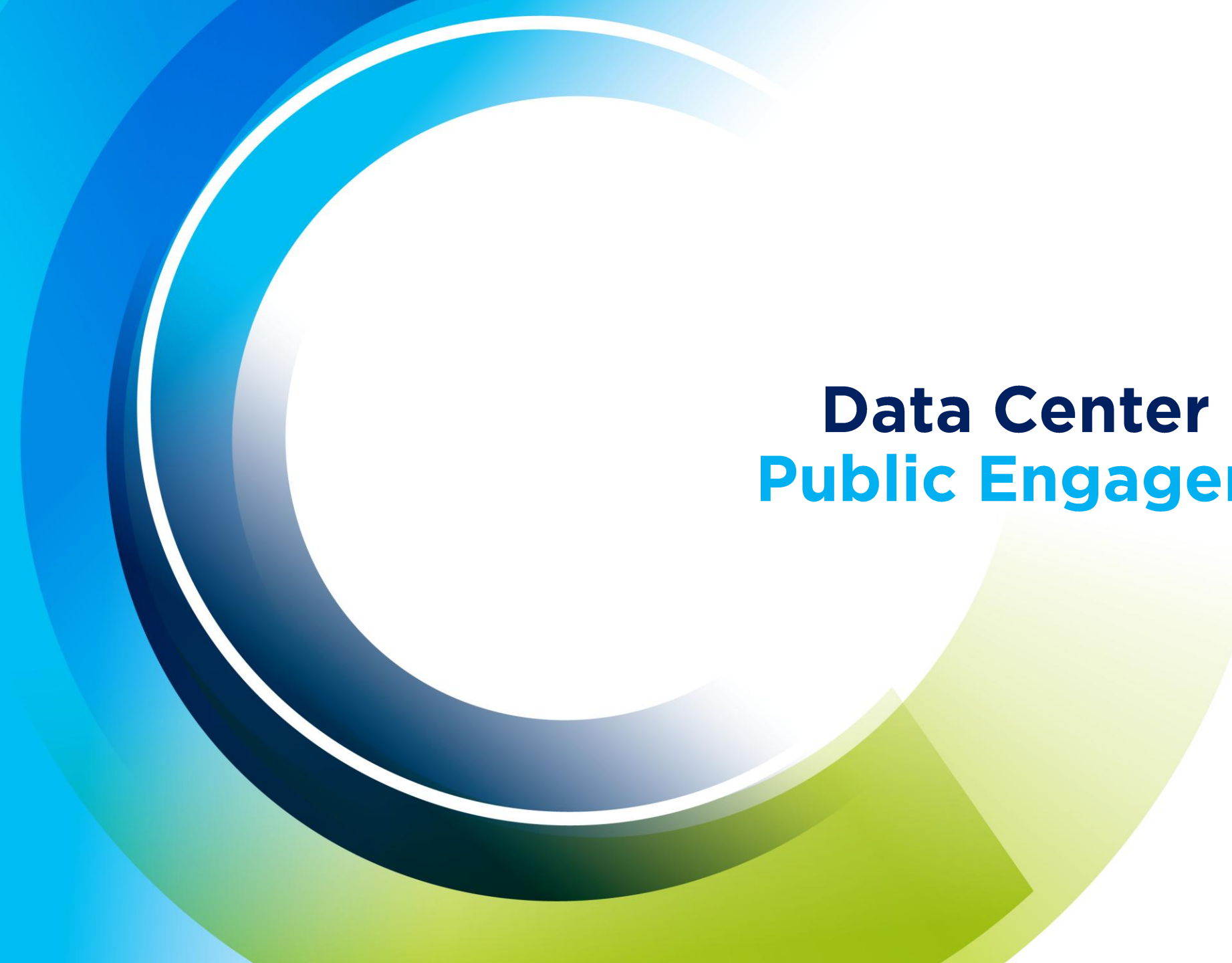




Data Center Zoning Study **Public Engagement Round 1**

Virtual Engagement
October 1, 2026

Purpose of Today's Meeting

PART 1 – Update

- What is the purpose and eventual outcome of the study?
- What have we learned during the study?

PART 2 – Listen

- What do you want to know about data centers?
- What are your primary interests or concerns?
- What do you want to see from the City's data center policy?

Schedule for Today's Meeting

- **Intro**

- Background & Planning [6:05-6:25]

- *Department of City Planning and Engagement, Enterprise Technology Solutions*

- **Breakout Rooms – Presentations with Q&A**

- Data Centers & Water - *Metropolitan Sewer District, Greater Cincinnati Water Works*
- Data Centers & Sustainability - *Office of Environment & Sustainability*
- Session 1 [6:25-6:45]
- Session 2 [6:45-7:05]

- **Breakout Rooms – Listening Sessions** [7:05-7:55]

- **Next Steps** [7:55-8:00]

Meeting Expectations

- Put questions / comments in the chat space
- Stay muted until called on
- Raise hand to speak during breakout sessions
- All questions will be recorded. An FAQ will be made available on the website after the engagement events.

Data Center Basics

- Building that stores and runs computers
- Support everyday activities that use technology
- Train and run Artificial Intelligence (AI)



Financial Transactions



Streaming



Social Media



Business Operations



Hosting Websites

- Basic components – server storage, cooling, constant power, security

Background of Interim Development Control (IDC) Overlay District No. 89 “Data Centers”

- **February 2026** – IDC No. 89 “Data Centers” established
- **April 2026** – IDC No. 89 “Data Centers” extended for an additional 9 months
- **Purpose of IDC No. 89 “Data Centers”**
 - Define “Data Center” in the Zoning Code
 - Determine zoning districts & development regulations
 - Make additional policy recommendations as appropriate

Zoning Study Process



Defining Data Centers

What are data centers? What do they do?

Facility or portion of a facility used to house computer systems

Remote storage, processing, and distribution of data

Service to persons other than the company operating the data center

Not server rooms or IT infrastructure that is accessory to principal use

Exceptions / Clarifications

Accessory Structures / Elements

Water Cooling and Storage

Air Handlers

Utility Substations

Backup Batteries & Generators

Examples

Server Farms

Cloud Computing

Blockchain Transaction Processing

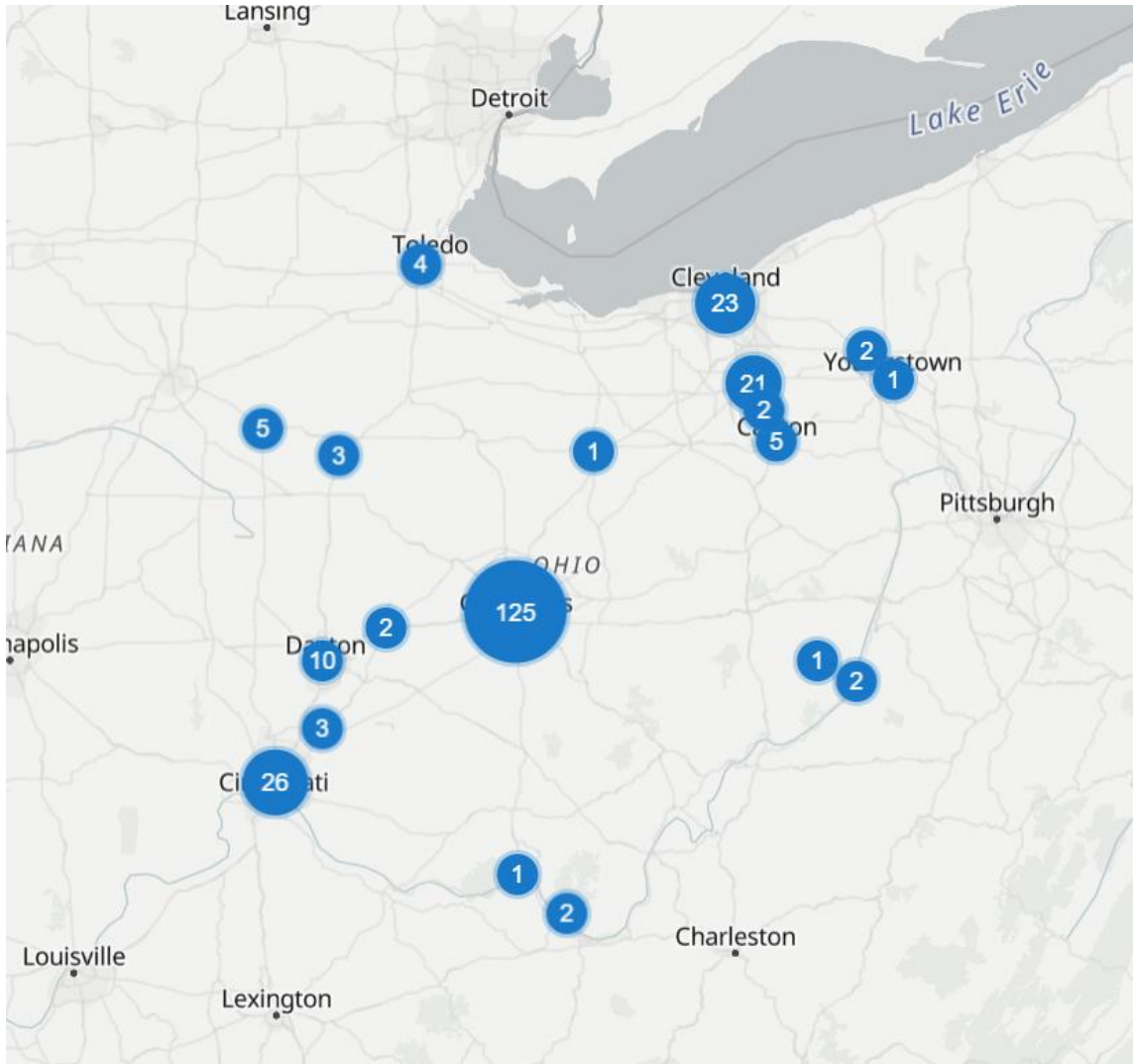
AI / Large-language Models

Cryptocurrency Mining

Telecommunications Switching Hubs

Colocation

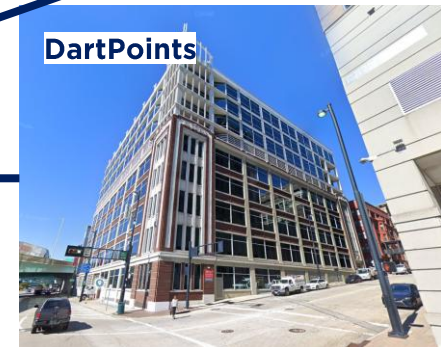
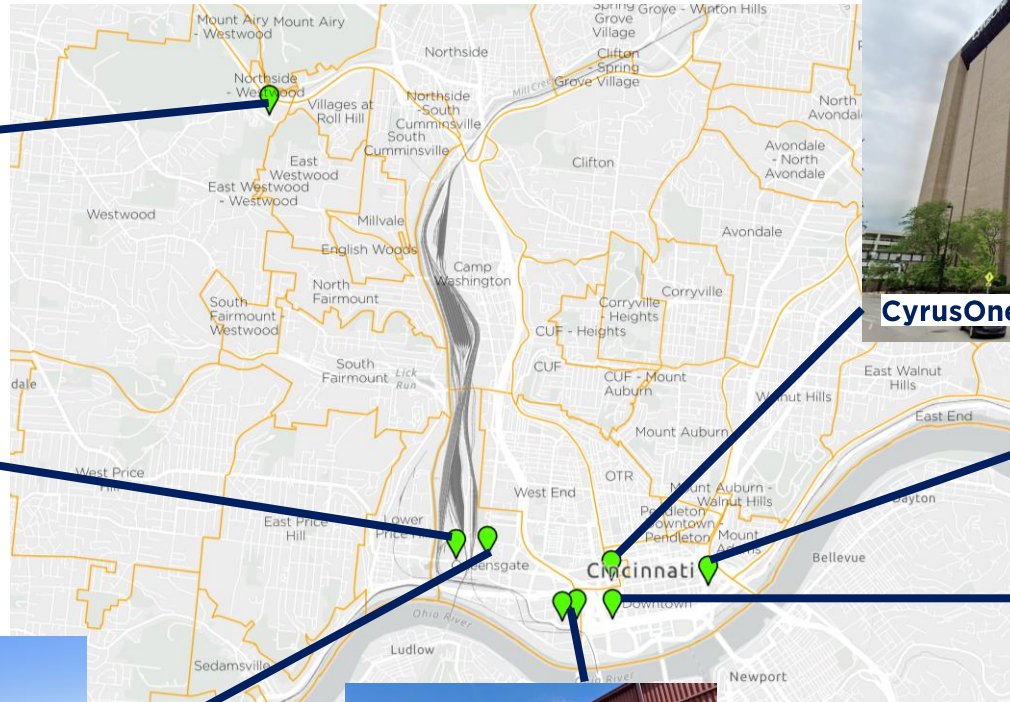
Data Centers in Cincinnati



- **12,259 worldwide**
- **4,767 in the United States**
(39% of world's total)
- **240 in Ohio**
(5% of US total)

Data Centers in Cincinnati

- **28** in Cincinnati's market (12% of Ohio, 0.5% of US total)
 - 8 in City of Cincinnati



Classifying Data Centers

1 MEGAWATT CAN POWER...



1.2 MONTHS OF POWER
FOR AN AVERAGE U.S. HOME



2 REFRIGERATORS
RUN FOR A YEAR



3,600 MILES DRIVEN BY
AN ELECTRIC CAR



2 60-WATT LIGHT BULBS
RUN NONSTOP FOR A YEAR

Classifying Data Centers

Small (<5 MW)

- Small footprint
- Local service delivery
- Serves the operating company



Verizon facility in Cincinnati, OH
Total capacity <1 MW

Medium (5-50 MW)

- Multi-tenant building/campus
- Colocation services
- Large-load users over 20 MW



CyrusOne in Cincinnati, OH
Total capacity <14 MW

Large/Hyperscale (100+ MW)

- Campus-style
- At least 10,000 sq. ft.
- Can be 1M+ sq. ft.



Prometheus in New Albany, OH
Total capacity 1 GW (1,000 MW)

Regulating Data Centers (Zoning)

- **Siting Data Centers** – Data centers look for...
 - Dense power grid
 - Water availability
 - Proximity to large users (universities, hospitals, major companies, etc.)

- **Land Use Permission Options**

Where could data centers be built?

- Permitted By-Right
- Conditional Use
- Planned Development

Regulating Data Centers (Zoning)

- **Development Regulations**

How could data centers look?

- Buffering from schools, daycares, hospitals, residential uses, parks, etc.
- Fencing and screening of equipment
- Maximum height

Other considerations

- No testing of generators outside daytime hours
- Pre- and post-construction noise studies
- Decommissioning plans (What happens if the data center closes?)
- Minimize off-site lighting

Q&A – Data Center Basics & Zoning

- Moderator will ask questions from pre-registration and from the chat
- Put more questions in the chat as they come up
- Opportunity for more discussion during listening sessions

Questions from Registration:

1. How do data centers serve the community?
2. Is the City expecting interest from hyperscale data centers? Are data centers reaching out to develop?
3. Are there alternative approaches being considered that are less resource intensive?
4. How can the City limit noise pollution, especially around residential areas?

Department Presentations

- Room 1 – Water then OES
- Room 2 – OES then Water
- Presentation then Q&A
 - Questions from registration
 - Put additional questions in the chat



Data Centers & Water

Greater Cincinnati Water Works &
Metropolitan Sewer District

Overview of Greater Cincinnati Water Cycle

- **GCWW – Greater Cincinnati Water Works**

- Supplier and Wholesaler of High-Quality Potable Water for household and commercial and industrial uses.



- **MSD – Metropolitan Sewer District**

- Wastewater Collection and Treatment of most of that water that GCWW distributes.



Greater Cincinnati Water Works

Map of Service Area



A Service of The City of Cincinnati

GREATER CINCINNATI
WATER WORKS

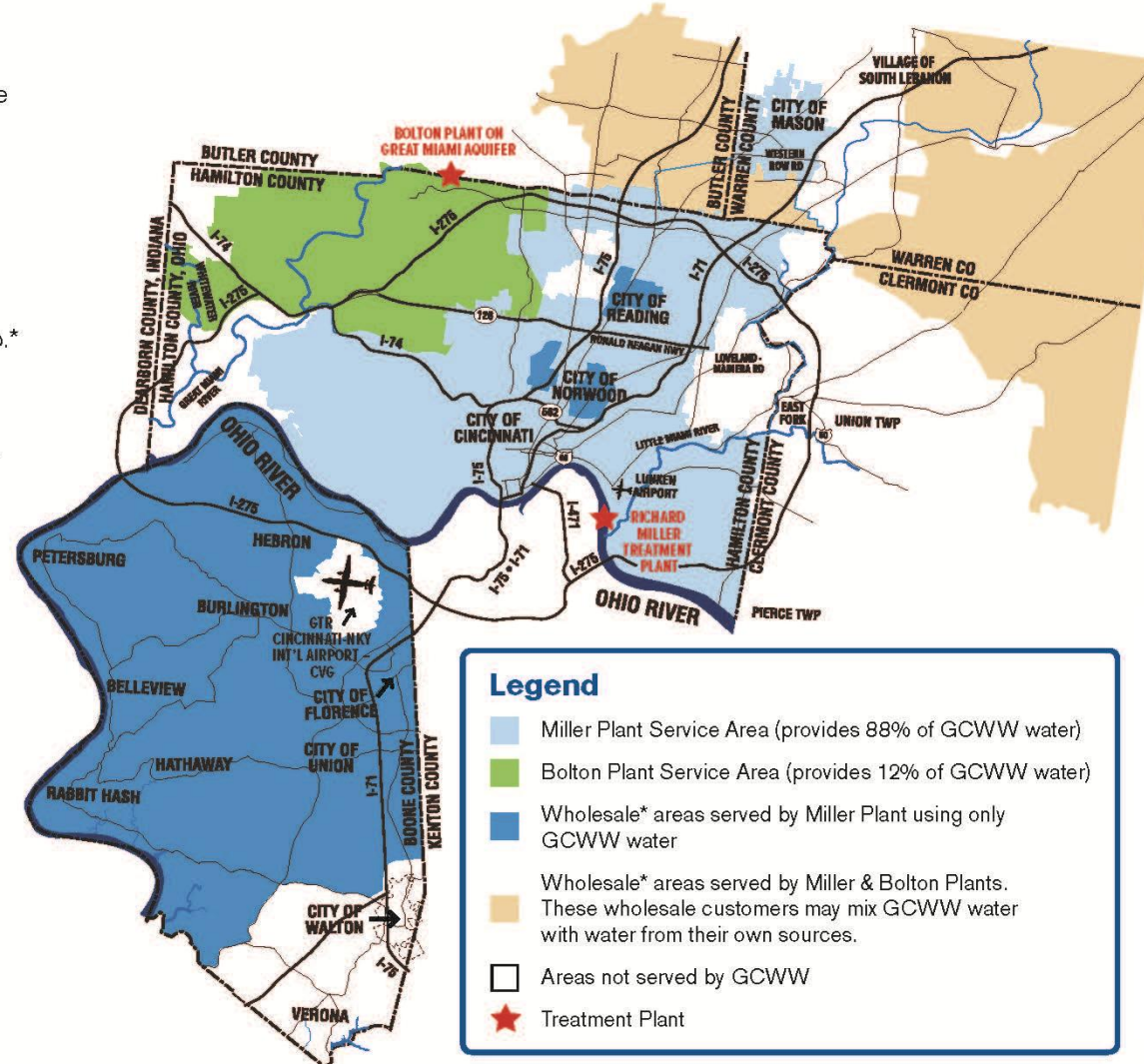
Miller Plant Service Area

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

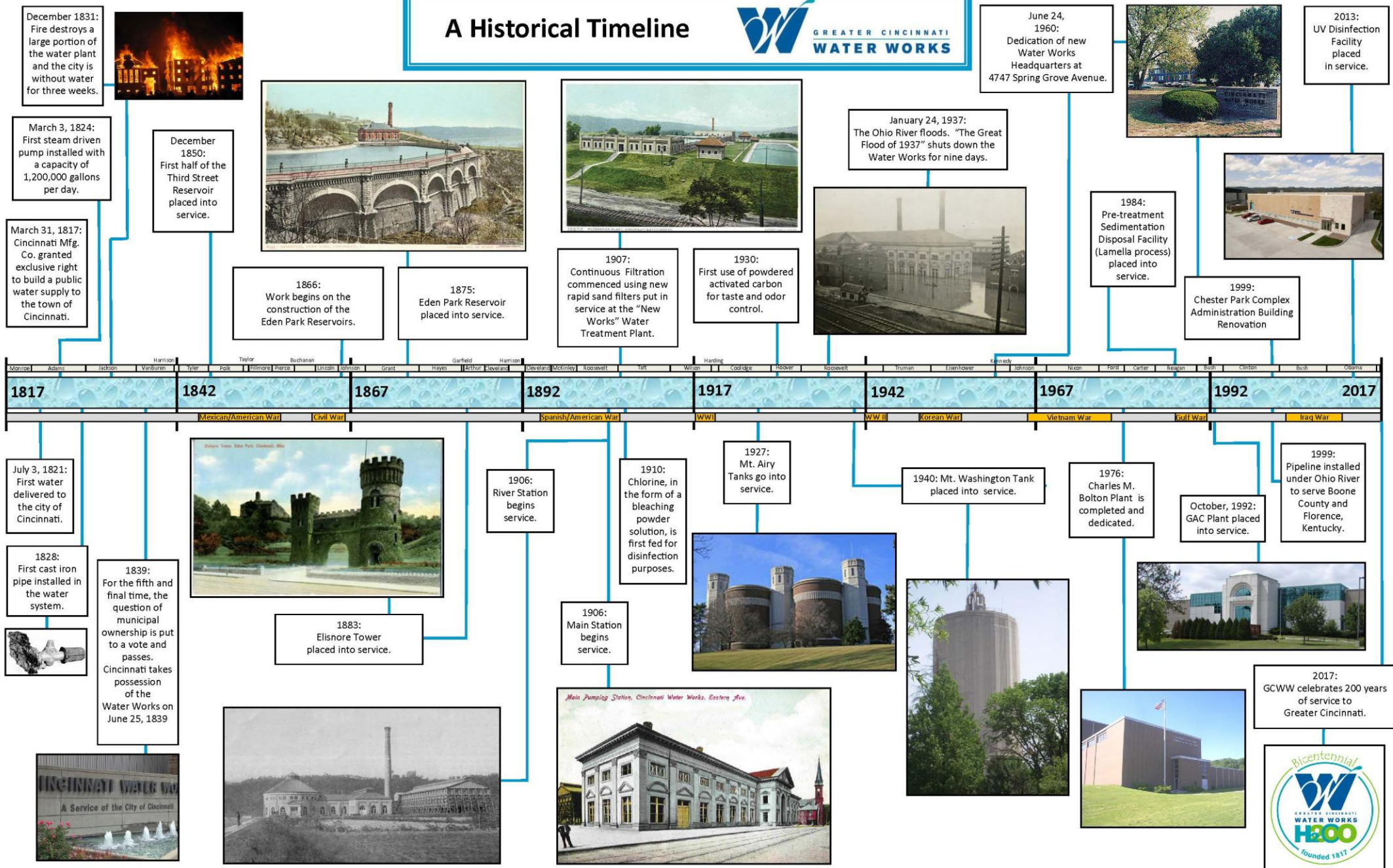
Bolton Plant Service Area

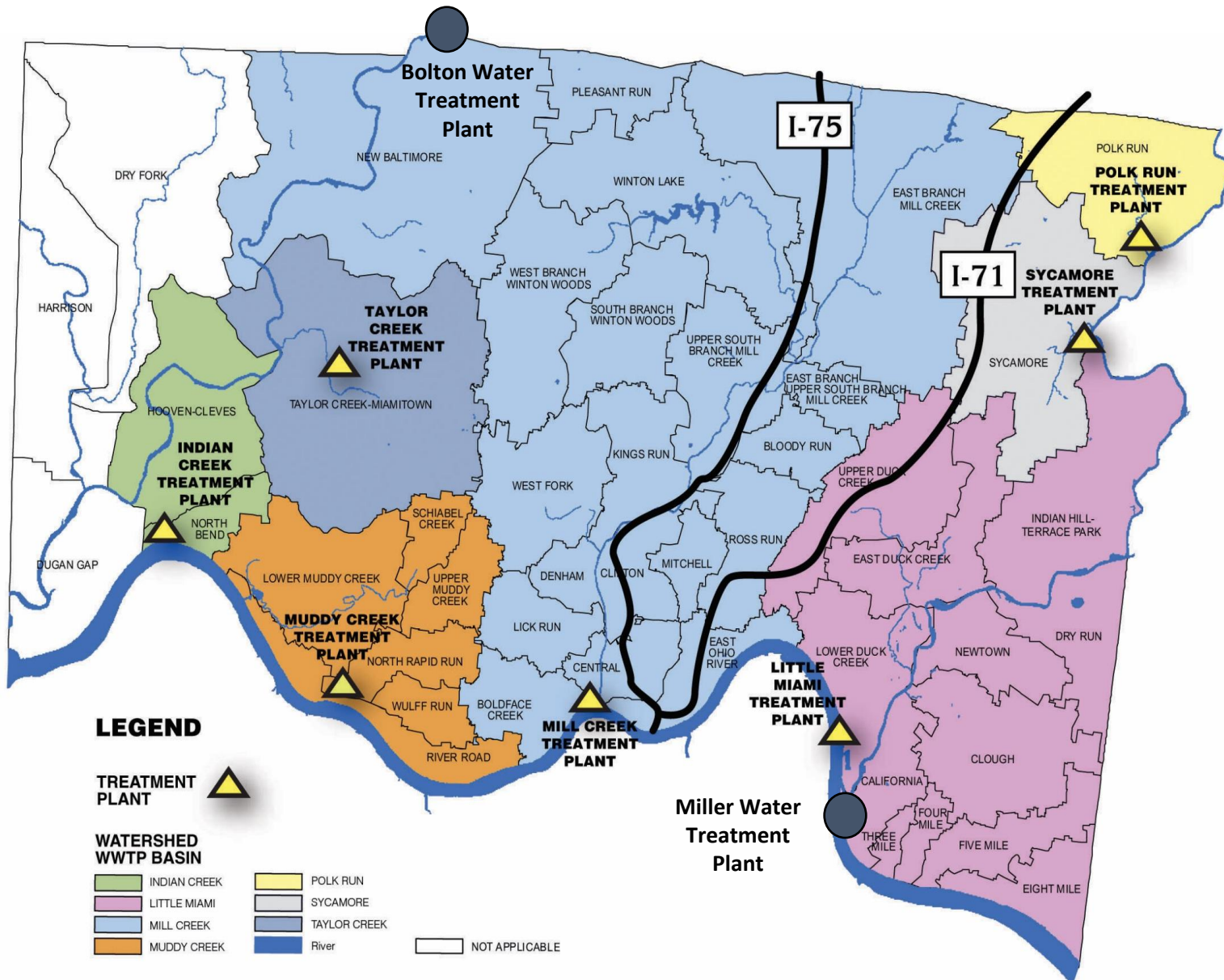
Blue Jay	Mt. Healthy*
Colerain Twp.	New Burlington
College Hill*	North College Hill
Crosby Twp.	Northgate
Dent*	Pleasant Run
Finneytown*	Springfield Twp.
Forest Park*	Venice Gardens
Miamitown	White Oak*
Monfort Heights*	White Water Twp.

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



A Historical Timeline





MSD treats 185 million gallons of wastewater a day

MSD maintains more than 3,000 miles of sewer pipe

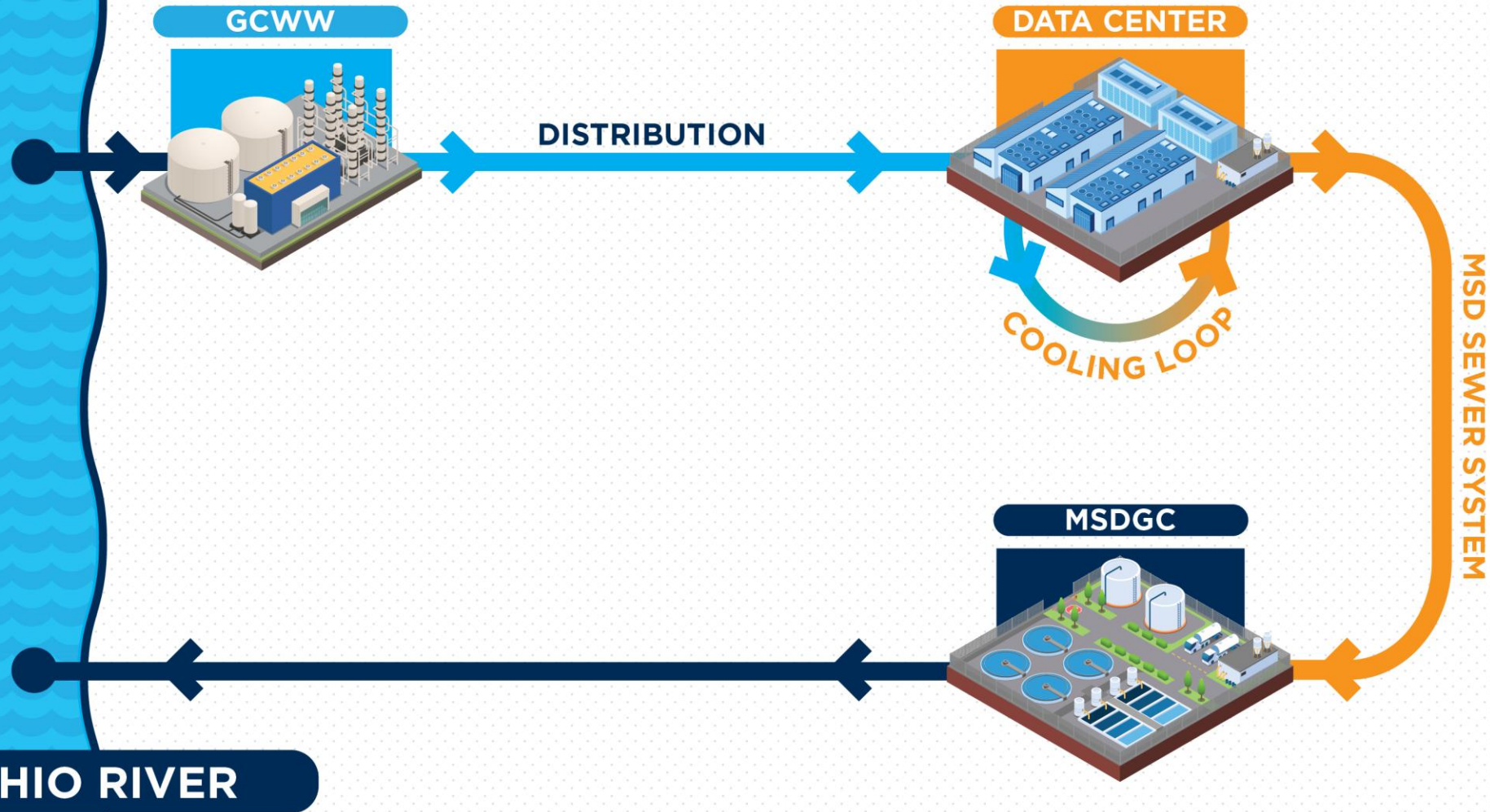


MSD has 9 treatment plants and other assets



MSD serves >225,000 residential, commercial and industrial customers

DATA CENTER WATER CYCLE



Agenda

- Initial GCWW and MSD service requests
- MSD's ongoing regulatory control
- Alternative water source potential and siting considerations

GCWW
Director's
Office

Divisions:



Sections:



Engineering Process for Developments: (Case by case basis)

- Water Availability Request (GCWW website)
 - Submitted by Approved Developer's Representative
- Understanding Development Water Needs
- Utilizing GCWW Hydraulic Model to Evaluate Water Needs
 - Normal use + Fire Flow
- Assess potential gaps in infrastructure
- Coordinate with Developer

GREATER CINCINNATI WATER WORKS



BUSINESSES | RESIDENTS | VISITORS | SERVICES | GOVERNMENT | HELP |

Translate

GREATER CINCINNATI WATER WORKS

Connect With GCWW:

GCWW / Construction Projects



BUSINESSES | RESIDENTS | VISITORS | SERVICES | GOVERNMENT | HELP |

Translate

GCWW / Construction Projects / FORMS & SPECIFICATIONS

GCWW MENU

- Leaks and Breaks
- Set Up a Payment Plan
- Special Event Requests
- Moving or Selling Your Property
- Public Records Requests
- News
- Rate Updates / Service Charges
- Boil Water Advisories
- Water Quality and Treatment
- Pay Your Bill / LOG IN
- Construction Projects**
- Contact Us
- GCWW Job Opportunities
- Reducing Your Meter Size
- Backflow Prevention Program
- About
- Assistance Programs
- Billing Information
- Lead Awareness

Forms & Specifications

- [Water Service Branch Fees & Procedures - 2026](#)
- [Certified Plumbers List](#)
- [Water Service Branch and Meter Application - Domestic/Irrigation Application](#)
- [Water Service Branch and Meter Application - Fire Application](#)
- [Large Branch Sample Drawing](#)
- [Blank Flow Test Form](#)
- [Laws, Ordinances, Rules and Regulations](#)
- [Standard Drawings \(Black and White\)](#)
- [Bond Form - Certified Person](#)
- [Bond Form - Certified Tapper](#)
- [Bond Form - Contractor](#)
- [Bond Form - Developer](#)
- [Bond Form - Temporary Water](#)
- [Branch Inspection Request](#)
- [FOD Form-Application for Discontinuance of Service Branch](#)
- [City Supplement to ODOT Construction and Material specifications 2023](#)
- [Development Plan Review Checklist](#)
- [Flowable Fill Specifications](#)
- [GCWW Building Permit Review Application](#)
- [How to Measure Branches in a Cul-de-sac](#)
- [Preliminary Application Form - Cincinnati](#)
- [Preliminary Application Form - Hamilton County](#)
- [Preliminary Application Form - Mason](#)
- [Rainwater Harvesting Specifications](#)
- [Temporary Water Use Permit](#)
- [Water Main Easement Certificate Of Title Form](#)
- [Water Service Branch Application Checklist](#)
- [Water Availability Request Form - New/Small or Large Residential/Commercial Development](#)
- [Water Availability for Domestic & Fire Flow Review for 1, 2, 3 Family & Small Commercial Form](#)

Businesses

Residents

Services

Government

How would a Data Center Ask MSD for Sewer Service?

- **Sewer Service Request Required**
 - Request for Availability of Sewer Service through MSD Development Services
- **Flow Information Needed**
 - Project details: proposed use (e.g., data center), building square footage, and anticipated water usage
- **MSD Technical Review**
 - GIS data, sewer records, and hydraulic modeling
 - Reviews typically take 2-4+ weeks.
- **Formal Determination Issued**
 - Approval, denial, or conditional approval letter with supporting explanation
 - Follow up with developer & next steps

Ongoing Regulations Related to Data Center Discharges to POTWs

- **Water Quality**

- OEPA Authorized Pretreatment Program
- Permit discharges based upon:
 - Categorical requirements
 - Local Limits specific to NPDES permit
 - Passthrough and Inhibition

- **Water Quantity**

- Ensure sewer capacity to ensure no Sanitary Sewer Overflows, Combined Sewer Overflows or Sewer Backups
- Regulated through MSD Rules and Regulations

What is MSD concerned about?

- **Water Quality and Quantity**

- **Construction and startup water discharges (passivation of pipes)**

- Most impactful to biological treatment systems
 - Can contain chemicals that inhibit biological function of POTW
 - Can contain metals
 - Can contain excess nutrients

- **Blowdown and Operations**

- Less impactful to biological treatment systems
 - Can contain chemicals that inhibit biological function of POTW
 - Can contain metals
 - Can contain excess nutrients

What is MSD doing to prepare?

- Learning from other places with Data Centers
 - WRF Data Center Forum
 - NACWA Data Center Workshop
- Inventory
- Sampling
- Timing and characterizing blow down processes
- Examining permit structure and Rules and Regulations for additional control language if needed

Water Reuse or Recycled Water

- **What is recycled water?**

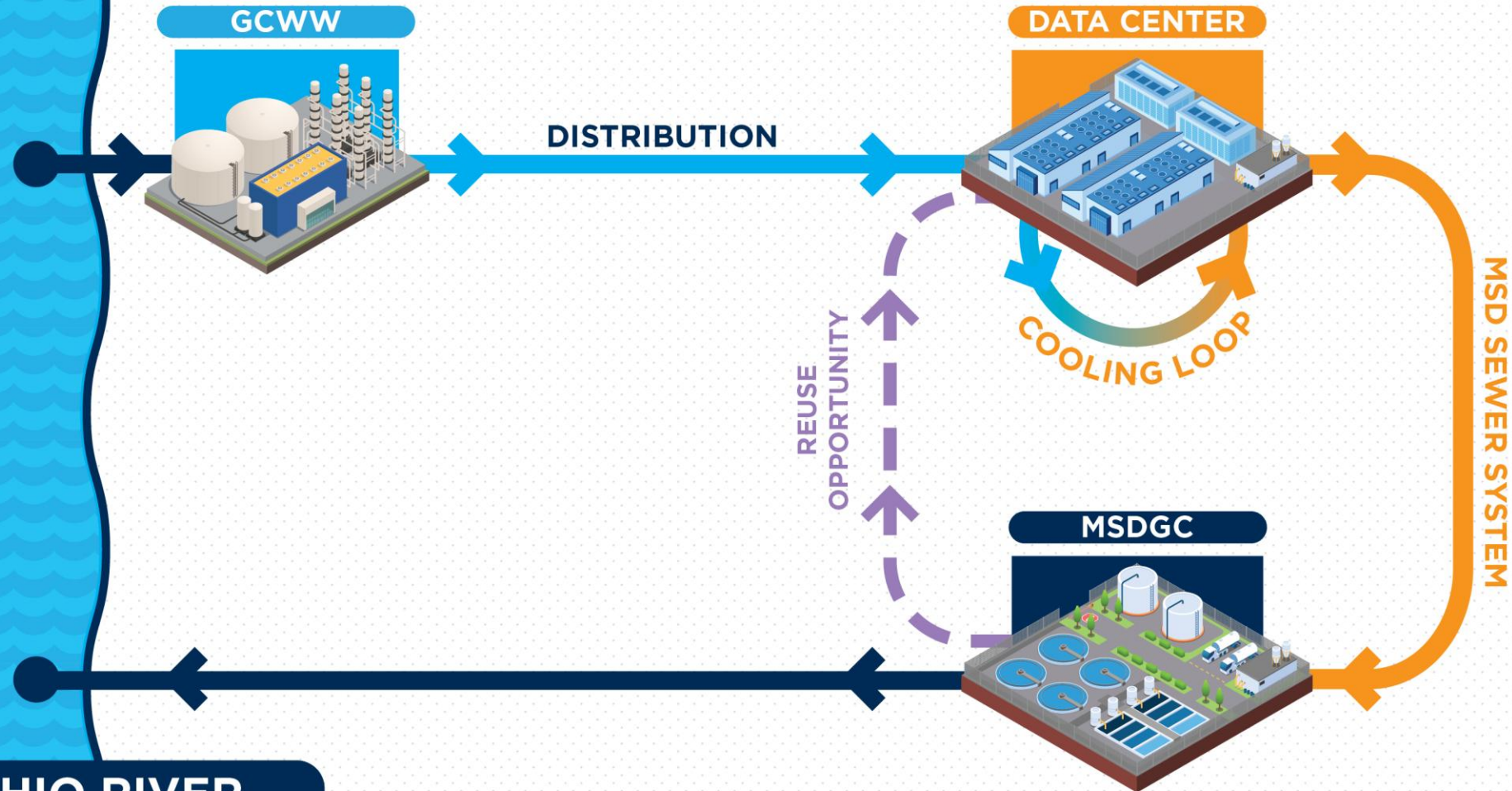
- Effluent from a wastewater reclamation facility that would otherwise be surface discharged to a water body.
- Captured stormwater on site to be reused on site without discharge to the combined sewer system or storm sewer.
- In Greater Cincinnati, these discharges (when not reused) are regulated by NPDES permits with varying discharge limits.

- **Why reuse water?**

- Places less demand on freshwater resources like surface or ground water.
- Meet non-potable water demand at a lower cost than drinking water supply.



DATA CENTER WATER CYCLE



Siting

- Many municipalities site data centers and other industry that does not need potable quality water near recycled water sources.
- Columbus, Ohio and Delaware County, Ohio
- Loudoun County, Virginia
 - Data Center Alley
- In Greater Cincinnati, that could be next to MSD Plants



Summary

- Data centers follow the same review process as other large developments.
- MSD already has regulatory tools to protect water quality and sewer capacity.
- Water reuse may create opportunities to support growth while conserving drinking water resources.
- Future developments are assessed on a case-by-case basis regardless of the use

Q&A

- Moderator will ask questions from pre-registration and from the chat
- Put more questions in the chat as they come up
- Opportunity for more discussion during listening sessions



Data Centers & Sustainability

Office of Environment & Sustainability

2023 Green Cincinnati Plan Goals

50%
REDUCTION IN CARBON
EMISSIONS BY 2030

100%
CARBON NEUTRALITY
BY 2050

Green Cincinnati Plan  2023

Data Centers Increase Carbon Emissions

Google's emissions continue to climb due to AI buildout

Despite a 2030 net-zero target, the tech giant's latest environmental report found its 2025 carbon footprint increased 18% from the year prior and is 81% higher than its 2019 baseline.

Microsoft's AI Buildout Sent Carbon Emissions Up 25% Last Year

Amazon's 2025 emissions jump as AI brings 'momentum and complexity': report

The tech and e-commerce company's absolute carbon emissions increased 16% in 2025 from the previous year, as it reported adding more data center capacity than any other company globally.

Data Centers Increase Demand for Power

Small Data Centers

- Consume less than 43.8 GWh annually
- Equivalent to the usage of a city with a population of less than 3,500



Medium Data Centers

- Consume between 43.8 and 438 GWh annually
- Equivalent to the usage of a city with a population between 3,500 and 34,000



Hyperscale Data Centers

- Consume 876 GWh or more annually
- Equivalent to the usage of a city with a population of greater than 67,500

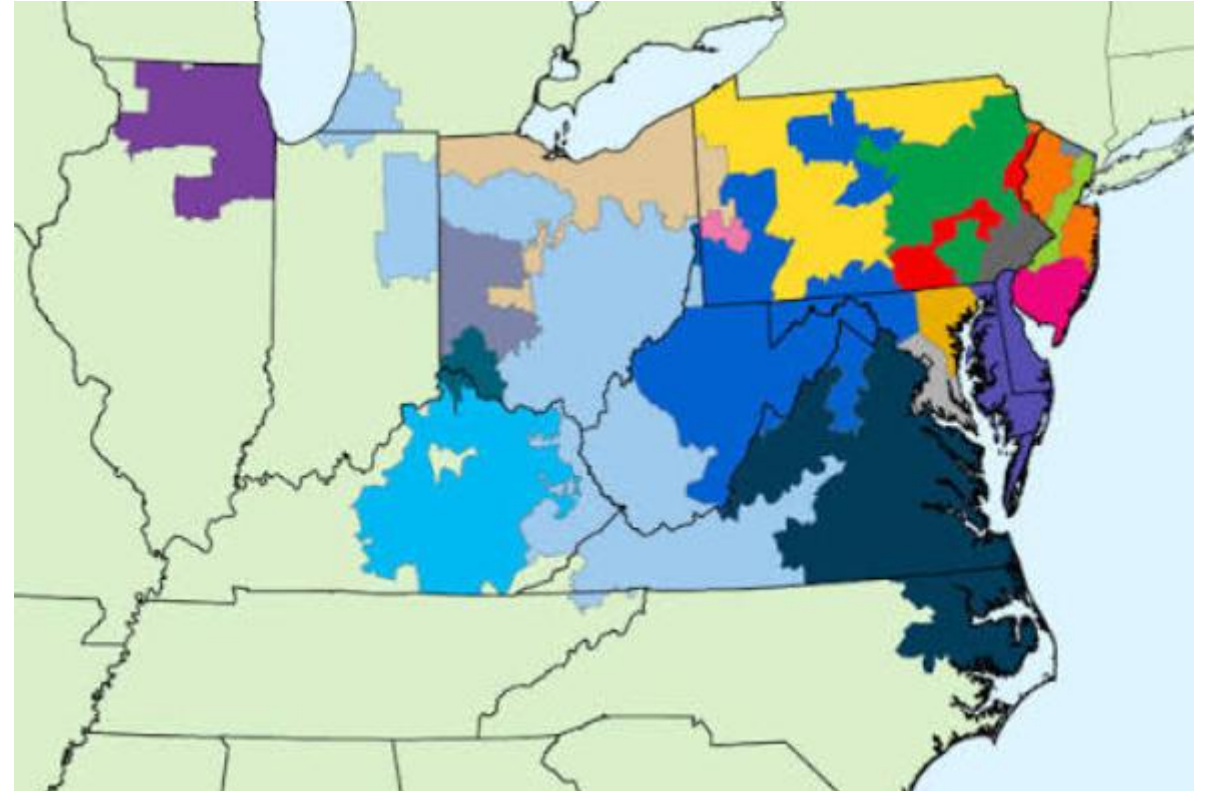


1. Annual GWh determined by taking data center MW size for each category type and multiplying by 8,760 hours in a year
2. Population size determined by dividing annual GWh consumption for a data center by annual electric usage per capita for Ohio as determined by the [U.S. Energy Information Administration](#)

Data Centers and the Power Grid

- Cincinnati is part of the PJM Interconnection
- PJM supports over 67 million people in 13 states and the District of Columbia
- PJM's primary responsibility is to ensure the reliability of the grid
 - Generation capacity
 - Transmission

PJM Interconnection Territory



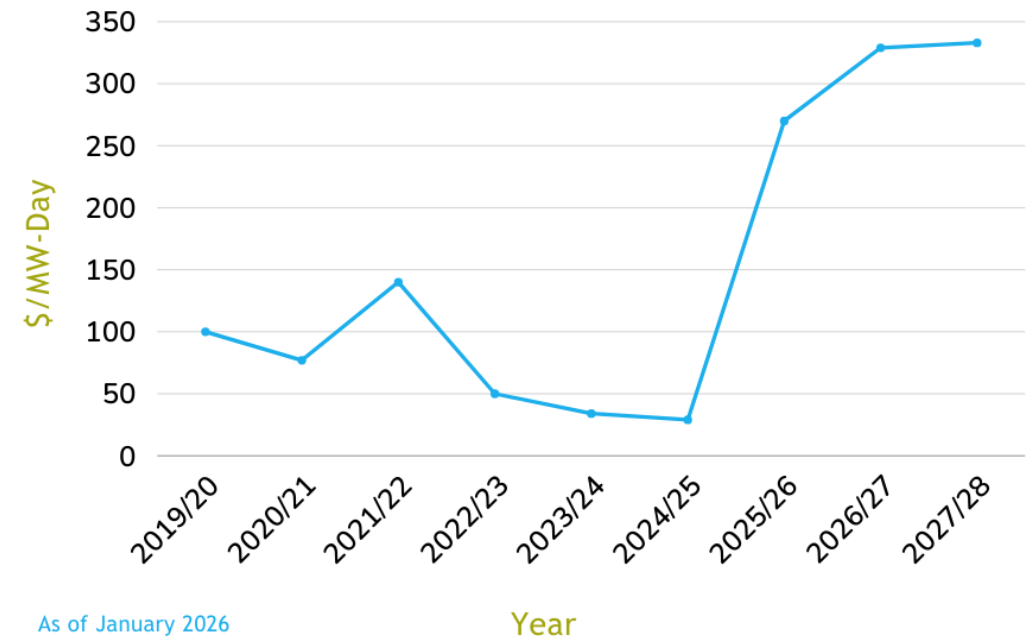
PJM Map. Source: [PJM](#)

Data Centers and the Power Grid

Capacity

- PJM needs to ensure that enough generation capacity is available for the hottest day/hour of the summer
- Conduct auctions to determine prices to pay generation facilities

PJM Capacity Auction Results



Data Centers and the Power Grid

Capacity Explained

- Parking lots need to be built with enough space for the busiest day of the year
- Adequate capacity ensures there are enough spaces available for customers



Data Centers and the Power Grid

Power Prices

- Data centers add a new level of power demand
- Increased reliance on older inefficient power plants that are costly to run



Data Centers and the Power Grid

Transmission

- Data centers require new infrastructure to deliver power
- Utilities recover infrastructure costs through the rates charged to customers



Data Centers and Sustainability



Heat

- Waste heat from cooling systems
- Creates localized heat islands



Emissions

- Pollutants from backup generators
- Impacts to local air quality



Noise

- Generators
- Cooling towers
- Computers



Water

- Consume water for cooling
- Increases pressure on treatment facilities and resources

Q&A

- Moderator will ask questions from pre-registration and from the chat
- Put more questions in the chat as they come up
- Opportunity for more discussion during listening sessions

Listening Sessions

- **What are your priorities and concerns related to data centers?**
- **What do you want to see from the City's policy, especially as it relates to zoning?**
- Use “raise hand” function to be called on by staff
- Additional comments can be put in the chat if you do not wish to unmute
- **Plan website: <https://tinyurl.com/IDC89DataCenters>**

Next Steps for the IDC

- Update to CPC November 6
- Update to City Council November 10
- Draft recommendations end of November (*tentative*)
- CPC January 15 (*tentative*)
- Council February 2 (*tentative*)

Contact Info – Stay Involved

Sophia Ferries-Rowe

City Planner

Sophia.Ferries-Rowe@cincinnati-oh.gov

Plan website: <https://tinyurl.com/IDC89DataCenters>



A screenshot of the City of Cincinnati's website. The header includes the city logo and navigation links: BUSINESSES, RESIDENTS, VISITORS, SERVICES, GOVERNMENT, HELP, and a search icon. There are also links for Translate, Facebook, X, and LinkedIn. The main content area features a dark blue banner with the text "CITY PLANNING AND ENGAGEMENT" and "INTERIM DEVELOPMENT CONTROL OVERLAY #89 'DATA CENTERS' FOR A ZONING STUDY TO DEVELOP TEXT AMENDMENTS". Below the banner, there is a breadcrumb trail: "City Planning and Engagement / Planning Projects and Studies / Active / Interim Development Control Overlay #89 'Data Centers' and Zoning Study". On the left, there is a "CITY PLANNING AND ENGAGEMENT MENU" with links for "About Us" and "City Planning Calendar". On the right, there is a section titled "Interim Development Control Overlay #89 'Data Centers' for a Zoning Study to develop Text Amendments" and a link for "Upcoming Public Engagement Opportunities".