



Anaerobic Digestion Project

Little Miami Wastewater
Treatment Plant in
East End/Columbia-Tusculum

Presentation to East End
Community Council
June 5, 2023



It's All About Clean Water

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.

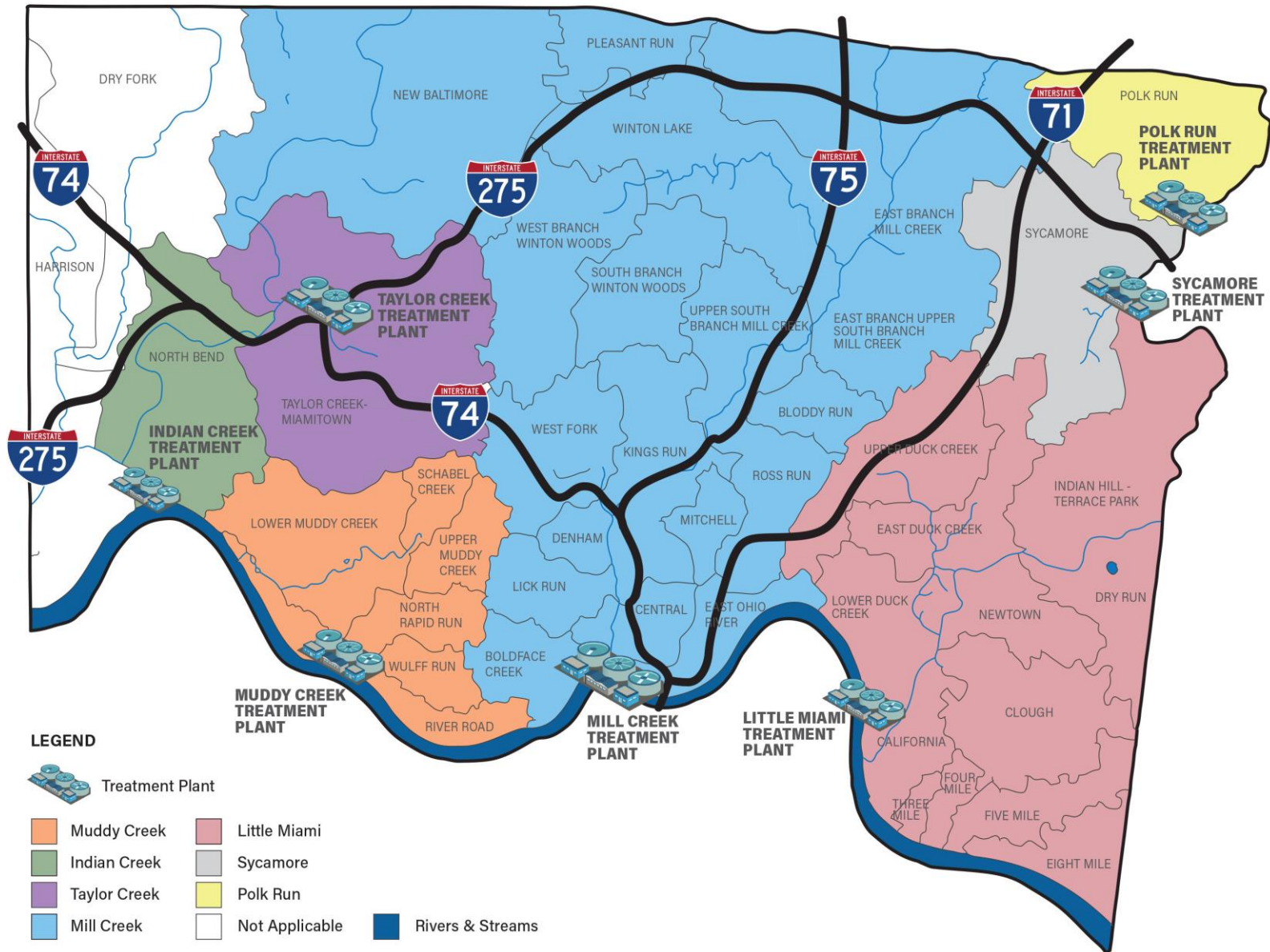


Anaerobic Digestion Project

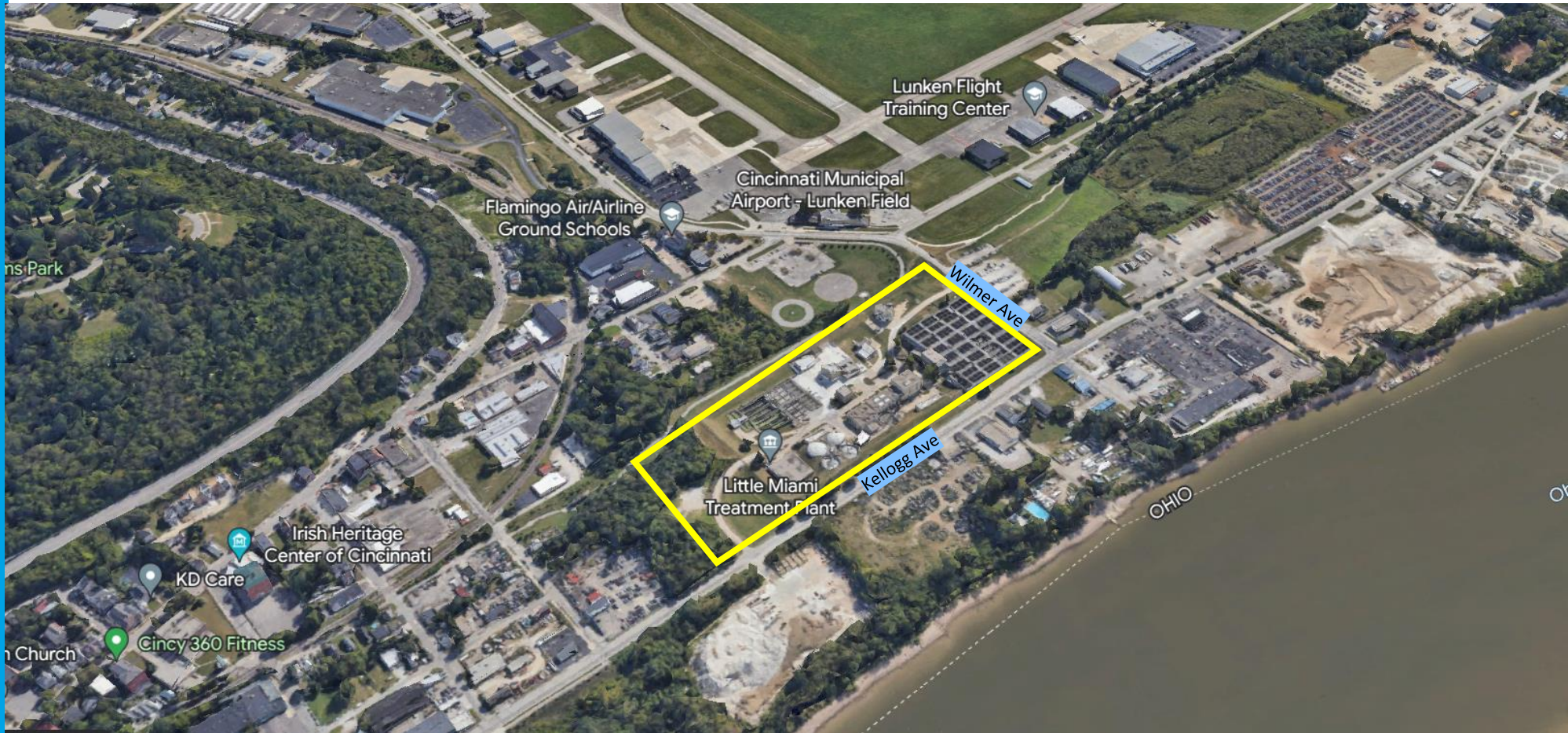
- Design and construct an anaerobic digestion facility at the Little Miami Wastewater Treatment Plant near Lunken Airport
 - Design start: January 2023
 - Construction: 2024-2028
- Will process the waste solids (treatment residuals) from the Little Miami, Polk Run, and Sycamore Creek treatment plants on the east side of Hamilton County
- This project will **reduce our carbon footprint, improve energy efficiency, and divert waste from the landfill for beneficial reuse**



MSD Sewersheds



Little Miami Treatment Plant



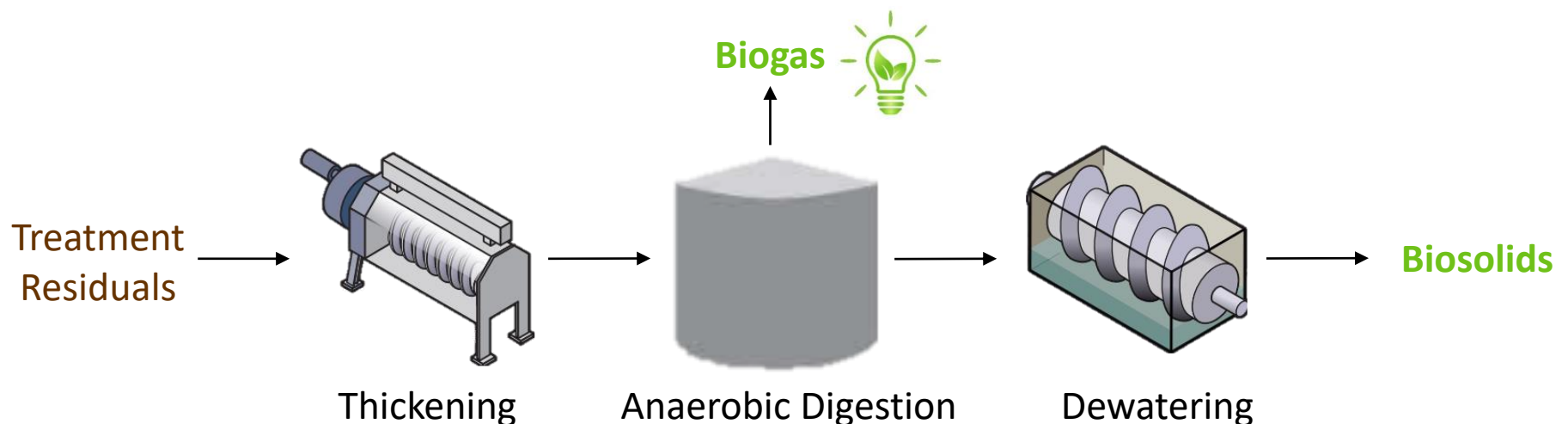
Project Location



Artist Rendering

What is Anaerobic Digestion?

- Treatment residuals are the solids removed from wastewater during the treatment process
- Anaerobic digestion is a biological treatment process for treatment residuals
 - Bacteria break down the residuals – in the absence of oxygen – into biogas and biosolids
 - Process destroys pathogens and reduces volume of the residuals.
- With this project, treatment residuals will be thickened, anaerobically digested, dewatered, and hauled offsite for beneficial reuse



Project Benefits

- **Diverts Waste from Landfill for Beneficial Reuse** – MSD is evaluating the most economical and environmentally friendly ways to reuse the biosolids (e.g., soil amendments and fertilizers).
- **Reuses Biogas as Energy Source** – Biogas, which is primarily methane, will be reused onsite as a renewable energy source to run other plant operations. This will reduce our carbon footprint and reliance on the grid.
- **Improves Plant Operations** – New solids handling and processing facilities help optimize operations and maintenance.



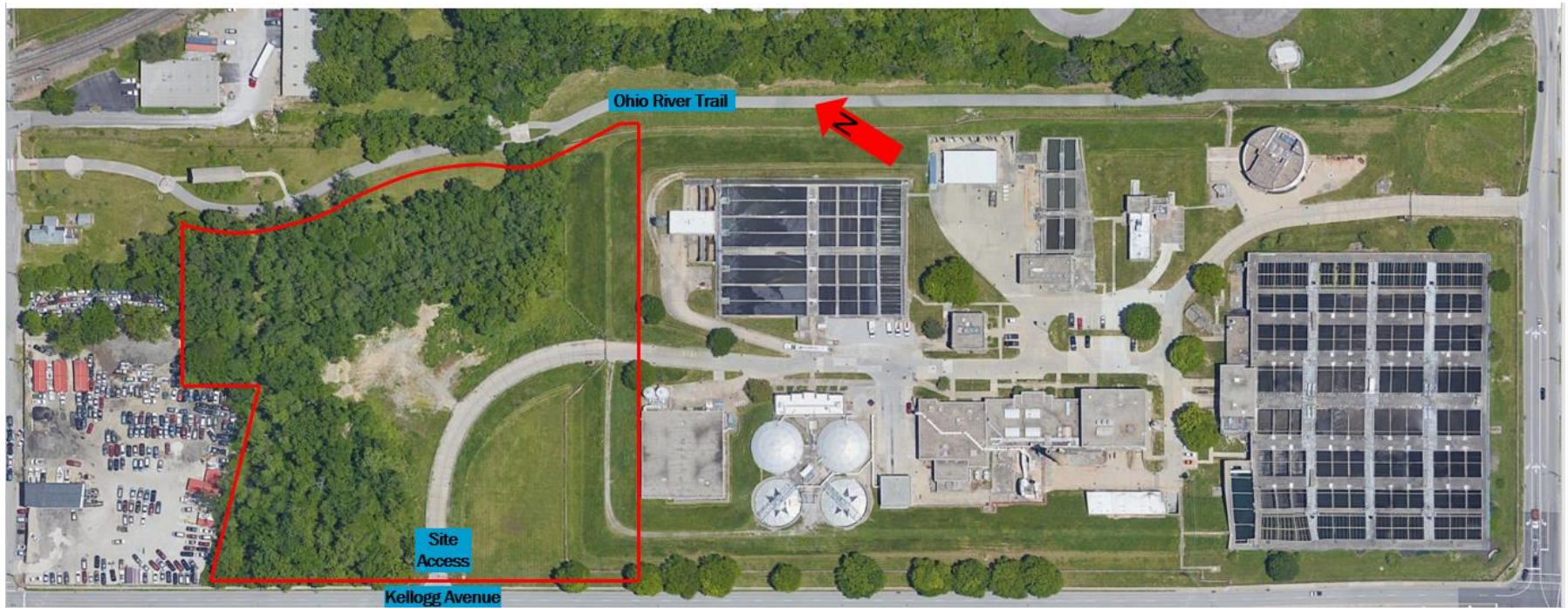
Project Benefits (continued)

- **Reduces Truck Traffic** – Fewer trucks needed to haul away biosolids, due to 30-45% reduction in solids volume
- **Reduces Odors** – New odor controls on solids handling processes to minimize/eliminate odors
- **Save Money** – Since the project involves renewable energy generation (biogas), the project is eligible for reimbursement of up to \$50 million in project costs through the Inflation Reduction Act.



Expanded Plant Footprint

- MSD will expand the footprint of the plant to the north/northwest by about 7 acres
 - This property is owned by the City
 - MSD aims to provide the maximum buffer zone possible when removing trees
- Levee around the plant will be expanded to protect the extension
- The existing entrance drive off Kellogg Avenue may need to be relocated



Impact on Ohio River Trail

- A portion of the Ohio River Trail runs east of the plant
- The new facilities will not obstruct the trail; the plant grounds and trail will be separated by 25 feet at a minimum
- MSD is working closely with the City's Department of Transportation & Engineering (DOTE), who maintains the trail
- MSD is committed to minimizing impacts to trail users



Communicating with the Public

- Updates to City Council and Hamilton County Commissioners
- Updates to East End and Columbia-Tusculum Community Councils
- Project website
- Media relations
 - WVXU and Local 12
- Social media





**For more
information:**

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[MSDCommunications@
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msdgc.org/digester



Project Need

- Treatment residuals were incinerated onsite at the Little Miami plant until March 2016 when the incinerator was taken offline due to new emission regulations
- They have been hauled to Rumpke landfill since 2016
- A 2019 Master Plan recommended an anaerobic digestion facility at Little Miami, to provide **significant economical and environmental benefits** for MSD and the community
- MSD considered and **did not advance** an alternative solution to haul all treatment residuals to the incinerator at the Mill Creek treatment plant



Contract Management

- A single entity delivers both design and construction via a single contract
- Design-Builder selected on best value
- Design-Builder collaborates with the Owner (MSD) throughout design
- Pricing for construction is negotiated during design development to establish a guaranteed maximum price
- Construction estimate is \$150M

