



# Little Miami WWTP Project

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

Presentation to City Council  
May 23, 2023



# It's All About Clean Water

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



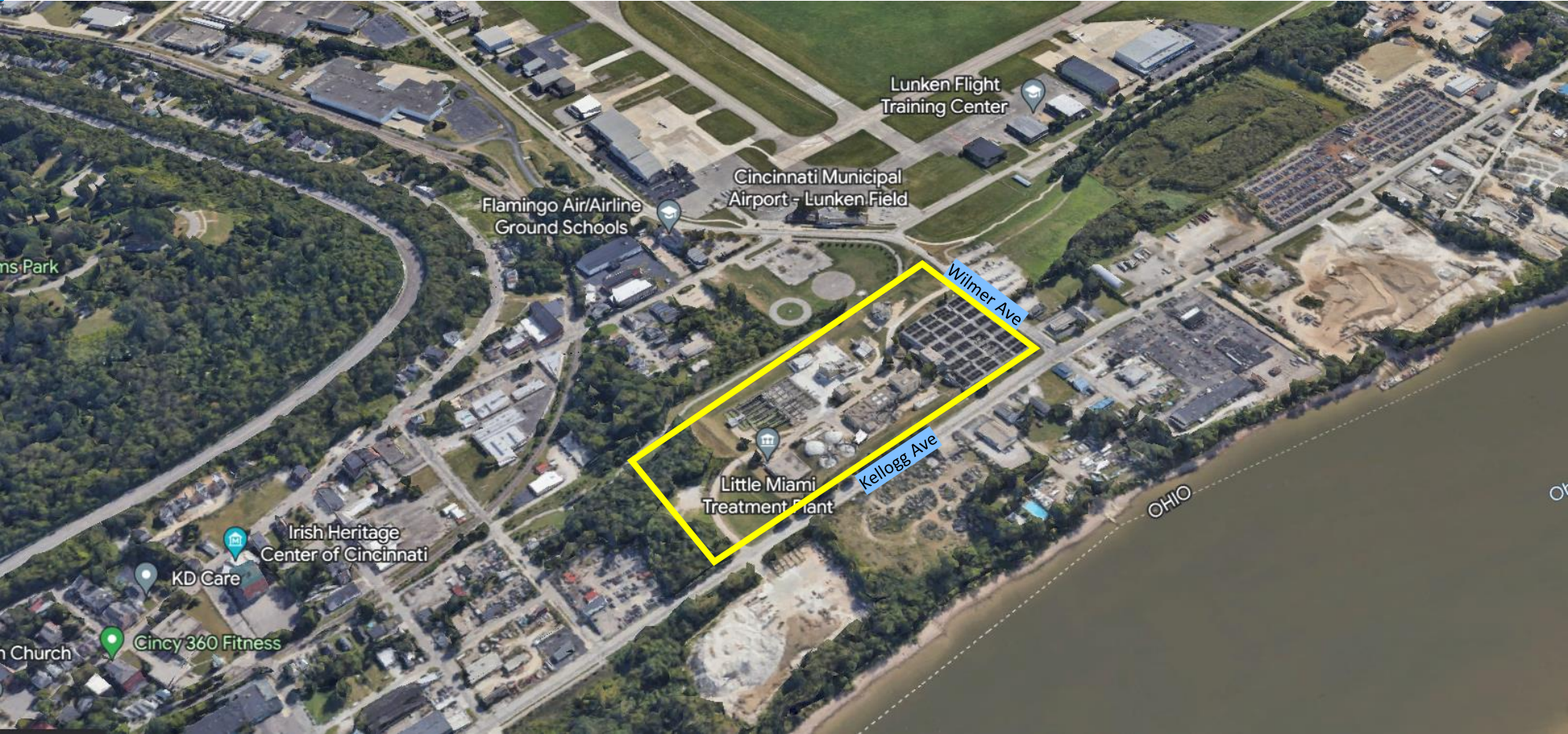
# Solids Handling Project

- Design and construct an anaerobic digestion facility at the Little Miami Wastewater Treatment Plant near Lunken Airport
  - Design start: January 2023
  - Construction: 2024-2028
- 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**





# Little Miami Treatment Plant





# Project Location



*Artist Rendering*



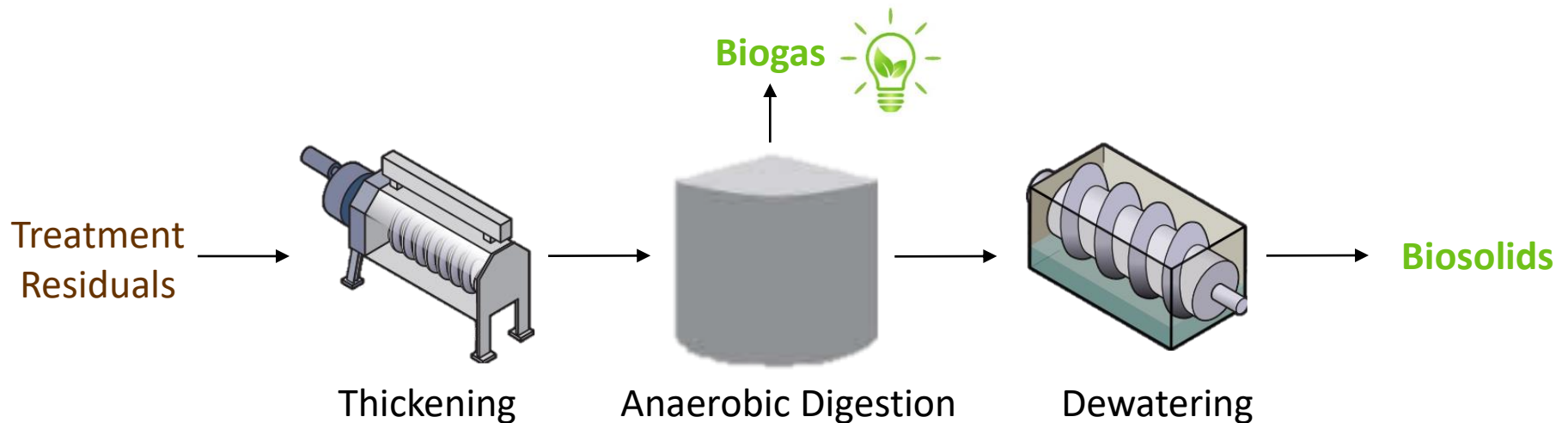
# Project Need

- 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



# 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 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

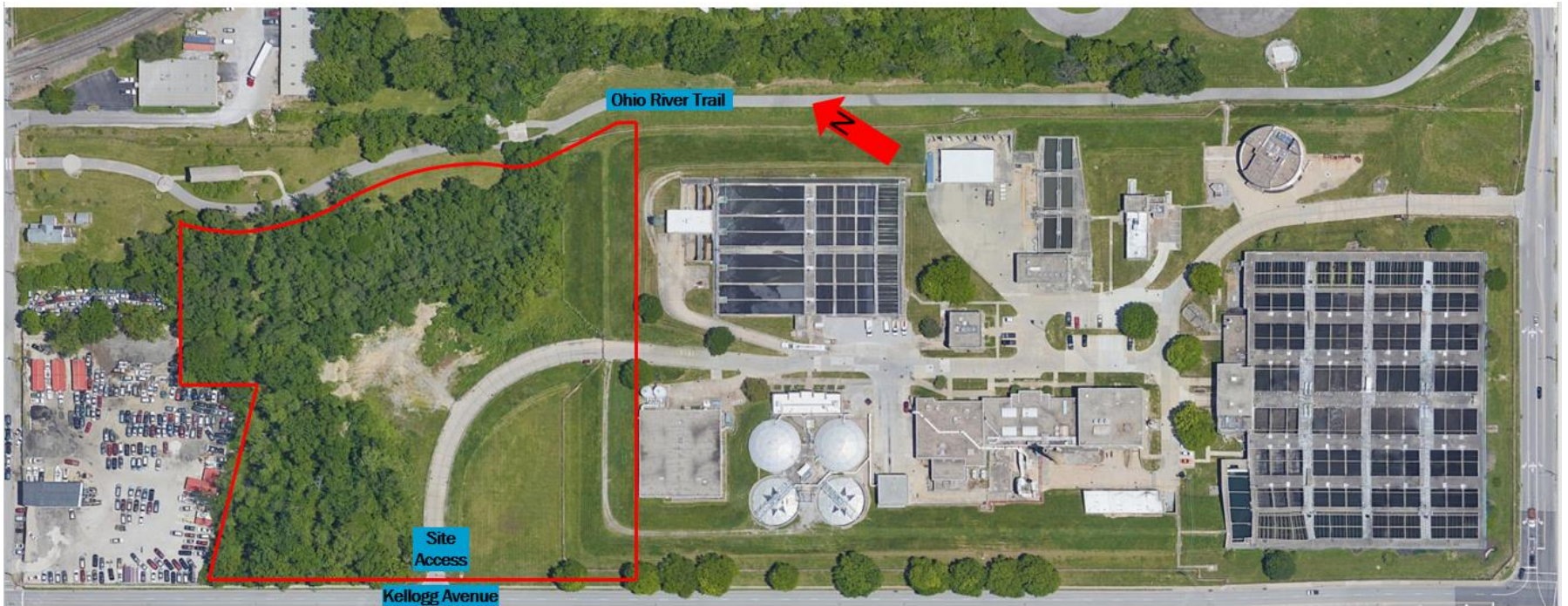
- **Reduces Truck Traffic** – Fewer trucks needed to haul away biosolids, due to 30-45% reduction in solids volume
- **Reduces Odors** – New odor controls on solids handling processes to minimize/eliminate odors
- **Save Money** – Since the project involves renewable energy generation (biogas), the project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



*\*Inflation Reduction Act*

# Expanded 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 (DOT&E), who maintains the trail
- MSD is committed to minimizing impacts to trail users



# Communicating with the Public

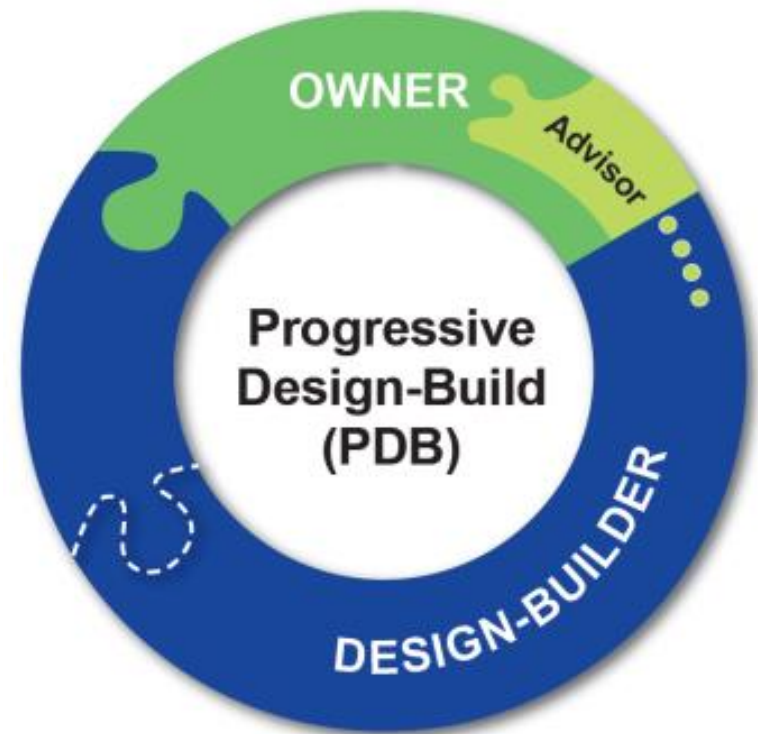
- Updates to City Council and Hamilton County Commissioners
- Updates to East End and Columbia-Tusculum Community Councils
- Project website
- Media relations
- Social media





# 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





## For more information:

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[msdgc.org/digester](http://msdgc.org/digester)

