



R.L. Sutton Water Reclamation Facility Biosolids Handling Upgrades Project

May 5, 2025





R.L. Sutton Water Reclamation Facility (WRF)

- Meeting Purpose

- This public meeting will provide information regarding the proposed Biosolids Handling Upgrades Project at the R.L. Sutton Water Reclamation Facility and provide an opportunity to ask questions.

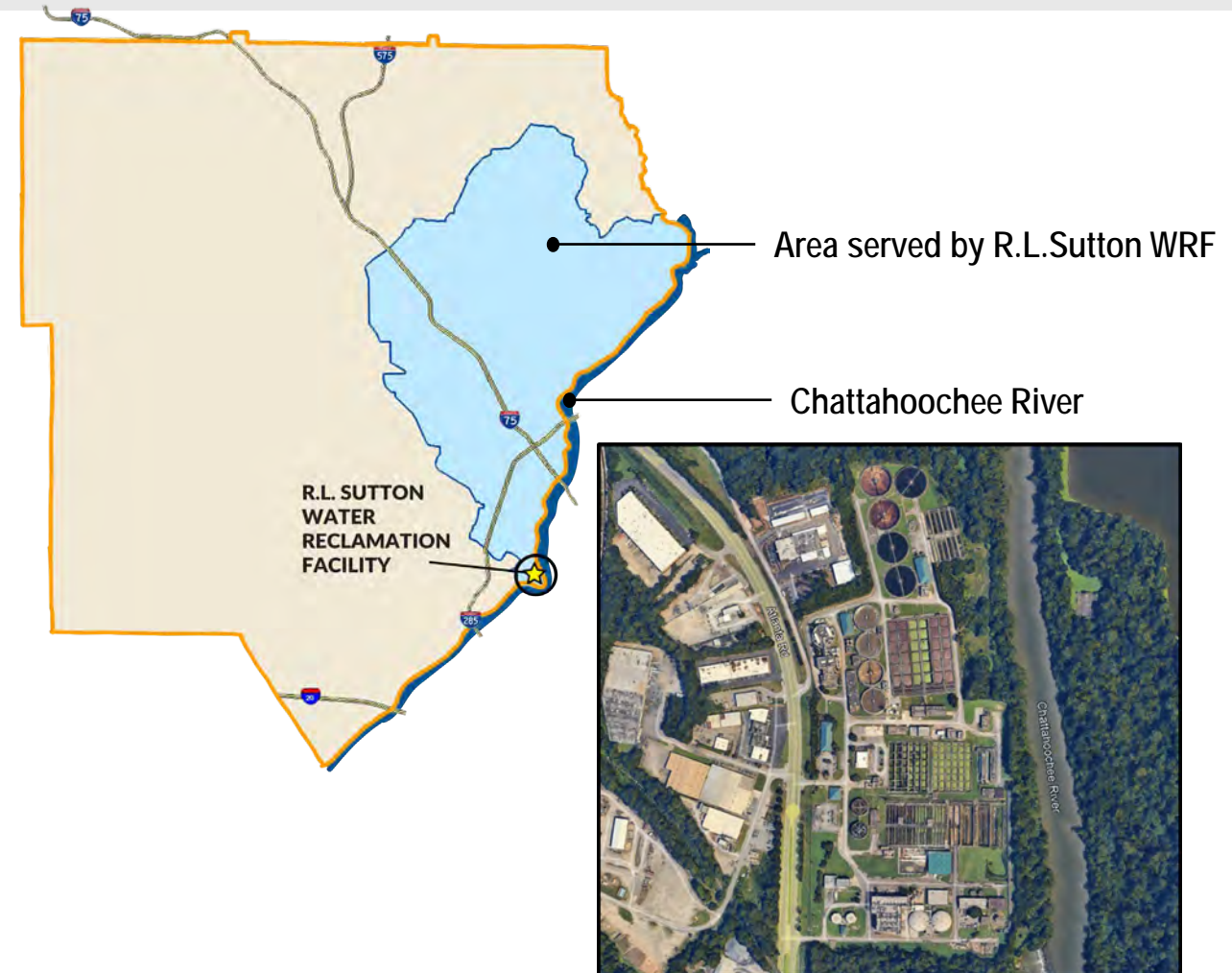
- Meeting Agenda

- Background
- Biosolids Management
 - History
 - Challenges
 - Options Evaluated
 - Incineration - Process & Regulatory Standards
- Next Steps
- Questions



R.L. Sutton WRF is an Award-Winning Facility Serving Cobb County for Half a Century

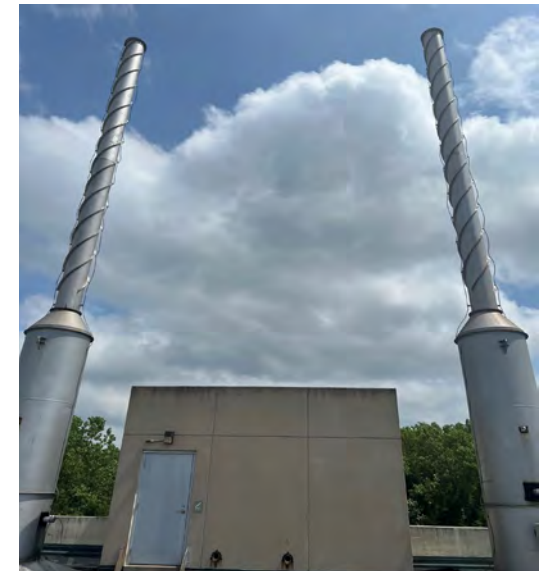
- Built in 1971 and expanded several times.
- Largest of the four WRFs in Cobb County at permitted treatment capacity of 50 million gallons per day (MGD).
- Serves east Cobb County including parts of Smyrna and Marietta.





What Are Biosolids?

- During the wastewater treatment process, liquids are separated from solids. Those solids are then treated physically and chemically to further reduce the moisture content producing organic matter called "biosolids".
- The U.S. Environmental Protection Agency (EPA) provides three main options for disposal of biosolids:
 - Land application (Only Class A Biosolids – Pathogen Free)
 - Landfilling
 - Incineration





History of Biosolids Management at R.L. Sutton WRF

- 1971 - 1980: Disposal at landfills
- 1980s: Incineration with Multiple Hearth Incinerators
- 2008: Fluidized Bed Incinerators replaced outdated Multiple Hearth Incinerators
- 2016: EPA implemented stricter air emissions standards for sewage sludge incinerators. Began landfilling biosolids because it was more economical than upgrading emissions controls.
- 2022: On-site lime stabilization by third-party to produce Class A Biosolids for land application
- 2024: Lime stabilization ceased. Biosolids sent to landfills.



1980

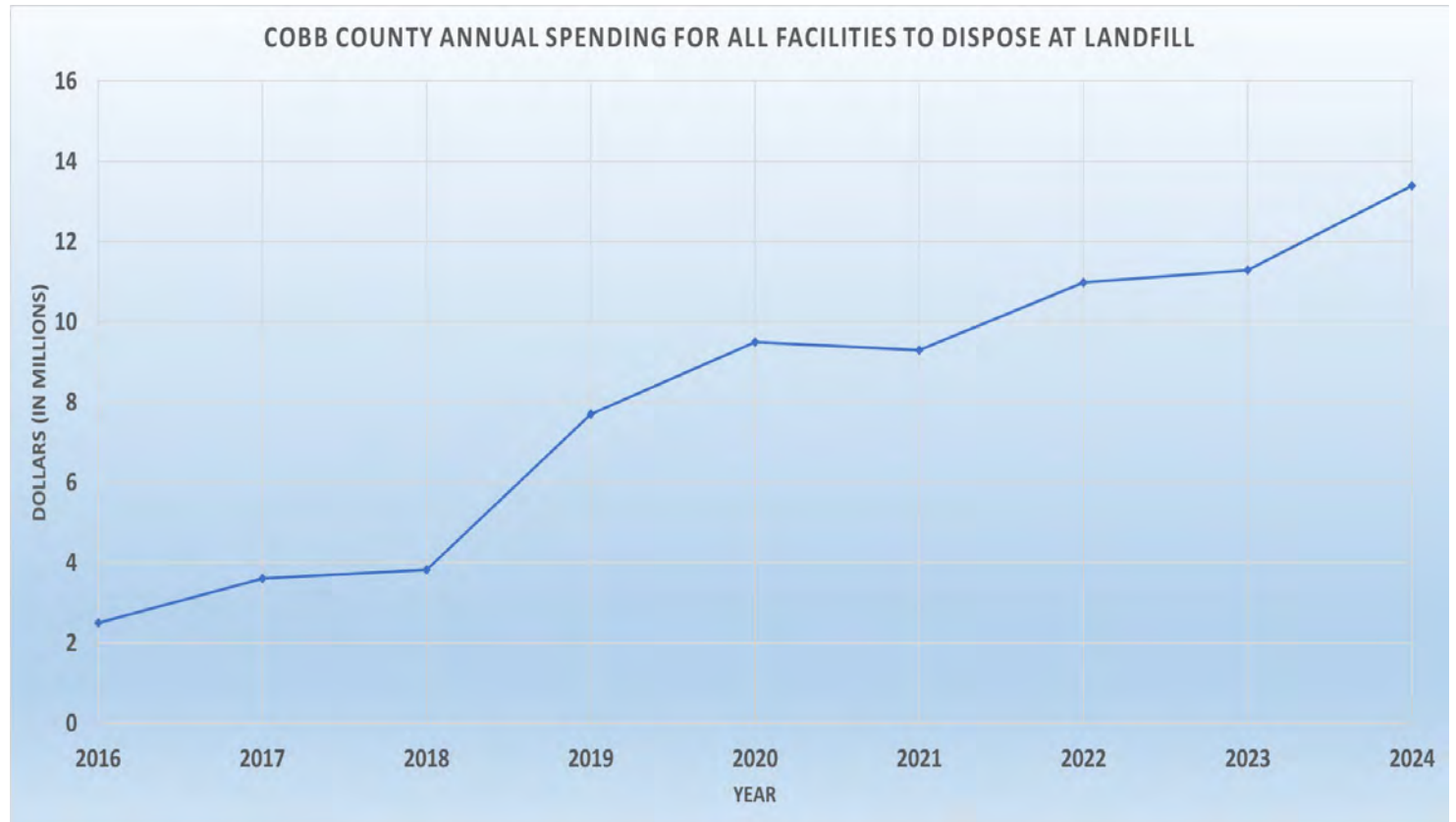


2024



Growing Challenges of Biosolids Management

- **Regulatory Changes:**
 - Georgia regulations now limit biosolids in landfills due to potential stability issues, forcing out-of-state hauling.
- **Landfill Uncertainty:**
 - Limited space and landfill acceptance criteria create future disposal and budgeting challenges.
- **Soaring Landfill Costs:**
 - Cobb County's expenses have risen from \$2.5M (in 2016) to almost \$14M annually (present).





Assessment of Biosolids Management Alternatives

1. Third-Party Lime Stabilization Hauled to Off Site Regional Facility

- Temporary pilot project at R.L. Sutton WRF produced Class A biosolids that were land applied
- Experienced odor issues
- No cost savings compared to landfilling
- Cancelled due to permitting issues

2. Regional Drying Facility

- Partner with neighboring utilities to construct and operate a regional drying facility
- Would not reduce truck traffic
- Project did not move forward

3. Onsite Biosolids Dryers

- **Capital Cost** : High (\$110-\$130M)
- **Volume Reduction**: Reduces moisture but not overall volume
- Produces strong odors
- Produces Class A Biosolids, but limited for land application
- No cost savings compared to landfilling

4. On-Site Thermal Hydrolysis

- **Capital Cost** : Very high (\$220M)
- **Volume Reduction**: Reduces moisture but not overall volume
- Produces odors
- Requires changes to treatment process at the facility (\$\$)
- No cost savings compared to landfilling

5. Third-Party Mobile Drying

- **Capital Cost**: No capital investment (operational fees)
- **Volume Reduction**: Reduces moisture but not overall volume
- Only operates on a temporary air permit (temporary solution)
- Not tested at Large Scale WRF Like R.L. Sutton WRF

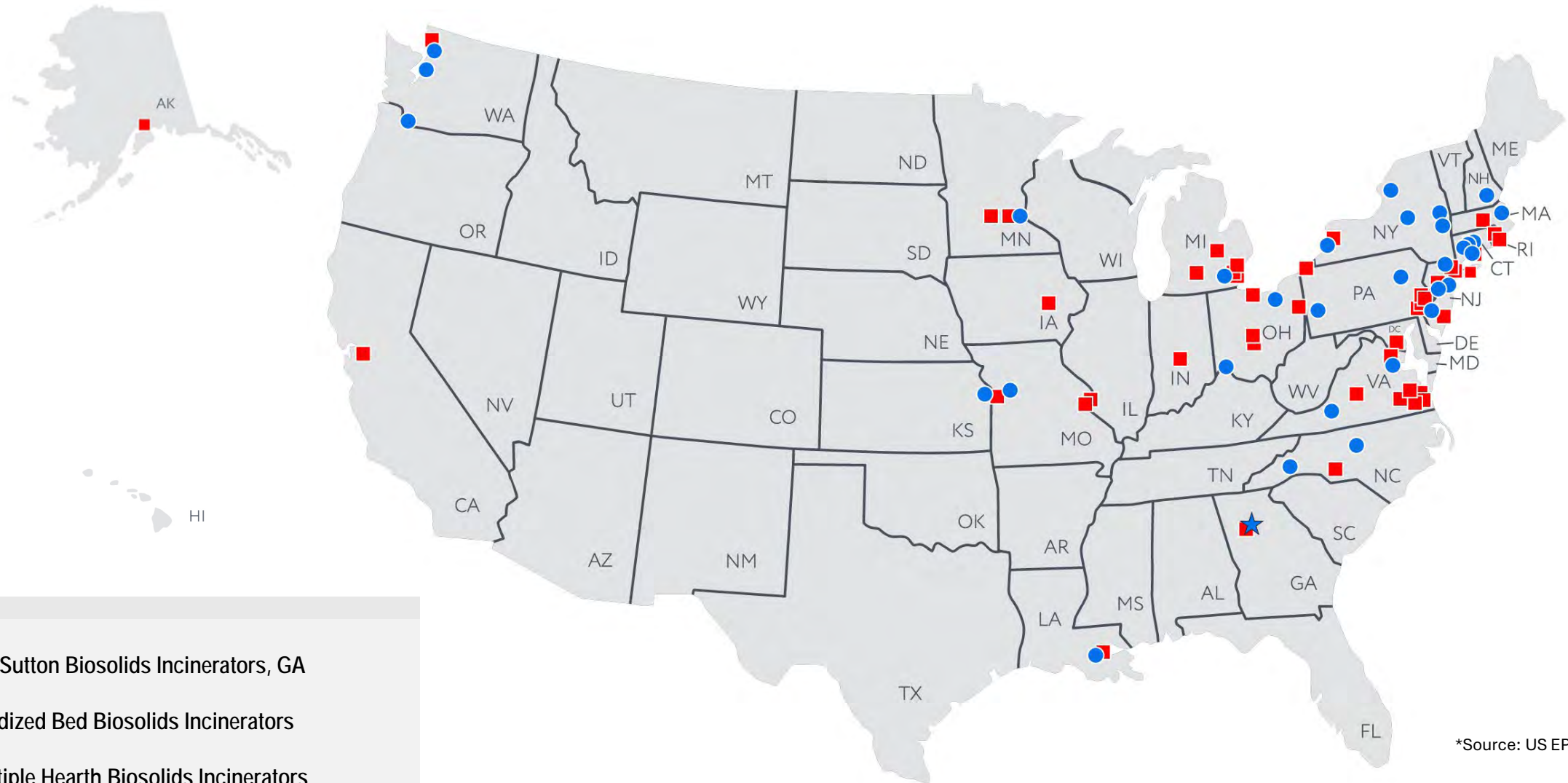


Why Incineration is the Best Solution at R.L.Sutton WRF

- Uses existing infrastructure. Anticipate recouping project costs over 10 years from savings in biosolids disposal - **Low Capital Cost & Financial Viability**
- Air emissions to comply with strict EPA regulations – **Incinerator Upgrades To Ensure Compliance**
- Incineration reduces biosolids volume up to 95% - **Relieves Landfill Burden & Reduces Hauling**
- Incineration produces no odor – **Odor free**
- Biosolids were safely incinerated for nearly 35 years (1982-2016) at this facility – **Reliable & Safe**
- Initial plan is to incinerate biosolids from two large plants, R.L. Sutton WRF and South Cobb WRF. If landfilling issues arise, they can also temporarily incinerate biosolids from the two smaller plants until another landfill is available - **Operational Flexibility**

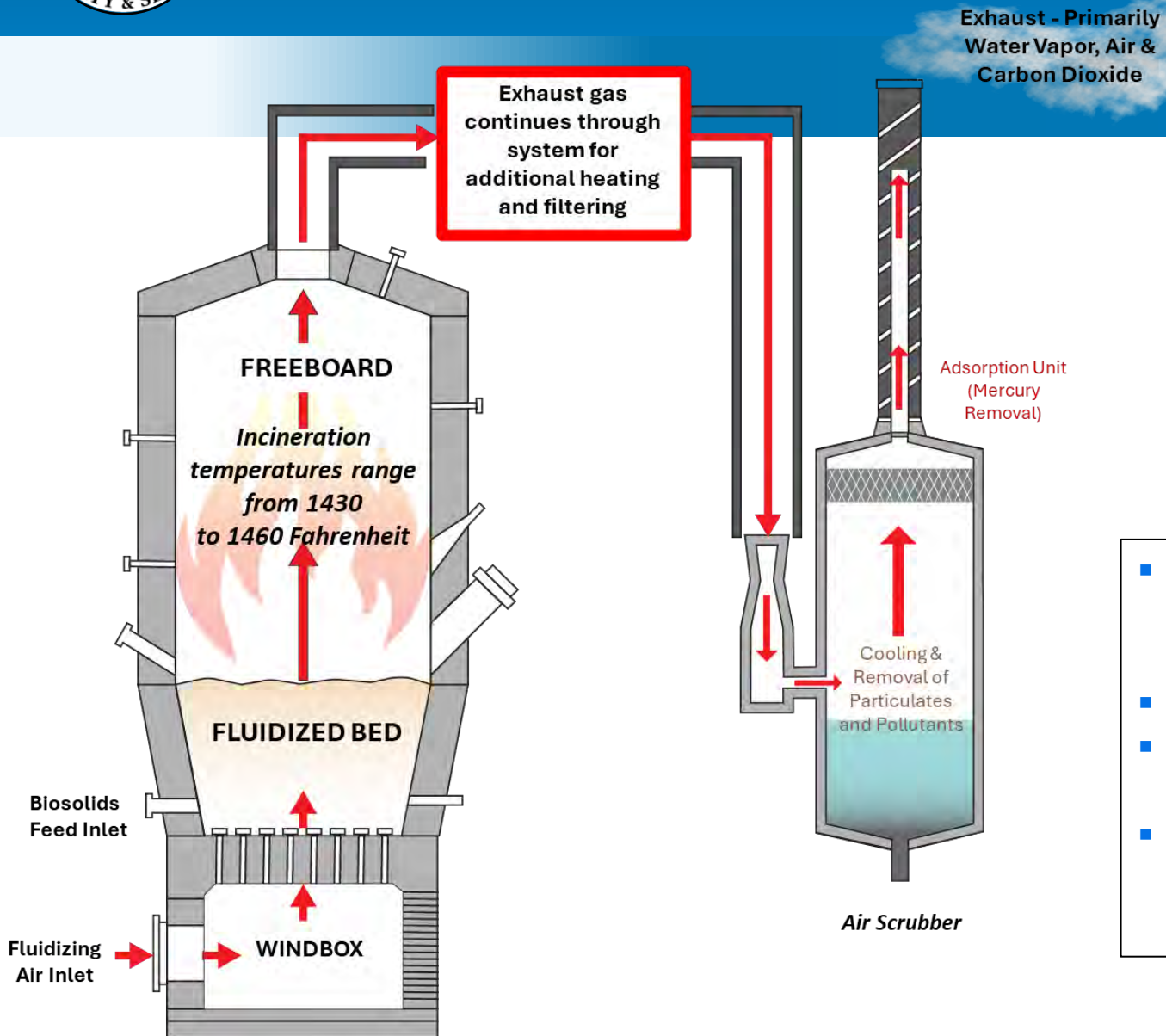


Fluidized Bed Incinerators and Multiple Hearth Biosolids Incinerators





Fluidized Bed Incineration Process



- A fluidized bed incinerator (FBI) uses a bed of hot sand/granular material to transfer extreme heat directly to biosolids to eliminate pathogens and reduce organic matter to ash within seconds.
- Emissions control equipment scrubs and captures pollutants.
- The entire incineration process is enclosed in a building except for the top portion of the stack.
- Proposed upgrades ensure incinerators will meet or exceed US EPA's very aggressive emission standards, which are based on health risk assessments.



US EPA Maximum Achievable Control Technology (MACT) Standards

EPA Requirements

- Incinerators shall meet federal Clean Air Act requirements per Section 129 through MACT standards
- MACT regulates several different air pollutants including heavy metals and particulate matter.
- Typical permit may require the following to show compliance:
 - Annual stack testing
 - Monitoring of operating parameters to ensure that emissions are within the permissible limits
 - Semiannual reporting
 - Required operator qualifications and annual training

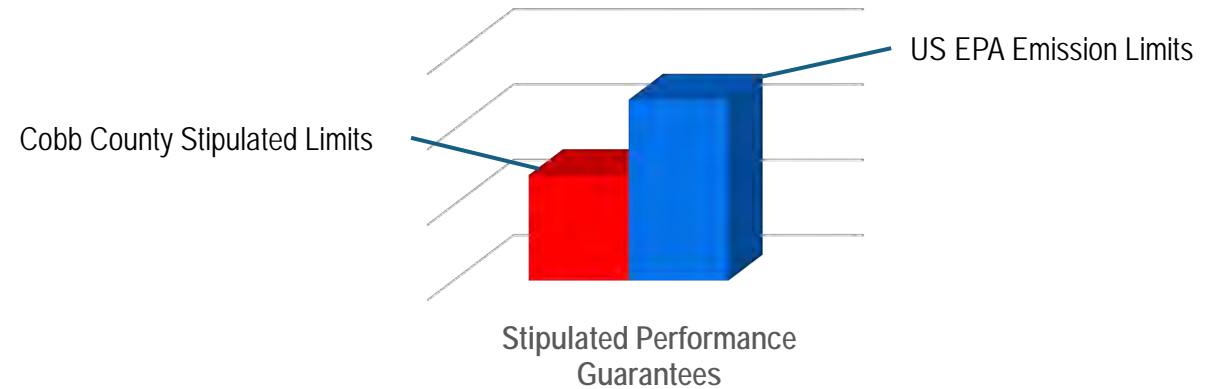
Parameter	Limit
Particulate Matter	18 milligrams per dry standard cubic meter
Hydrogen Chloride	0.51 parts per million by dry volume
Carbon Monoxide	64 parts per million by dry volume
Dioxins/ Furans	1.2 nanograms per dry standard cubic meter
Oxides of Nitrogen	150 parts per million by dry volume
Sulfur Dioxide	15 parts per million by dry volume
Cadmium	0.0016 mg per dry standard cubic meter
Mercury	0.037 mg per dry standard cubic meter
Lead	0.0074 mg per dry standard cubic meter





Proposed Project Delivery and Procurement

Design-Build Project Delivery - Proposed

- Design Engineer and Contractor part of same team
- Single point of accountability
- Negotiated construction price based on best value rather than lowest cost
- Performance guarantee
 - Project not considered complete until emission limits are met



Legend

-  Cobb County Project Acceptance Limits (75% of MACT Limits)
-  EPA MACT Emission Limits



Next Steps

PLANNING & PROCUREMENT (2024 – SUMMER 2025)

- 
- **Open House at Vinings Library – February 27, 2025**
 - Request for Proposals – Currently reviewing proposals and conducting interviews with firms (Qualification Based) - **Ongoing**
 - **Vinings Village HOA – May 5, 2025**
 - Recommendation to the Board of Commissioners for award to start first phase (Assessment) - **Summer 2025**



DESIGN (SUMMER 2025 – SPRING 2027)

- Complete assessment and evaluation of entire biosolids handling system and determine what improvements will be needed - **Summer 2026**
- **Public Outreach - TBD**
- Negotiate construction cost and establish a guaranteed maximum price to complete the work - **Fall 2026**
- Recommendation to the Board of Commissioners to approve start of construction - **Spring 2027**



CONSTRUCTION (SPRING 2027 – FALL 2029)

Construction Completion - Fall 2029
Public Outreach - TBD



Questions



R.L. Sutton WRF Webpage

CONTACT INFORMATION

- Project Email: SuttonUpgrades@cobbcounty.org
- Project Website & FAQs: www.cobbcounty.org/water/water-sewer/wastewater-treatment/sutton