

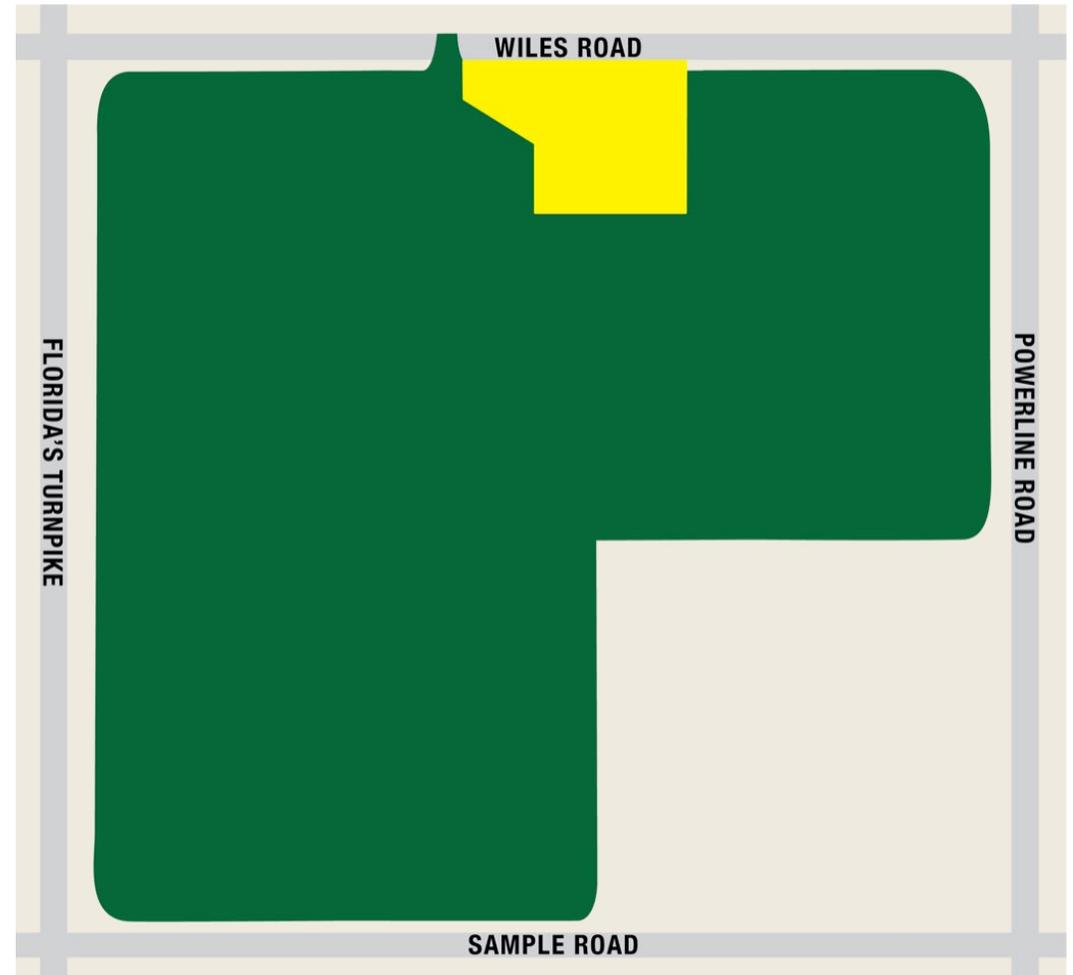
# Monarch Hill Landfill Land Use Plan Amendment (LUPA)



# Monarch Hill - Land Use Plan Amendment (LUPA)

## 24-acre parcel - Redesignation - “Electrical Generation” to “Industrial”

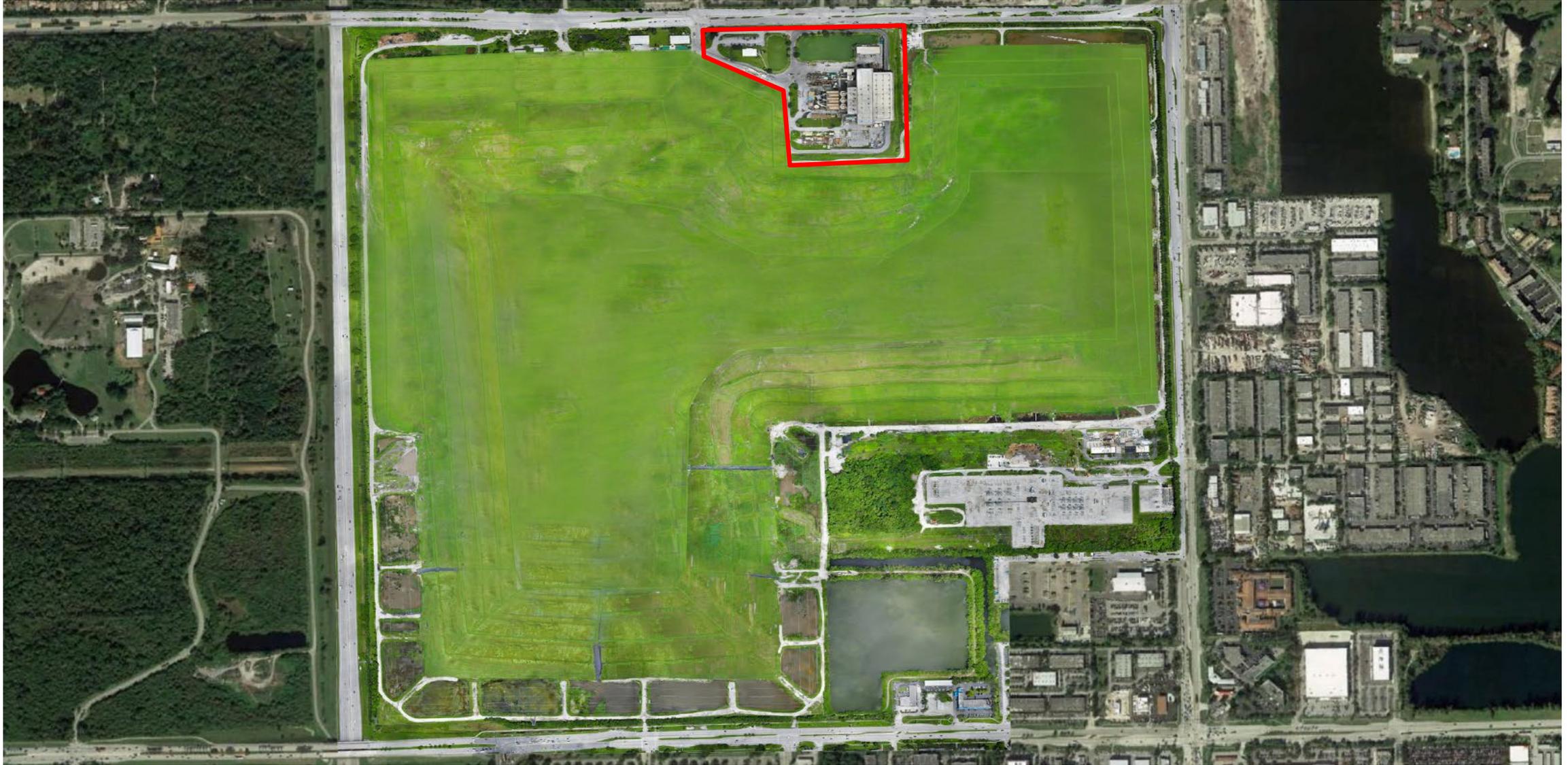
- LUPA for the land use of a 24-acre parcel of land at Monarch Hill, formerly Wheelabrator North site, and originally a Waste-to-Energy (WTE) facility.
- Currently operated as a trash transfer station for municipalities in Northern Broward County.
- In order for the current use to be in compliance, WM is seeking to change the land use designation from “Electrical Generation” to “Industrial.”
- Eventual landfill disposal after July 2023 (end of Wheelabrator contract to operate transfer station).



# Monarch Hill Landfill - Aerial of 24-Acre Parcel



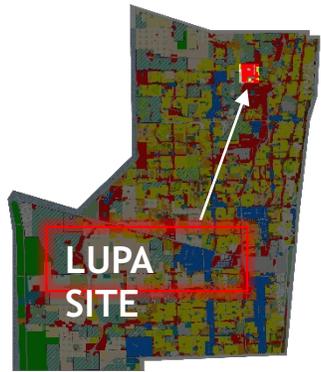
# Monarch Hill Landfill - Currently Permitted



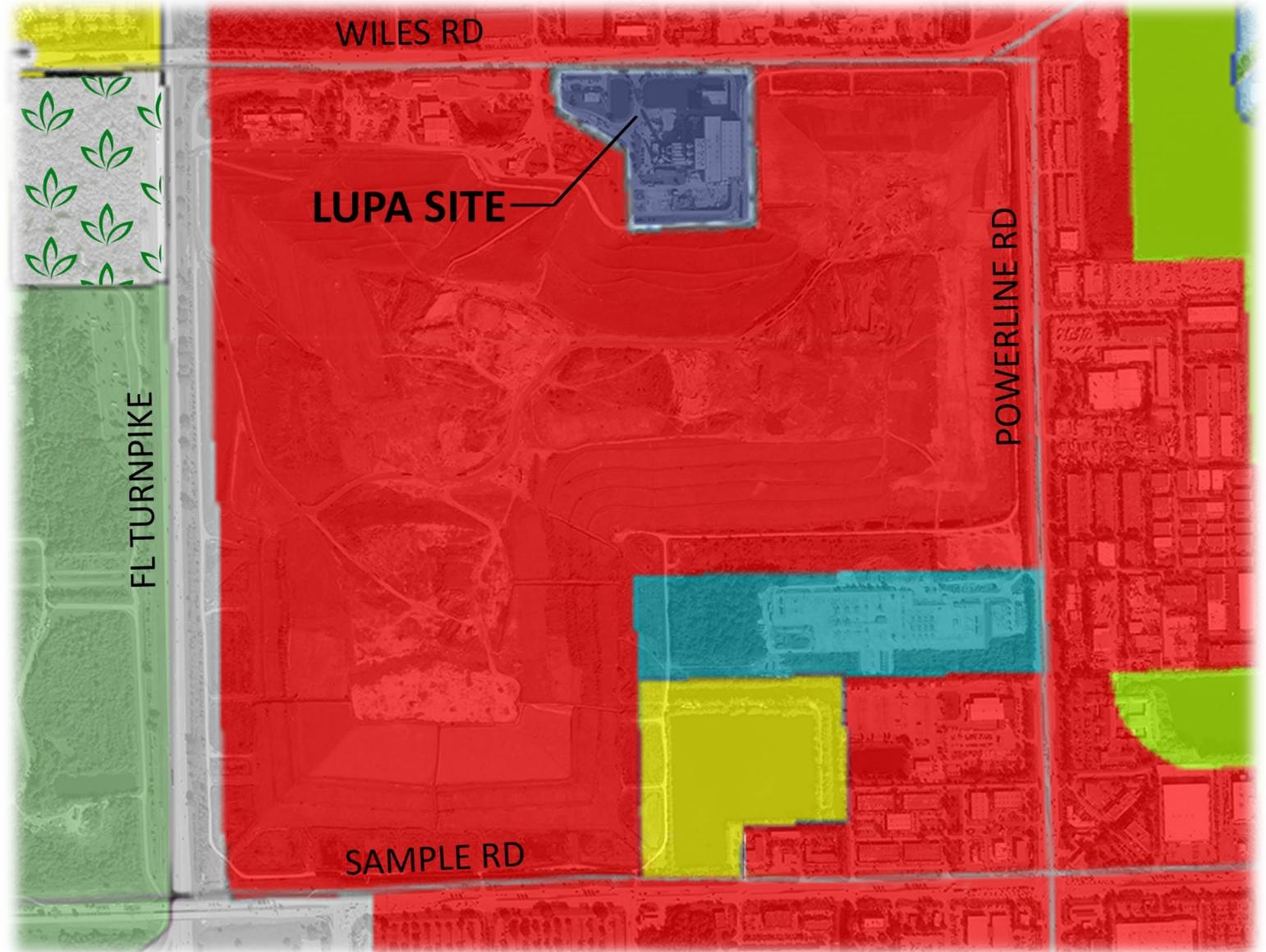
# Monarch Hill Landfill - Proposed Land Use Change



# LUPA Site and Adjacent Land Use Designations



Broward County  
Urban Area



**BROWARDNEXT**

**BROWARD COUNTY  
LAND USE PLAN**

Adopted: February 11, 2020

**LEGEND**

-  Commerce
-  Low (5) Residential
-  Recreation and Open Space
-  Commercial Recreation
-  Community
-  Electrical Generation Facilities
-  Transportation
-  Irregular Residential
-  Conservation - Natural Reservations



# Nearby Industrial and Waste Facilities



## View of Monarch Hill Transfer Station (Former WTE Site)



# Monarch Hill Landfill

## Materials Disposed at this location & Improvements Made Over the Years

### Materials:

- Construction and Demolition (C&D) Debris
- Municipal Solid Waste
- Yard Waste
- Project driven material
- Hurricane Debris
  - Monarch Hill is a vital Broward County asset.
  - During Hurricane Irma, the landfill assisted Broward County communities impacted by the storm by taking in their debris volume and allowing for efficient clean-up efforts.

### Improvements:

- Bird mitigation
  - Use of falconry for the humane control of bird populations at the landfill.
- Odor mitigation
  - Commitment to significant investment and technological improvements to minimize odor.
- Street sweeping
  - Voluntary sweeping along roads in cooperation with Deerfield Beach.



# Monarch Hill Landfill

## Bird Mitigation

- Waste Management contracts with Predator Bird Services, Inc. for falconry services.
- Falconry uses trained falcons and hawks to create a hostile environment for avian pests.
- The predator birds prevent other birds from foraging in the newly deposited material and roosting in the area.
- This method has proven to be a highly effective and humane solution to control the bird population at the landfill.



# Monarch Hill Landfill

## Odor Mitigation

- **Landfill gas collection** - Primary form of odor control. The collectors are installed 2x per year usually during the dry season.
- **Gas Collection and Control System** - The GCCS is monitored daily to ensure efficient collection.
- **Pin Wells** - Shallow surface wells that do not require drilling are installed as-needed to control odor.
- **Misting** - Biodegradable, neutralizer compounds are misted into the air around the active area to help control odor from fresh waste.
- **Daily Cover** - Six (6) inches of soil are used to cover newly deposited material on a daily basis to control odor.
- **Limited Schedule for Odor-Causing Activities** - Waste Management does not perform odor-causing activities such as excavating or drilling during weekends or holidays.



# Monarch Hill LUPA

## Summary of Impacts

Impact Area	Change
Sanitary Sewer	Decrease
Potable Water	Decrease
Groundwater Recharge	Increase
Solid Waste	No Impact
Recreation and Open Space	No Impact
Traffic	No Impact
Public School Facilities	No Impact
Historic/Archeological Sites	No Impact
Natural Resources	No Impact

# Monarch Hill Landfill

## Renewable Energy Creation: Landfill Gas-to-Energy

- Landfill-Gas-To-Energy: Monarch Hill generates clean, renewable energy at its on-site landfill gas-to-energy plant powering approximately 9,000 homes per day.
- WM is currently investing \$1 million in additional flare capacity to enhance its odor abatement program.



# Monarch Hill Landfill - Vital Broward County Asset

## Future Capacity

- Current remaining capacity is approximately 17 million yards (approx. 17.5 million tons).
- The LUPA would allow for an additional 7.8 million yards of vital capacity.
- Proposal represents an increase of 8.9% of total capacity at Monarch Hill - 4 or 5 storm events based on history.



# Monarch Hill LUPA

## County Policies in Support of LUPA

### Broward County Land Use Plan:

- Policy 2.11.8: Landfills and resource recovery facilities shall be planned to minimize impacts on adjacent existing or planned uses.
- Policy 3.4.2: Sites for landfills, incinerators, recycling plants, or other major public facilities should be made available, and properly zoned in anticipation of future needs.
- Policy 3.4.3: The disposal of solid wastes by sanitary landfill should be environmentally sound and state of the art.

### Broward County Solid Waste Element:

- Objective 6.3: Broward County shall ensure the availability of solid waste facilities with sufficient capacity to process and dispose of present and future volumes of solid waste, using adopted level of service standards.
- Policy 6.4.3: New and expanded landfills, and new and expanded resource recovery facilities, shall be planned to minimize impacts on adjacent existing or adopted future land uses.

### Broward Municipal Services District Land Use Plan:

- Policy 1.3.3: Proposed amendments to the BMSD Future Land Use Map designations within BMSD enclaves shall be evaluated based on the availability and cost of providing public facilities and services, in addition to site suitability, compatibility with surrounding uses, complete streets, transportation infrastructure, affordable housing, and potential impacts on natural resources.

# Monarch Hill Landfill

## WM Community Outreach

To keep our adjacent communities updated on our projects, WM has invited residents from local communities for private tours of the facility. Communities that have visited Monarch Hill Landfill include:

- Independence Bay, Deerfield Beach
- Century Village, Deerfield Beach
- Crystal Lake, Deerfield Beach
  - Wynmoor, Coconut Creek
- Banyan Trails, Coconut Creek
  - Township, Coconut Creek

Over the past 10 years, more than 12,000 Broward County residents have visited Monarch Hill during Earth Day celebrations for our local school students and their families.

## Monarch Hill LUPA - Summary

- Proposed land use change is limited to the former Wheelabrator North plant property.
  - Monarch Hill landfill serves as the disposal back-up to the Wheelabrator South WTE.
- Site currently being used for trash transfer station as per the Broward County/WM global agreement.
  - Contractually obligated to use site as a transfer station through July 2023.
- Utilizing this property for landfill capacity will not extend the landfill beyond the borders of the current facility. Rather, the LUPA will maximize the existing footprint of the landfill.
- Monarch Hill Landfill's gas-to-energy plant provides renewable energy to power to approximately 9,000 homes.
- The land use change provides vital landfill capacity for future storm events and hurricanes.

# Thank You!

