

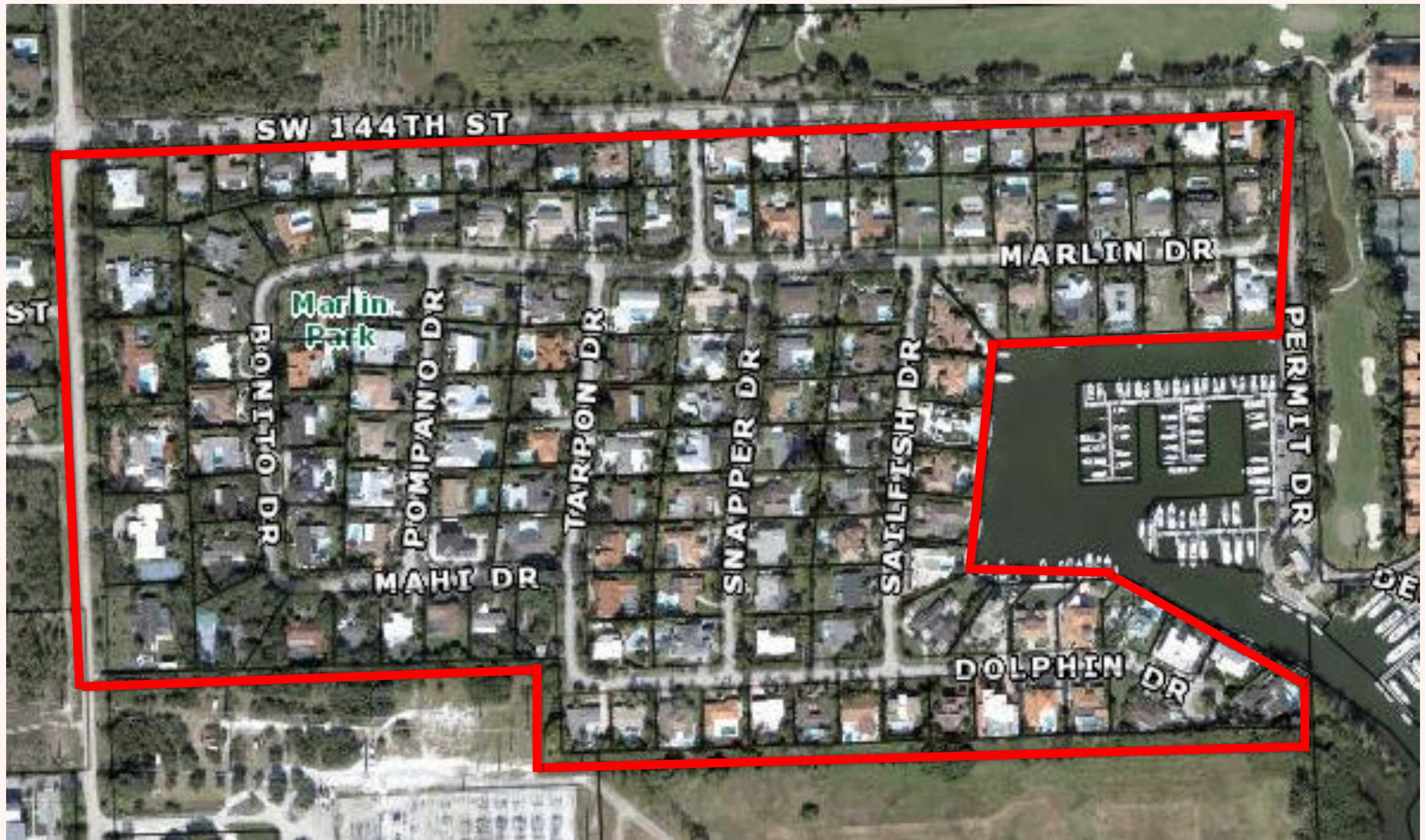
# *Kings Bay Gravity Sanitary Sewer System*

APRIL 26, 2022

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# KINGS BAY GRAVITY SANITARY SEWER SYSTEM BASIN



# PROJECT BACKGROUND

- Kings Bay Community is the last coastal community in the city abutting Biscayne Bay served by septic tanks.
- Multiple studies indicate that septic systems are at least partly to blame for the nitrogen enriched groundwater that is causing algae blooms and oxygen depletion.
- Nutrient pollution is killing seagrass, coral, and causing fish kills.
- An 18-year study of the impact of wastewater infrastructure improvements on beach water fecal indicator bacteria levels in Monroe County, Florida, showed a direct relationship between sewer infrastructure projects and reduced fecal indicator bacteria.
- A citywide survey conducted September thru November 2021, showed 96% of respondents in the south of the city support septic to sewer conversion, knowing that a significant portion of cost would be assumed by property owners via a special assessment.

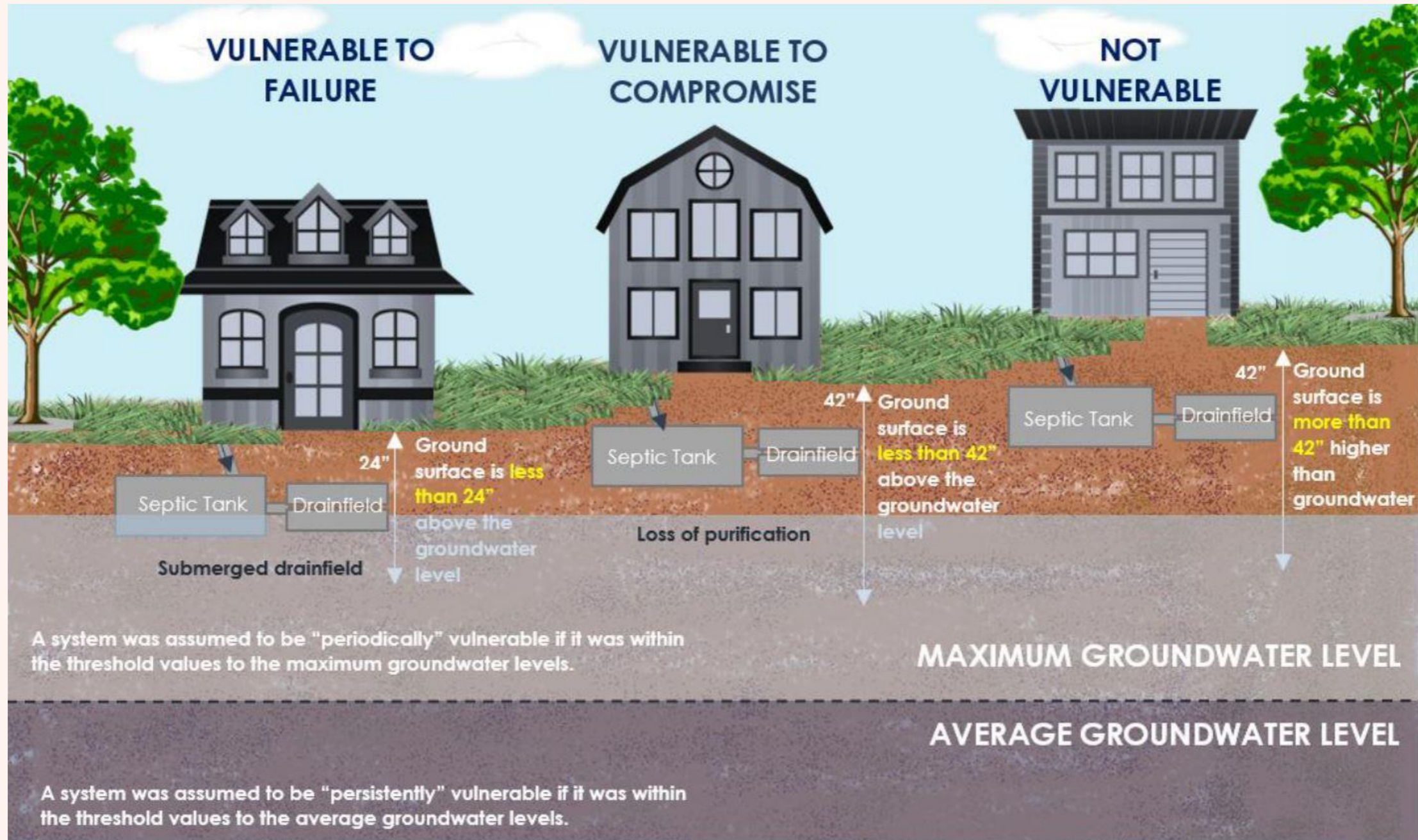
# PROJECT DESCRIPTION

- Design and construct a gravity sanitary sewer system.
- Includes service lateral line in public right of way for 149 single family homes and one city owned lot.
- Design and construct new sanitary sewer pump station and force main.
- Roadway resurfacing.

# SEPTIC SEWER SYSTEMS

- Septic tanks located near low lying coastal areas have a higher risk of being compromised due to sea level rise, floods, and storm surge.
- Approximately half of Kings Bay is located within a flood zone.
- All of Kings Bay is located under Miami-Dade County Storm Surge Planning Zone A.
- Compromised septic systems may no longer provide adequate treatment and can lead to water quality impacts.
- In the event of a complete failure, septic replacement may require substantial investment.

# SEPTIC SEWER VULNERABILITY



A Risk-Based Approach to Septic Systems Vulnerable to Sea Level Rise

# LEGISLATION

## **Septic Tank System Disclosure Ordinance 21-71**

- Adopted as Section 21-49.1 of Miami-Dade County's Code of Ordinances.
- Real estate transactions require acknowledgment of septic tank system disclosure statement on instrument of conveyance.
- Instrument conveying the affected real property must be signed by the purchaser, notarized, and recorded with the Clerk of the Court.
- This ordinance is applicable to both incorporated and unincorporated areas.

# LEGISLATION

## **Onsite Sewage Treatment and Disposal System Ordinance**

- Adopted on first reading by County Commission on 04/19/2022 under File No.220760.
- Tentatively scheduled for public hearing before the PortMiami and Environmental Resilience Committee on 06/07/2022
- The proposed ordinance will require the registration of all new systems installed after January 1, 2023, and the registration of all other existing systems by January 1, 2024.
- Will require the installation of more advanced, “performance-based” treatment systems for new developments and at any time a property owner seeks to replace their existing conventional septic systems
- New systems will require remote telemetry units that provide operation status every 15 minutes, and will include an antenna, power, backup battery, warnings and alarms.
- Miami-Dade County estimates the new systems will cost \$10,000 - \$20,000 above the cost of a standard system.



# BENEFITS

- Improved water quality.
- Reduces maintenance burden on homeowners.
- Reduced risk of hydraulic failure during flood and storm surge events.
- Frees-up land for other purposes .

# PROJECT SCHEDULE

- Design and permitting: 8-9 months
- Procurement: 3 months
- Construction: 10-12 months

# PROJECT COST AND FUNDING

Special Assessment charge to property owner for specific benefit of public sewer.

## Assumptions:

- 150 paying properties (incl. 149 single family homes and one city owned lot).
- Total project cost = \$6M.
- Grant Funding = \$2.75M.
- \$3,412,500 to be financed (incl. admin./finance fees).
- Assessment cost per property = \$22,750 (before interest).
- Billed by city starting November 2022; on the tax bill starting November 2023.
- Homeowner can pay in full in advance to avoid financing charges.

## Estimated Repayment Charges (with interest):

5 Year Repayment

\$4,800 Annually

10 Year Repayment

\$2,700 Annually

Note: Homeowner is responsible for connecting to new sewer lateral and septic system abandonment.

*Thank you!*



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