

Presenting our new resident engagement series...

# Voices of Home

*Bridging Communities for Affordable Housing*



**March 16, 2024**

**9:30am- 12:30pm**

**3250 sw 3rd ave, Miami, FL 33129**



**MIAMI HOMES  
FOR ALL**



*This is a hybrid event. Register today.*

\*FILL OUT OUR SURVEY FOR THIS SESSION'S TOPIC, **HOUSING & CLIMATE**, AS IT RELATES TO YOUR EXPERIENCE.



MIAMI HOMES  
FOR ALL  
SINCE 1985

At our core, Miami Homes For All is a champion for low-income and no-income residents across Miami-Dade County who struggle to find a safe AND affordable place to live. MHFA brings the right information and people to the table in order to affect sustainable housing policies.

We aim to improve the housing ecosystem so that it produces more affordable housing, preserves that which we have, and increases marginalized residents' access to that housing.

*Follow us for updates [@miamihomes4all](#) on IG, X, FB, YouTube, & TikTok!  
If you'd like to sign up for our newsletter, email [daniela@miamihomesforall.org](mailto:daniela@miamihomesforall.org)*

# Menti Ice Breaker



MIAMI HOMES  
FOR ALL

SINCE 1985



# Presentations by

## **DESITNI SMITH**

DIRECTOR OF POPULAR EDUCATION AND GRASSROOTS  
LEADERSHIP OF CATALYST MIAMI



## **JEN POSNER**

DEPUTY EXECUTIVE DIRECTOR OF THE UNIVERSITY OF  
MIAMI'S CLIMATE RESILIENCE ACADEMY



## **JASON GRANT, PH.D., CEM, DGCP, LEED AP, ENV SP**

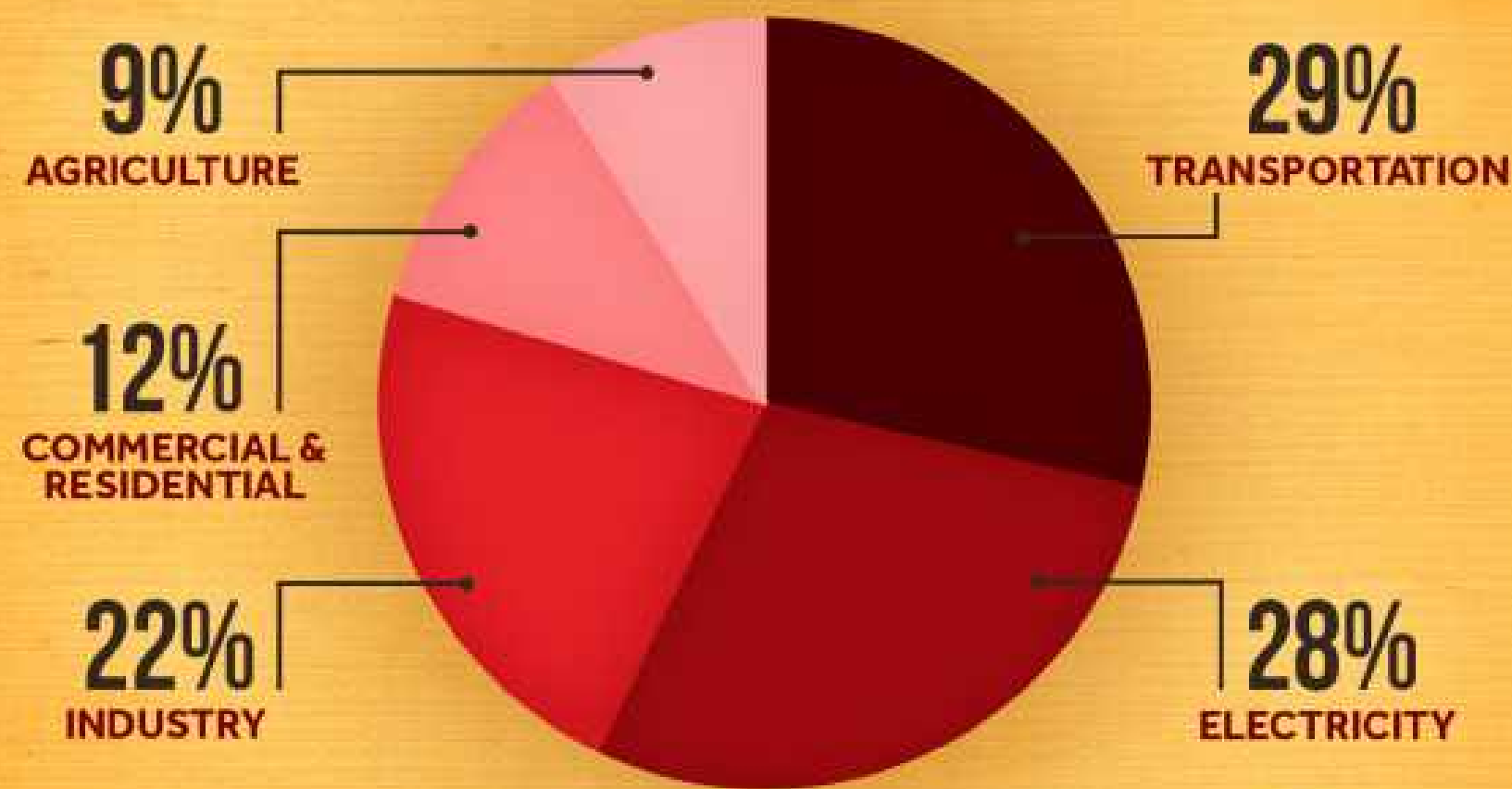
SENIOR ENERGY RESILIENCE PROGRAM MANAGER OF  
THE MIAMI-DADE COUNTY OFFICE OF RESILIENCE



# Climate Change 101

**Climate Change:** long-term shift in global & local weather patterns primarily caused by carbon emissions & the greenhouse gas effect.

## GREENHOUSE GAS SOURCES UNITED STATES EMISSIONS BY SECTOR

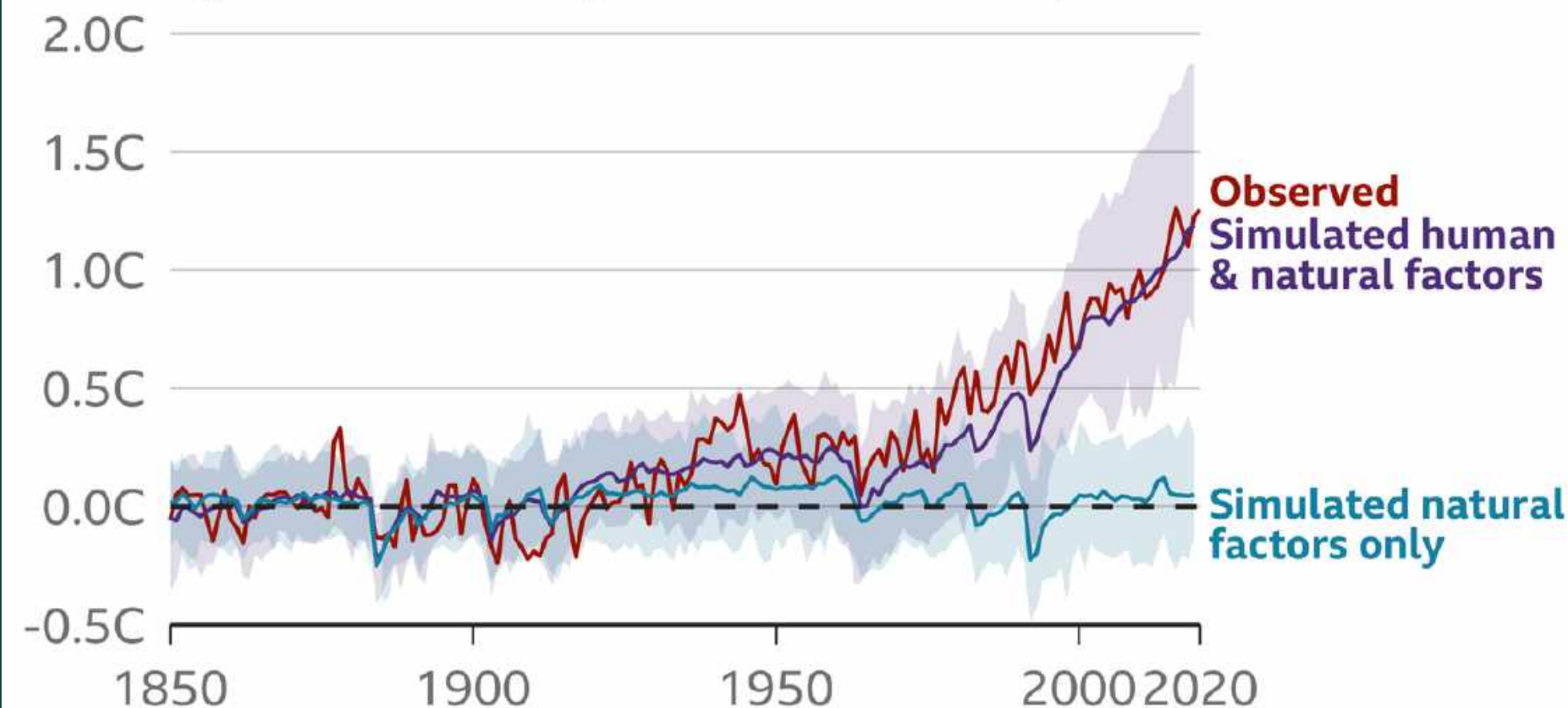


Source: U.S. EPA 2017 (released 2019)

CLIMATE CENTRAL

## Human influence has warmed the climate

Change in average global temperature relative to 1850-1900, showing observed temperatures and computer simulations



Note: Shaded areas show possible range for simulated scenarios

Source: IPCC, 2021: Summary for Policymakers

BBC



# Climate Justice 101

Climate justice begins with recognizing key groups are differently affected by climate change.  
Climate impacts can exacerbate inequitable social conditions.





In Florida, which was hit by Hurricane Irma in September, many residents have accused their local representatives of environmental racism for predominantly using poor and minority neighborhoods as trash sites for the more than 3 million cubic yards of hurricane debris, [WLRN is reporting](#).



FORT MYERS, Fla. — Unlike the affluent seaside communities of Sanibel Island and Fort Myers Beach, where the media has descended to chronicle every detail of the aftermath of Hurricane Ian, the people who live in the squat homes in Dunbar have faced the crisis mostly on their own.

And for many in the historically African American neighborhood, there's a sense of anger and frustration. "They're saying the islands got destroyed," observes 24-year-old Lexus Cherry. "Well, we're destroyed, too. We're really messed up here."

There's no electricity. Water comes out of the faucet, but it's little more than a thin brownish stream, unsafe to drink. A faint smell of sewage wafts up from the street.

When people here call the power and water authorities, they get only vague assurances. No promises, and no timeframes.



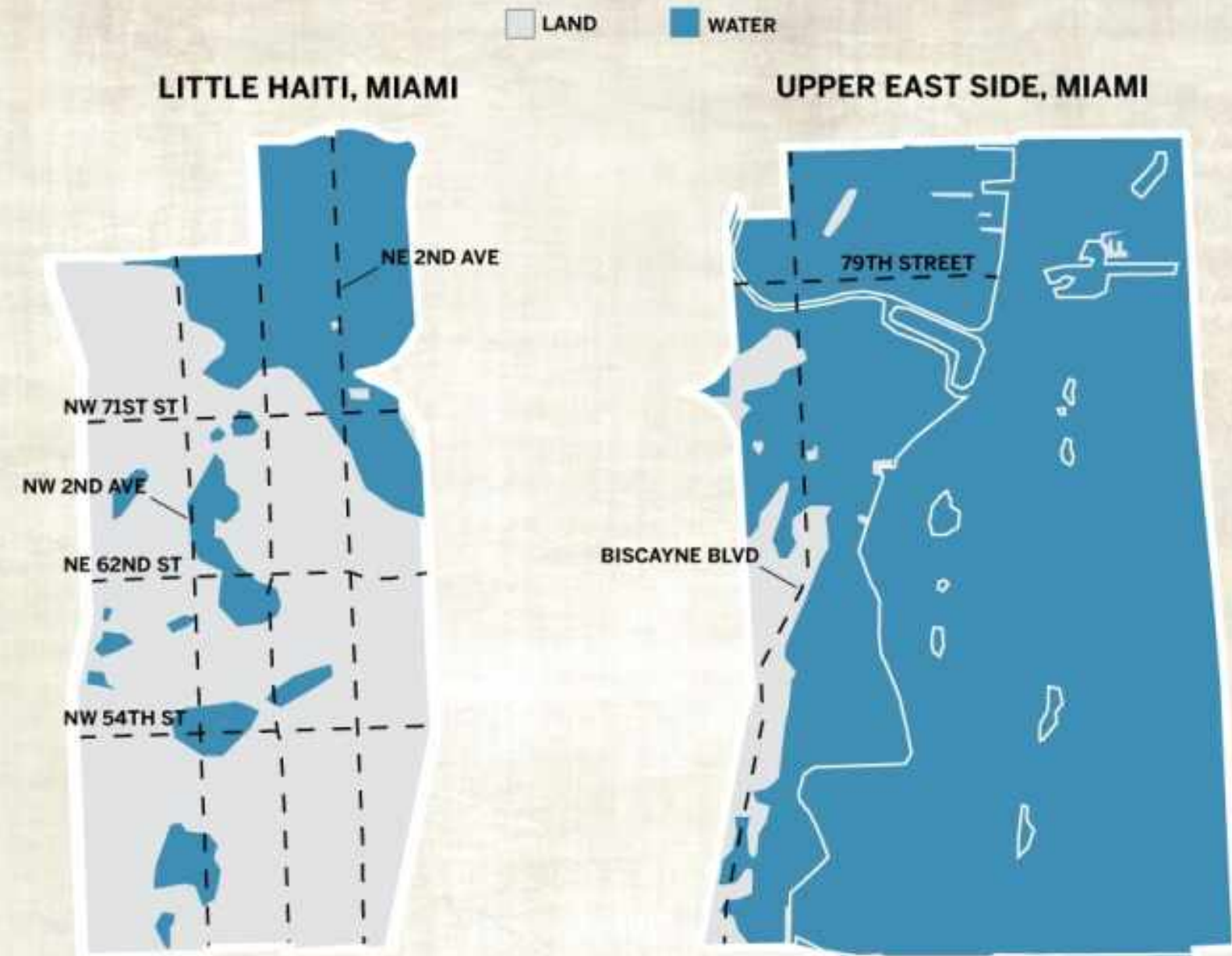
# Climate Gentrification

Due to the threats and impacts of climate change, residents, developers, corporations, gov't, and the like *must* consider developing and residing in more climate-resilient places.

Communities that were once considered poor investments become prime real estate for development due to climate change.

These neighborhoods see changes such as rising housing costs, "green revitalization", and shifts in the economy that result in the displacement of local residents with more affluent residents and businesses.

## Projected Areas of Flooding During a Category 4 Hurricane



Rising costs are pushing more longtime residents out of Little Haiti. Some have seen their rent double or triple in a single year; many who own property have cashed in on their equity. Haitians are being displaced to neighboring communities like Homestead, North Miami, and Miami Lakes, unable to return because they're priced out of the market in Little Haiti. "They want to come back and purchase, but guess what, they can't afford it," Konsyan says.

**THE STAKES**  
WITH  
**KAI WRIGHT**  
thestakespodcast.org





**LIBERTY CITY**

**MIAMI BEACH**

YEAR 2150

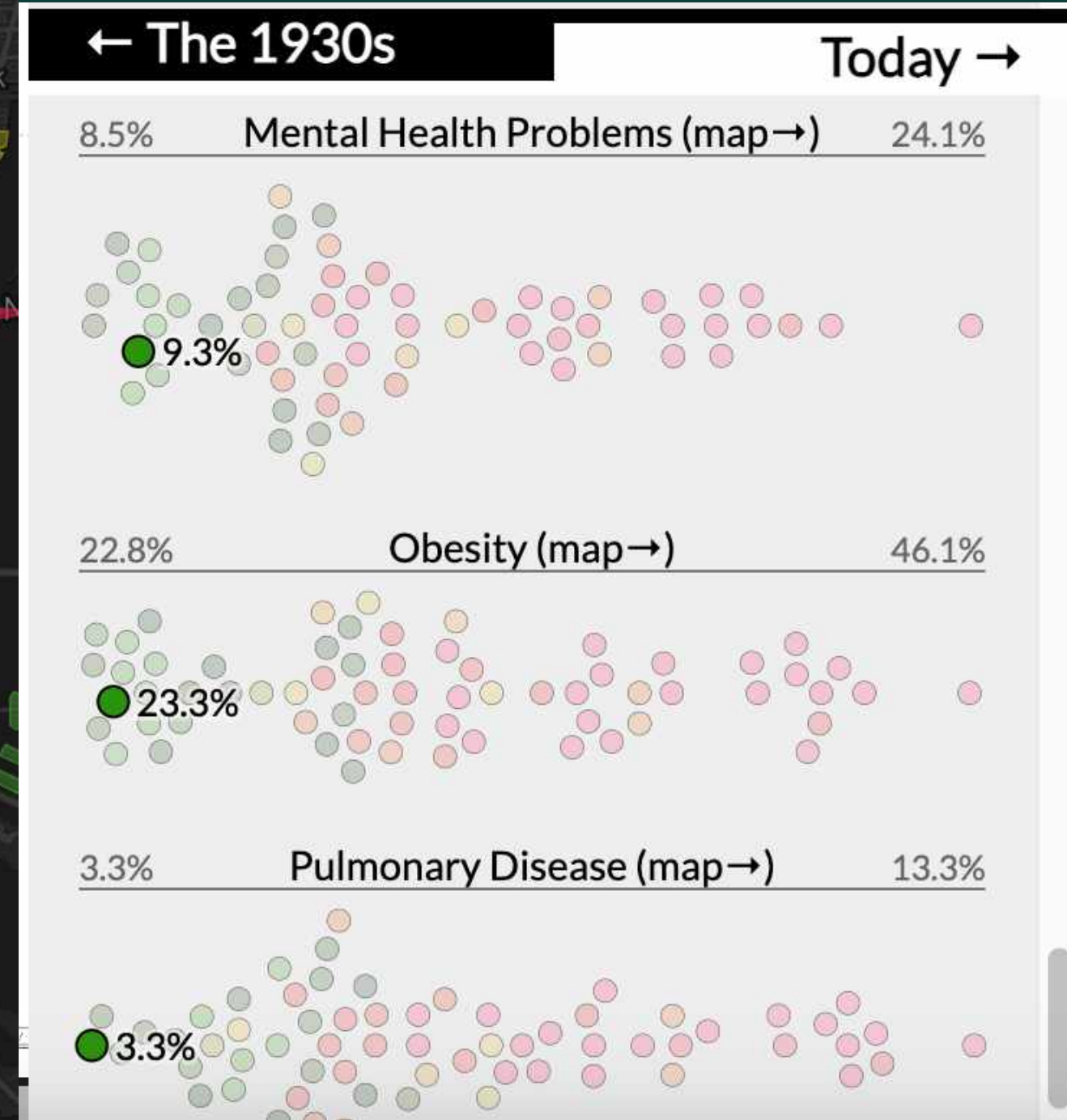
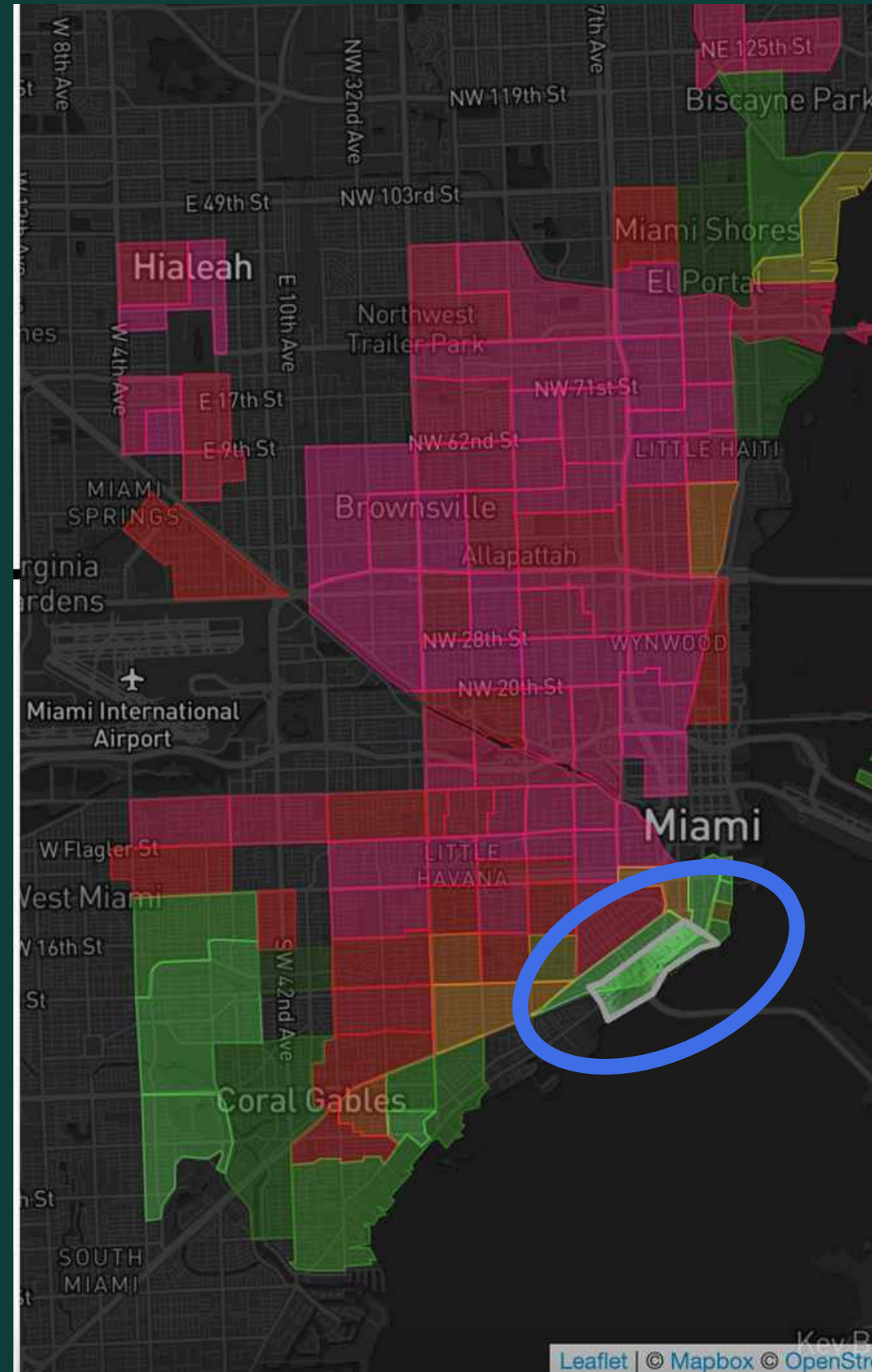


# History of Miami Neighborhoods



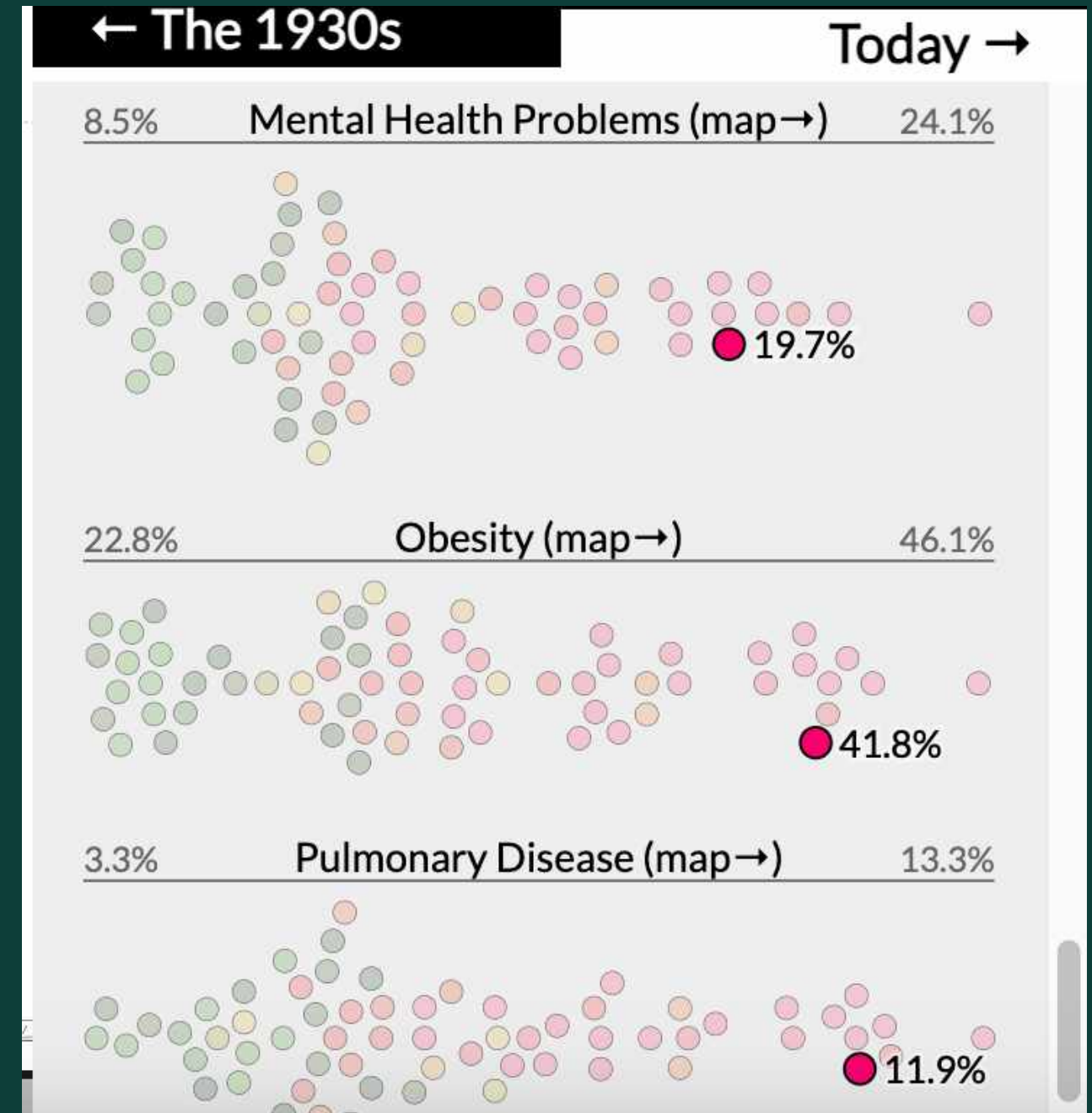
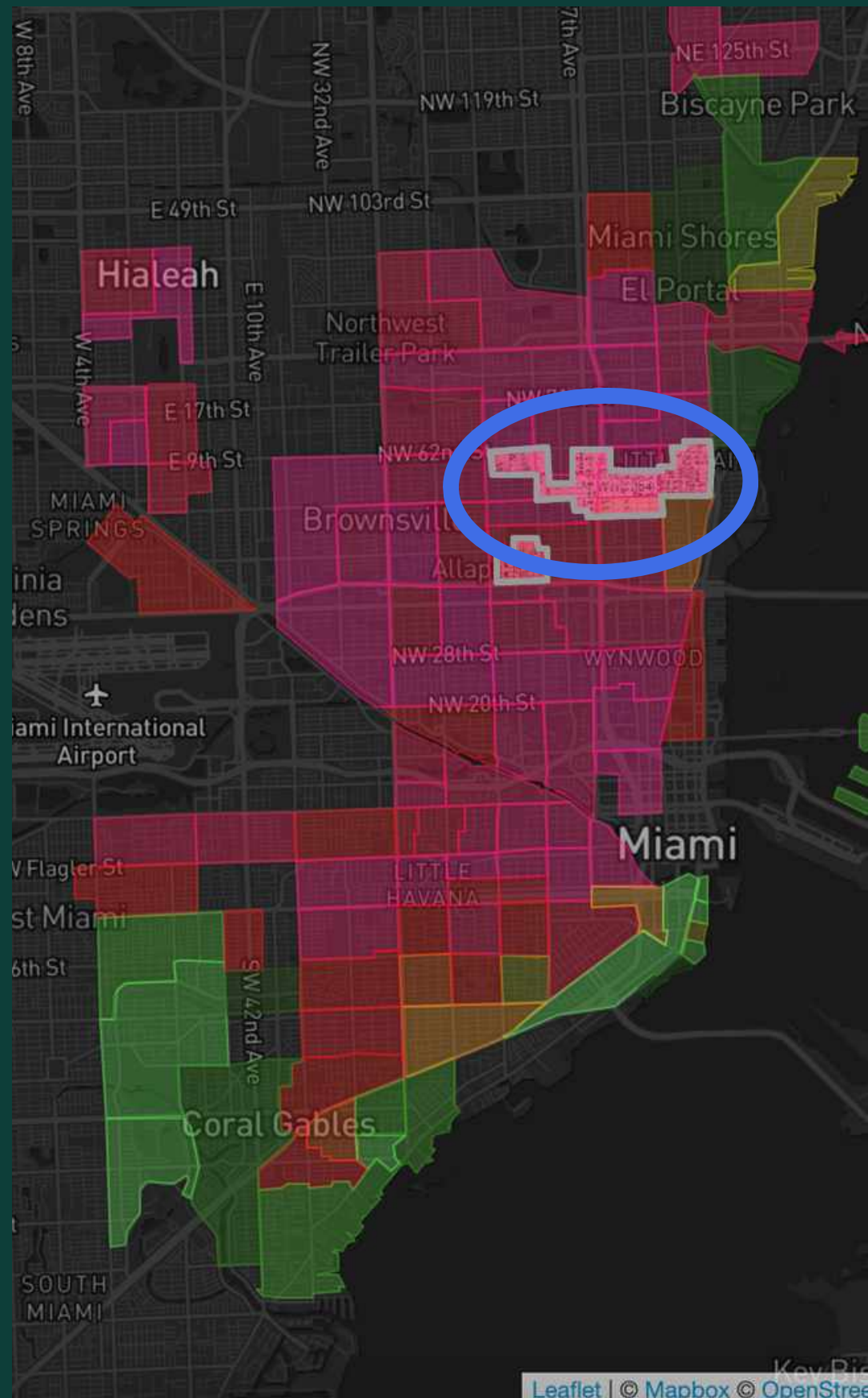
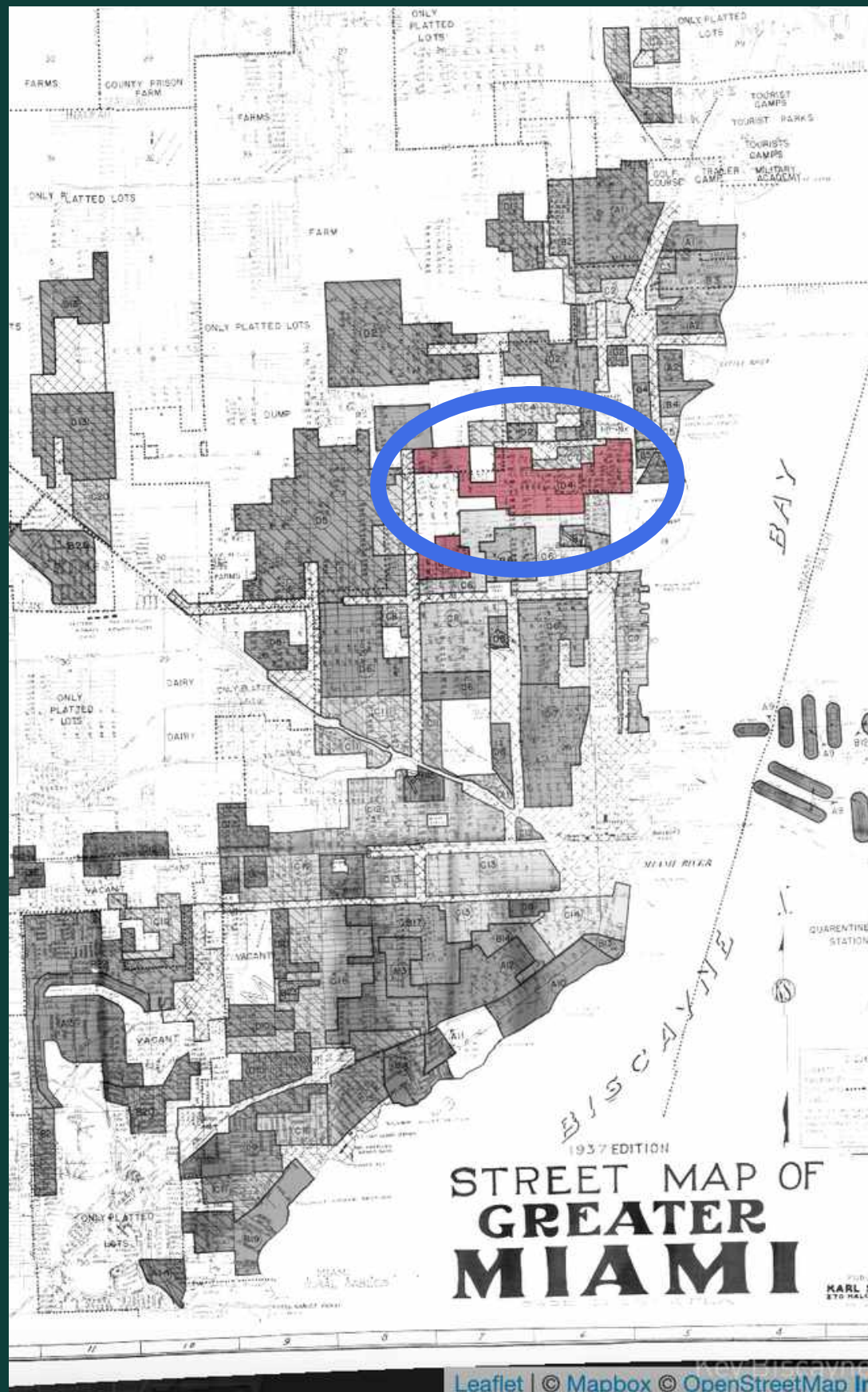


# Redlining: Coconut Grove





# Redlining: Little Haiti





# DISPLACEMENT VULNERABILITY & MITIGATION TOOL (DVMT)

## Our Goals



Promote economic revitalization while allowing current residents to remain in their homes and benefit from increased investment in their community.



Create an easy-to-use tool that saves users time and money by automatically compiling data from a wide range of sources



Equip decisionmakers with research-backed information on the community so they can make informed choices about new developments.

**The “Epicenter”**  
Miami is in a state of hyper-development spurred by its reputation as a global tourist destination and pandemic-era relocation. But current development practices are causing massive displacement of long-time residents and creating one of the worst affordable housing crises in the country.

## How it works:

- 1 Users select project parcel(s) on an interactive map or by inputting the project address or folio number(s).
- 2 User inputs details of proposed project (e.g., total square feet of proposed residential space, average monthly rent for proposed development, changes in the amount of green space)
- 3 DVMT instantly compiles demographic, socioeconomic, and environmental data for the project parcel(s) from the US Census, the American Community Survey, Miami-Dade GIS Data, and USGS.
- 4 DVMT calculates susceptibility to displacement through a statistical analysis of the data from Steps 2 and 3.
- 5 DVMT provides guidance on mitigation strategies to decrease risk of displacement based on vulnerability to displacement calculated in Step 4.

Ready to try the DVMT?

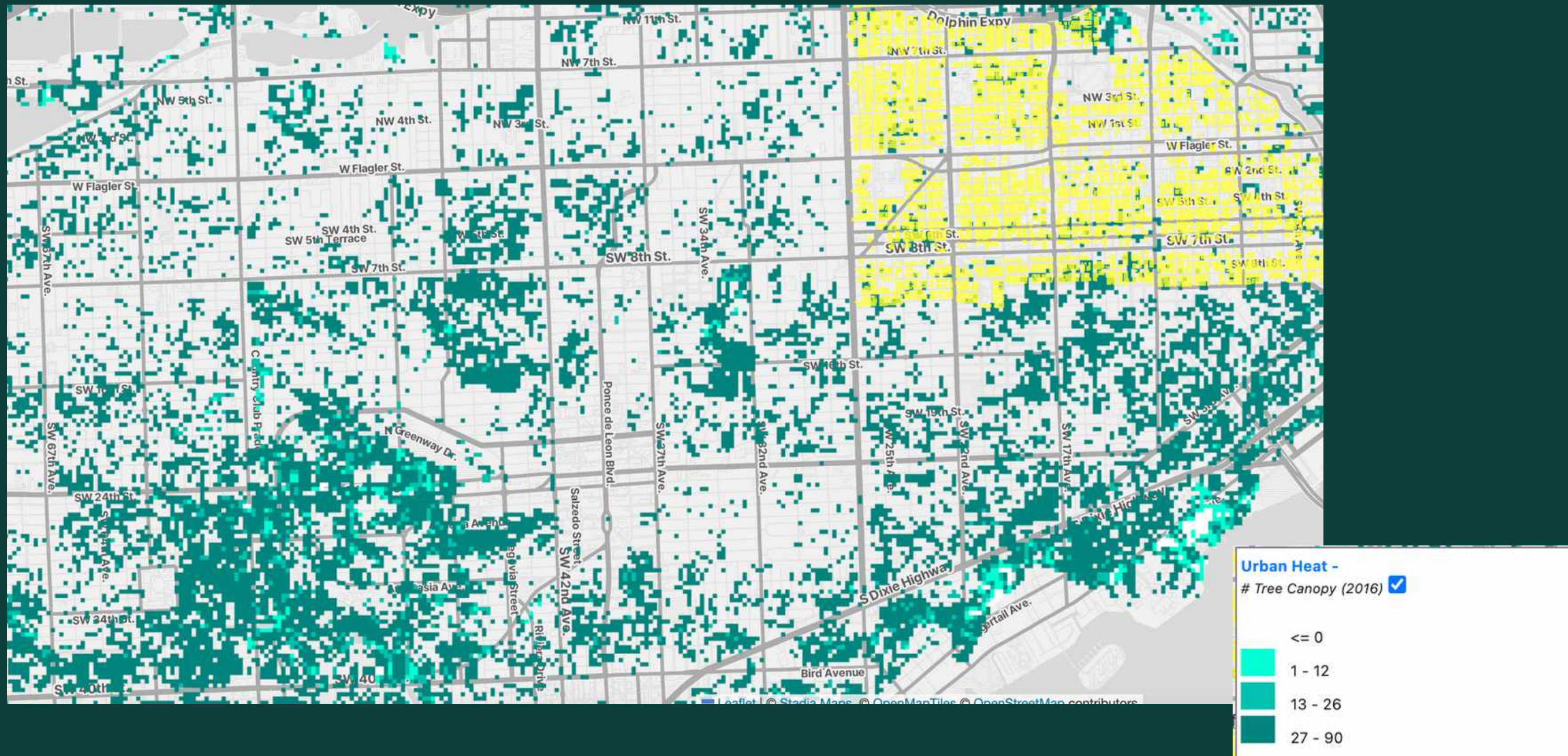
Scan the QR code to get started



Or visit us at <https://dvmt-dev.idsc.miami.edu/>



# Miami Affordability Project - MAP





MIAMI-DADE COUNTY

# OFFICE OF RESILIENCE

REGULATORY AND ECONOMIC RESOURCES

[miamidade.gov/resilience](http://miamidade.gov/resilience)



## Jason Grant, Ph.D

Senior Energy Resilience Program  
Manager

Miami-Dade County Office of Resilience

The Office of Resilience's mission is to lead Miami-Dade County to a resilient and sustainable future by identifying vulnerabilities, coordinating stake-holders, and facilitating innovative solutions.

Our office has continued to grow! Resilience touches many aspects of County operations

ENERGY AND CLIMATE MITIGATION	ADAPTATION	COMMUNICATION	BISCAYNE BAY	EXTREME HEAT	FUTURE READY	ZERO WASTE
 <p>Reduce Sources of Climate Change</p>	 <p>Address Sea Level Rise Impacts</p>	 <p>Engage &amp; Connect Stakeholders</p>	 <p>Protect and Restore</p>	 <p>Implement Heat Risk Reduction Efforts</p>	 <p>Resilience Implementation &amp; Planning</p>	 <p>Minimize Waste &amp; Enable Circularity</p>





ADAPTATION

# Sea Level Rise: Science, Requirements, & County's Strategy





# Sea level rise requirements

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“all County infrastructure projects, ... shall consider sea level rise projections and potential impacts as best estimated at the time of the project, using the regionally consistent **unified sea level rise projections**, during **all project phases** including but not limited to planning, design, and construction, **in order to ensure that infrastructure projects will function properly for fifty (50) years** or the design life of the project, whichever is greater.”

- In order to comply with [Resolution No. R-451-14](#), [Ordinance No. 14-79](#), and CDMP policy LU-13E



# regional unified sea level rise projections

[Link](#)

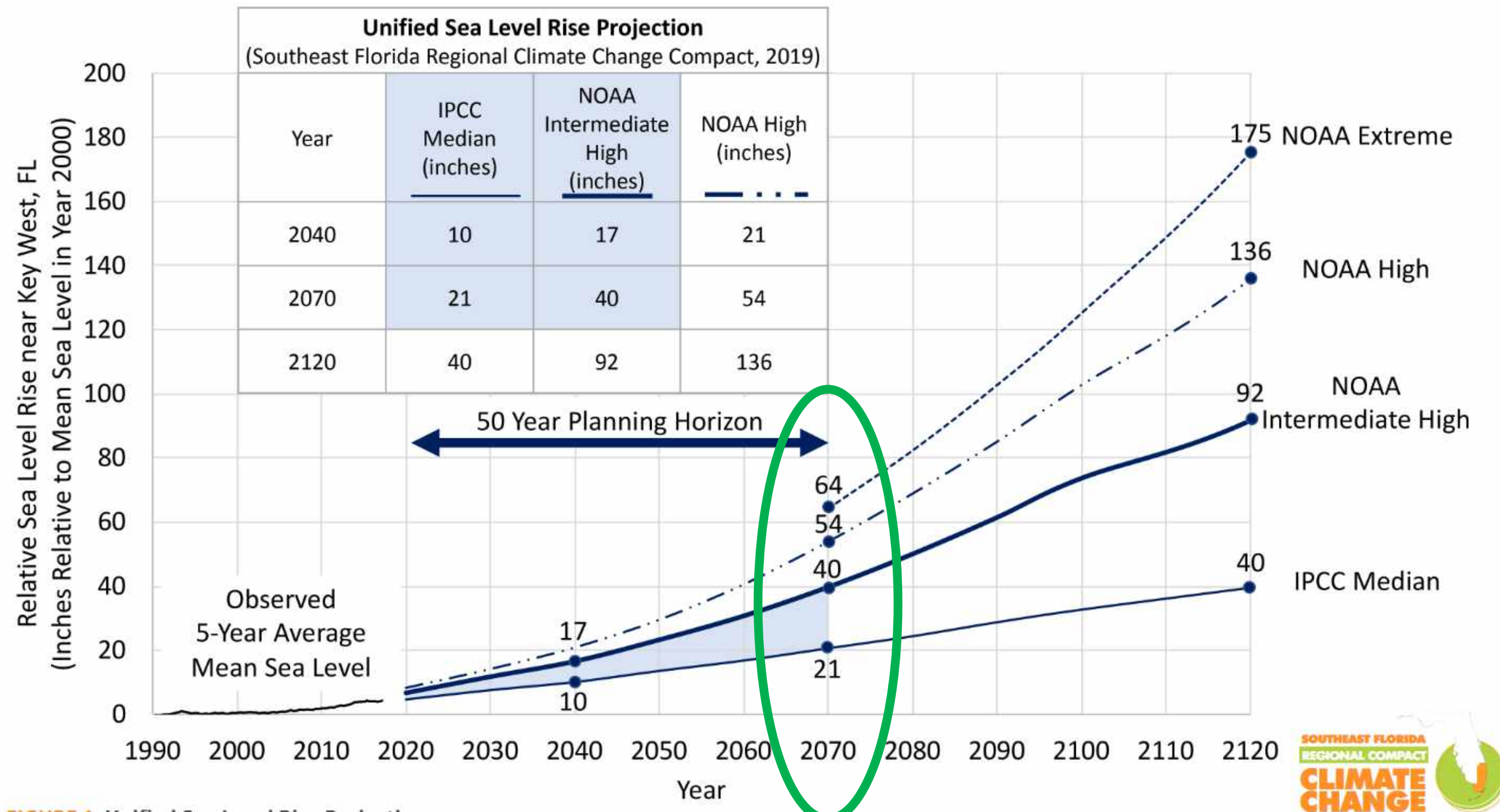
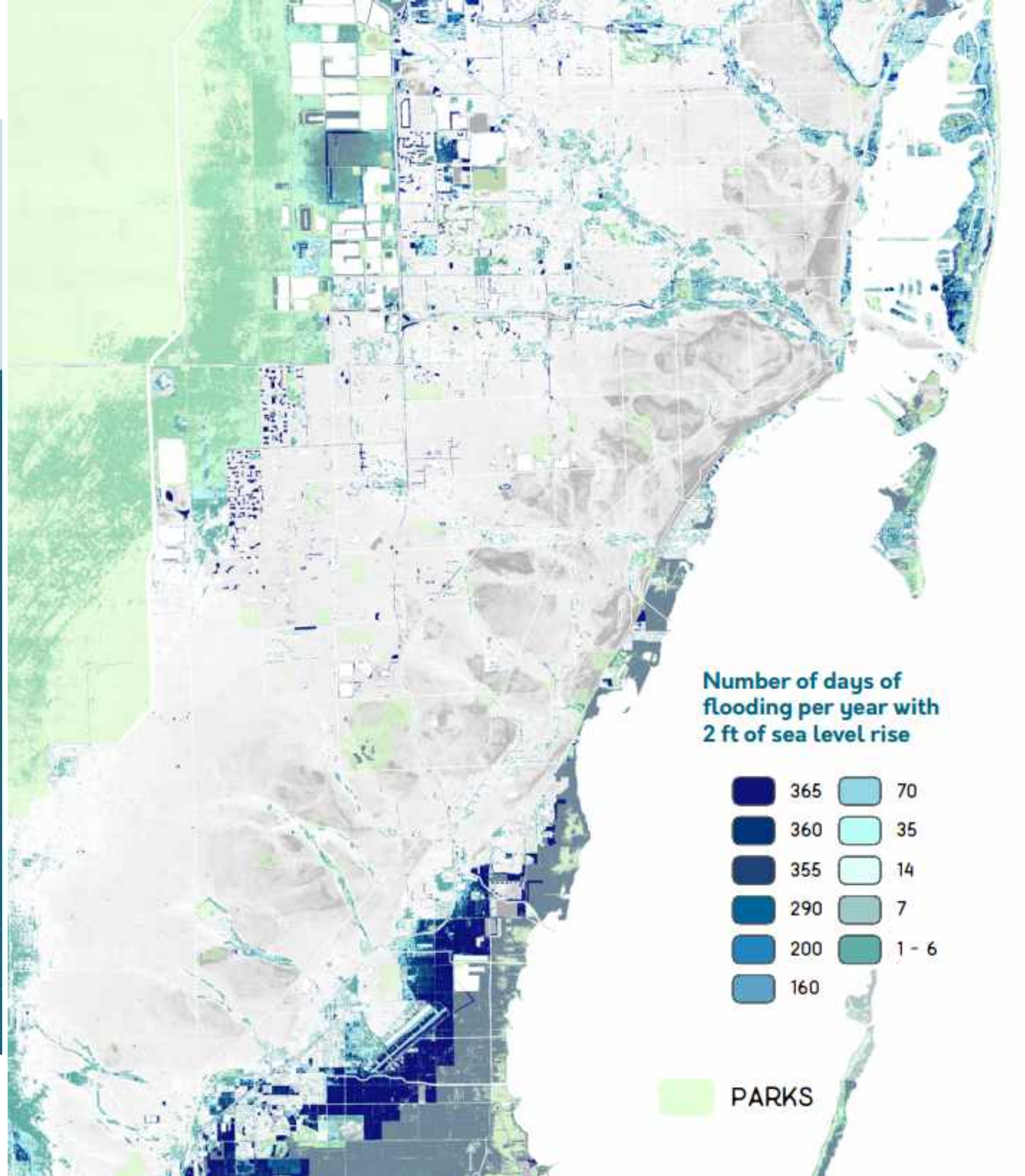
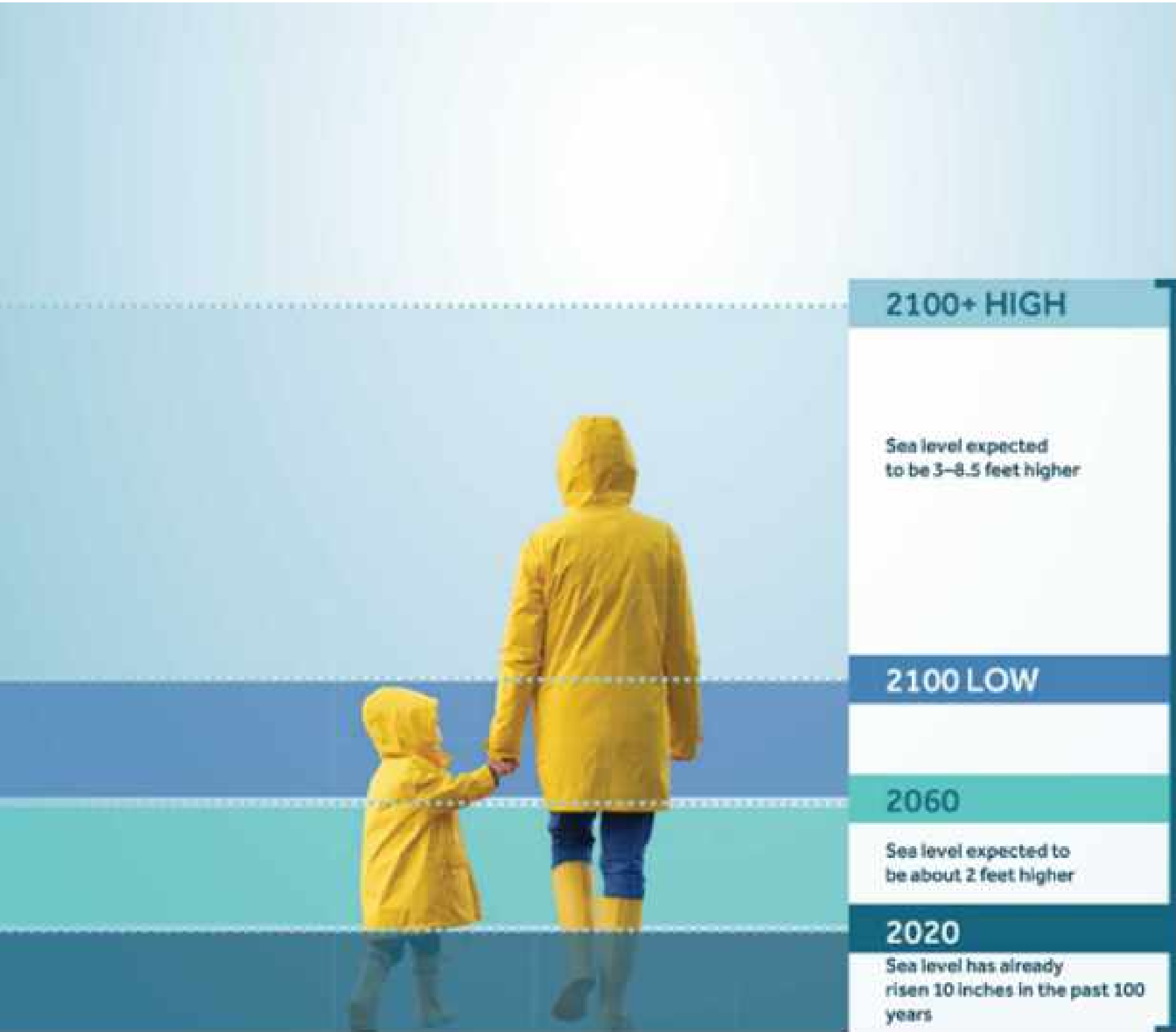


FIGURE 1: Unified Sea Level Rise Projection







# How can we design for sea level rise + future flood risk?

Elevated first floor

Water can flow under building

Salt-tolerant landscaping

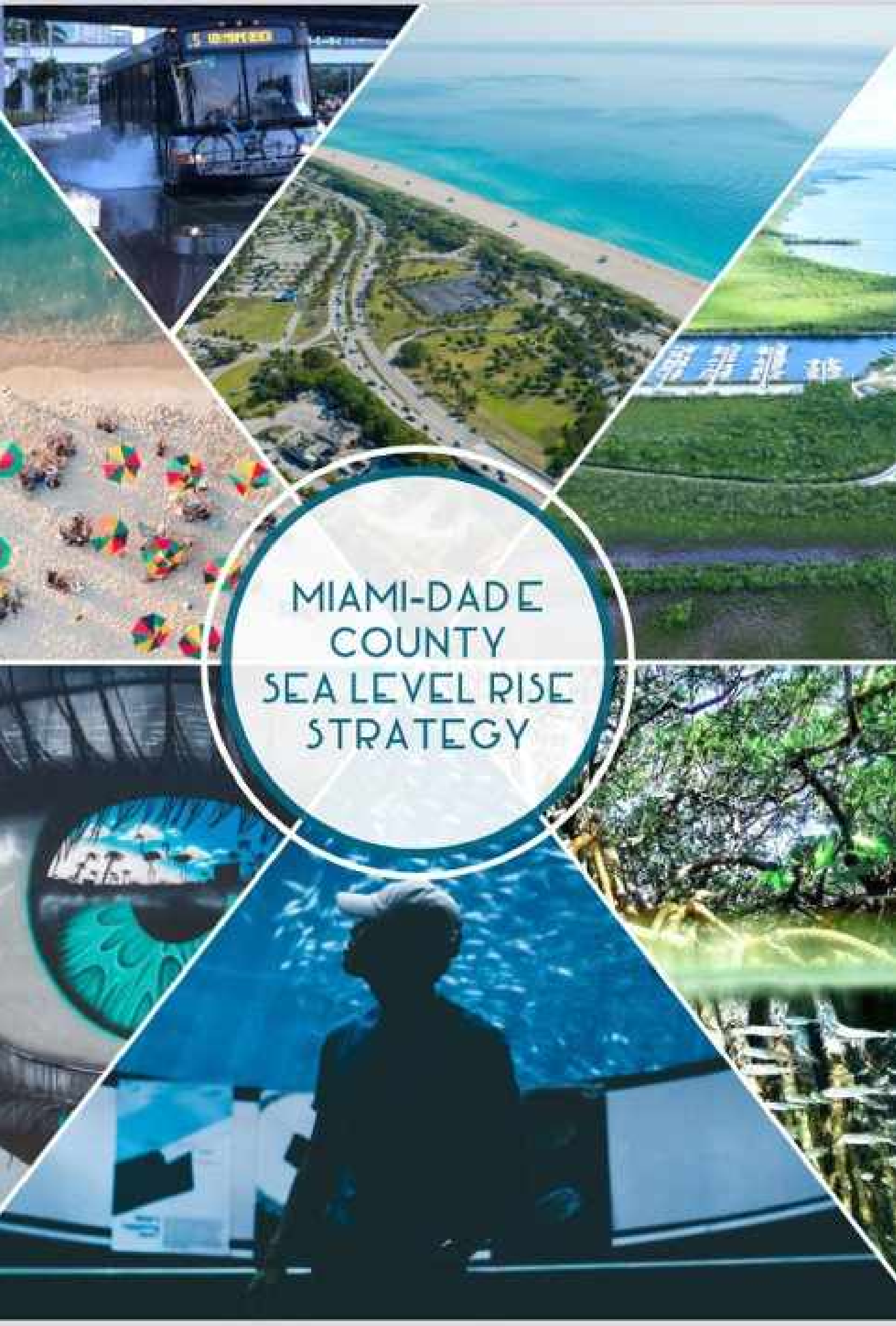
sea wall is elevated

Permeable surfaces

site is elevated on fill

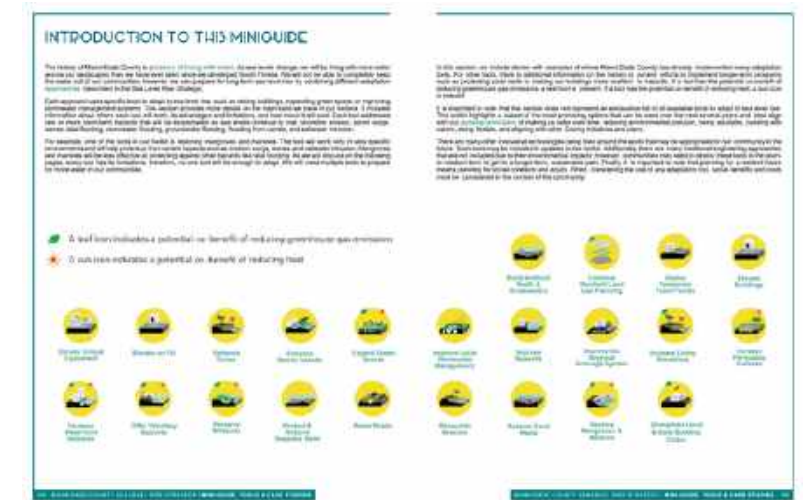






# MDC's Sea Level Rise Strategy

- Adaptation tools & cost estimates
- Top 10 priorities for action
- Funded and unfunded County projects



<https://miami-dade-county-sea-level-rise-strategy-draft-mdc.hub.arcgis.com/>





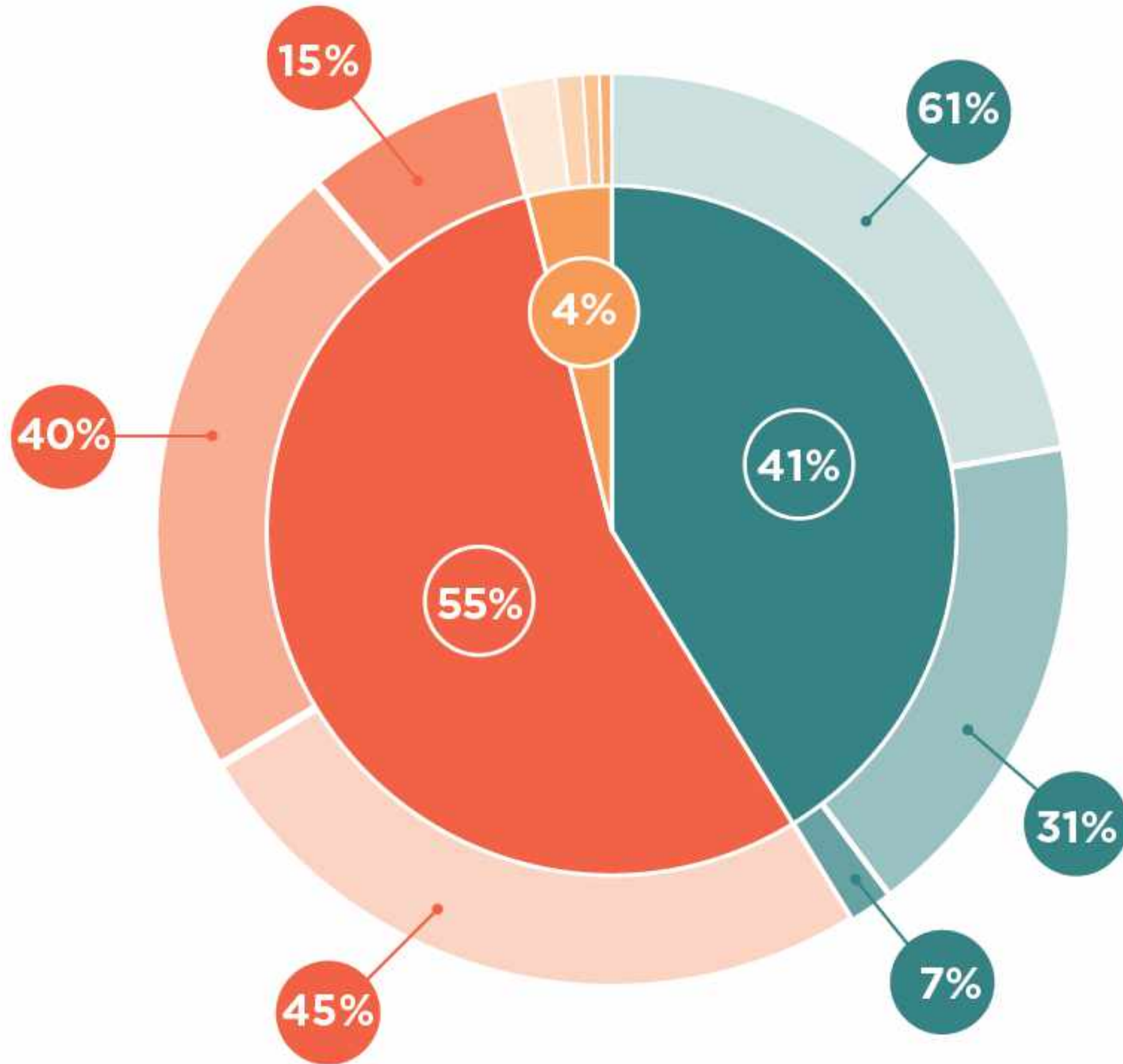
# Mitigation Sustainable Buildings Program & BE305





# Sources of GHG Emissions

## Communitywide Sources of Emissions



**Buildings and Energy 41%**

- Electricity 61%
- Other Fuels 31%
- Natural Gas 7%

**Transportation and Land Use 55%**

- Air Travel 45%
- Ground - Gasoline 40%
- Ground - Diesel 15%

**Water and Waste 4%**

- Landfilled Waste 53%
- Wastewater Energy 25%
- Incinerated Waste 12%
- Other 10%





# Why? Reduce SEVERITY of future climate change IMPACTS

**vehicles burn fuel**

CO<sub>2</sub>  
N<sub>2</sub>O

CO<sub>2</sub>

CH<sub>4</sub>

CO<sub>2</sub>

CH<sub>4</sub>

N<sub>2</sub>O

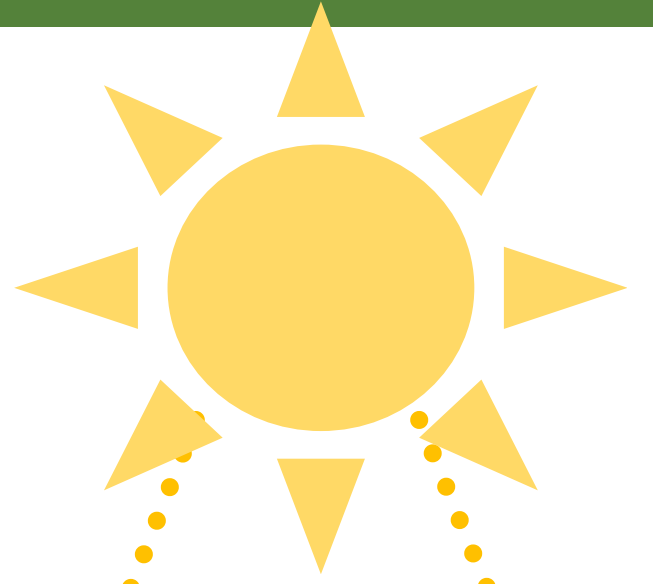
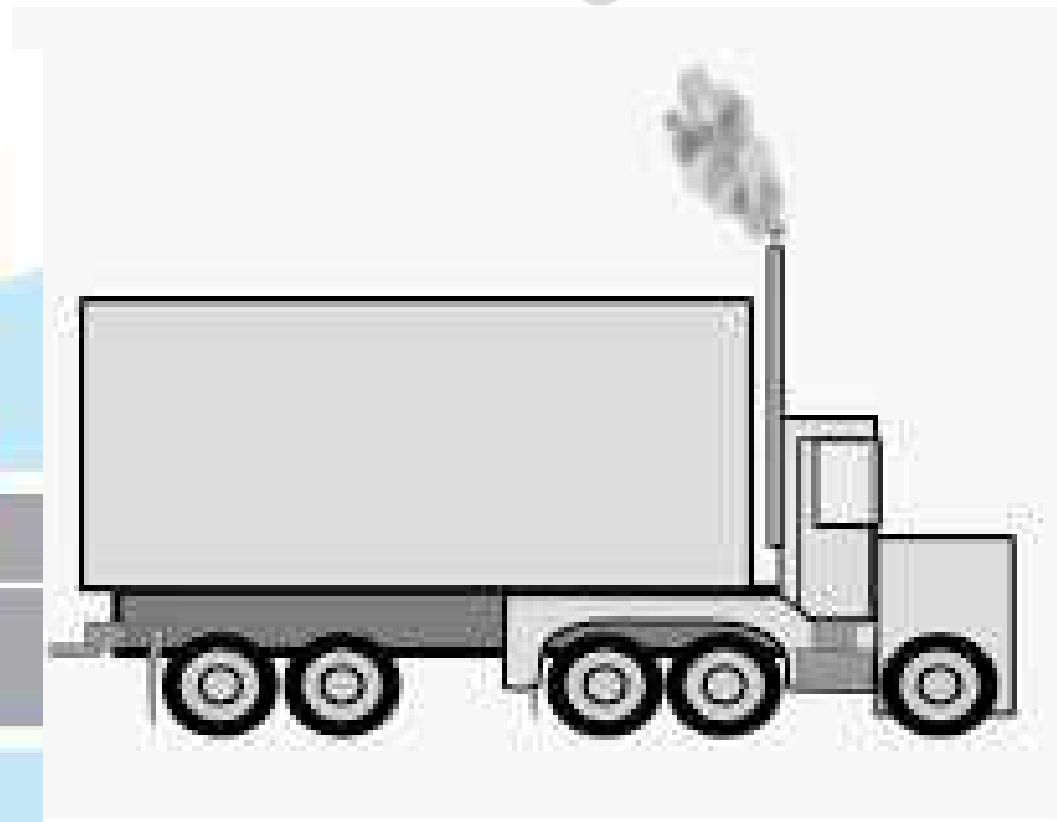
**burning fuel releases climate air pollution (GHGs) into the atmosphere (air)**

CH<sub>4</sub>

N<sub>2</sub>O

Climate air pollutants **trap heat from the sun** in the atmosphere

**IMPACT - INCREASED:**  
sea level rise  
extreme heat  
drought  
storm activity & intensity







# How is fuel use related to climate change?

💡 **electricity** for buildings is generated by **power plants**

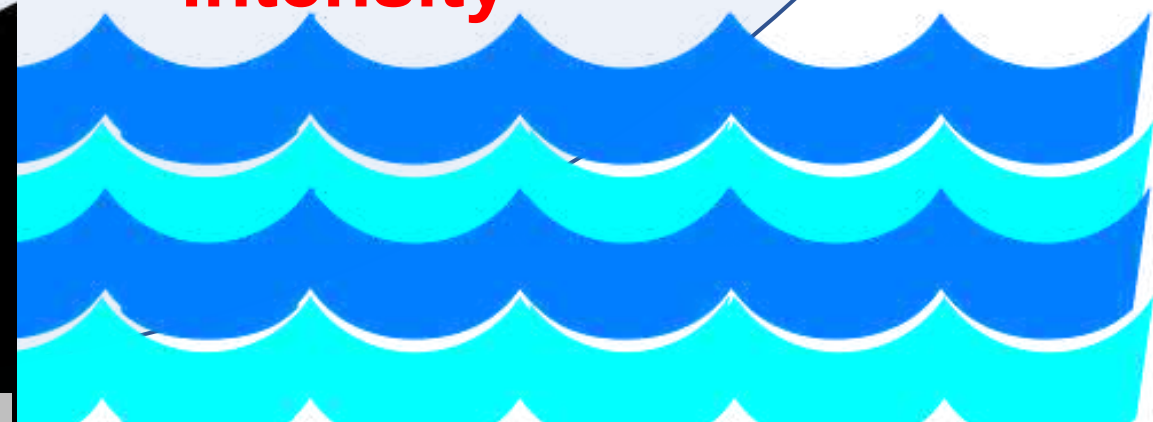
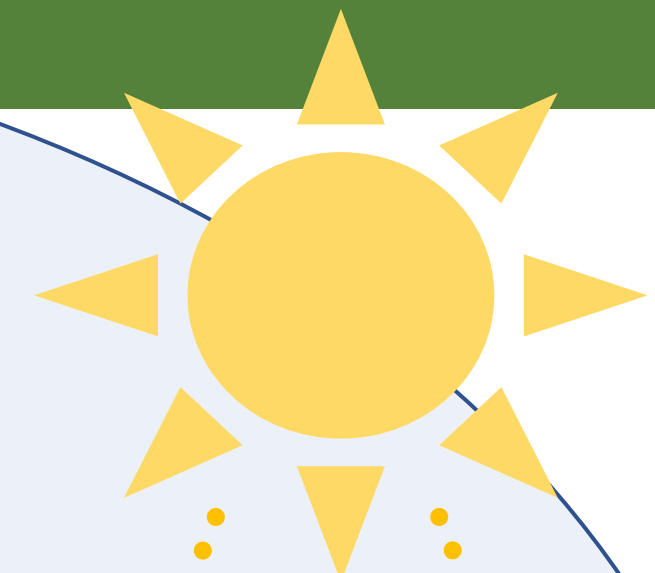
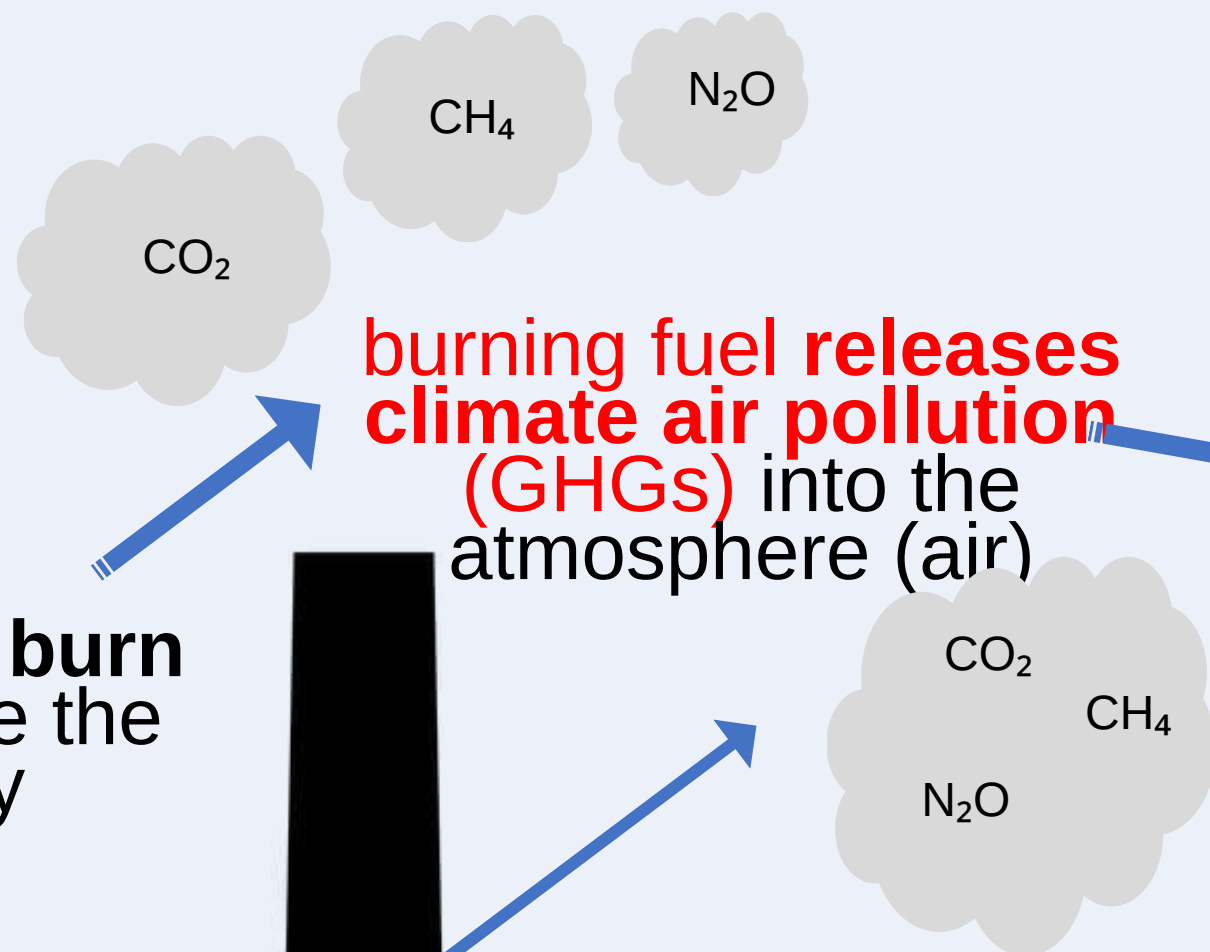
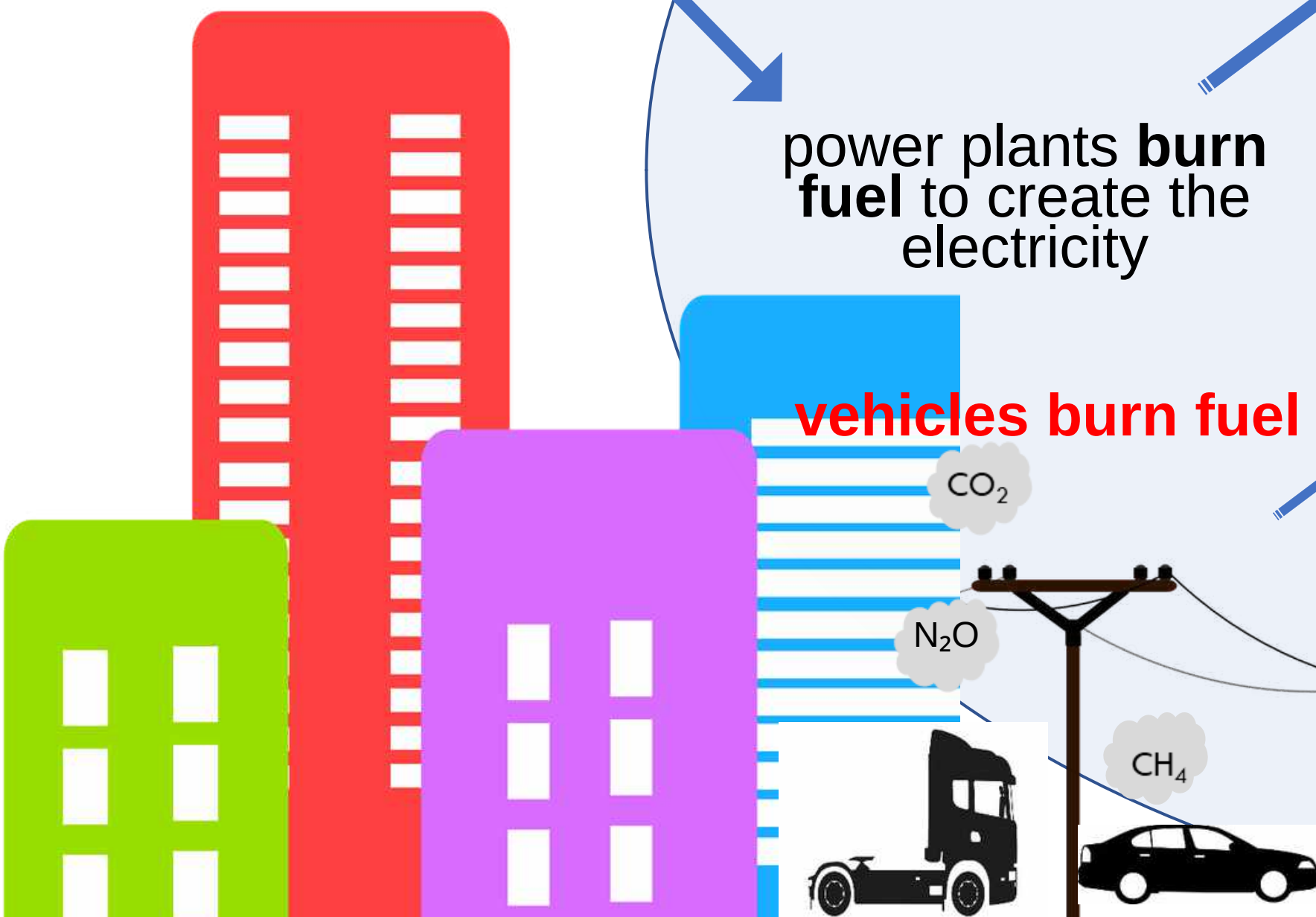
power plants **burn fuel** to create the electricity

**vehicles burn fuel**

**burning fuel releases climate air pollution (GHGs)** into the atmosphere (air)

Climate air pollutants **trap heat from the sun** in the atmosphere

**IMPACT - INCREASED:**  
sea level rise  
extreme heat  
drought  
storm activity & intensity







# Climate Action Strategy Targets

Emission reductions from  
2019 levels

50%

by 2030

Net Zero by 2050

**RACE TO ZERO**



## ENERGY & BUILDINGS



Benchmark, retune and retrofit existing buildings



Expand on-site and off-site renewable energy generation



Build ultra-low energy buildings





- **Sustainable Buildings Program**
  - Implements green building practices into to the planning, design, construction, management, renovation, maintenance, or decommissioning of any infrastructure project or building:
  - **Envision and/or LEED Silver Certification**
- **Building Efficiency 305 (BE305)**
  - Benchmarking for Energy/Water/Waste for large buildings in Miami-Dade County





# Purpose-Driven Procurement (PDP)?

- PDP aims to increase transparency, enhance equity, and foster small and local business contracting opportunities in all procurements within the County.
- PDP focuses on engaging businesses and residents in new ways, improving working conditions, prioritizing environmental considerations, and ensuring ethical behavior throughout the County's supply chain.

## PURPOSE-DRIVEN PROCUREMENT (PDP) ALIGNS WITH THE COUNTY'S 4Es

- **Equity**
- **Economy**
- **Engagement**
- **Environment**



*Image courtesy of Miami-Herald*





## SUSTAINABLE BUILDINGS PROGRAM

**OFFICE OF RESILIENCE**  
REGULATORY AND ECONOMIC RESOURCES

More than **\$3.7 million** saved and  
**100,844,488 kWh** of electricity



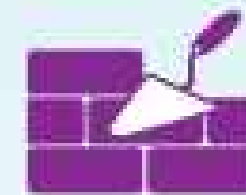
Improved **7.27 million sq. ft.**  
with **63 completed** projects



Avoided **71,700**  
**Metric Tons** of  
emissions



**90 projects**  
in-progress - an additional  
**\$27 million** in savings by 2030

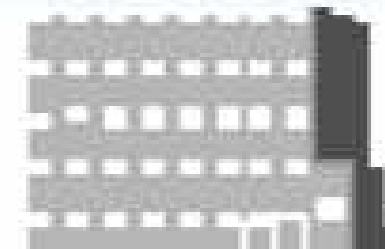


Second  
Envision  
**Certified  
Project**  
in November 2021

**Equivalent to  
removing  
15,000  
gas-powered  
cars** from the  
road annually



**15 Years**  
of the **Sustainable  
Buildings Program**





## SEPTIC 101

### A COMPROMISED SYSTEM:

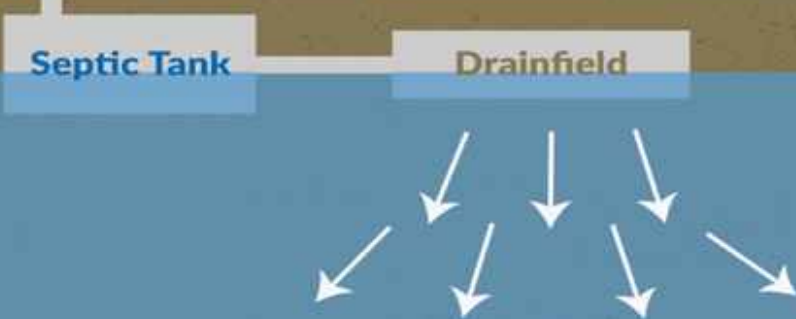
- ⊗ Has less than 2 FEET OF DRY GROUND beneath the system
- ⊗ Cannot filter your waste out properly



Sea level rise raises the water table, making septic tanks prone to **COMPROMISE & FAILURE**

### A FAILING SYSTEM:

- ⊗ Is **NOT** surrounded by **DRY** soil
- ⊗ Cannot filter your waste out properly



## Miami -Dade County

Water & Sewer Department

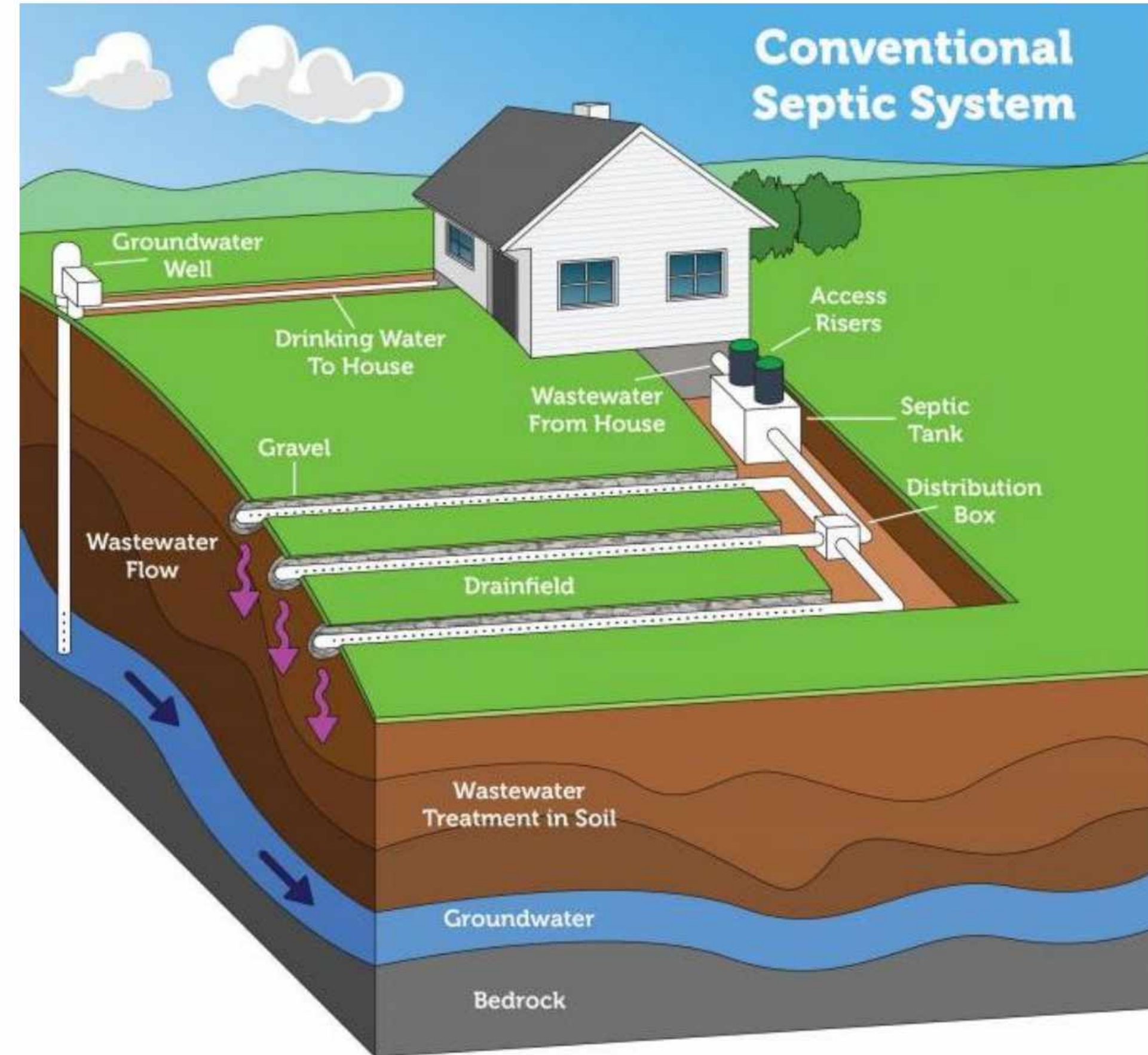
Department of Environmental Resources Management

## Septic to Sewer:



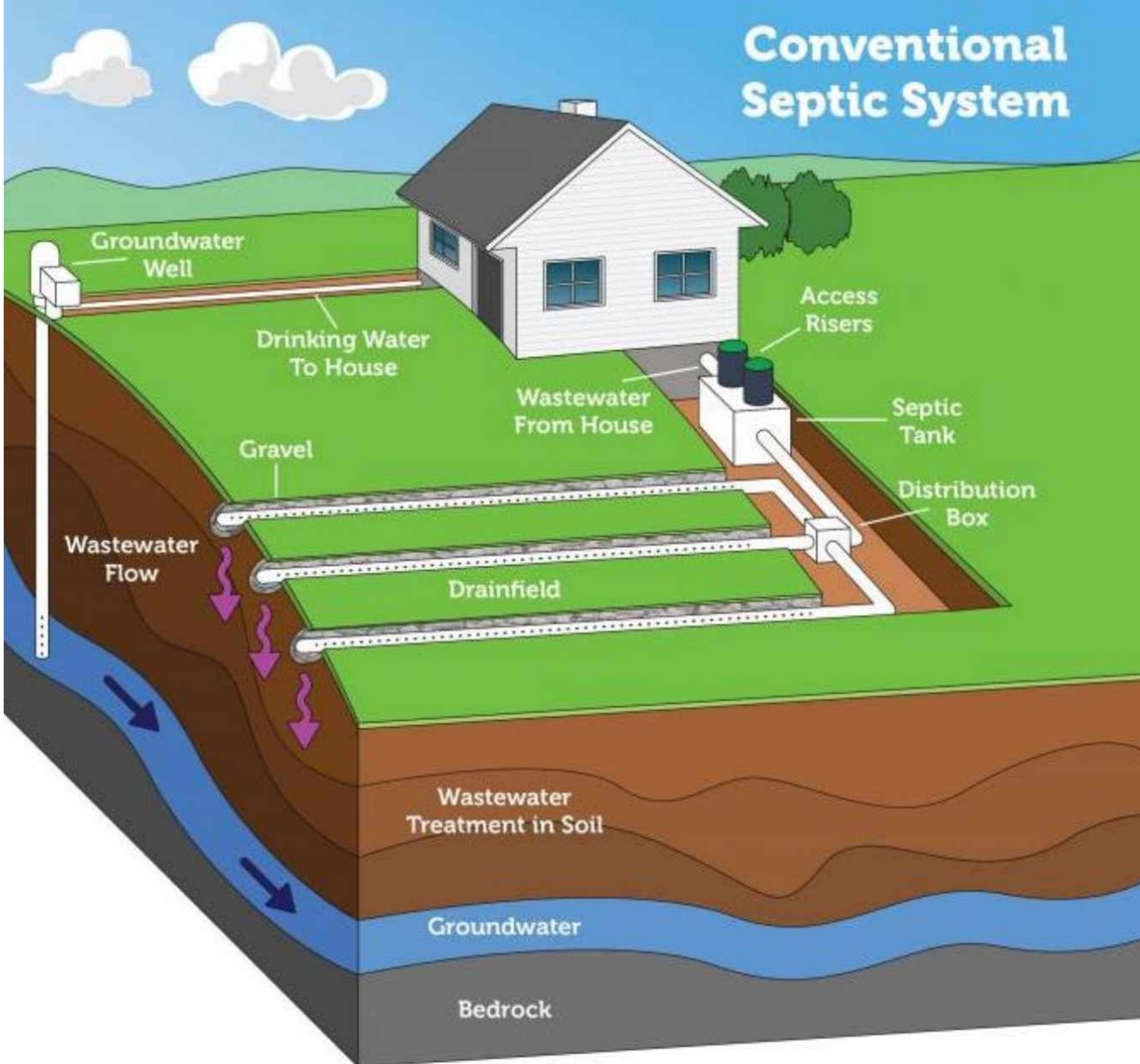
# Septic systems are a source of nitrogen to soil and groundwater

- Septic systems are designed from a public health perspective, to remove pathogens.
- When properly sited and maintained, they do a good job of this.
- They were not designed to remove nutrients, like N and P
- Nitrate readily leaches to groundwater



Please note: Septic systems vary. Diagram is not to scale.



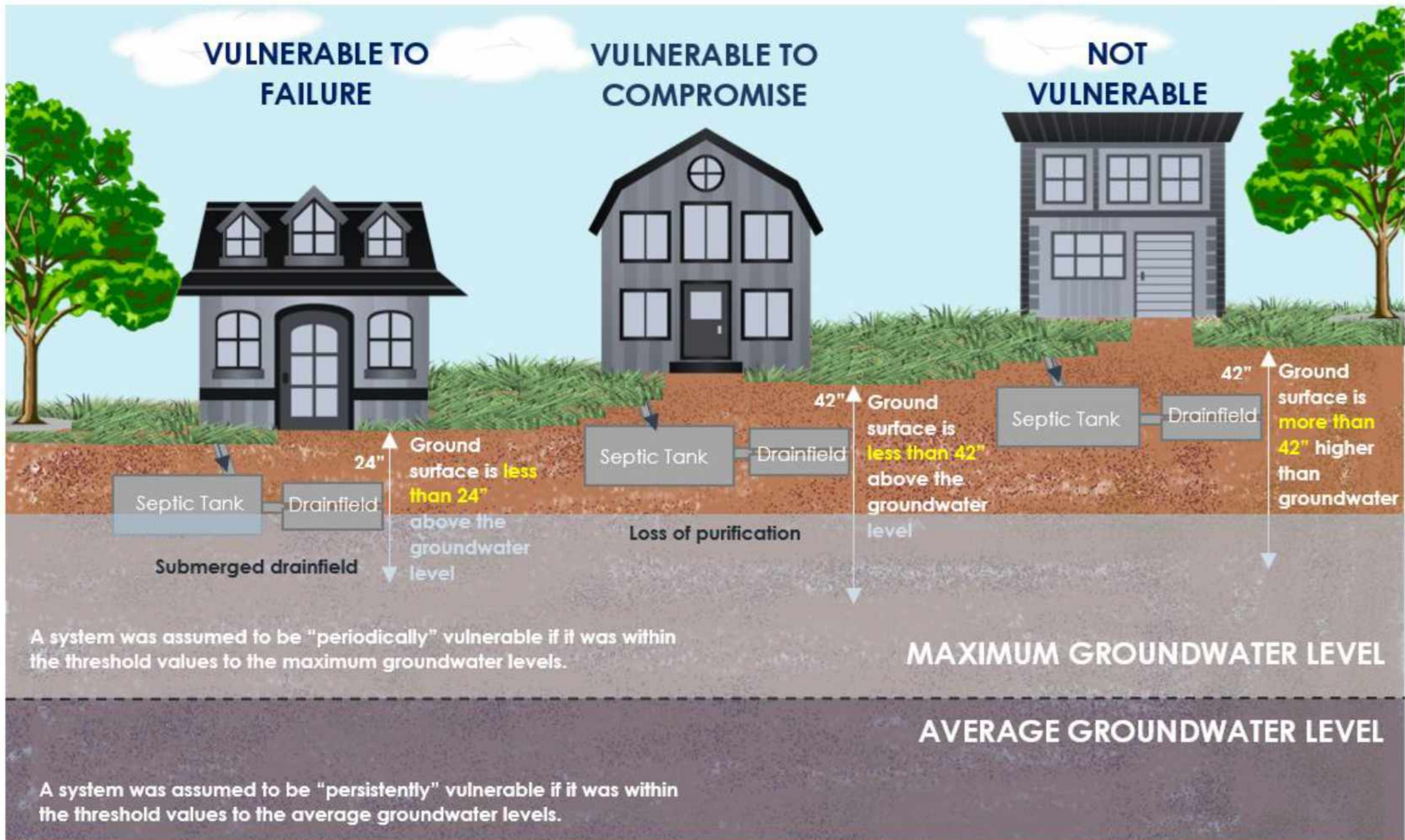


## The Drainfield

### Most treatment takes place here

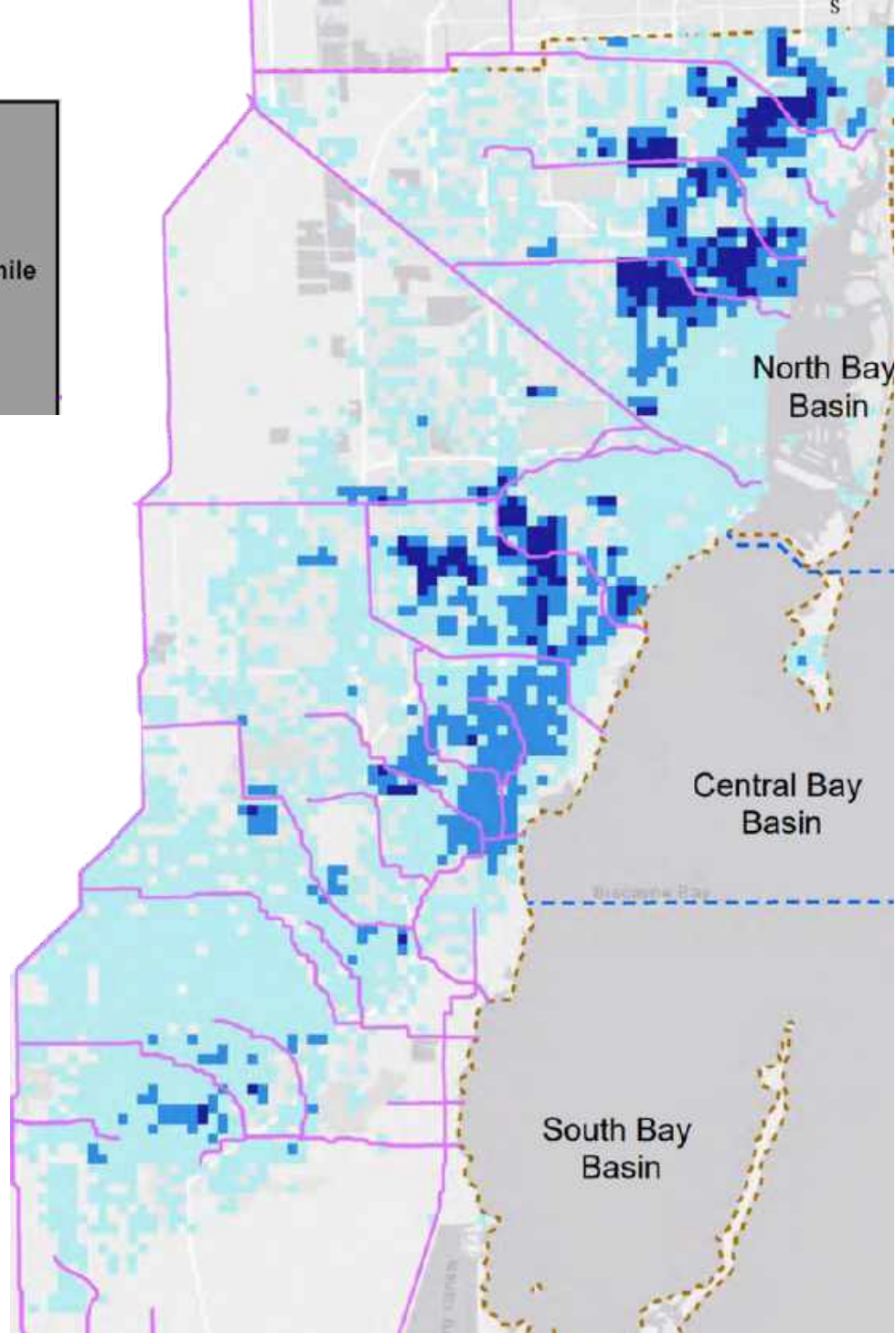
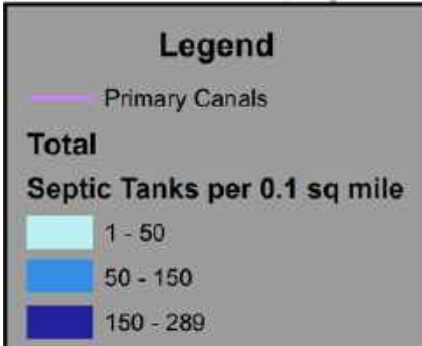
1. Series of trenches or a single bed with perforated pipes
2. Filtering, removal, and transformation of contaminants as effluent moves through the soil
3. Need unsaturated soil
  - ❑ 24 inches from bottom of drainfield to wet season high water table





Source: Septic Systems Vulnerability to Sea Level Rise, WASD, 2018

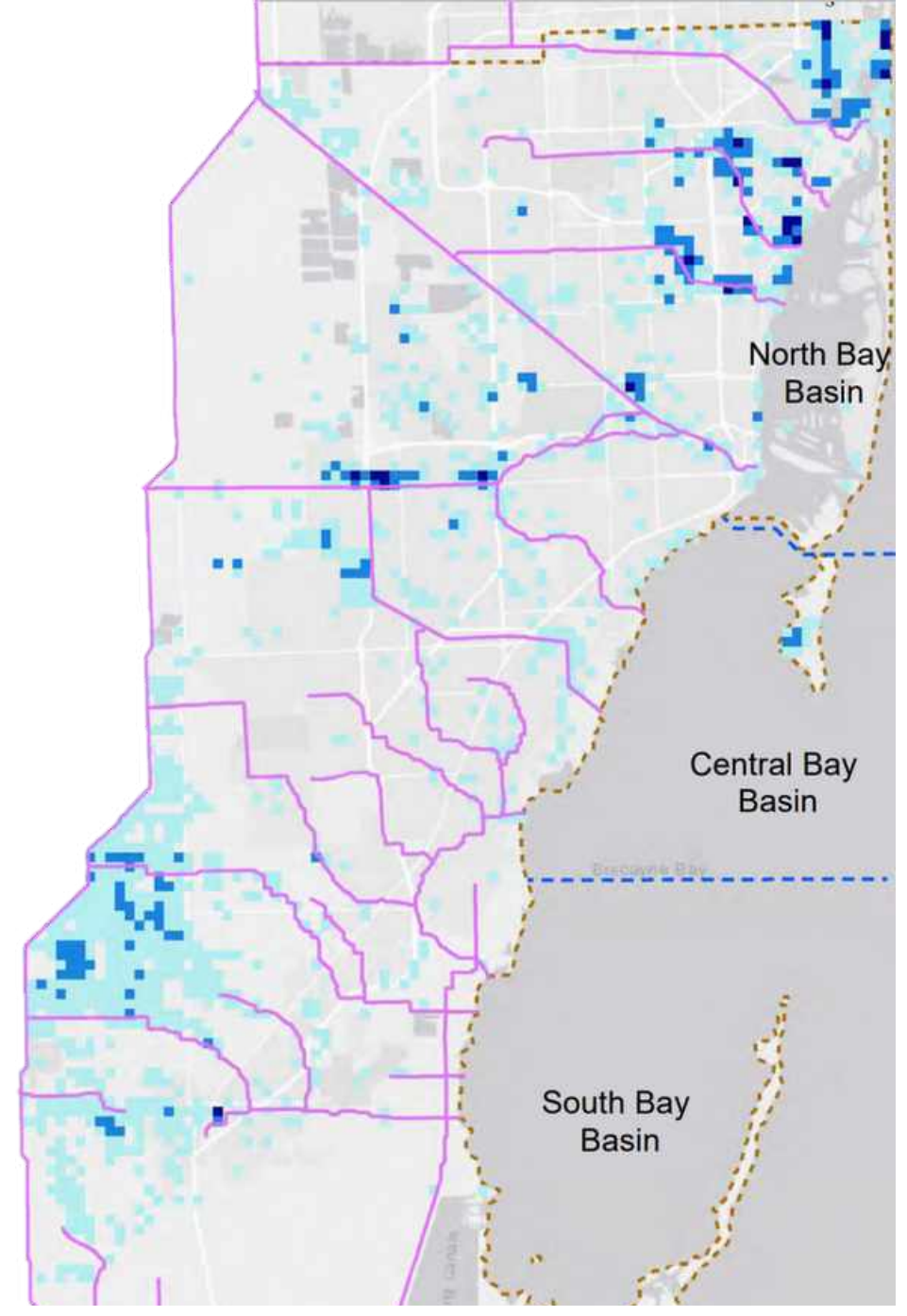




# Septic Systems

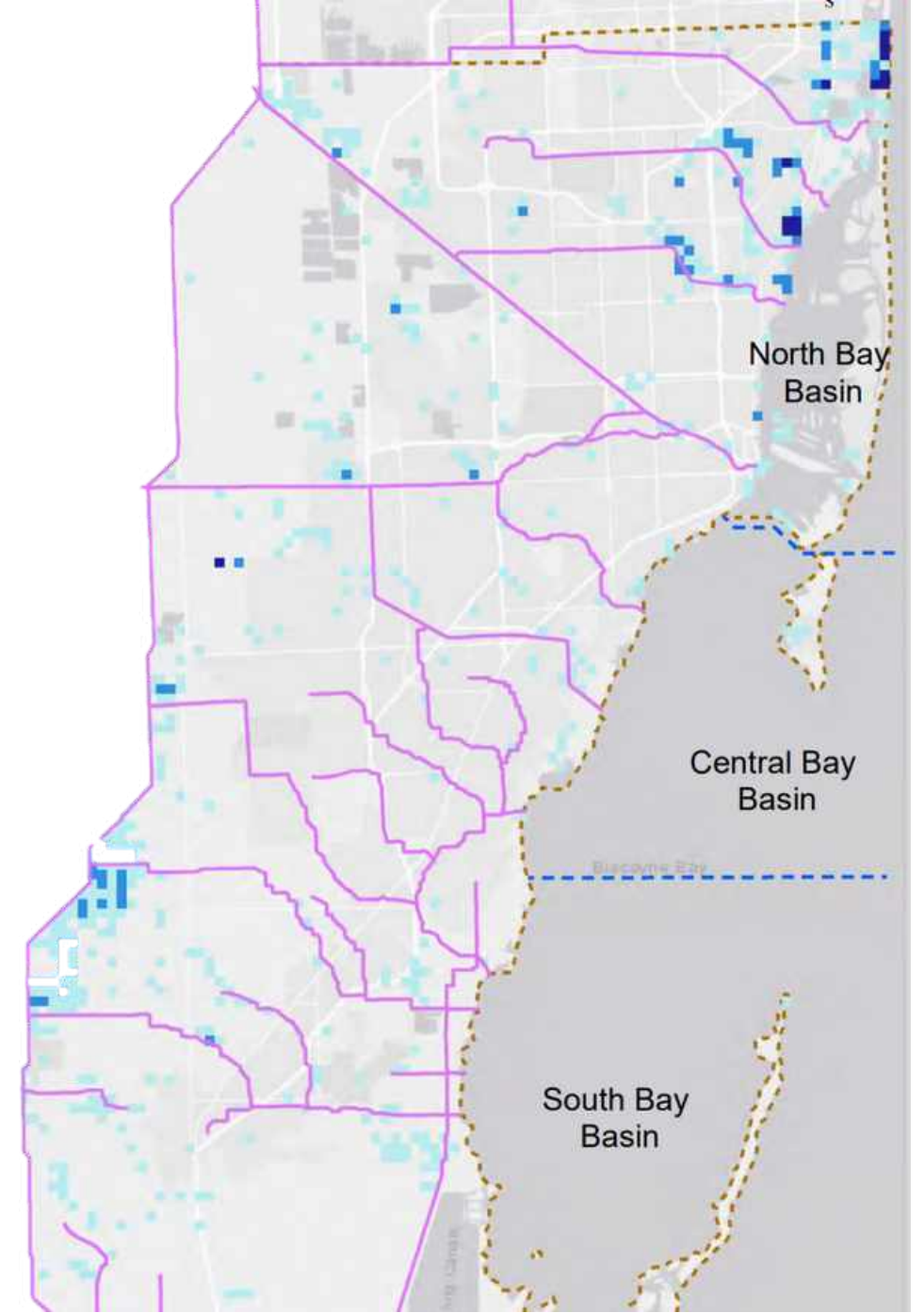
~120,000 Countywide

*Approximately 13% of County population served by septic systems*



# Compromised Septic Systems

Loss of purification



# Failing Septic Systems

Partially submerged system

2020: ~ 9,000  
2040: ~ 13,500



RECOGNIZING THAT **9,000 SEPTIC SYSTEMS** ARE VULNERABLE TO COMPROMISE OR FAILURE UNDER CURRENT GROUNDWATER CONDITIONS AND INCREASES TO APPROXIMATELY **13,500 BY 2040**, THE FOLLOWING ARE THE NEXT STEPS:



## NEXT STEPS

- Implement a program to install public laterals to support connection of properties abutting sewer infrastructure, prioritizing those that are vulnerable to compromise/failure by 2040
- Prioritize areas for expansion of the sanitary sewer system based on environmental, social, and economic impacts
- Investigate financing opportunities for homeowners for the conversion of septic to sewer
- Initiate residential and commercial septic system registration program
- Perform water quality analysis to guide investment choices





# Insurance Florida Flood & Property Insurance



HOME PAGE

## 100,000 Miami-Dade residents will get a big discount on flood insurance. Are you one?

BY ALEX HARRIS

UPDATED JANUARY 12, 2024 5:20 PM



Aerial view of floods affecting West 29 Street and 14th Avenue in Hialeah as South Florida is getting drenched Wednesday night as torrential downpours inundate the region due to a disturbance off Florida's coast affecting, on Wednesday November 16, 2023. PEDRO PORTAL [pportal@miamiherald.com](mailto:pportal@miamiherald.com)

### Flood Insurance:

- Due to a change in how the Federal Emergency Management Agency looks at Miami-Dade's flood risk, about 100,000 residents will see a 35% discount in their flood insurance premiums starting April 1, 2024.
- Designated residents and business owners in Miami-Dade will save \$12 million a year.
- The new discount applies to anyone in unincorporated Miami-Dade who has a flood insurance policy, both inside the flood zones — where it's mandatory — and everywhere else.

### Property Insurance:

- The cost of repairing or replacing damage to a home increased 55% between 2019 and 2022.
- The cost of reinsurance has increased dramatically in recent years, including 27% this year on avg.
- Despite years of reforms by Gov. Ron DeSantis and the FL Legislature, insurance experts and analysts don't expect to see premiums falling any time soon.
- Legislators state changes could take five or six years to be realized.





# Current Resources:





# U.S. EPA Inflation Reduction Act Tax Credits for Homes:

- Solar Energy
- Solar Water Heating
- Efficient Appliances
- Efficient Water Fixtures
- Energy Efficient Windows and Doors
- Energy Storage
- Electric Vehicles
- Water Heaters
- Heat Pumps

# FPL Rebates for Homes:

- Ceiling Insulation
- On Call
- Air Conditioning
- LED Lighting
- New Home Build Smart Certification



MIAMI-DADE COUNTY

# OFFICE OF RESILIENCE

REGULATORY AND ECONOMIC RESOURCES

[miamidade.gov/resilience](https://miamidade.gov/resilience)



## Miami-Dade County Resilience Links:

<https://www.miamidade.gov/global/economy/resilience/home.page>

<https://be305about-mdc.hub.arcgis.com/>

<https://sustainable-buildings-program.miamidade.gov/>

<https://www.miamidade.gov/global/economy/resilience/climate-strategy/home.page>

<https://www.miamidade.gov/global/economy/resilience/resilient305.page>

<https://www.miamidade.gov/global/economy/resilience/sea-level-rise-strategy.page>

<https://www.miamidade.gov/global/economy/environment/extreme-heat-action-plan.page>



# *Housing & Climate Resource Guide*



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SINCE 1985







MIAMI HOMES  
FOR ALL  
SINCE 1985



**HUGE THANKS FOR JOINING US TODAY!**

We look forward to building community with inspiration and intention.