CLEAN AIR COALITION
Sarasota – Manatee Region

SARASOTA-MANATEE REGION CLEAN AIR PLAN

A COMPREHENSIVE CLIMATE POLLUTION REDUCTION PLAN.







March 6, 2025

INTRODUCTIONS

Sarasota County

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Consultant, Environment

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AGENDA

Clean Air Plan

Comprehensive Climate Pollution Reduction Plan for the Sarasota-Manatee region.

[1] **Introductions** (5-min)

[2] **Overview of the Clean Air Plan** (5-min)

[3] **Strategies to Reduce Air Pollution** (10-min)

[4] **Discussion** (60-min)

[5] **Report Out** (15-min)

[6] **Next Steps**

Clean Air Plan

Sarasota County is managing a $1 million EPA "Climate Pollution Reduction Planning Grant" (CPRG) funded via a formula award under the Inflation Reduction Act (IRA). The grant will cover the full geographic extent of Sarasota and Manatee counties.

The plan will be developed in two phases per EPA requirements:

MAR 2024

Priority Climate Action Plan (PCAP)

Dec 2025

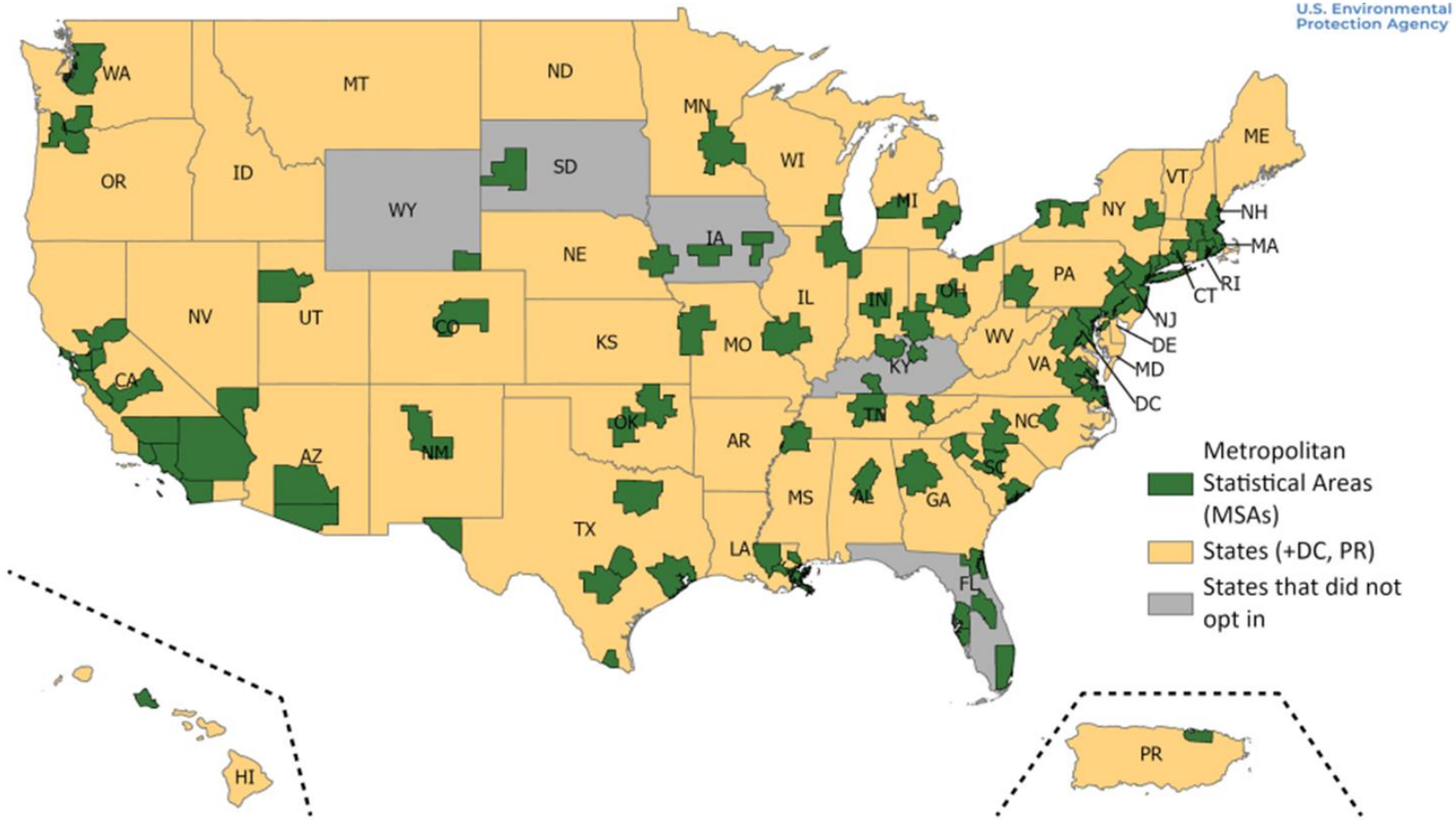
Comprehensive Climate Action Plan (CCAP)

The CPRG grant will be used to develop the region's Clean Air Plan (Climate Action Plan).

WHAT: The Clean Air Plan will identify programs, projects, and policies for clean air.
WHY: The Clean Air Plan will grant Sarasota and Manatee counties funding for clean air implementation.

Who else is working on this plan?

- The Climate Pollution Reduction Plan Grant from the EPA provided ~$5 billion in grants to states, local governments, tribes and territories to develop and implement ambitious plans for reducing GHG emissions.
- Planning and Implementation phases.
- Authorized under Inflation Reduction Act.
- Largest climate investment in history.



WHY WE NEED YOUR INPUT

Your input will help us identify our community and regional priorities.

These will help develop projects and programs for regional investment.

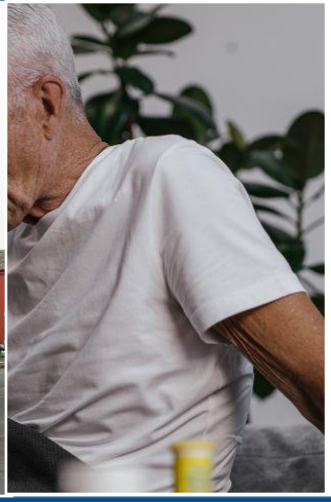
Help make decisions that support community well-being and economic growth

Why should everyone get involved?

Impacts & Consequences on our Communities are increasing.

Extreme heat, drought, wind, flooding, wildfires, rising sea level, groundwater elevation

- Damage to infrastructure → housing, insurance, and utility costs; shift in property investment.
- Ecosystem loss → Food insecurity, increasing food cost.
- Productivity loss → Financial loss to business and community
- Heat stress → Human physiological and mental health

SHORELINE	STORMWATER INFRASTRUCTURE	ACCESS AND TRANSPORTATION	POWER AND COMMUNICATIONS	ECONOMIC	PUBLIC FACILITIES	VULNERABLE POPULATIONS	HUMAN HEALTH (PHYSIOLOGICAL AND MENTAL)
							

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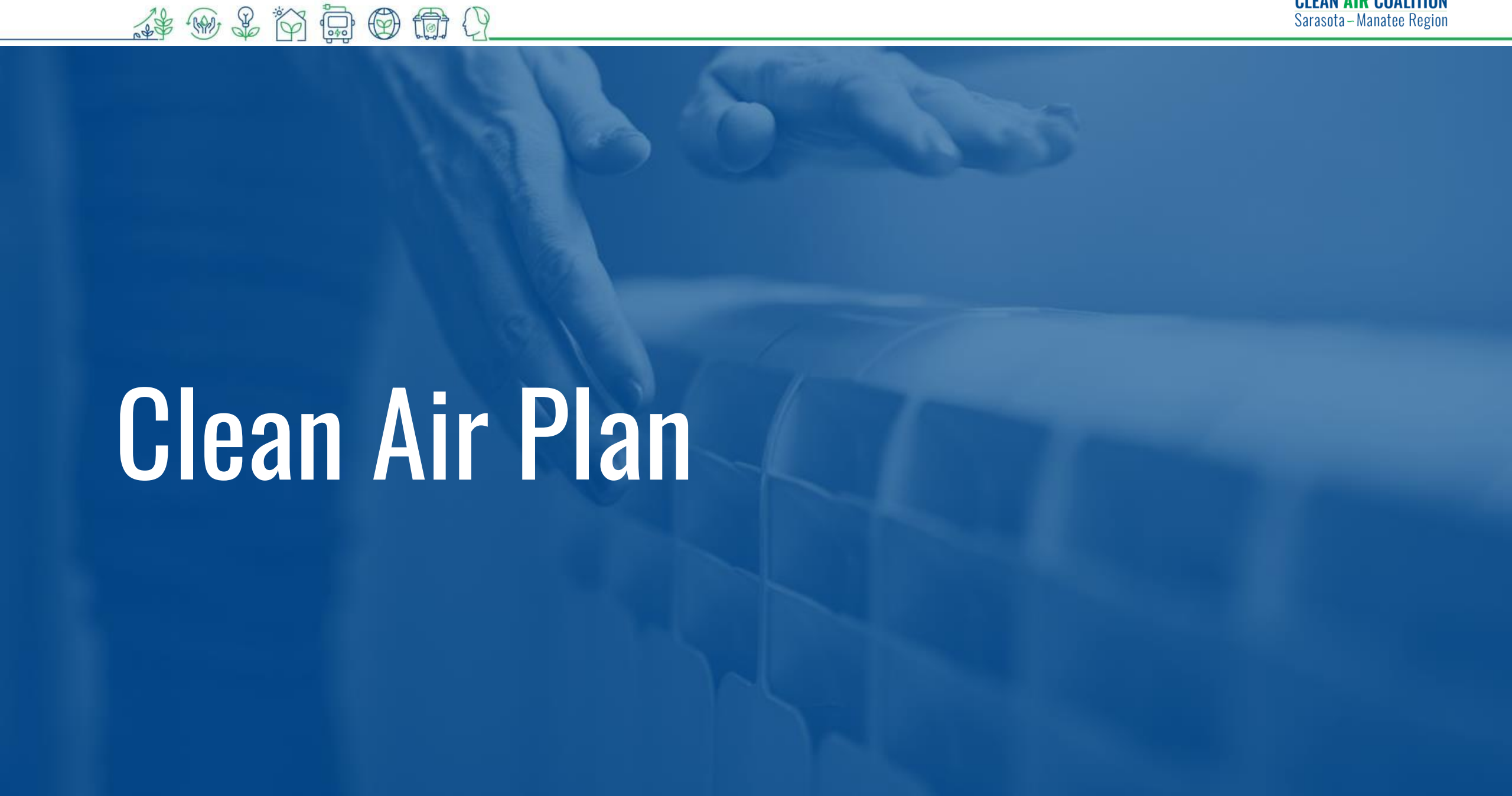

Clean Air Plan

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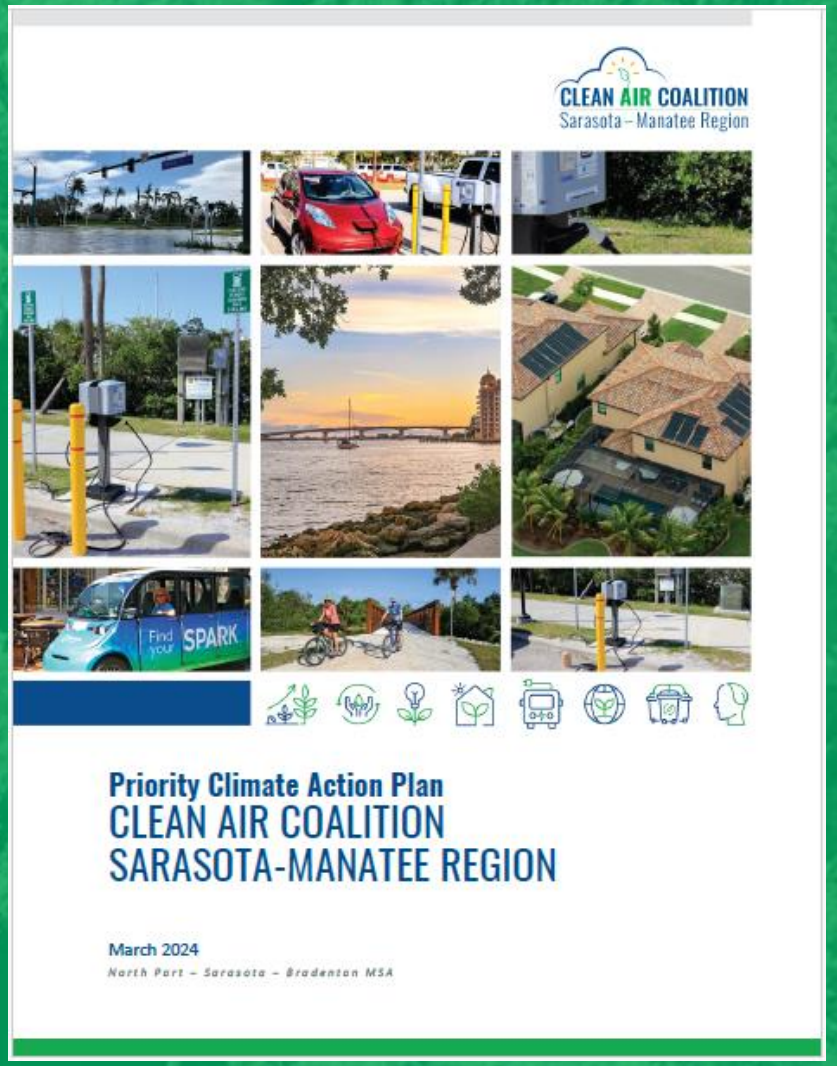
Priority Climate Action Plan (PCAP)



Download it at https://www.scmc-pollutionreduction.com/

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SIGN UP FOR UPDATES!

Project website
www.scmc-pollutionreduction.com/

Sarasota-Manatee Region Climate Pollution Reduction Plan

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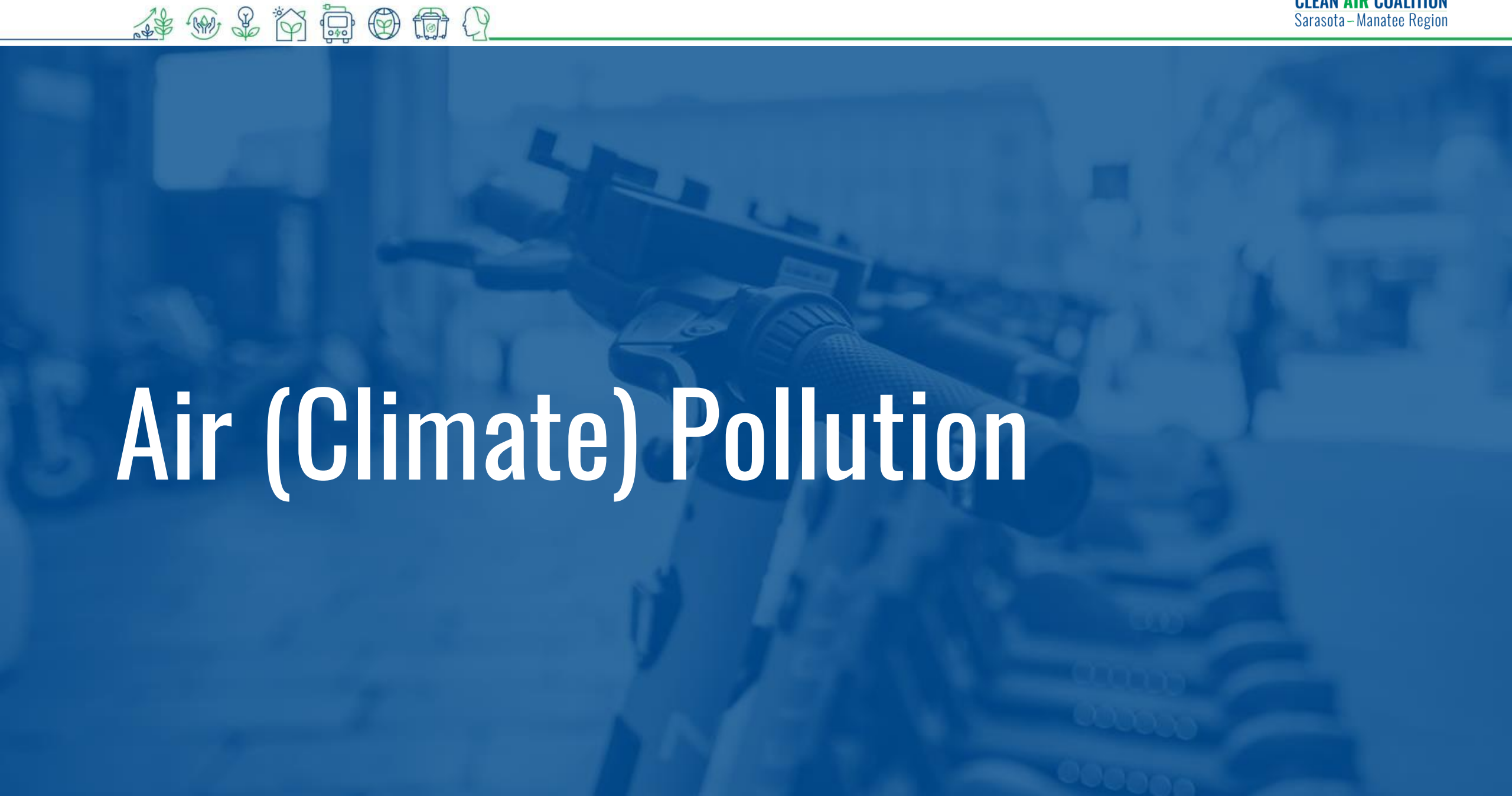

Air (Climate) Pollution

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Air (Climate) Pollution

Air pollutants and **greenhouse gases (GHG)** often come from diesel/gas-fueled vehicles.

Gases that trap heat in the atmosphere are called greenhouse gases.
They include Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), Fluorinated gases

Why does Air Pollution matter to Sarasota-Manatee?

Impacts to Human Health

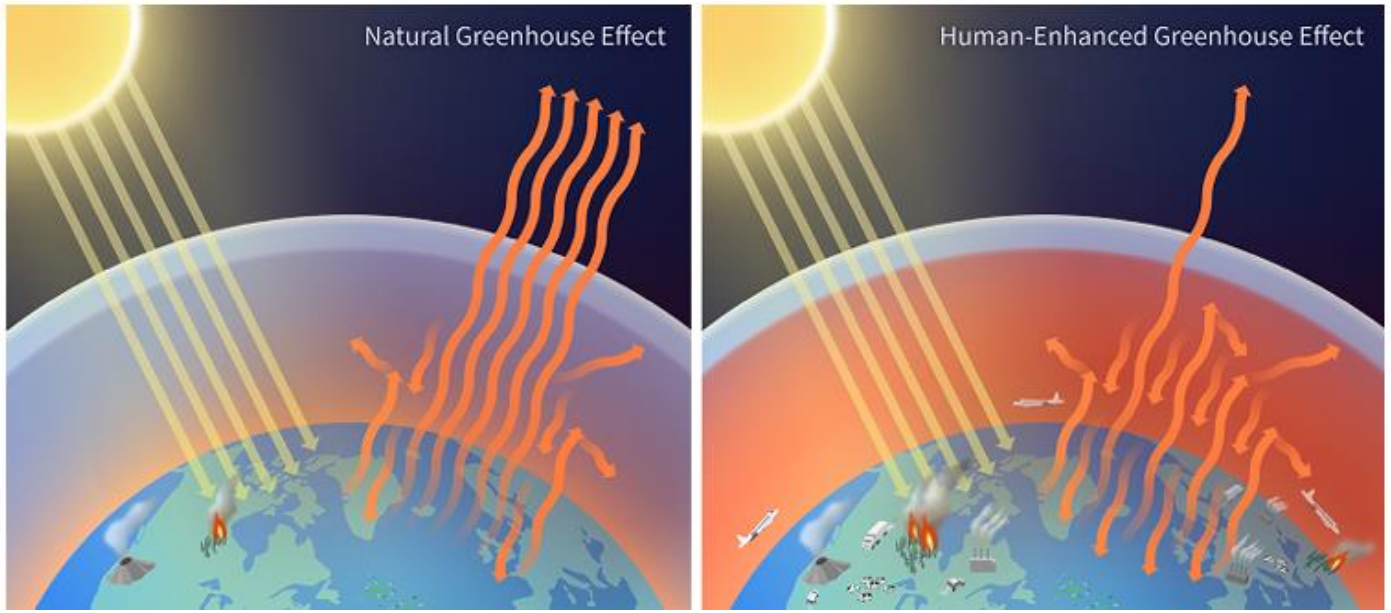
Fine particulate matter in the air results in strokes, heart diseases, lung cancer, acute and chronic respiratory diseases

Health Impacts

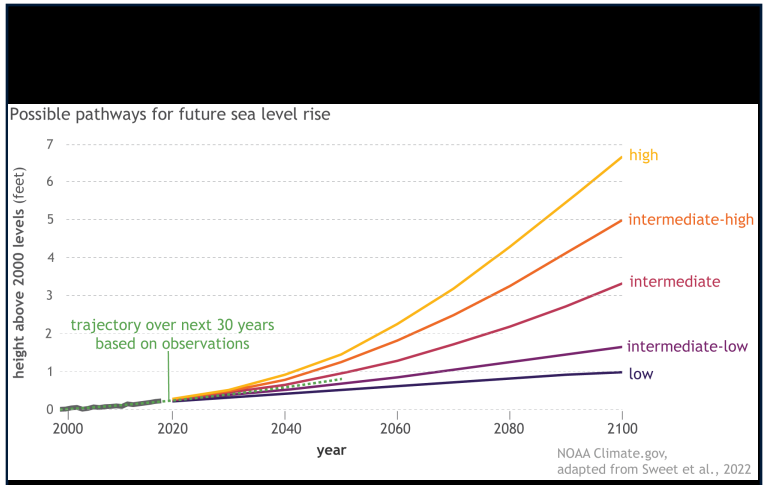
Why does Air Pollution matter, globally?

Carbon dioxide (CO_2) and other GHG emissions are the primary drivers of the global rise in temperatures.1

Air Pollution → High Temperature → Higher Sea Level Rise, Extreme Climate (Climate Change)



Greenhouse Effect Diagram 2



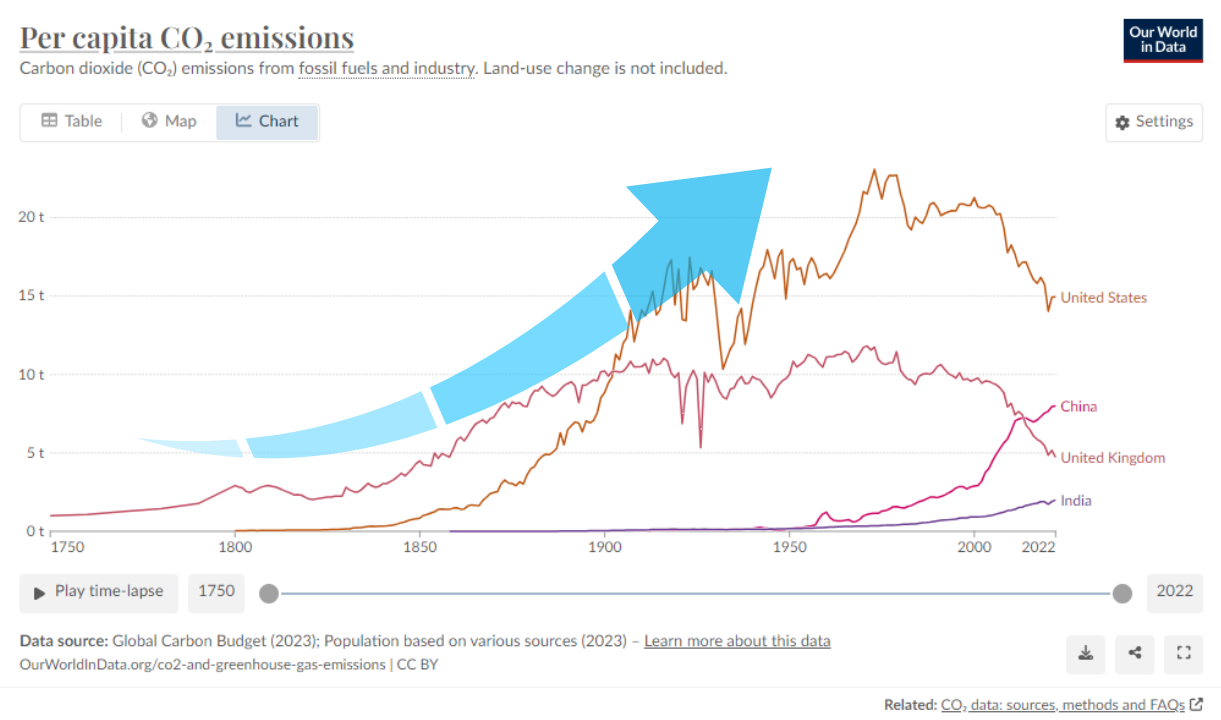
Source:

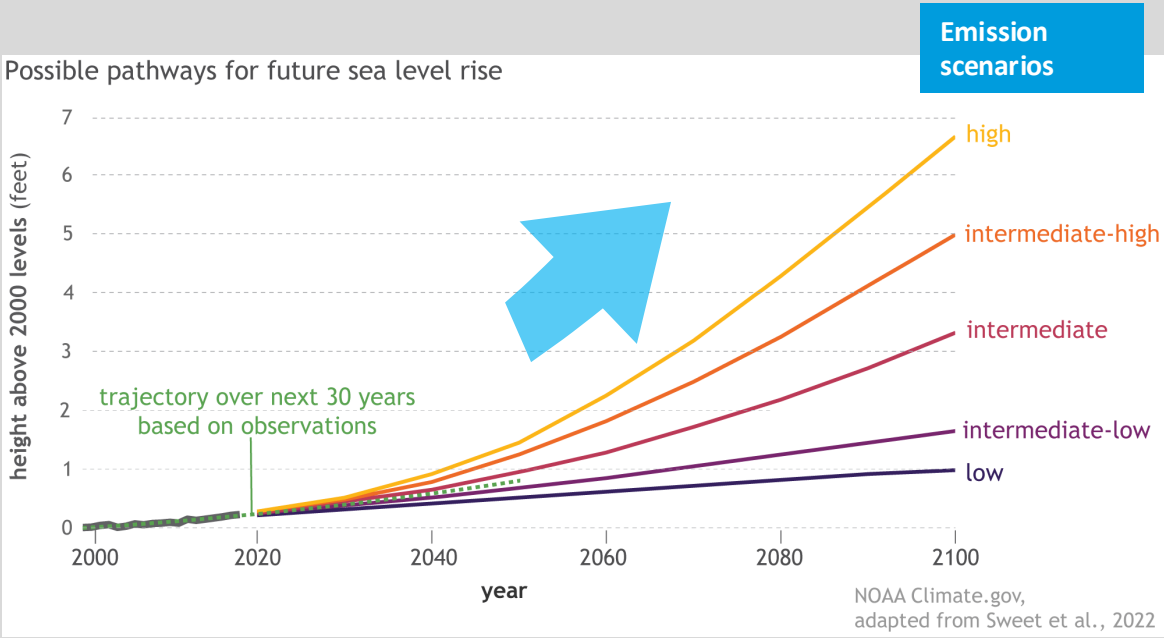
[1] *IPCC, 2021: Climate Change 2021: The Physical Science Basis.*

2 NOAA Climate Program Office. Graphic by Anna Eshelman

Air (Climate) Pollution & Climate Change

Emissions of carbon dioxide and other greenhouse gases are the primary drivers of the global rise in temperatures.[1]





Source: https://ourworldindata.org/

[1] *IPCC, 2021: Climate Change 2021: The Physical Science Basis.*

Are some people disproportionately impacted than others?

Yes.

Frontline communities **experience the impacts of climate change "first and worst."**

Also, **Fenceline communities** **who live adjacent to highly polluting facilities.**

Your zipcode should not dictate your health outcomes.

Why Reducing Air (Climate) Pollution Matters …

In the Sarasota-Manatee region

$47,314
median household income

Energy Burden

$1,852 average annual residential energy cost ($1,849 in 2022)

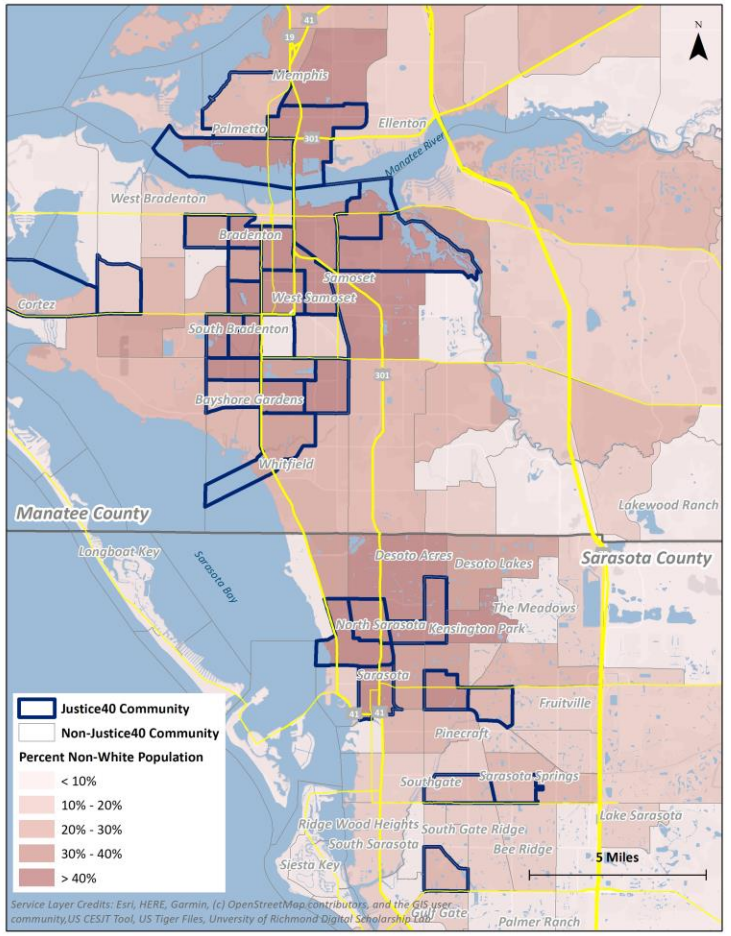
Within the disadvantaged census tracts*

Health Impacts

+ 6%
adults have a heart disease or asthma compared to the region;

+ 6%
have diabetes compared to the region.

Lower-cost homes are **4x** more likely to have the highest energy bills per square foot



Source: Climate and Economic Justice Screening Tool (CEJST)

How can we do to reduce Air Pollution?

We develop a roadmap to reduce pollution through a **Clean Air Plan.**

Clean Air Plan (Comprehensive Climate Action Plan) is a framework that helps communities reduce greenhouse gas (GHG) emissions.

It serves as an implementation roadmap (programs, projects, policies) that help communities:

1. Understand which actions contribute to air pollution
2. Plan for pollution reductions by identifying the most cost-effective ways
3. Make decisions that support community well-being and economic growth

Then, we **pursue funding opportunities** to implement the identified strategies.

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PROJECT TIMELINE

JULY to OCTOBER 2024	OCT 2024 to FEB 2025	March 2025	Aug-Sep 2025	December 2025	2026-27
Community Engagement	**Develop *draft* GHG reduction Strategies**	**Community Engagement**	**Community Engagement**	***Final* Comprehensive Climate Action Plan Report with GHG Reduction Strategies**	**Track Project Progress of identified strategies**
☑ Pop-up Events ☑ Survey ☑ Community Leaders Meeting #2		☑ Pop-up events ☑ Survey ☑ Public Meeting	☑ Public (Virtual) Report out ☑ Community Leaders Meeting #3		

Today's Discussion

WORKSHOP GOAL

PRIORITIZE

The long-term (year 2050) Sarasota-Manatee region pollution reduction measures.

Focus only on the

<u>Community and Regional priorities</u>

across all sectors.

TODAY'S GOAL

Prioritize Long-term goals for the region. >> 2050 PLAN

What are the goals, and how can we achieve Clear Air by the year 2050 in our community?

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TODAY'S FOCUS

Community Actions

not Individual Actions

not State, National, and International Action

What programs, policies, incentives, would support Clear Air within Sarasota-Manatee communities?

What actions can we take to reduce air pollution?

[1]

INCREASE NATURE-BASED (CARBON) SINKS

[2]

REDUCE AIR POLLUTION FROM EMISSION SOURCES

Increase Carbon Sinks **+** Pollution Reduction

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1. Nature-based Carbon Sinks

Air quality affects water quality

The Environment is Central in this conversation

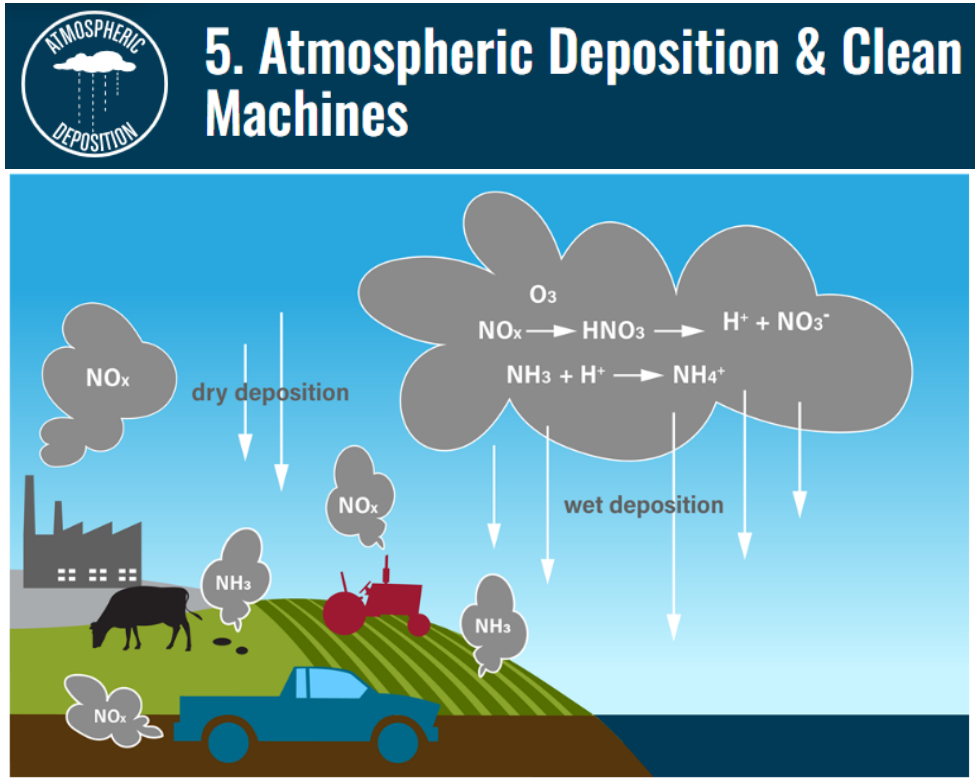
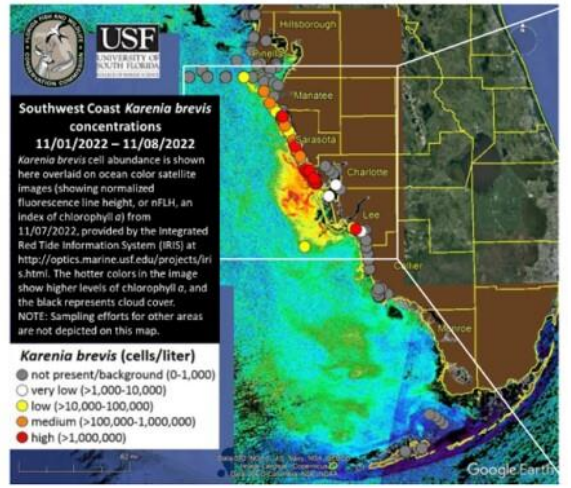


Figure 5.1 Nitrogen emissions from vehicles, power plants, and livestock react in the atmosphere and fall back to the ground in dust and rain. Source: Gulf Coast Community Foundation

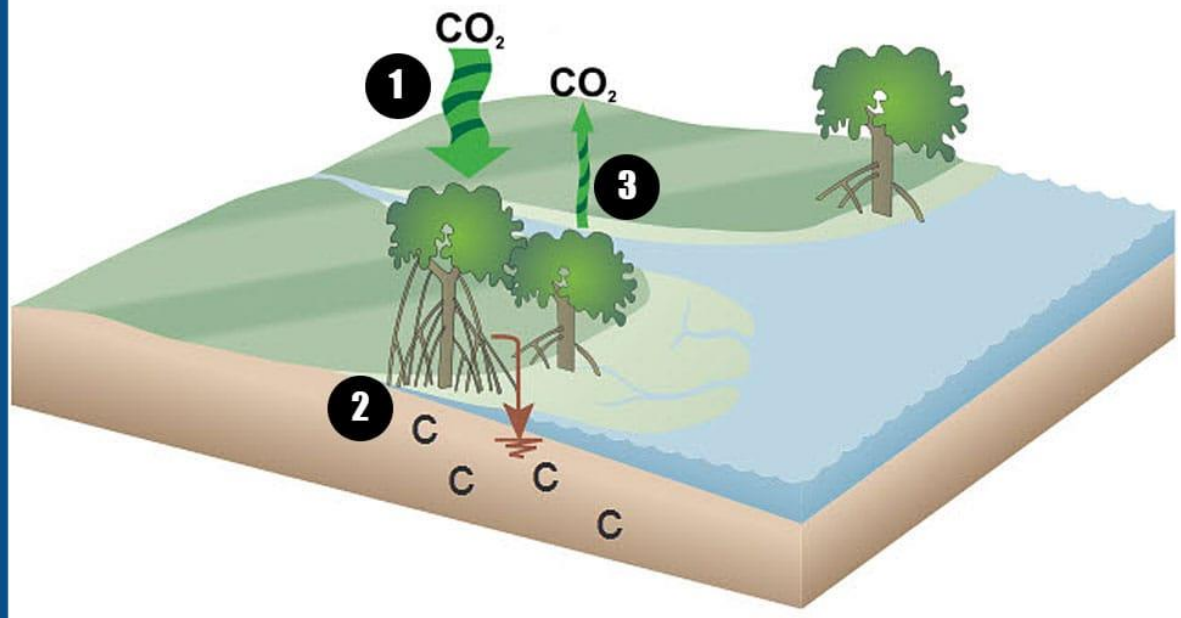
***Source**: https://waterqualityplaybook.org/*



***Source**: https://www.srqmagazine.com/*

Coastal (Blue Carbon) Sequestration

How carbon moves into and out of coastal wetlands

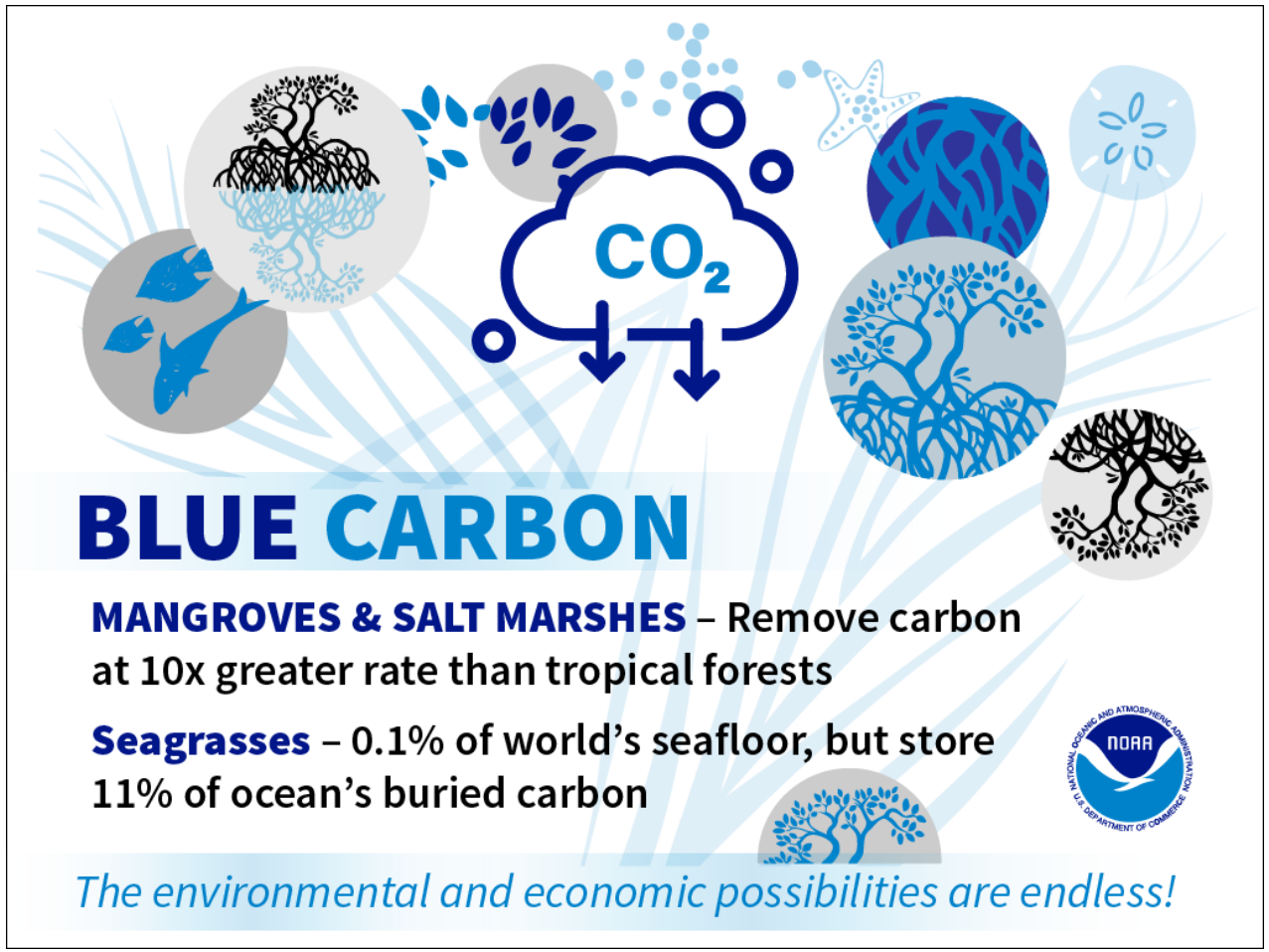


Source: https://oceanservice.noaa.gov/. This diagram is adapted from a figure in Sutton-Grier et al. 2014 Marine Policy.

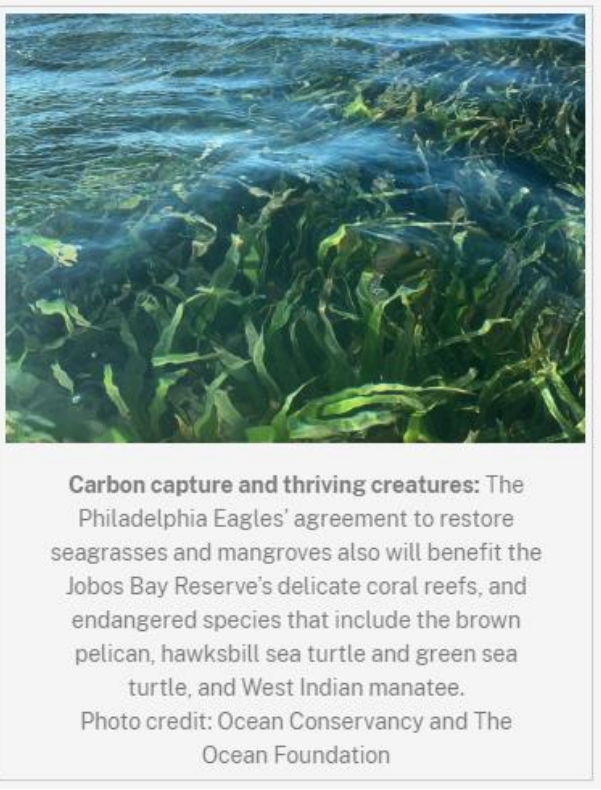
Coastal wetland ecosystems (salt marshes, mangroves, and seagrass beds) **can store large quantities carbon.**

1. Plants: Growing capture (or sequester) large amounts of carbon dioxide (CO2).
2. Soils: Carbon that gets incorporated into the soils decomposes very slowly and can persist for hundreds or even thousands of years (carbon storage).
3. A small amount of carbon is lost back to the atmosphere through respiration, while the rest is stored in the leaves, branches, and roots of the plants.

Coastal (Blue Carbon) Wetlands Sequestration



Provides co-benefits to other sea-creatures and plant life.



Carbon capture and thriving creatures: The Philadelphia Eagles' agreement to restore seagrasses and mangroves also will benefit the Jobos Bay Reserve's delicate coral reefs, and endangered species that include the brown pelican, hawksbill sea turtle and green sea turtle, and West Indian manatee.
Photo credit: Ocean Conservancy and The Ocean Foundation

Source: https://coast.noaa.gov/states/stories/blue-carbon.html

Protect the Environment >> 2050 PLAN

[1]

COASTAL WETLAND CONSERVATION AND RESTORATION

Pollution Reduction Potential ★★★

Protecting coastal areas from erosion and storm surges, wetlands help to mitigate the impacts to the environment.

[2]

WATER QUALITY IMPROVEMENTS FOR SEAGRASS ENHANCEMENT

Pollution Reduction Potential ★★★

Restoring seagrass meadows to enhance their capacity to capture and store carbon.

Protect the environment >> 2050 PLAN

[3]

REFORESTATION OF OPEN SPACES, NATURE-BASED SOLUTIONS

Pollution Reduction Potential ★★☆

Implement reforestation of green spaces, leading to improved air quality, reduced urban heat islands, enhanced biodiversity, and better overall community well-being.

[4]

CONSERVATION AND RESTORATION OF AGRICULTURAL LAND

Pollution Reduction Potential ★★☆

Support farmers to use small, targeted easements or Farm Bill programs to monetize marginal acres to:

- Support keeping local, and small farms to be productive
- Increase above and below-ground carbon sink

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2. Regional Long-term (Year 2050) Reduction Measures

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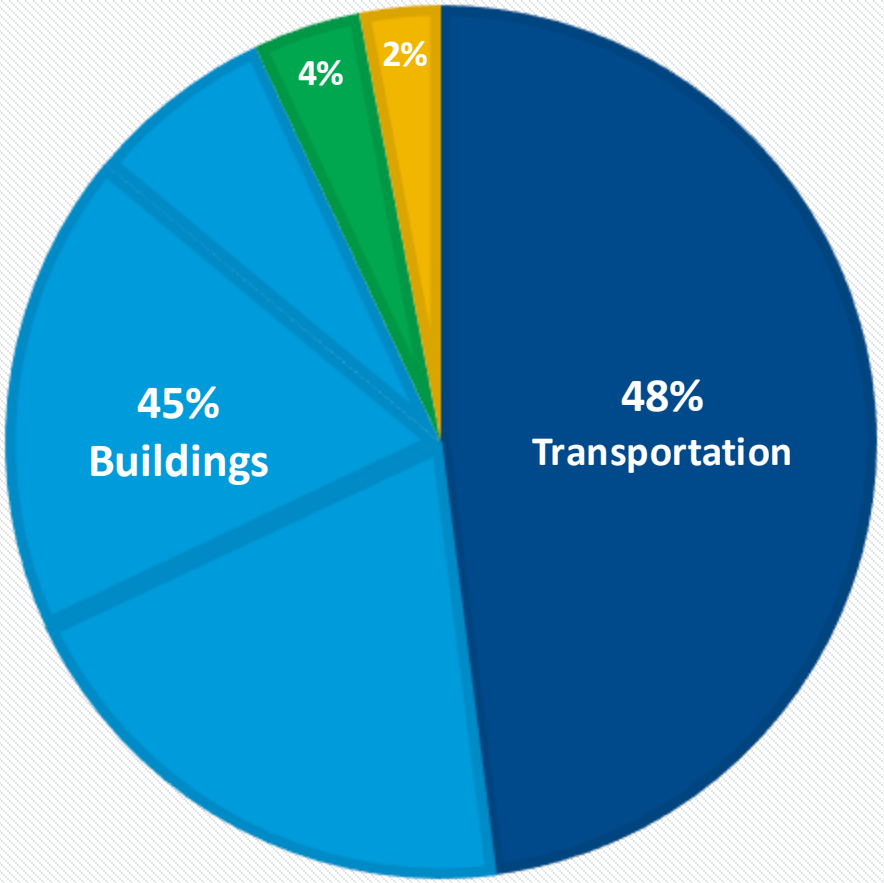
What are the emission sources in the region?

48%
Transportation & Mobile Sources

45%
Buildings Energy

4%
Solid Waste

2%
Agriculture



Transportation >> 2050 PLAN

[1]

REDUCE MILES TRAVELED

[2]

REDUCE CONGESTION/ IDLING

[3]

INNOVATIVE TRANSPORTATION MATERIALS

Transportation >> 2050 PLAN

[1] REDUCE MILES TRAVELED

Pollution Reduction Potential ★★☆

Premium Transit - Bus Rapid Transit (BRT)

Implement dedicated bus lanes and priority signaling.

- Reduce travel times and increase the reliability of bus services.
- High-quality transit experience similar to rail systems but at a lower cost.

Pollution Reduction Potential ★★☆

Biking and Walking Infrastructure sharing

Invest in walking and cycling infrastructure, like bike lanes, pedestrian paths, with shade trees.

- Safe and accessible for non-motorized users.
- Promotes healthier lifestyle with open spaces.

Pollution Reduction Potential ★★☆

Shared Vehicles, Autonomous Shared-Use

Promote the use of shared vehicles, such as car-sharing and ride-sharing services.

- Safe and accessible for users of all abilities.
- Reduce congestion single-occupancy vehicles.

Transportation >> 2050 PLAN

[2] REDUCE CONGESTION/IDLING

Pollution Reduction Potential ★★☆

SMART Signals

Implement smart traffic signals that adjust signal timings based on real-time traffic conditions.

- Reduce congestion and emissions from idling vehicles.

Pollution Reduction Potential ★★☆

Managed Lanes

Develop lanes that are dynamically managed to optimize traffic flow, such as high-occupancy vehicle (HOV) lanes or toll lanes that adjust pricing based on congestion levels.

Transportation >> 2050 PLAN

[3] INNOVATIVE TRANSPORTATION MATERIALS

Pollution Reduction Potential ★★☆

Recycled/clean materials use to improve infrastructure

Innovative transportation materials such as low-carbon cement and asphalt, recycled asphalt, and others, reduce pollution and environment impacts.

Pollution Reduction Potential ★★☆

Electric (Alternative Fuel) Fleet Vehicles, Landscape Maintenance Equipment

High Efficiency Buildings >> 2050 PLAN

1. **Energy efficient improvements**
2. **Building Envelope and Roofing Improvements**
3. **Solar Panels**
4. **Battery back-up storage (Agency-owned buildings)**
5. **Updated energy efficiency building standards (privately-owned buildings)**

High Efficiency Buildings >> 2050 PLAN

[1]

ENERGY EFFCIENCY IMPROVEMENTS

Pollution Reduction Potential ★★☆

Reduce Energy Consumption and Operating Costs.

- LED lighting
- Energy Star electrical appliances
- Smart thermostat, High-efficiency HVAC

[2]

BUILDING ENVELOPE AND ROOFING IMPROVEMENTS

Pollution Reduction Potential ★☆☆

Improve the envelope efficiency for improved energy conservation and comfort.

[3]

SOLAR PANELS

Pollution Reduction Potential ★★★

Generate electricity on residential and agency-owned buildings to reduce energy costs, and for quicker post-disaster recovery.

High Efficiency Buildings >> 2050 PLAN

[4]

BATTERY BACK-UP STORAGE (Agency-owned buildings)

Pollution Reduction Potential ★☆☆

Generate electricity on residential and agency- owned buildings to reduce energy costs, and for quicker post-disaster recovery.

[5]

UPDATED ENERGY EFFICIENCY BUILDING STANDARDS (privately-owned buildings)

Pollution Reduction Potential ★★★

Implementing energy efficiency measures in buildings can reduce overall energy consumption.

Reduce Waste >> 2050 PLAN

[1]

BACKYARD COMPOSTING, REGIONAL COMPOST FACILITY

Pollution Reduction Potential ★★★

Divert organics waste to a regional compost facility and enhance backyard composting.

[2]

HOUSEHOLD RECYCLING

Pollution Reduction Potential ★★★

Increase the recycling capture rate.

Reduce Waste >> 2050 PLAN

[3]

ALTERNATIVE FUEL GARBAGE VEHICLES

Pollution Reduction Potential ★★☆

Transition Garbage collection vehicles to alternative fuel for reduced operating costs, noise and air pollution.

[4]

IMPROVE AND EXPAND CONSTRUCTION AND DEMOLITION MATERIALS DIVERSION

Pollution Reduction Potential ★☆☆

Divert construction, post-disaster debris away from landfills.

OPEN DISCUSSION

Instructions

Feedback on the four sectors:

1. **Handouts** are on your table for your reference.
2. **Every 15 minutes, our team will rotate the topic** and come to your table.

Discussion Topic

1

Protecting the Environment

What programs or initiatives can encourage community participation?

Discussion Topic

2

Transportation

Which improvements do you believe would have the greatest impact on reducing pollution?

Discussion Topic

3

Building Improvements

What type of improvements would have the most significant impact on reducing pollution?

Discussion Topic

4

Waste Reduction

What strategies do you think would most effectively decrease pollution?

Instructions

How to Capture Feedback?

1. **Add a colored dot** to your priority measure. Everyone is encouraged.
2. **Use the marker and the sticky sheets** to capture your thoughts. Pick a table spokesperson who will do the report-out.

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REPORT OUT, KEY MESSAGES

Sign up for project updates at www. *SCMC-PollutionReduction.com*

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Next Steps

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Thank you.

Questions?

Please email Sara Kane at *SKane@scgov.net* or Catherine Prince at *Catherine.Prince@wsp.com*

What is the best way to reach you during the plan development?

Example:
Quarterly Newsletters, Workshops