



CoconutCreek.net/Ambassador

Meeting Guidelines



Listen

Actively listen to the speaker and other community members. Feel free to ask for clarification, but please hold questions until the end of the full presentation.



Participate

Think about how this topic impacts you, your neighbors, and the City. Offer feedback and suggestions.



Share

Agree that you will share this information with your HOA, community, and neighbors.

Welcome

to the Ambassador Program

Karen Brooks
CITY MANAGER
CITY OF COCONUT CREEK



Innovative Inclusive Progressive
with a small-town personal touch

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Presenters



Angela Biagi
WGI, Director of Planning



Tyler Tornese
WGI, Planner

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Climate Change & Vulnerability

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TODAY'S AGENDA



Overview of Vulnerability Assessment

What Is a Vulnerability Assessment?

Why Does It Matter?

What Are the Benefits?



Accomplishments

Vulnerability Task Overview

Findings



Critical Path Forward

Focus Areas

We want to hear from you!



Discussion and Q&A

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WHAT IS A VULNERABILITY ASSESSMENT?

A vulnerability assessment helps a community determine which **physical, social, and cultural** assets are likely to be impacted by future flooding, rain events, and heat.

Vulnerability assessments provide the necessary information to make **impactful change** and **resiliently plan for the future**.

WHAT IS A VULNERABILITY ASSESSMENT?

History of the *Resilient Florida Grant Program*

Call for statewide flooding and sea-level rise resilience after extreme weather events

Senate Bill 1954 is passed, establishing s. 380.093, F.S.

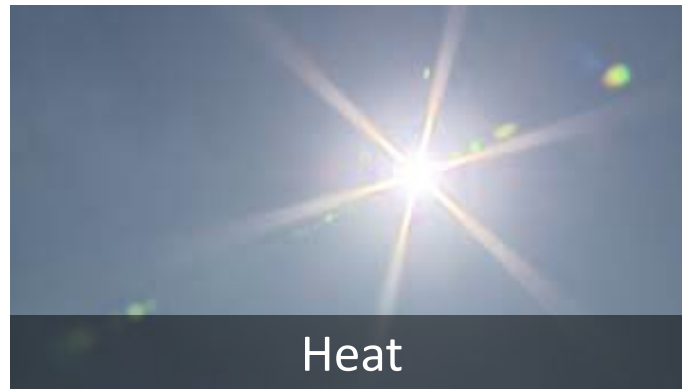
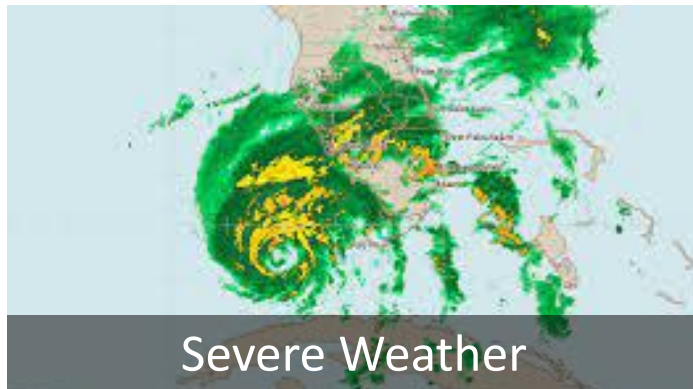
The ***Resilient Florida Grant Program*** was passed in May 2021

The Florida Department of Environmental Protection (FDEP) is authorized to administer grants to local governments to fund resilience planning

The FDEP awarded the City of Coconut Creek a grant through the Resilient Florida Grant Program. The state grant is funding the research for this study.

WHY DOES IT MATTER?

Local Vulnerability and Climate Change Stressors

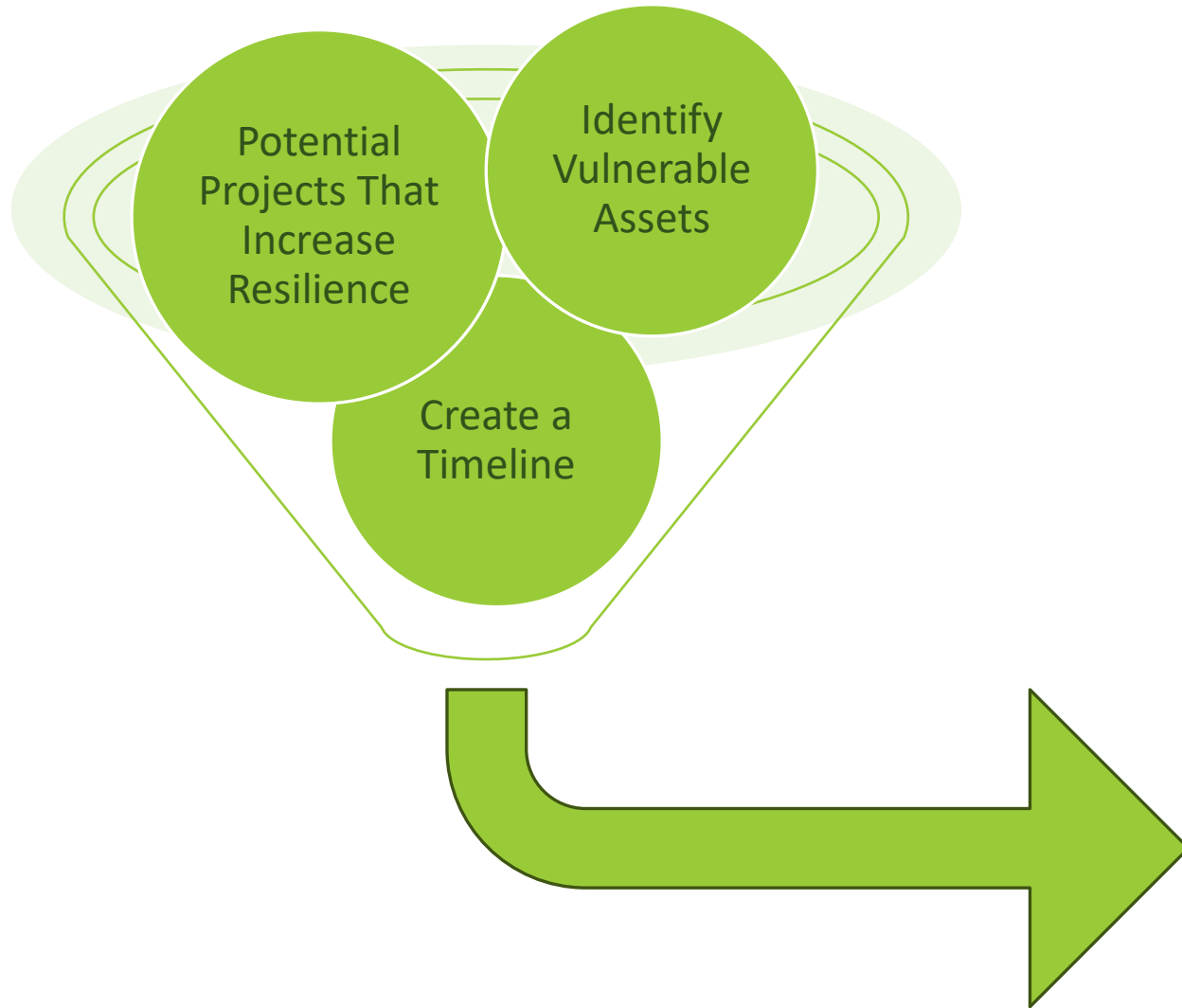


WHY DOES IT MATTER?

Direct Impacts

- **Health:** injury/accident, disease, contamination
- **Safety:** emergency response, shelters, healthcare
- **Where You Live:** neighborhoods and utility services
- **Your Livelihood:** access to jobs
- **Vulnerable People:** health/physical constraints, renters, non-English speakers
- **Natural Resources:** unique habitats, preserves, public open space

WHAT ARE THE BENEFITS?



Coconut Creek will be able to...

- Apply for federal/state/non-profit **grant funding opportunities**
- Effectively plan for the immediate and future **resilience** of the community

VULNERABILITY ASSESS. TASK OVERVIEW

We Are Here



Acquisition of
Background
Data

Geospatial (GIS) mapping and collection of critical/regionally significant assets, topographic data, and flood scenario data

Exposure
Analysis

Review of GIS maps and analysis findings to identify levels of exposure to specific event types

Sensitivity
Analysis

Coordination with City of Coconut Creek Steering Committee to assign sensitivity levels to localized assets. Sensitivity in this lens is regarding the significance of the exposed asset

Identification
of Focus
Areas

Ranking and prioritization of assets based on their exposure analysis, sensitivity analysis, and community input

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STEERING COMMITTEE

The Coconut Creek Steering Committee is comprised of the following City Departments:

- City Manager
- City Attorney
- City Clerk
- Community Relations
- Human Resources
- Public Works
- Parks and Recreation
- Information Technology
- Utilities and Engineering
- Finance
- Police
- Fire
- Sustainable Development

STUDIED THREATS



Storm Surge and Sea-Level Rise



Rainfall Induced Flooding

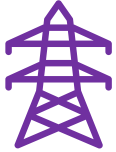


Heat

CITYWIDE ASSETS



Transportation assets and evacuation routes - bridges, bus stops, parking structures, state/county/local roads



Critical infrastructure - communications infrastructure, solid waste debris sites, drinking water, stormwater, wastewater infrastructure, EV/PV charging



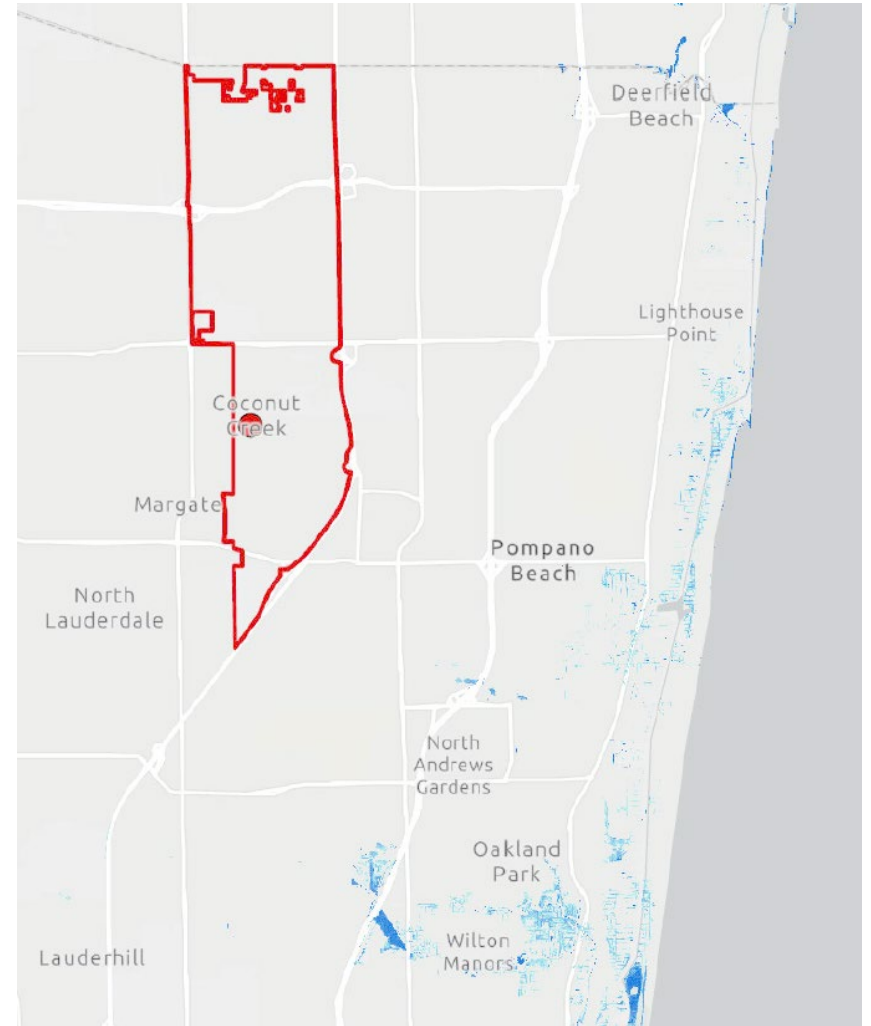
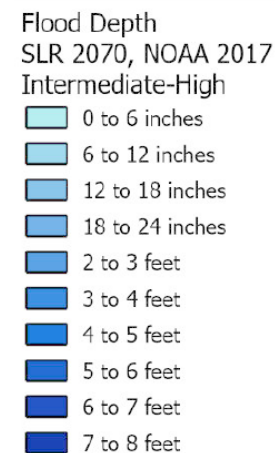
Critical community and emergency facilities – affordable housing, city hall, colleges/schools, community centers, government facilities, grocery stores, healthcare facilities



Natural, cultural, and historical resources – public/private parks, protected lands, surface water, wetlands

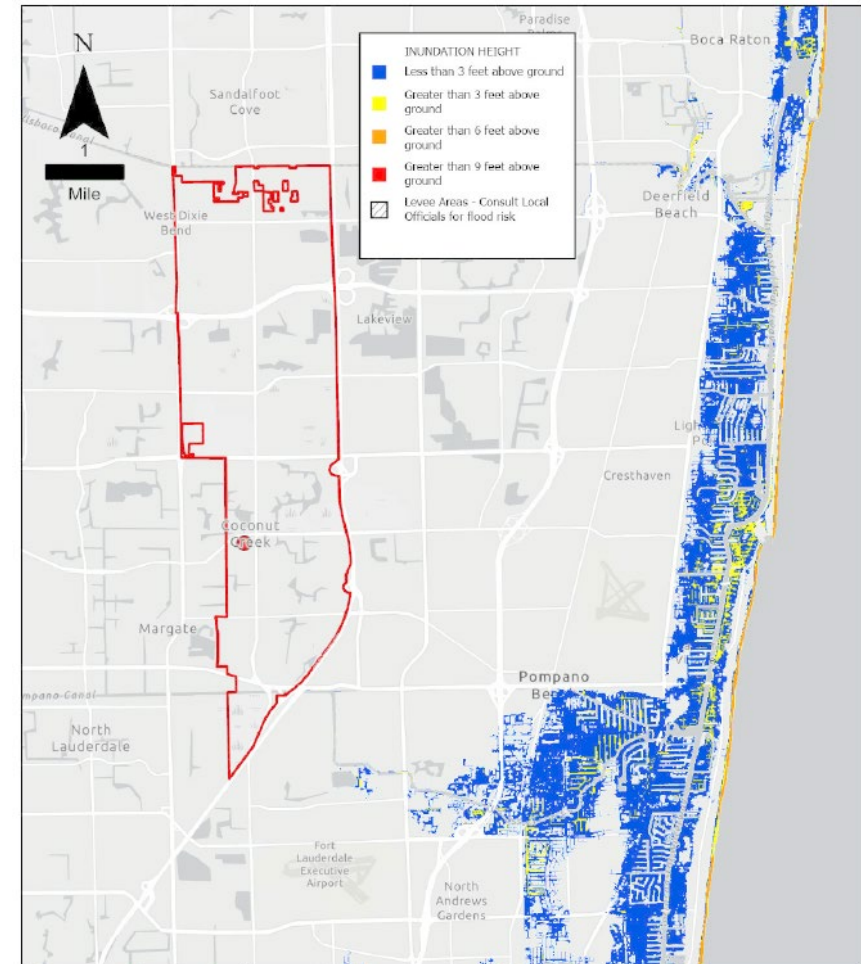
SEA-LEVEL RISE FINDINGS

- No direct threat from this individual threat alone
- Projections come from NOAA, based on a timeline projected to 2040 & 2070
- Danger comes from compounded threats, relationship with other rainfall and flood events



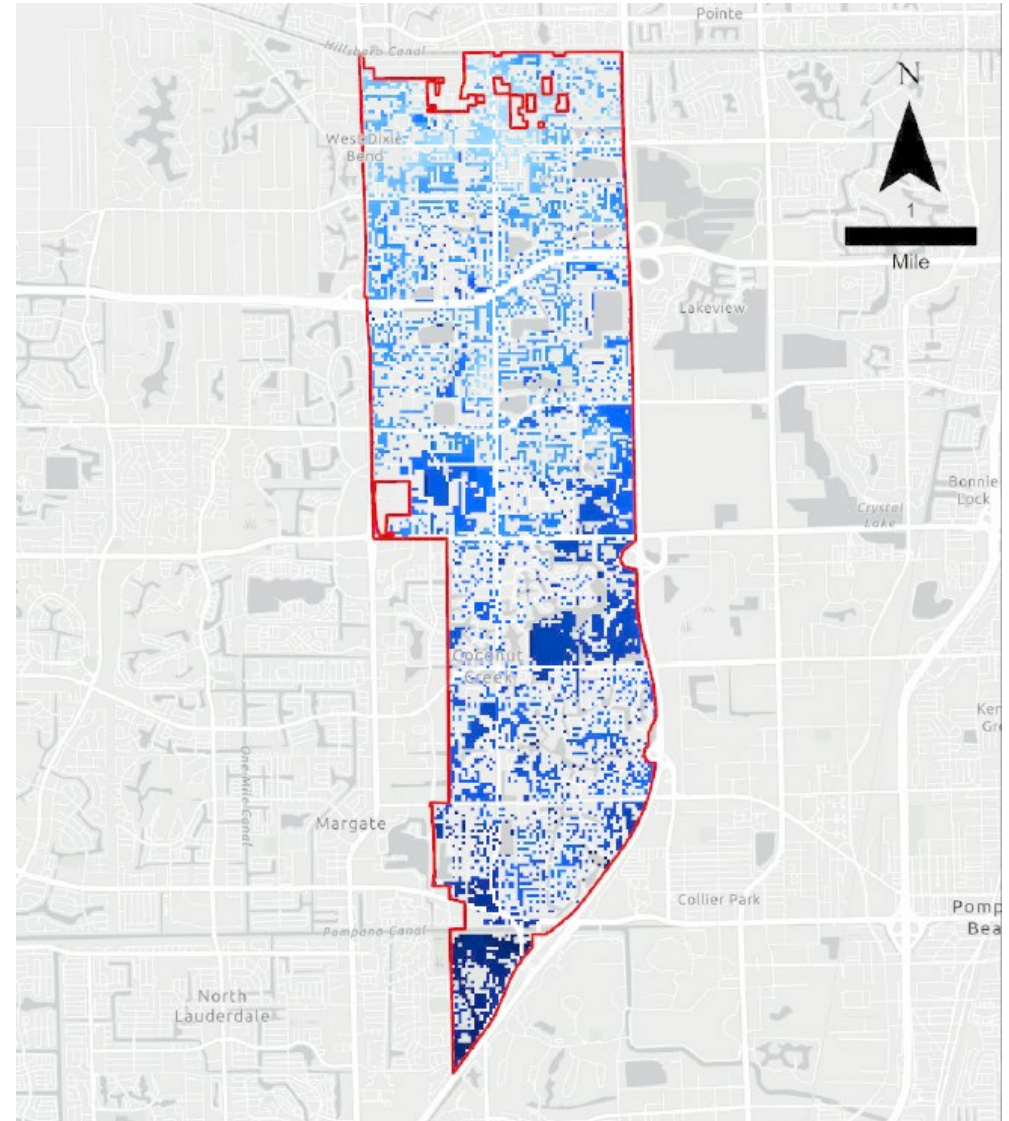
STORM SURGE FINDINGS

- No direct threat from this individual threat alone
- Projections come from NOAA, based on 2040 & 2070 models
- Danger comes from compounded threats, relationship with other rainfall and flood events



RAINFALL INDUCED FLOODING FINDINGS

- Broward County data – recently developed using new models
- 100-year, 3-day rainfall event
- Int. Low and Int. High scenarios
- Most intense scenarios studied
- Darkness of color represents flood elevation, not depth



FLOODING RISK ANALYSIS FINDINGS

Asset Groups evaluated with this vulnerability assessment:

- Roads
- Parks
- Schools and Colleges
- Community Centers
- Essential Facilities
- Healthcare Facilities
- Private Parks / Protected National Lands
- Lift stations

Asset Groups NOT evaluated due to missing or incomplete data:

- Animal Facilities
- Churches
- Charging Stations
- Grocery Stores

At this stage, the Vulnerability Assessment will review the assets that we have data and information for.

VULNERABILITY ASSESS. TASK OVERVIEW

Key Terms and Definitions

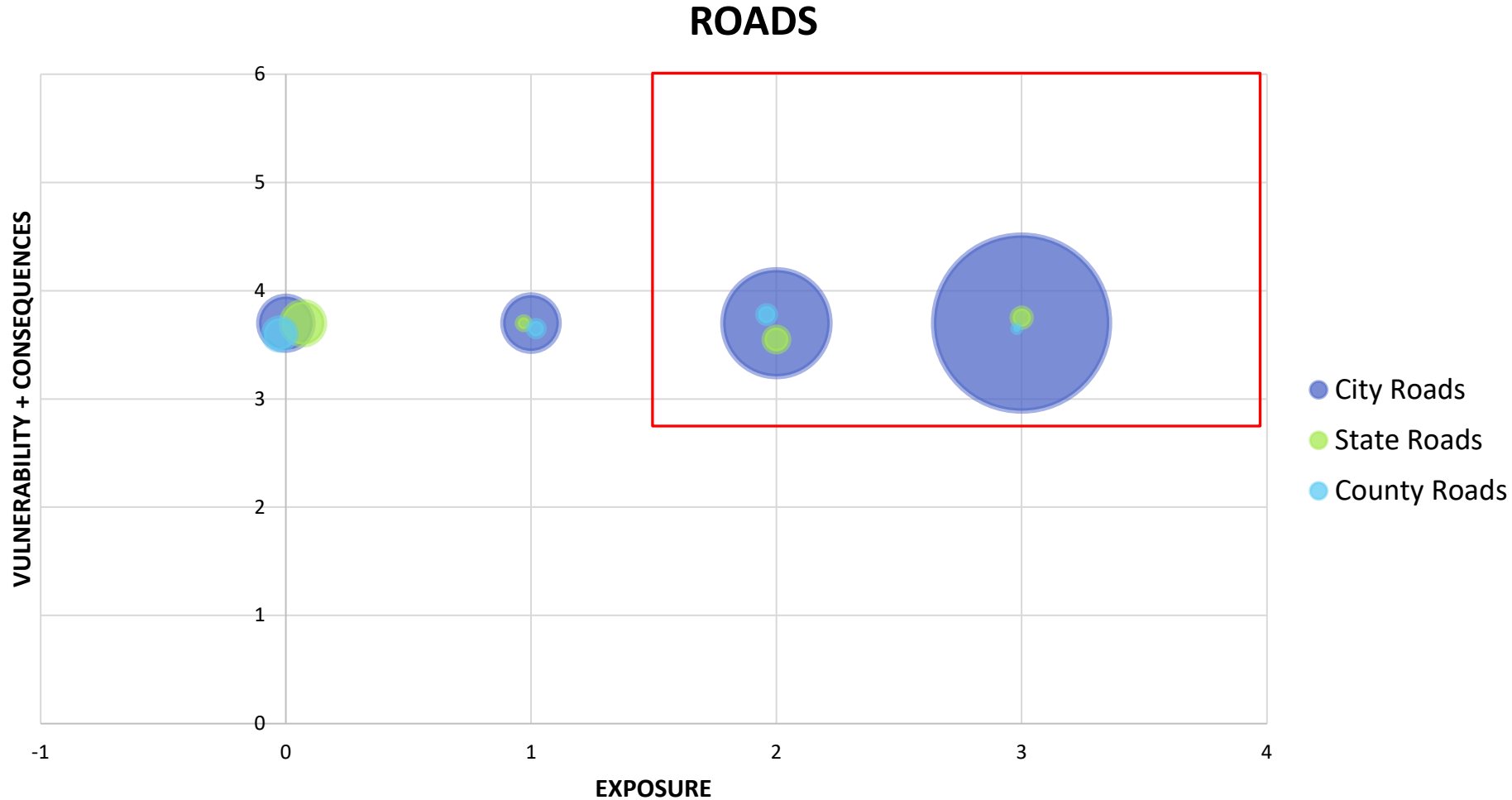
Exposure: The level at which assets or resources are exposed to threats

Sensitivity: The level of significance if the assets is exposed to a threat

- Will the asset be impacted or damaged if it floods?
- What are the social, economic, or environmental consequences?
- Can the asset be adapted to prevent/minimize impacts?

Higher sensitivity and exposure = higher priority assets to protect

FLOODING RISK ANALYSIS FINDINGS

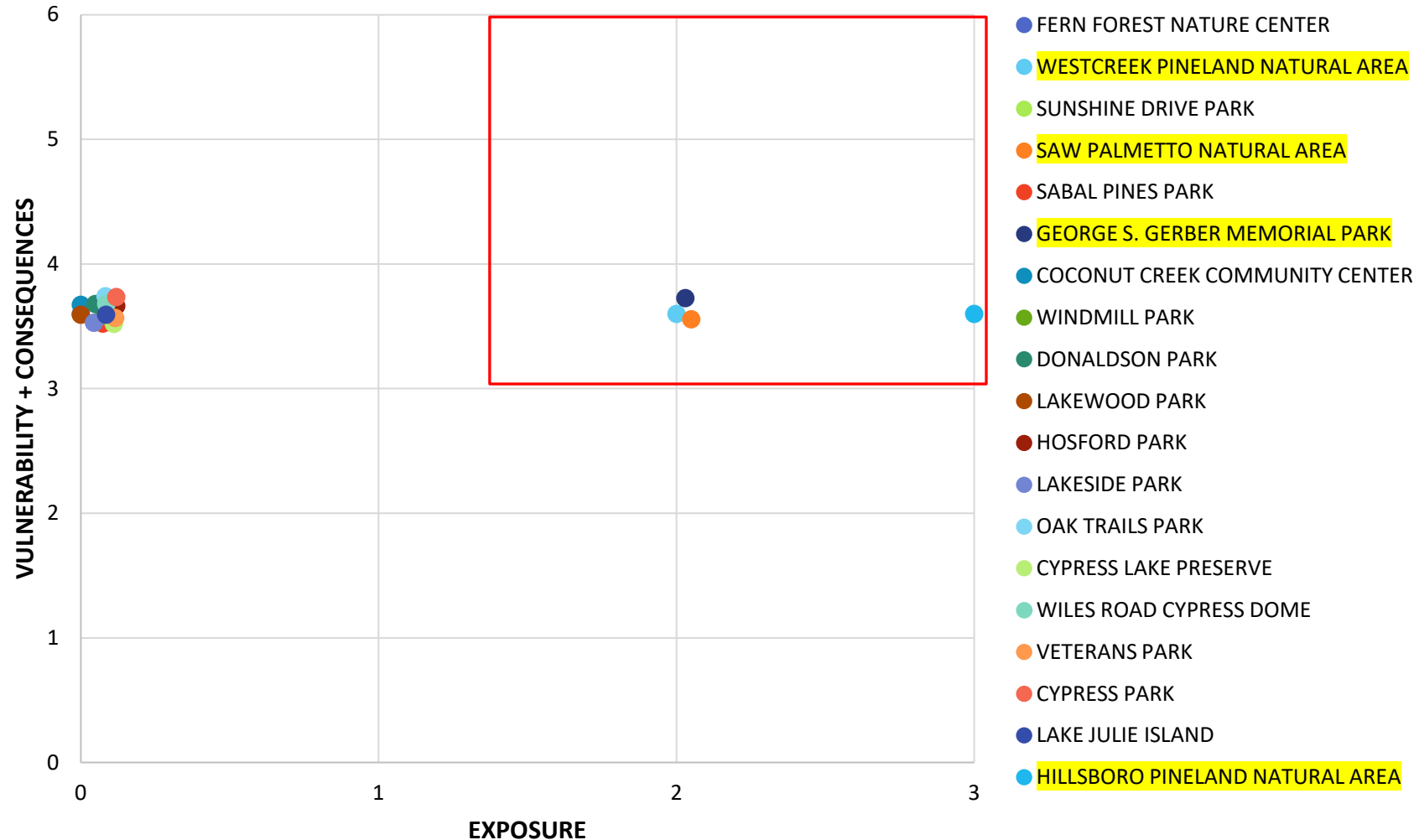


Moderate vulnerability & consequences

- **56%** have high exposure;
- **22%** have moderate exposure;
- **6%** have low exposure; and
- **10%** have insufficient data.

FLOODING RISK ANALYSIS FINDINGS

PARKS

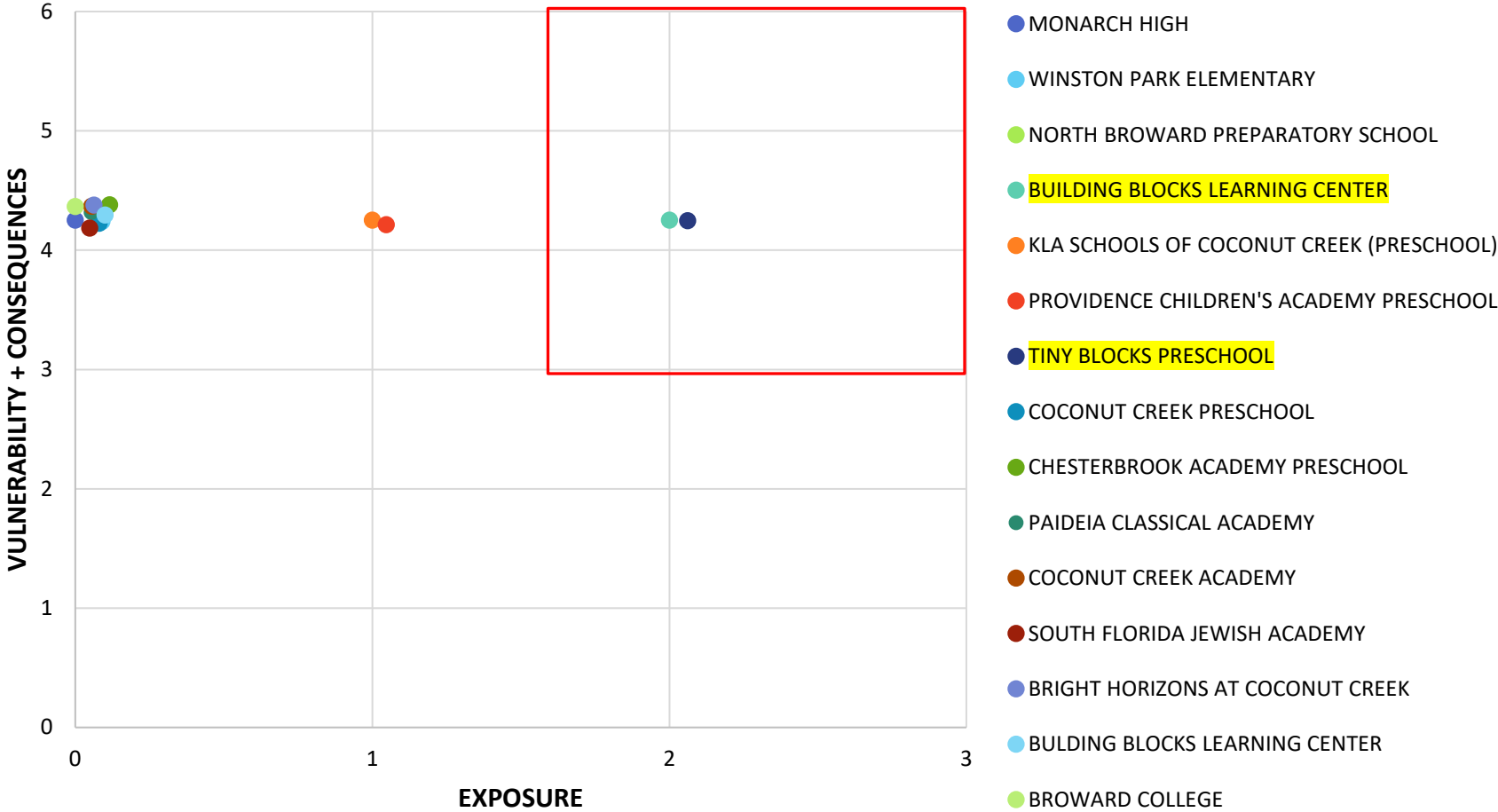


Moderate vulnerability & consequences

- 2% have high exposure;
- 7% have moderate exposure;
- 41% have no exposure; and
- 49% have insufficient data.

FLOODING RISK ANALYSIS FINDINGS

SCHOOLS AND COLLEGES

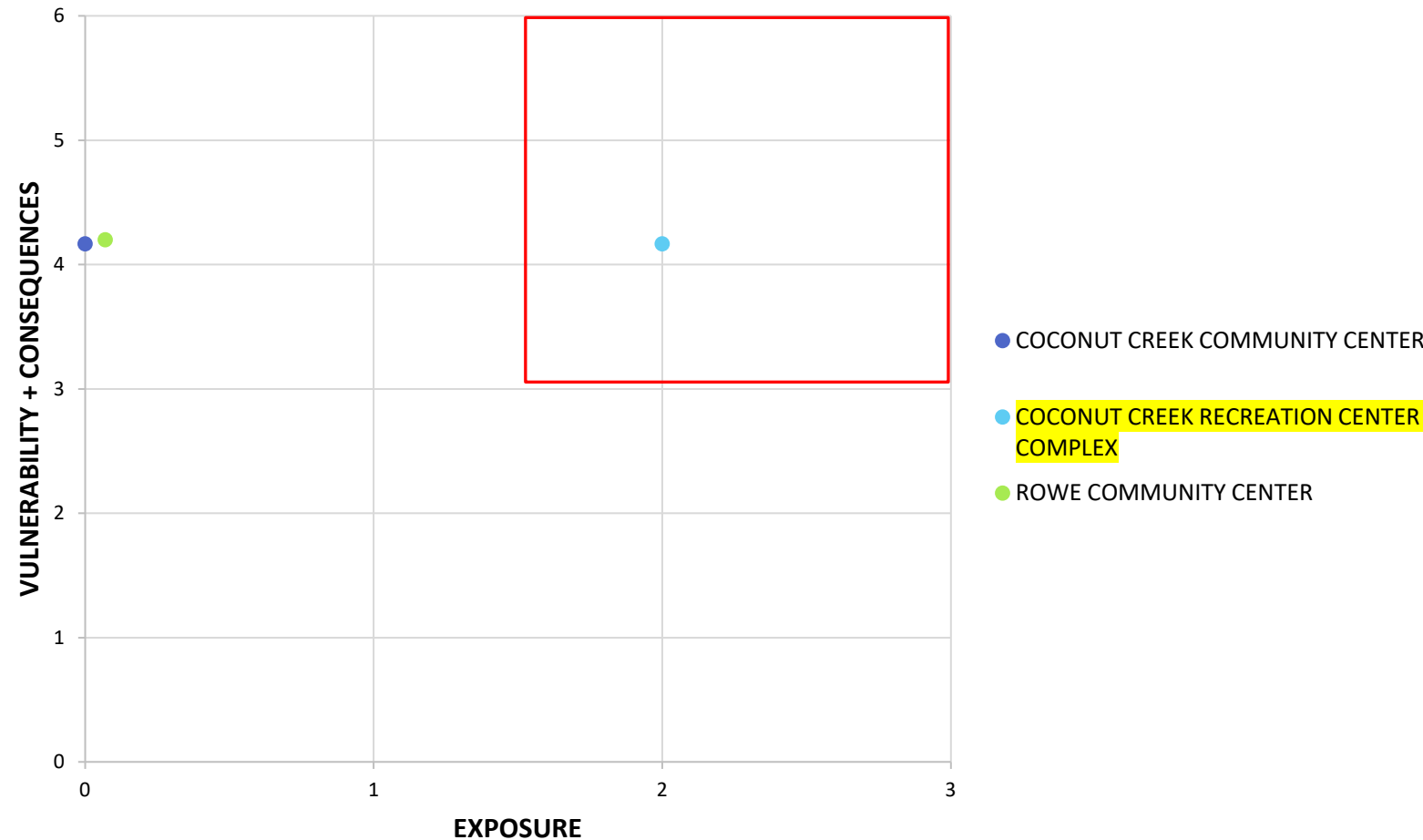


High vulnerability & consequences

- 9% have moderate exposure;
- 9% have low exposure;
- 50% have no exposure; and
- 32% have insufficient data.

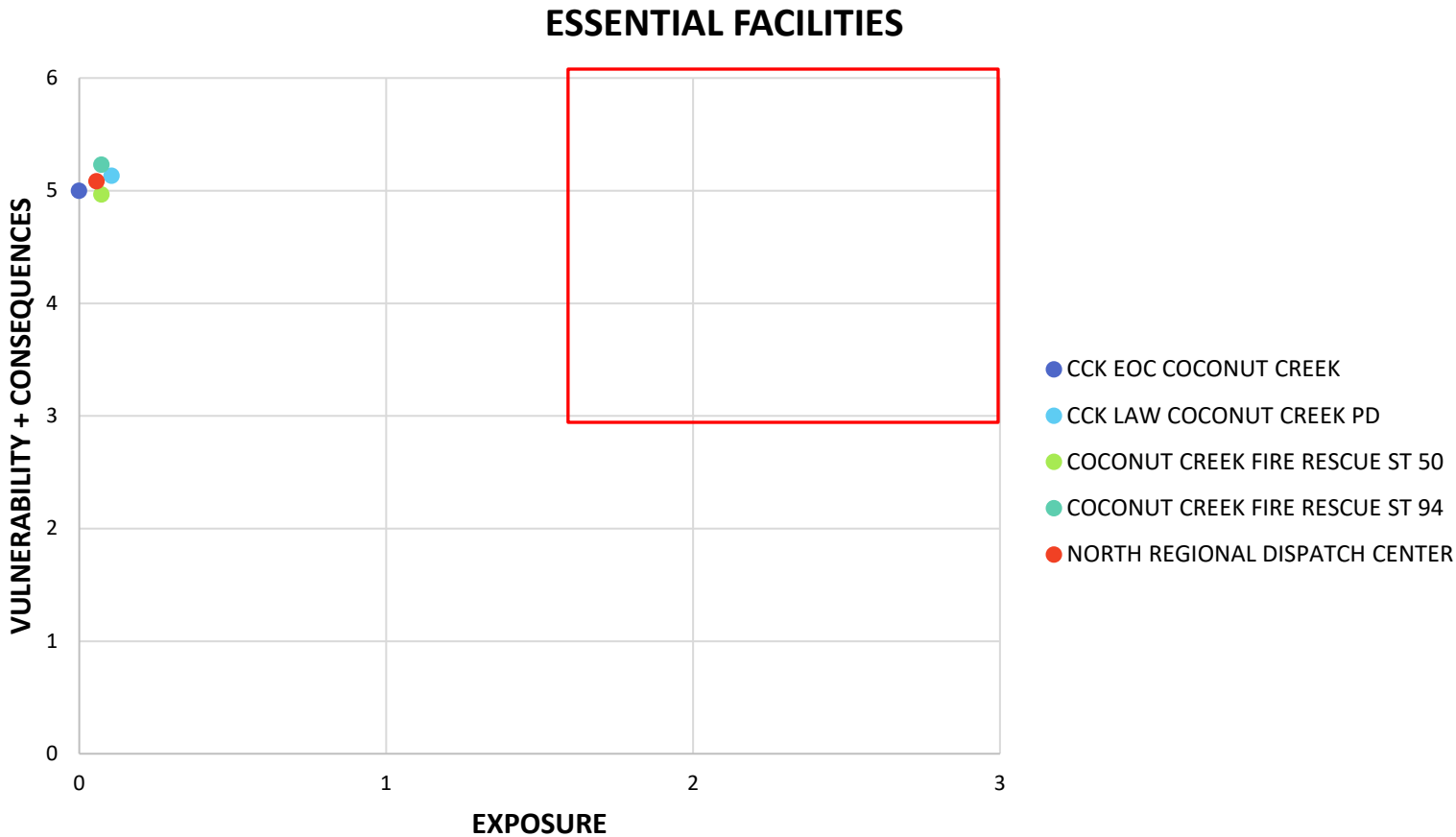
FLOODING RISK ANALYSIS FINDINGS

COMMUNITY CENTERS



- High vulnerability & consequences
- 33% have moderate exposure; and
 - 66% have no exposure.

FLOODING RISK ANALYSIS FINDINGS

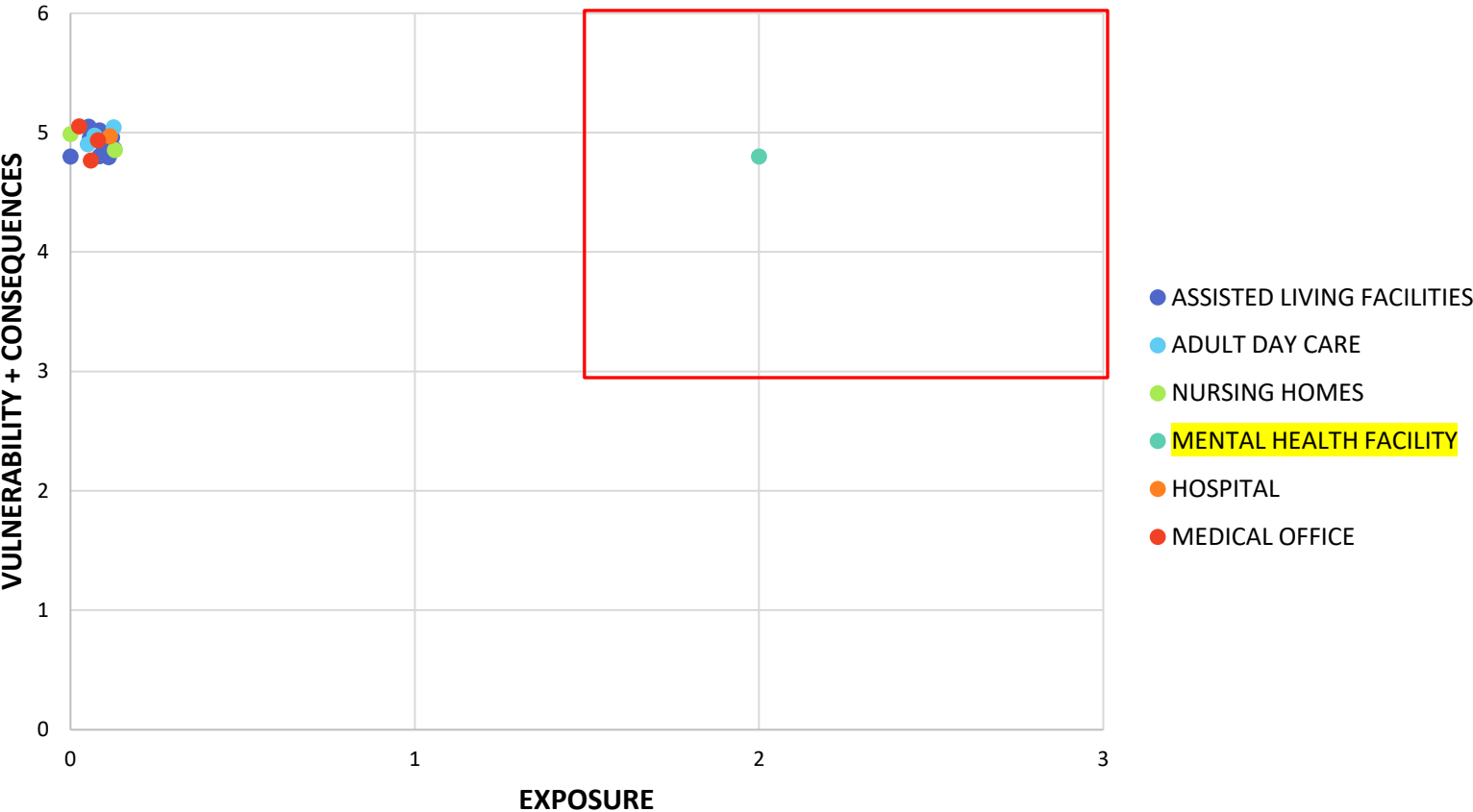


High vulnerability & consequences

- **83%** have no exposure; and
- **17%** had insufficient data.

FLOODING RISK ANALYSIS FINDINGS

HEALTHCARE FACILITIES

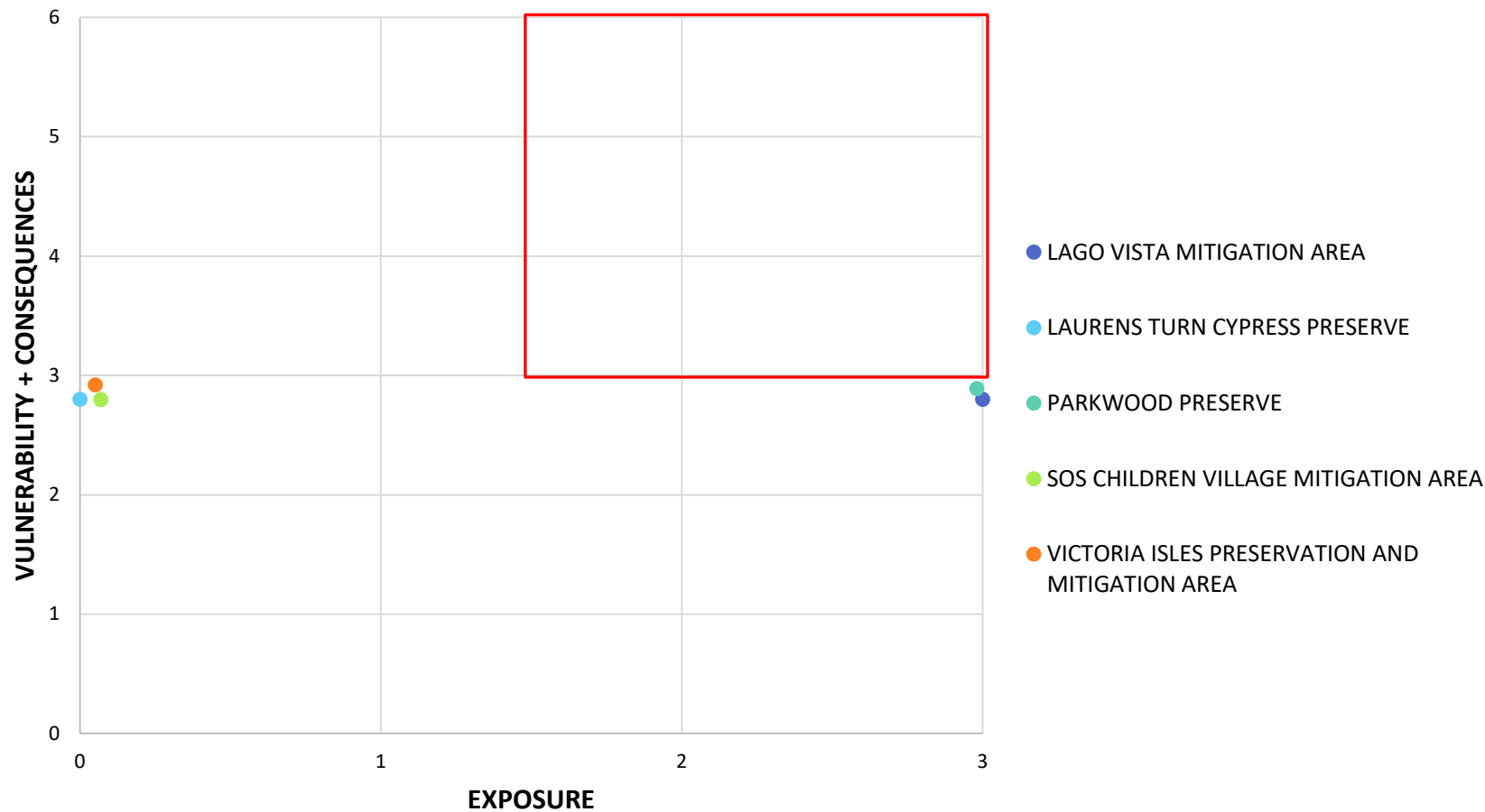


High vulnerability & consequences

- **4%** have moderate exposure;
- **88%** have no exposure; and
- **8%** have insufficient data.

FLOODING RISK ANALYSIS FINDINGS

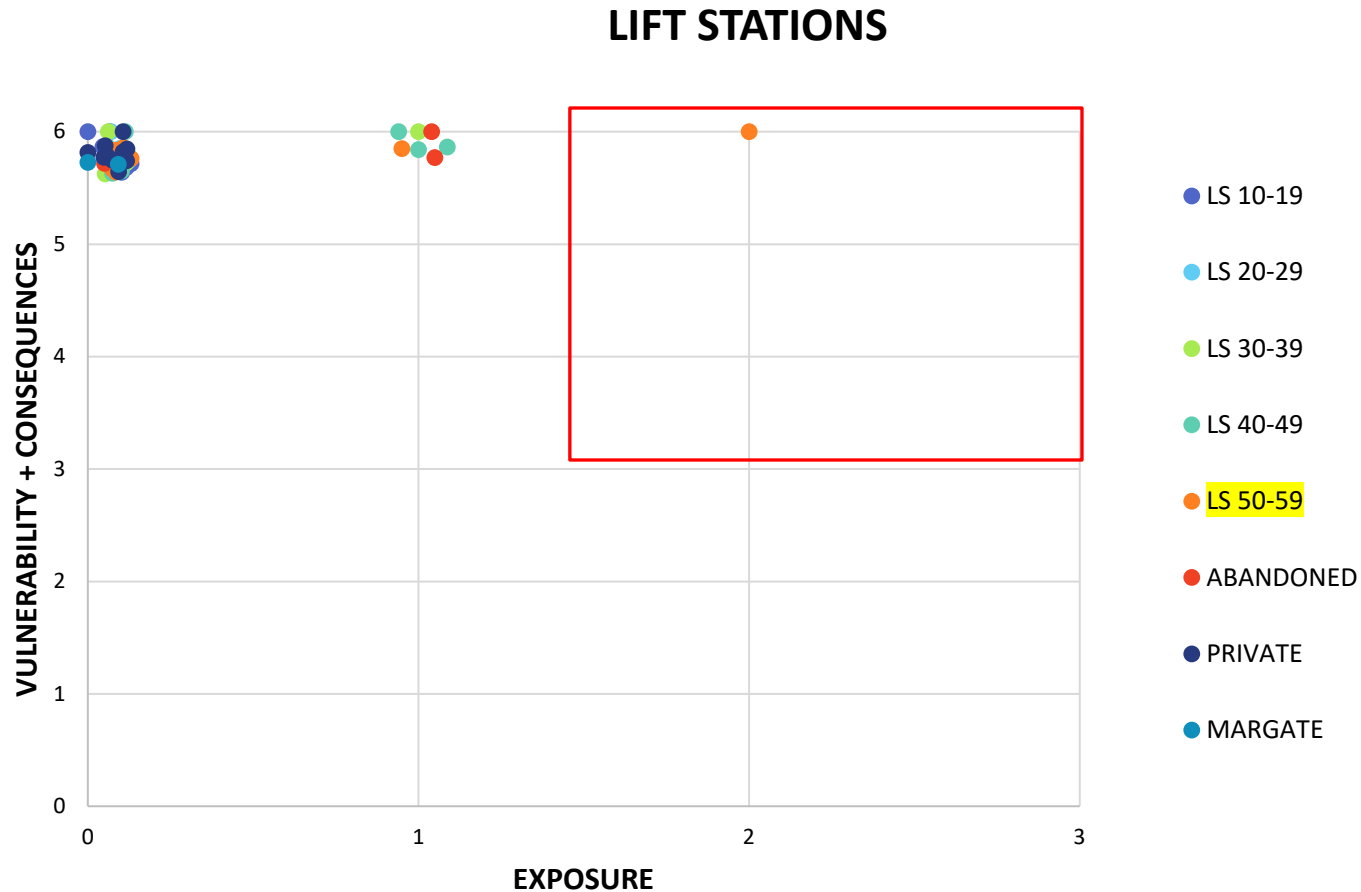
PRIVATE PARKS - PROTECTED NATIVE LANDS



Moderate vulnerability & consequences

- **18%** have high exposure;
- **27%** have no exposure; and
- **55%** have insufficient data.

FLOODING RISK ANALYSIS FINDINGS



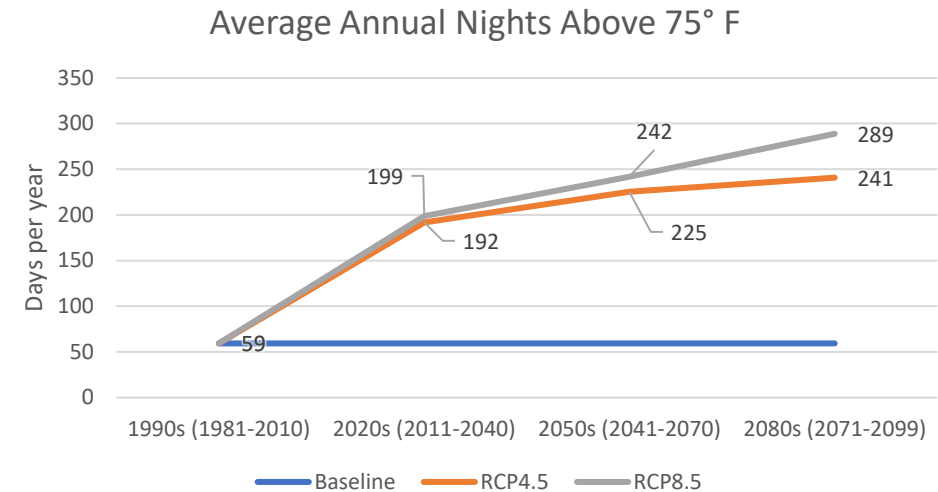
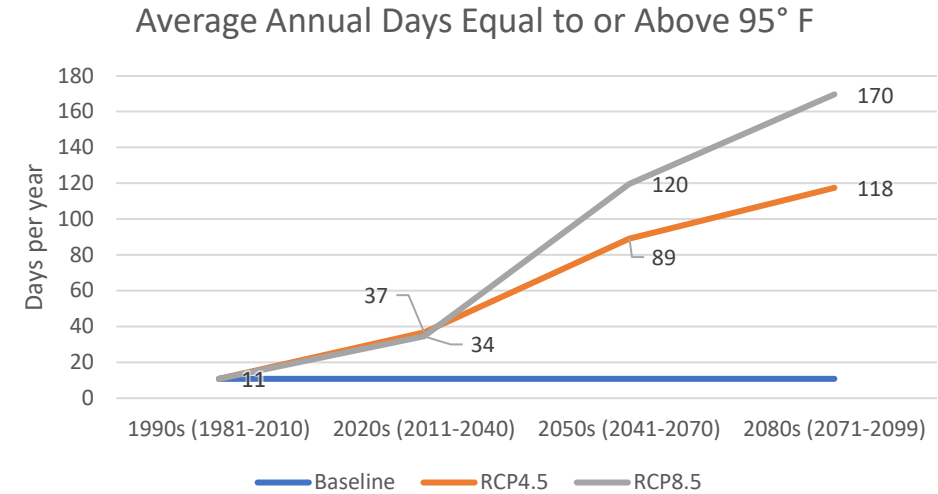
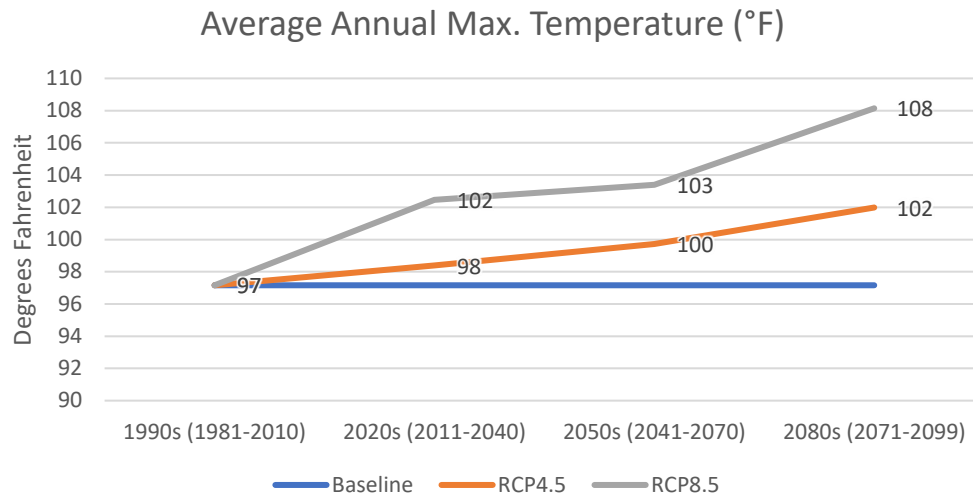
High vulnerability & consequences

- **1%** have moderate exposure;
- **8%** have low exposure;
- **61%** have no exposure; and
- **30%** have insufficient data.

HEAT EXPOSURE FINDINGS

Temperature Projections were assessed based on two scenarios – RCP4.5 shows the most likely scenario and RCP8.5 shows the most severe scenario.

These scenarios were used to determine the average annual maximum temperature, average annual days equal to or above 95°F, and average annual nights above 75°F.

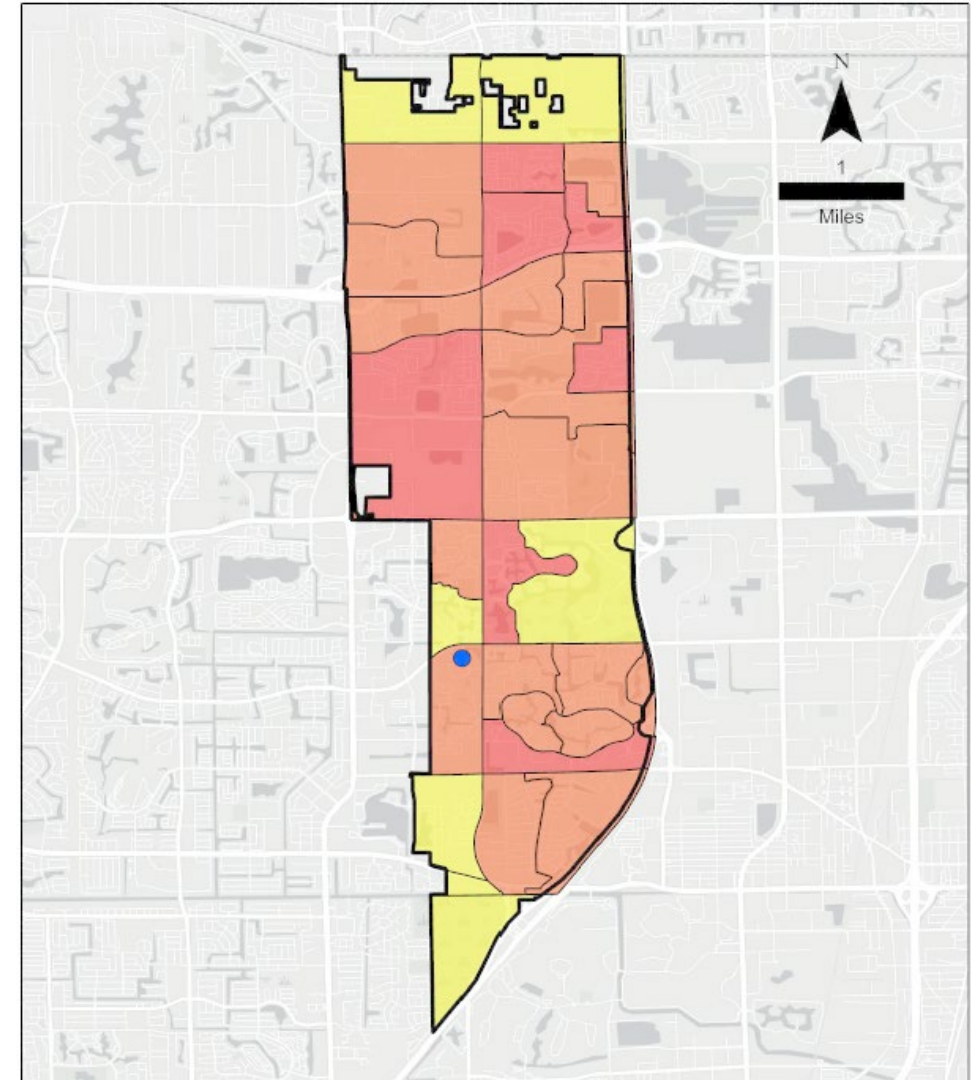
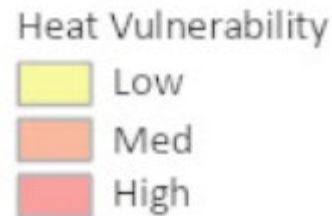


HEAT EXPOSURE FINDINGS

Heat Vulnerability: An individual's susceptibility to the effects of high temperatures and heat exposure.

Most vulnerable:

- Younger than 18 and older than 65
- Impervious percent coverage
- Tree canopy coverage.



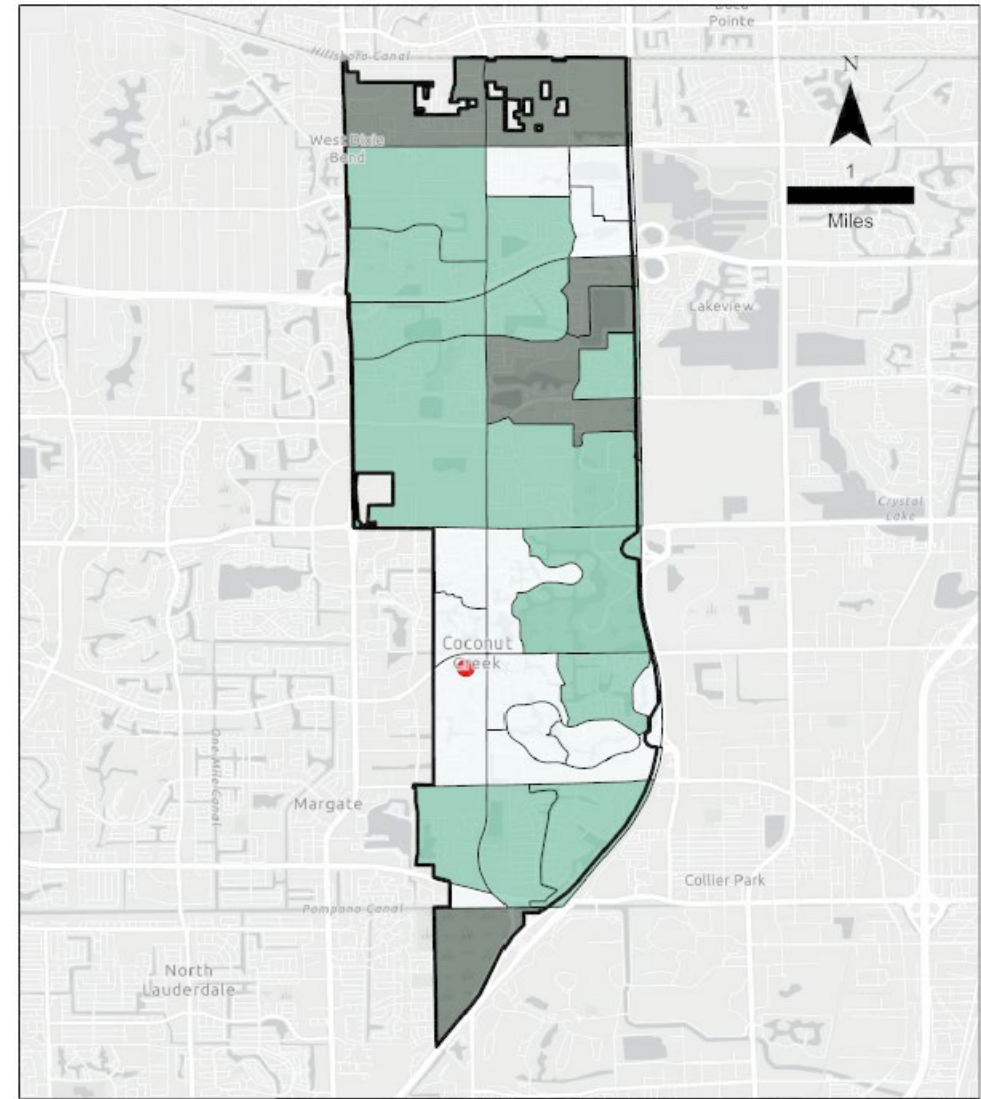
HEAT EXPOSURE FINDINGS

Adaptive Capacity: Ability of communities to cope or adjust to hazardous changes within the environment.

Adaptability based on:

- Median household income
- Canopy percent coverage

Adaptive Capacity

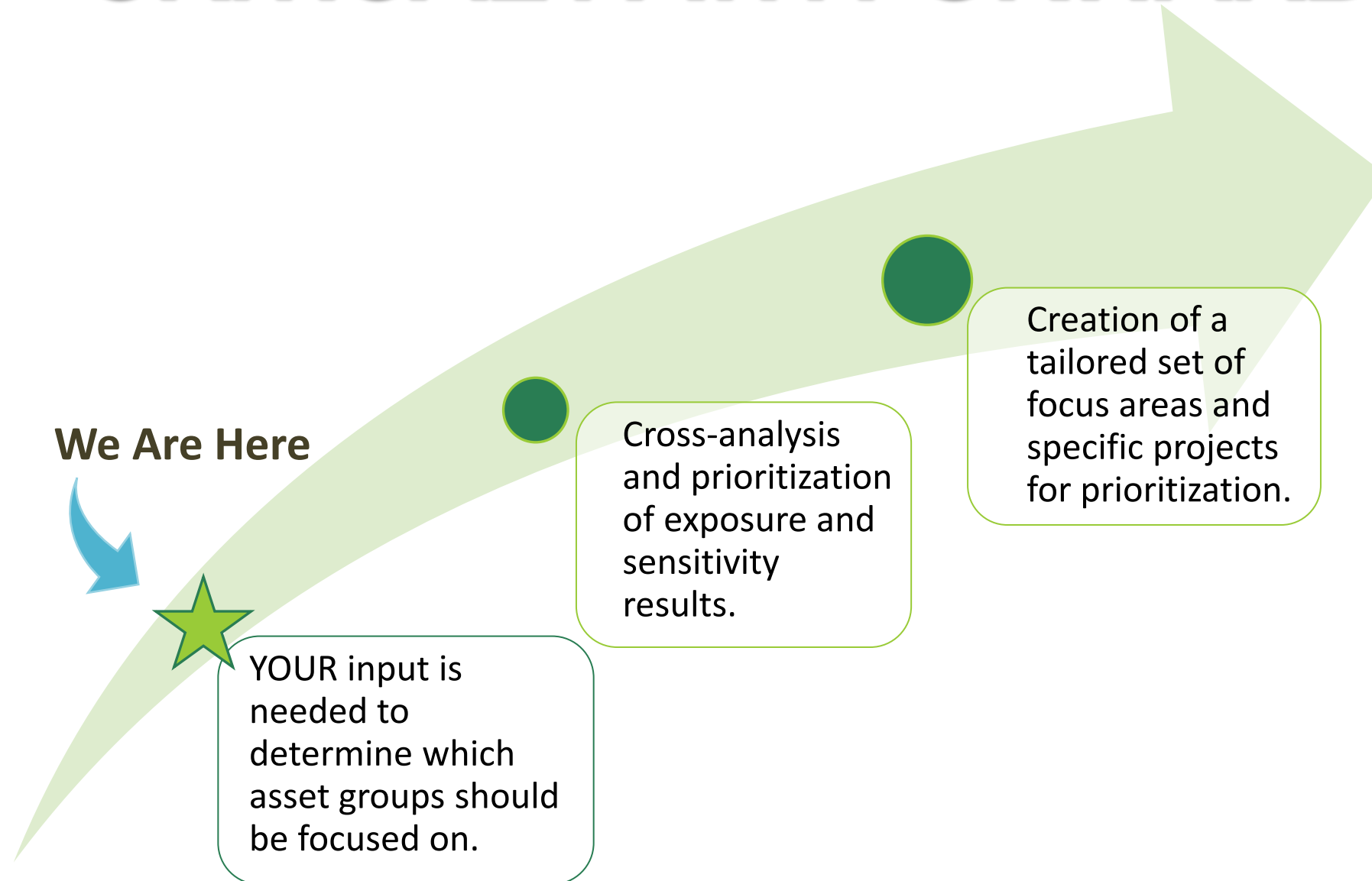


HEAT EXPOSURE FINDINGS

The following Asset Groups have the given relative vulnerabilities that has the potential to see a medium to high effect from heat:

- Affordable Housing – 50%
- Bus Stops – 41%
- Communications Infrastructure – 50%
- Fire and Police Facilities – 43%
- Government Facilities – 50%
- Healthcare and Assisted Living Facilities – 59%
- Mobile Home Parks – 25%
- Protected Natural Lands – 50%
- Surface Water – 42%
- Wetlands – 36%

CRITICAL PATH FORWARD



FOCUS AREAS

The results from this step are **CRITICAL** to the City of Coconut Creek, as this will help identify actual projects that the City could pursue to build resilience and adaptability.



FOCUS AREAS

Examples of what focus areas can be:

- **Geographic locations** – specific neighborhoods or areas of the city
- **Types of assets** – physical buildings; important road corridors
- **Population or demographics** –highest population; vulnerable populations; employment centers

What do you want prioritized?

FOCUS AREAS

*What do you want to prioritize for the threat of RAINFALL/FLOODING?
Pick your top 3*

- | | |
|---|--|
| <input type="checkbox"/> Roads | <input type="checkbox"/> Essential Facilities |
| <input type="checkbox"/> Parks | <input type="checkbox"/> Healthcare Facilities |
| <input type="checkbox"/> Schools and Colleges | <input type="checkbox"/> Private Parks/Protected Lands |
| <input type="checkbox"/> Community Centers | <input type="checkbox"/> Lift stations |

FOCUS AREAS

What do you want to prioritize for the threat of HEAT?
Pick top 3

- | | |
|--|--|
| <input type="checkbox"/> Affordable Housing | <input type="checkbox"/> Healthcare/Assisted Living Facilities |
| <input type="checkbox"/> Bus Stops | <input type="checkbox"/> Mobile Home Parks |
| <input type="checkbox"/> Communications Infrastructure | <input type="checkbox"/> Protected Natural Lands |
| <input type="checkbox"/> Fire and Police Facilities | <input type="checkbox"/> Surface Water |
| <input type="checkbox"/> Government Facilities | <input type="checkbox"/> Wetlands |

STRATEGIES

How do you want to prioritize the city's actions?

Pick top 3

- ☐ **Infrastructure** – green infrastructure; asset hardening
- ☐ **Land Use, Building Codes & Standards** –climate action plan; green building standards
- ☐ **Planning, Policy, & Management** – revise city code; operations; internal practices
- ☐ **Capacity Building** – partnerships with other public, private, non-profit organizations
- ☐ **Public Outreach** – public engagement; communication; education
- ☐ **Funding and Financing** – grants, loans; homeowner improvement programs

Contacts



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Upcoming Ambassador Meetings

- Monthly Meetings
- Relevant Topics aligned with strategic priorities
- An engaged community, working together

Date	Time	Meeting Title
Nov. 9th	5:30 PM - 6:30 PM	Parks & Recreation

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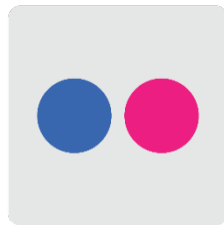
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