



COASTAL RESILIENCE PARTNERSHIP
SOUTHEAST PALM BEACH COUNTY

Climate Change Vulnerability Assessment

Identifying our Assets

This document summarizes the seven classes of community assets included in the Coastal Resilience Partnership of Southeast Palm Beach County's Climate Change Vulnerability Assessment. A vulnerability assessment provides a baseline understanding of the risks a certain community, place, or asset faces as it relates to specific threats. This assessment focuses on threats associated with climate change. Additionally, there is a Climate Threats document that details the specific climate threats that would impact the region. Through sophisticated modeling and data analysis, we can assess the specific properties, locations, and components within the community that may be at risk of experiencing any of the climate threats identified as part of this study. Once each facility or asset is intersected with the location of extreme events, the vulnerability of all public infrastructure can be defined. The ultimate goal of the Coastal Resilience Partnership is to install, inform, and implement long-term resilience and adaptation strategies into all participating local governments.

Key Terms



Vulnerability
Asset characteristics used to indicate levels of sensitivity, potential impact, and adaptive capacity.



Risk
Both threat and asset characteristics used to indicate levels of probability of a particular climate event from happening and its associated consequence.



Sensitivity
The range or magnitude of how much an asset may be hurt by a threat.



Adaptive Capacity
The extent to which an asset may change and its ability to adapt.

Asset: Critical Facilities

These critical facilities reflect structures that are utilized on a daily basis by a wide distribution of people serving numerous purposes. The primary asset categories include public safety, food, water, shelter, health and medical, energy and communications, and government facilities. These are lifeline facilities that are pivotal to communities because they provide crucial services that ensure the smooth function of everyday life.

Threats to Critical Facilities:

- High Winds
- Rainfall-Induced Flooding
- Tidal Flooding
- Storm Surge
- Shoreline Recession



Asset: Water Infrastructure

Water infrastructure facilities are a critical aspect to societies as individuals rely heavily upon the distribution of clean and safe water, the proper management of drainage systems, and the continual protection of water quality. This infrastructure includes stormwater, wastewater, and potable water systems.

Threats To Water Infrastructure:

- Drought
- Rainfall-Induced Flooding
- Saltwater Intrusion
- Groundwater Inundation
- Tidal Flooding
- Storm Surge
- Shoreline Recession



Asset: Economic Factors

A prospering society depends on businesses staying open and continuing to contribute to the overall economy. Accounting for climatic threats is essential to assessing the possible effects future conditions can have on each local government's economy, as well as that of the region. When assessing the economic factors, the main asset categories include employees/jobs and annual sales volume.

Threats to Economic Factors:

- High Winds
- Rainfall-Induced Flooding
- Tidal Flooding
- Storm Surge
- Shoreline Recession
- Pest and Disease Outbreaks
- Groundwater Inundation
- Harmful Algal Blooms



Asset: Natural Resources

Natural assets provide multiple ecosystem services that improve the livability of our communities. The natural resources that are present in these South Florida communities such as beaches, parks and natural areas, tree canopy, and water bodies are inherently unique and represent much of our community. Calculating for the potential of these threats and their relative effects on the environment is key for the continual protection and survival of these natural resources.

Threats to Natural Resources:

- Drought
- Pest and Disease Outbreaks
- Rainfall-Induced Flooding
- Tidal Flooding
- Storm Surge
- Harmful Algal Blooms
- Shoreline Recession



Asset: People & Socioeconomics

This asset theme can be defined as socially vulnerable populations that may be disproportionately vulnerable to climate threats. The Centers for Disease Control and Prevention, or CDC, classifies social vulnerability through a number of factors including but not limited to socioeconomic status, housing and transportation, and household composition. These communities may be affected by external stressors that impact human health and productivity. Stressors come in many forms and can range from global pandemics to local extreme weather.

Threats To People & Socioeconomic:

- Drought
- Pest and Disease Outbreaks
- Rainfall-Induced Flooding
- Tidal Flooding
- Storm Surge
- Harmful Algal Blooms
- Shoreline Recession
- High Winds
- Extreme Heat
- Wildfire
- Saltwater Intrusion
- Groundwater Inundation



Asset: Property

For this asset theme, properties ranging from commercial, cultural, and residential are analyzed to determine the likelihood of climate threats influencing or burdening properties. This can be amplified when socially vulnerable communities intersect with physically vulnerable properties.

Threats To Property:

- High Winds
- Rainfall-Induced Flooding
- Tidal Flooding
- Storm Surge
- Shoreline Recession



Asset: Transportation & Mobility

The ability to move and be mobile as a community is pivotal to the continued flow of everyday life. Particularly in Florida, roadways and other major transportation facilities are inherently vulnerable to climate threats such as flooding because of our relative low elevation.

Threats to Transportation & Mobility:

- Rainfall-Induced Flooding
- Tidal Flooding
- Storm Surge
- Shoreline Recession
- Groundwater Inundation

