



# CITY OF CAPE CANAVERAL

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City of Cape Canaveral Community and Economic Development Department:  
Resilience Division

## Residential Sustainability and Resilience Field Guide

The [City of Cape Canaveral](http://www.cityofcapecanaveral.org) (City) seeks to promote awareness of sustainability and resilience-based best management practices in order to encourage residents and business owners to be better prepared for climate-related hazards, reduce risks, increase environmental stewardship, and maintain economic vitality. The City openly embraces its place as a coastal municipality in the heart of the revitalization of the Space Coast, and greatly appreciates the opportunity to be your area of residence. However, there are challenges unique to our paradise; the City is a barrier island community surrounded by water. Being a barrier island, the area is vulnerable to urban flooding, light pollution, hurricanes, storm surge, and ongoing [sea level rise](#).

The City has developed this field guide based on years of experience and real-world observations on the island to specifically assist property owners in protecting their investments.

The following resources and recommendations have been provided to you for **information purposes only**. If you have any questions or want additional information, please contact the City's Resilience Division at 321-868-1220 ext. 219 or at [resiliencedivision@cityofcapecanaveral.org](mailto:resiliencedivision@cityofcapecanaveral.org). The City does not endorse specific companies mentioned in this publication. Company names are provided for informational purposes only.

## Energy Continuity and Resilience

Electricity is a vital utility that must be managed and responsibly sourced in order to improve socio-economic sustainability, resilience, and environmental well-being. In today's modern digital era, almost every aspect of life is conducted via the use of electricity. With demand for power increasing around the world due to a rise in the electrification of numerous economic sectors (i.e., telecommunications, transportation, buildings, industry, etc.), ensuring reliable and clean sources of generation is key to developing a more sustainable future.

Below are resources that you can take advantage of, or that the City has successfully utilized, in order to lower your property's energy consumption, carbon emissions, and – by so doing – increasing financial savings.

### ***Florida Power and Light (FPL) SolarTogether Program***

- SolarTogether is an offset program spearheaded by FPL where customers voluntarily agree to pay a slightly higher utility rate in order to invest in large-scale solar arrays being deployed by the company as a part of their 30 by 30 initiative, which intends to see 30 million solar panels deployed across the state by 2030 to generate up to 10 gigawatts of electricity. In exchange for this increased

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rate, customers will receive bill credits that will – after a relatively short period – see a breakeven point and subsequently begin positive financial returns. Customers can choose to subscribe any amount of their consumption to the program.

In January 2019, the City partnered with FPL to become one of the first municipal SolarTogether subscribers, and will see over \$385,000 in utility savings over the course of the 30-year program.

For additional program information, please visit: [FPL SolarTogether Program](#)

### ***FPL SolarVantage Program***

- FPL's SolarVantage Program involves FPL designing, installing, operating, and maintaining rooftop, ground mount, or car canopy solar arrays (whichever makes the most sense for any given property) with no upfront costs. FPL owns and maintains the system for 10-years before handing over ownership of the system to the customer. One can enter into an agreement with FPL to continue maintaining the system after this 10-year period, if desired. The system is slowly paid back through the 10-year period by the customer while simultaneously receiving bill credits via [net metering](#), lowering a customer's overall energy costs while also reducing carbon emissions. The energy produced is fed back into the electrical grid.



Figure 1. Example of a residential rooftop solar array.

For additional program information, please visit: [FPL SolarVantage Program](#)

### ***FPL EVolution Home Program***

- FPL's EVolution Home Program involves FPL installing and maintaining an electric vehicle (EV) charging station in one's residence in order to encourage and assist with the transportation sector's electrification. Most of the capital costs associated with EV charging stations are their initial installation; therefore, this program could represent huge cost savings for customers.



Figure 2. EV recharging.

For additional program information, please visit: [FPL EVolution Home Program](#)

## **Low Impact Development (LID)**

LID - as defined by the US Environmental Protection Agency (EPA) - refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration, or use of stormwater in order to protect water quality and associated aquatic habitat, such as the nearby Banana River Lagoon.

The City continues to undertake numerous projects that incorporate LID practices. To learn more, visit the [City's LID guide for residents](#) to see what is possible.

Below are several resources and examples that you can take advantage of, or that the City has successfully utilized, in order to reduce your property's stormwater runoff and increase its use of green stormwater infrastructure.

### ***Permeable Pavement***

- Using permeable or porous pavement can allow stormwater runoff to percolate into the ground where it can be naturally filtered instead of directly going into local watersheds. This can also reduce urban flooding by taking load off the City's existing stormwater infrastructure. For example, the City of Cape Canaveral Community Center utilizes a permeable concrete parking lot. A recent study indicates that over half of the City's land surface is paved. Where appropriate and feasible, utilize permeable paving materials to reduce the amount of impervious surfaces City-wide.

Permeable pavement does require maintenance periodically in order to remain effective at infiltration. Having a maintenance schedule where debris is vacuumed out of the pavement is important to system success in the long-term. A variety of material options and contractors are available if interested.

### ***Florida Native Landscaping***

- Florida native plants can be helpful resilience tools and aesthetically pleasing. For one, many are very effective at absorbing excess nutrients from the soil, thus reducing nutrient pollution in nearby waterways. They also absorb and store carbon dioxide, a potent greenhouse gas responsible for much of the warming currently being seen around the globe. Many are drought and salt tolerant, and require less maintenance and water, saving both time and money. In flood situations, most are also tolerant to some level of inundation. Additional tree canopy can even reduce an area's overall temperature by several degrees. The City views the expansion of its urban canopy as one of its top environmental properties.

For a listing of Florida native plants, visit: [Florida Native Plants](#). Interested in acquiring trees? Be sure to check out the City's [Adopt-A-Mangrove Program](#) if you are a lagoon-front resident, and [Adopt-A-Tree Program](#) for landside residents. Both of these free and voluntary programs allow interested participants the chance to vegetate their property.

### ***Adopt-A-Rain Barrel Program***

- The City encourages the use of rain barrels as these barrels can help reduce stormwater runoff and be used as a means of reducing potable water usage, which can in turn lead to financial savings over time.

In 2022, the City launched a residential rain barrel program that offers individuals the ability to “adopt” 55-gallon rain barrels from the City for free. Participants in this program will also be eligible for a [\\$50 rebate](#) from the City of Cocoa, the City’s potable water utility provider.



Figure 3. Fifty-five-gallon rain barrels.

Additional information can be found here: [Adopt-A-Rain Barrel Program](#)

### ***Sea Turtle-Friendly Lighting***

- Sea turtle-friendly lighting should be utilized by property owners beachside, and additionally the City encourages its use throughout the community given its overall proximity to the ocean. Sea turtle-friendly lighting involves the use of lights that either have shielding to reduce ambient glow, directional down lighting, and that are amber in color.

Additional information can be found here: [Sea Turtle-Friendly Lighting](#)

## **Weather and Climate–Related Hazard Mitigation**

Property owners and builders must be aware of the inherent weather and climate-related risks within the City; perhaps the most prominent and frequent of which are floods. According to the Federal Emergency Management Agency (FEMA), floods are the most [common natural disaster](#) in the United States. The City has developed a web page (linked below) to serve as a guide for property owners to better understand their risk and to showcase other helpful resources.

[City of Cape Canaveral Flood Protection Guide](#)

You can also call the City’s certified on-staff floodplain manager - (321) 868-1220 ext. 114 or (321) 868-1220 ext. 113 - at the City of Cape Canaveral Building Department, located at 100 Polk Ave., to assist you in determining your property’s risk and your specific flood zone. Check the current version of the Flood Insurance Rate Map (FIRM) by clicking the link below.

[FEMA Flood Map City of Cape Canaveral](#)

In 2019, the City of Cape Canaveral, in conjunction with the East Central Florida Regional Planning Council ([ECFRPC](#)), published a Vulnerability Assessment highlighting risks posed to the City by the impacts of current and future sea level rise, storm surge, and shallow coastal flood areas, as well as the City’s FEMA-derived 100-year and 500-year flood zones. Property owners and builders should take proactive measures to ensure their developments and projects are built with appropriate and feasible flood mitigation and adaptation

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measures at or above state and local codes; including: permeable paved surfaces, bioretention areas, elevating structures, onsite stormwater retention, flood barriers, etc. A full copy of the City's 2019 Vulnerability Assessment can be viewed via the link below.

[City of Cape Canaveral Vulnerability Assessment](#)

Additionally, other natural hazards, including tropical cyclones and lightning, have had significant impacts on the island. Please plan accordingly for proper mitigation and adaptation.

### ***Semi-Permanent Flood Barriers***

- In March 2020, the City's Public Works Services Department began installing semi-permanent flood barriers at the City's Water Reclamation Facility (WRF). These removable aluminum barriers are 42 inches wide by 36 inches tall. When a flood event is predicted—such as a hurricane—these barriers can be put into place via mounting racks set on either side of doorways. The barriers are then tightened, creating a water-tight seal. Each door's barrier can be deployed in under 30 seconds. This will take the place of sandbagging operations that normally take hours, allowing for more efficient storm preparations throughout other areas of the City.



Figure 4. Semi-permanent flood barrier installed at the City's Water Reclamation Facility.

A total of 14 barriers have been installed at the WRF to date, but more should be expected to be installed at other City facilities. These barriers can also be used for one's residence as well, and come in set and customizable sizes.

For additional information, please visit: [PSI Flood Barriers](#)

### ***Brevard County Weatherization Program***

- Brevard County offers a weatherization program to help interested homeowners improve home efficiency and comfortability via the repair and improvement of insulation, air conditioning systems, weather stripping and caulking, and water savings.

For additional information, please visit: [Brevard County Weatherization Program](#)

### ***PACE (Property Assessed Clean Energy) Financing***

- In 2017, the City adopted a resolution (2017-01) that allows local governments to create PACE programs in order to provide access to upfront financing for energy conservation and efficiency, renewable energy, wind resistance, and other improvements. The program, approved by the State of Florida, uses third-party administrators to provide funding for clean energy, home weatherization, and resilience enhancement projects.

To learn more, visit: [PACENation](#)

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