CLEARWATER A bright and beautiful future.

Conservation & Coastal Management

Conservation and Coastal Management Elements

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INTRODUCTION

This chapter offers guidance for protecting and preserving that natural resources found within the city as well as coastal areas, while also introducing sustainable and resilient techniques for development and redevelopment. The city is uniquely vulnerable to flooding as the city's boundaries stretch between the Gulf of Mexico and Old Tampa Bay and also includes the barrier islands of Sand Key and Clearwater Beach. This introduction is still a draft and will be edited with additional data before a final version is created.

The Conservation and Coastal Management chapter offers guidance for protecting and preserving the natural resources found within the city as well as coastal areas, while also introducing sustainable and resilient techniques for development and redevelopment. The city is uniquely positioned as the city's boundaries stretch between the Gulf of Mexico and Old Tampa Bay and includes the barrier islands of Sand Key and Clearwater Beach. This positioning makes the city increasingly vulnerable to flooding and other significant weather events.

Throughout this chapter conservation, sustainability, and resiliency are overlapping disciplines that will guide policy direction. Conservation is the careful preservation and protection of finite resources. Sustainability typically addresses the interdependence. of environmental, social, and economic systems through management of resources to maintain their availability for future generations. The city is committed to sustainability with its adoption of Greenprint 2.0, a policy document that will lower the city's reliance on fossil fuels and reducing the city's carbon footprint with actions such as transitioning to solar energy and fleet conversions to electric vehicles. Resilience refers to the capacity of systems to recover quickly after adverse situations such as disruptions or disasters. The city is committed to the protection of its coastal resources, as well as reducing its carbon footprint to mitigate the impacts of climate change.

CHAPTER GOALS

GOAL CCM 1. NATURAL RESOURCE CONSERVATION.

Continue to protect, enhance, and conserve natural resources within the city to provide for the long-term accessibility, enhancement, safety, economic viability, and environmental integrity of those resources.

GOAL CCM 2. BUILT ENVIRONMENT PROTECTION.

Protect development, redevelopment, and public facility investment from storm events, hurricane winds, and flood risks related to flooding, high-tide events, wind, and sea level rise to reduce property losses.

GOAL CCM 3. AIR QUALITY.

Work to increase air quality in the city to improve quality of life and reduce air pollution-related health effects.

GOAL CCM 4. SUSTAINABILITY AND RESILIENCY.

Integrate sustainable and resilient techniques into land use, transportation, housing, infrastructure planning, decision making, and development.

GOAL CCM 5. POST DISASTER REDEVELOPMENT.

Ensure post-disaster redevelopment occurs in a manner that minimizes public and private vulnerability to future disasters.

GOAL CCM 6. EDUCATION.

Educate the public on storm hazardrelated risks, flood insurance, the natural environment, and sustainability initiatives and best practices.

GOAL CCM 1

Continue to protect, enhance, and conserve natural resources within the city to provide for the long-term accessibility, enhancement, safety, economic viability, and environmental integrity of those resources.

Objective CCM 1.1

Continue to protect natural shoreline, dunes, and beaches from encroachment and development.

POLICIES

CCM 1.1.1

Continue to restore and enhance disturbed or degraded dune and beach areas using native vegetation plantings such as sea oats, seagrasses, or mangroves, or other natural materials in lieu of hardened structures to provide stabilization, shoreline protection, and erosion control.

CCM 1.1.2

Continue to minimize the disturbance of natural shorelines, dunes, and beaches which provide stabilization and protect landward areas from storm impacts.

CCM 1.1.3

Continue to prohibit the disturbance or destruction of beach and beach dunes from any form of construction except for access to and from the beach utilizing elevated wooden boardwalks.

CCM 1.1.4

Continue to prohibit unauthorized vehicles from operating or parking on beaches and dunes within the city, unless within designated areas.



Stevenson Creek

Objective CCM 1.2

Continue to protect floodplains, drainage ways, and all other natural resources from encroachment and development.

POLICIES

CCM 1.2.1

Guide proposed development or redevelopment away from environmentally sensitive areas.

CCM 1.2.2

Continue to restrict development density or intensity and prohibit development seaward of the Coastal Construction Control Line unless approved by the FDEP and the city.

CCM 1.2.3

Ensure that any construction within the 100-year floodplain (Zones A and AE, Map CCM 7. Flood Zones) complies with all applicable building requirements and codes.

CCM 1.2.4

Ensure that proposed development or redevelopment does not encroach on, disturb, or remove natural wetlands without appropriate and approved mitigation techniques.

CCM 1.2.5

Require mitigation plans for alteration of non-jurisdictional wetlands, floodplains, or lakes at not less than a 1:1 ratio as approved by the Public Works Department and in coordination with the Southwest Florida Water Management District (SWFWMD).

CCM 1.2.6

Continue to require development or redevelopment to use stormwater facilities or natural filtration techniques to improve the quality of and slow the amount of stormwater runoff into drainage basins.

CCM 1.2.7

Continue to use erosion control management programs during site development or redevelopment to contain site runoff and protect water quality.

CCM 1.2.8

Protect natural resources and systems through application of local, state, and regional regulations, mitigation and management plans, and permitting procedures as well as through locally instituted land purchase programs.

CCM 1.2.9

Continue to restore and enhance disturbed or degraded drainage systems and estuaries through upstream detention of stormwater, maintenance of existing drainage channels, widening of bridges, culverts, and other stormwater conveyance systems, limiting impacts to wetlands, and controlling operations of water-dependent uses.

CCM 1.2.10

Continue to prohibit marinas or similar uses near areas of environmental significance unless appropriate and approved mitigation techniques are provided.

Objective CCM 1.3

Continue to protect, maintain, enhance, and manage wetlands, estuaries, wildlife habitats, conservation areas, and city-owned lands that are in their natural state from unnatural disturbances or adverse impacts from development.

POLICIES

CCM 1.3.1

Continue to prohibit development that unnecessarily disturbs or destroys native vegetation.

CCM 1.3.2

Protect and conserve wetlands by directing incompatible or hazardous future land uses away from wetlands and through prohibition of dredging or filling wetlands other than by natural phenomena.

CCM 1.3.3

Continue to protect natural and mitigated wetlands, estuaries, conservation lands, marine life, shoreline vegetation, and wildlife habitats, especially threatened or endangered species, through professional wildlife management and habitat restoration techniques.

CCM 1.3.4

Continue to administer regulations providing for the protection of threatened and endangered species and species of special concern.

CCM 1.3.5

Continue to protect and preserve riverine floodways and wetlands from disturbance and destruction through application of the Community Development Code.

CCM 1.3.6

Continue the program of removing invasive species from city-owned wetlands, stormwater ponds, or other public lands and encourage residents to remove invasive species from their property.

CCM 1.3.7

Provide support to county and state efforts to protect mangroves.

CCM 1.3.8

Continue to protect and recognize the importance of natural ecosystems and city parks as integral parts of the city's urban environment.

CCM 1.3.9

Coordinate recreation planning with other plans concerning water quality, stormwater management, fish and wildlife management, and environmental education.

CCM 1.3.10

Continue to designate environmentally sensitive wetlands, floodways, or other environmentally significant areas with the Preservation (P) Future Land Use Map category and zoning district.

CCM 1.3.11

Support the Cooper's Point water quality project consisting of a new bridge opening in the Courtney Campbell Causeway and the restoration of a channel through Cooper's Bayou.

Objective CCM 1.4

Continue to protect all city-owned and maintained potable water wells from contamination and conserve current and future water sources.

POLICIES

CCM 1.4.1

Continue to administer a wellfield protection ordinance to protect potable water wells and wellfields from contamination.

CCM 1.4.2

Continue to prohibit uses with hazardous materials or waste from locating within protection zones or within the 25-year floodplain.

CCM 1.4.3

Consider adopting performance standards to reduce the current rates of potable water consumption.

CCM 1.4.4

Continue to expand reclaimed water service for use in irrigation to limit the use of potable water for irrigation.

CCM 1.4.5

Continue to study the feasibility of implementing the Groundwater Replenishment Project to recharge the Floridan Aquifer.

Objective CCM 1.5

Manage stormwater discharges to preserve, protect, and enhance the water quality of stormwater runoff into receiving waterbodies.

POLICIES

CCM 1.5.1

Update the stormwater manual to address new technologies and best practices.

ССМ 1.5.2

Review and update waterbody management plans in accordance with the Surface Water Improvement and Management (SWIM) program and develop plans for waterbodies with known or suspected water quality problems as needed.

CCM 1.5.3

Prepare watershed management plans, including both water quality and flood control considerations, and recommend and update funding sources as necessary.

CCM 1.5.4

Implement city-approved watershed management plans as appropriate and feasible.

CCM 1.5.5

Revise stormwater plans to include the use of natural features, lowimpact development techniques, native vegetation, or other strategies to reduce and improve stormwater runoff from developments.

CCM 1.5.6

Continue to use stormwater ordinances to regulate stormwater runoff from private developments.

CCM 1.5.7

Develop water quality specific level of service criteria as required within the provisions of the National Pollution Discharge Elimination System (NPDES) permit issued to Pinellas County.

CCM 1.5.8

Continue to develop management plans on an ongoing basis for waterbodies with known or suspected water quality problems in the city including Tampa Bay, Clearwater Harbor, Stevenson Creek, Allen's Creek, and Alligator Creek.

CCM 1.5.9

Seek to meet applicable goals, guidelines, and regulations established to provide flood protection and pollution abatement in all stormwater management improvements.



City staff during a cleanup day.

GOAL CCM 2

Protect development, redevelopment, and public facility investment from storm events, hurricane winds, and flood risks related to flooding, high-tide events, wind, and sea level rise to reduce property losses.

Objective CCM 2.1

Ensure proposed development or redevelopment follows applicable codes to reduce risk and losses due to flooding events and impacts of sea level rise.

POLICIES

CCM 2.1.1

Ensure proposed development or redevelopment within floodplains is consistent with applicable city plans, the Community Development Code, the Florida Building Code, and the National Flood Insurance Policy (NFIP) Community Rating System (CRS) Program.

CCM 2.1.2

Continue to bring non-compliant structures into conformance with FEMA standards, applicable building codes, and the Community Development Code.

Objective CCM 2.2

Research and implement standards for sustainable and resilient protection within the city's Community Development Code to address flooding, sea level rise, and storm events for all development in flood-prone and coastal areas of the city.

POLICIES

CCM 2.2.1

Evaluate current standards to determine if there is a need to require additional flood proofing techniques such as additional freeboard, elevated finished floors, or wet/dry flood proofing for new development or substantial improvements to existing development.

ССМ 2.2.2

Consider revising the city's substantial improvement and substantial damage regulatory threshold to reduce the number of non-compliant structures.

CCM 2.2.3

Research and implement resilient standards for dune, beach, natural shoreline, and seawall protection.

CCM 2.2.4

Consider amendments to permit the installation and use of renewable energy technologies such as solar or scaled wind turbines.

CCM 2.2.5

Research and incorporate biophilic planning, the strategy of including natural objects and shapes into development, development standards to improve air quality and reduce urban heat effects.

CCM 2.2.6

Consider allowing community gardens to locate within all zoning districts and allow for urban agriculture and food production activities.

CCM 2.2.7

Provide additional low-impact development techniques.

CCM 2.2.8

Continue to review and update development standards for sea turtle lighting.

CCM 2.2.9

Establish appropriate development standards for floating solar facilities.

CCM 2.2.10

Evaluate findings from the Pinellas County Sea Level Rise and Storm Surge Vulnerability Assessment, Tampa Bay Climate Science Advisory Panel Report, or other similar assessments and consider including recommendations.

Objective CCM 2.3

Evaluate city funded projects to assess vulnerabilities to maximize effective life spans.

POLICIES

CCM 2.3.1

Prepare a report that identifies public facilities and infrastructure that is at risk from sea level rise.

CCM 2.3.2

Utilize vulnerability assessments to determine if a public facility or infrastructure should be built, rebuilt, modified, or relocated.

CCM 2.3.3

Consider using the most recent sea level rise scenario identified in the Tampa Bay Climate Science Advisory Panel Report to use when designing critical city infrastructure to ensure that infrastructure lifespans are maximized to the fullest extent possible.

CCM 2.3.4

During construction or reconstruction, evaluate incorporating stabilization or armoring of roadway shoulders and embankments where flood waters tend to wash roads out.

CCM 2.3.5

Evaluate the feasibility of elevating roadways above base flood elevations to limit roadway flooding and allow roadways to be used during flooding events.

Objective CCM 2.4

Direct permanent populations and certain uses away from the Coastal Storm Area (as show in Map CCM 6. CHHA and CSA, which includes the Coastal High Hazard Area).

POLICIES

CCM 2.4.1

Prohibit the location of new or expansion of existing mobile home parks, hospitals, nursing homes, assisted living facilities, or other similar uses within the Coastal Storm Area.

CCM 2.4.2

Prohibit the transfer of density or intensity to properties or portions of properties within the CSA from outside of the CSA.

CCM 2.4.3

Limit residential densities on those portions of properties within the Coastal Storm Area in the US 19 Corridor to those that were in place prior to implementation of the US 19 Future Land Use Map categories as shown on Map CCM 8. Future Land Uses in US 19 and those areas identified in the Clearwater Downtown Redevelopment Plan.

CCM 2.4.4

Continue to allow development and redevelopment consistent with adopted densities and intensities and standards within the Community Development Code and Beach by Design: A Preliminary Design for Clearwater Beach and Design Guidelines.

Objective CCM 2.5

Ensure that certain uses have approved disaster or evacuation plans, that adequate hurricane evacuation times are maintained, and evaluate ways to reduce evacuation times.

POLICIES

CCM 2.5.1

Require disaster plans for hospitals, nursing homes, assisted living facilities, or other similar uses as required by law, to be sent to Pinellas County Emergency Management and kept on file with the Emergency Management Coordinator.

CCM 2.5.2

Require new or redeveloped overnight accommodation uses located within the Coastal Storm Area to have a city-approved hurricane evacuation plan for all guests.

CCM 2.5.3

Continue to use 16-hours as the adopted level of service standard for out-of-county hurricane evacuation clearance time for a category 5 storm-event.

CCM 2.5.4

Prohibit development on Clearwater Beach or Sand Key if it is evident that such development will impede adopted evacuation times.

CCM 2.5.5

Continue to utilize the hurricane evacuation zones identified on Map CCM 9. Evacuation Zones, during storm warnings and update the map as needed.

CCM 2.5.6

Continue to review and update Map CCM 10. Evacuation Routes, as necessary to ensure populations can safely evacuate during storm events.

CCM 2.5.7

Ensure that all appropriate efforts are made to evacuate vulnerable populations during storm events.

Objective CCM 2.6

Explore designating Adaptation Action Areas (AAAs) for areas vulnerable to flooding and sea level rise.

Policies

CCM 2.6.1

Map designated AAAs and define strategies applicable to development, redevelopment, and investment in public facilities, infrastructure, and utilities.

CCM 2.6.2

Evaluate the costs and benefits of adaptation alternatives in the design and siting of new infrastructure or the fortification or retrofitting of existing infrastructure.

CCM 2.6.3

Evaluate strategies after adoption and mapping to ensure the use of the most up-to-date data for vulnerability assessments in AAAs.

Objective CCM 2.7

Continue to protect and preserve access to public beaches.

POLICIES

CCM 2.7.1

Enhance access to public beaches through development of recreational lands, land acquisition or easements, and maintenance of public access and parking to beaches renourished with public funds.

CCM 2.7.2

Continue to enforce the Coastal Zone Protection Act of 1985 by prohibiting vacations of existing or future beach access ways and recognizing that all public access ways, street ends, waterfront parks, and parking areas are beach access easements.



Tourists on Clearwater Beach

GOAL CCM 3

Work to increase air quality in the city to improve quality of life and reduce air pollution-related health effects.

Objective CCM 3.1

Support and implement policies and programs that reduce the city's carbon footprint and protect or improve air quality.

POLICIES

CCM 3.1.1

Continue to protect and improve ambient air quality through administration of applicable standards in the Florida Administrative Code (FAC), FDEP, or other codes.

CCM 3.1.2

Research methods and strategies to reduce air pollution caused by motor vehicles.

CCM 3.1.3

Continue to promote the use of alternative energy resources that do not degrade air quality.



Child standing behind a butterfly garden.

GOAL CCM 4

Integrate sustainable and resilient techniques into land use, transportation, housing, infrastructure planning, decision making, and development.

Objective CCM 4.1

Increase the use of sustainable and resilient programs or techniques.

POLICIES

CCM 4.1.1 Consider developing a pilot program for commercial composting.

CCM 4.1.2

Continue to support residential composting through the Clearwater Creates Compost online course.

Objective CCM 4.2

Promote the use of sustainable and resilient building techniques and renewable energy sources in development, renovation, and rehabilitation.

POLICIES

CCM 4.2.1

Encourage and incentivize the use of green building standards by using resources such as those available through Global Green USA.

CCM 4.2.2

Develop incentives for LEED- and FGBC-certified buildings.

CCM 4.2.3

Encourage affordable housing projects to utilize US Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) principles or the Florida Green Building Coalition's (FGBC) Green Land Development and Building Standards.

CCM 4.2.4

Increase the supply of sustainable residential units that reduce greenhouse gas emissions through the use of sustainable designs and land development practices.

CCM 4.2.5

Educate residents on the benefits of using energy-efficient appliances and fixtures.

CCM 4.2.6

Consider creating and implementing development incentives for energy-efficient infill development or redevelopment within activity centers and commercial corridors.

CCM 4.2.7

Transition city operations to 100% renewable, zero-emission, clean energy electricity by 2040, and citywide by 2050 in accordance with Ready for 100 Program.

Objective CCM 4.3

Continue to implement and evaluate Clearwater Greenprint 2.0 to decrease energy consumption and increase the city's resiliency and sustainability.

POLICIES

CCM 4.3.1

Continue to implement energy management and conservation programs by reducing energy demand and maximizing efficiency in all city facilities and operations.

CCM 4.3.2

Transition the city's fleet into alternative fuel vehicles by 2040 as vehicles are replaced.

CCM 4.3.3

Evaluate the findings from the Solar Feasibility Study and implement solar installations on municipal buildings.

CCM 4.3.4

Encourage the restoration and reuse of buildings as an alternative to demolition.

CCM 4.3.5

Identify public and semi-public lands that would be suitable for food production pilot projects.



Resident receiving a tree during a tree giveaway.

GOAL CCM 5

Ensure post-disaster redevelopment occurs in a manner that minimizes public and private vulnerability to future disasters.

Objective CCM 5.1

Ensure that post-disaster redevelopment is governed by all applicable building, construction, and development codes.

POLICIES

CCM 5.1.1

Prepare an inventory of properties for acquisition and removal by the city with clear criteria for use of acquisition resources.

CCM 5.1.2

Continue to review FEMA's inventory of repetitive loss properties and work with state officials to improve the process of reducing vulnerability and loss for listed properties.

CCM 5.1.3

Establish criteria to limit future development or redevelopment in areas that experience repeated damage or properties that suffer repetitive losses.

CCM 5.1.4

Consider declaring building moratoriums when 50% or more of the homes in the Coastal Storm Area have been destroyed to evaluate impacts and feasibility of redevelopment.

CCM 5.1.5

Allow for redevelopment of structures in AE and V Zones where damage is greater than 50% of the assessed value prior to damages, consistent with adopted densities or as-built densities at the time of storm damage in accordance with applicable building codes, the Community Development Code, and FEMA requirements.

CCM 5.1.6

Require that structures rebuild to current building codes, Community Development Code provisions, and FEMA requirements.

CCM 5.1.7

Prioritize public expenditures that restore or enhance natural resources including program improvements.

CCM 5.1.8

Ensure that necessary infrastructure improvements are constructed in a phased approach to coincide with development demands to reduce the risk of loss.

CCM 5.1.9

Continue to manage, repair, or rebuild damaged critical infrastructure and facilities that are necessary to serve populations and minimize future storm and flooding damages.

CCM 5.1.10

Evaluate relocating non-critical public infrastructure and facilities outside of flood prone areas.

GOAL CCM 6

Educate the public on storm hazard-related risks, flood insurance, the natural environment, and sustainability initiatives and best practices.

Objective CCM 6.1

Continue to conduct community outreach and education campaigns.

POLICIES

CCM 6.1.1

Create and provide clear, credible, and compelling information on sustainability in a wide variety of venues and formats.

CCM 6.1.2

Partner with AMPLIFY Clearwater to develop informational programs about hurricane preparedness for local businesses.

CCM 6.1.3

Continue to communicate about flood-related risks and hazards and conduct NFIP community workshops on the benefits of acquiring flood insurance.

CCM 6.1.4

Promote educational programs encouraging the preservation of the natural environment at parks and recreation facilities.

CCM 6.1.5

Continue to promote environmental education through various programs and communications channels including social media, websites, television, brochures, lectures, and other innovative methods.

CCM 6.1.6

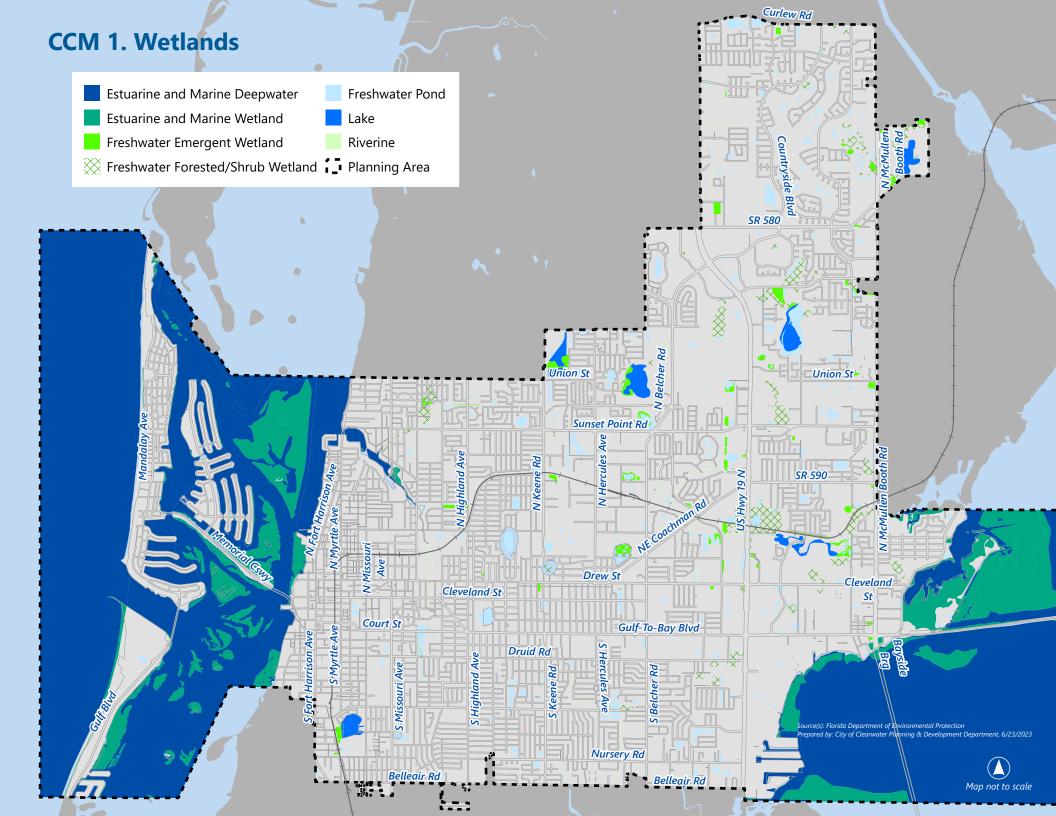
Educate the public on the benefits and promote the use of "Florida friendly" and drought tolerant vegetation and ground cover as it relates to conserving potable water.

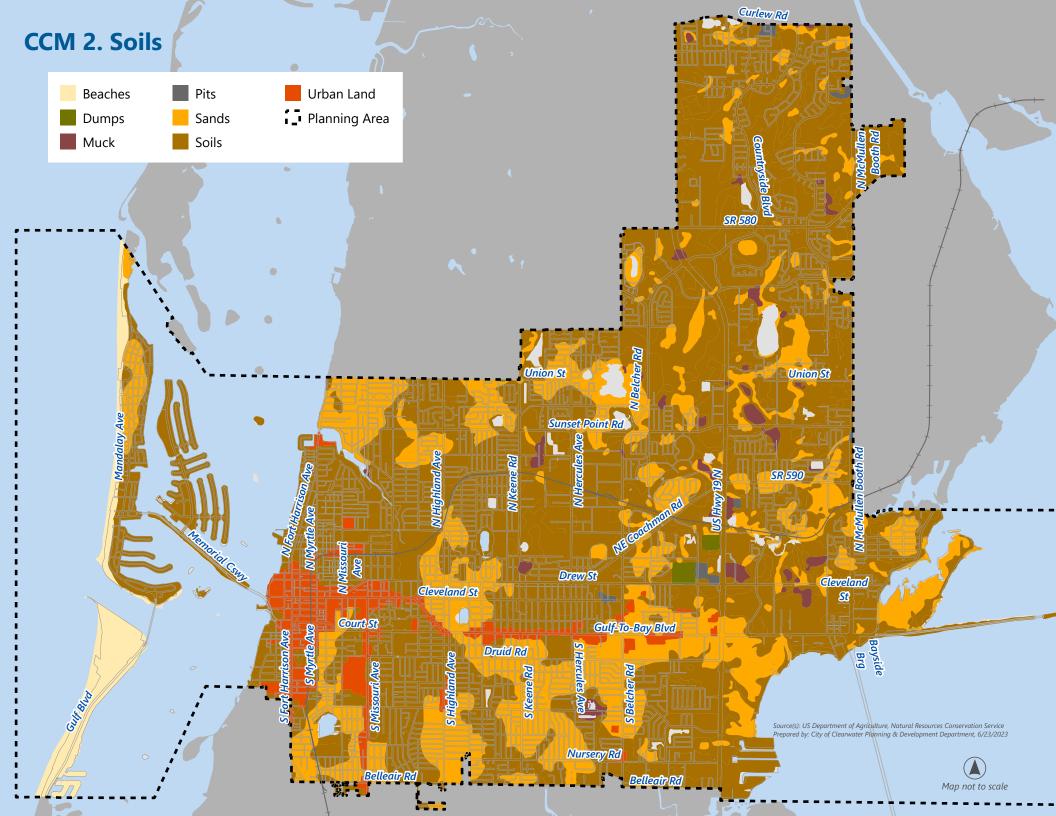
CCM 6.1.7

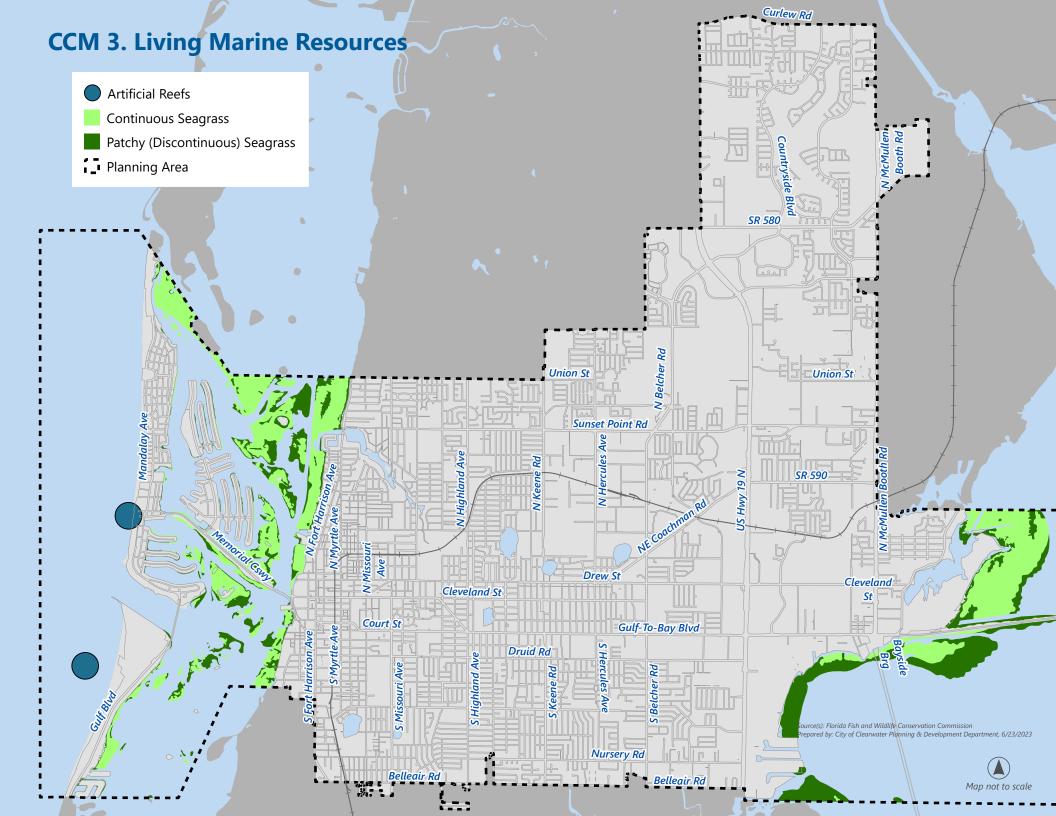
Provide "green building information" to local area housing providers.

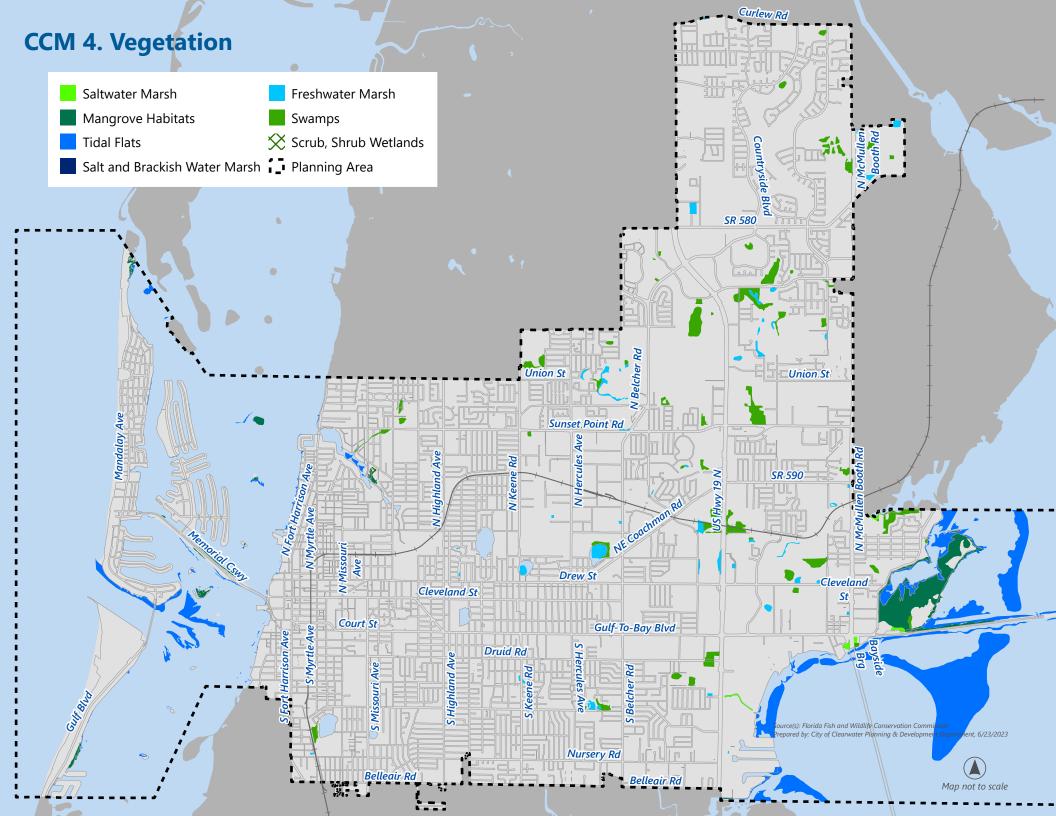


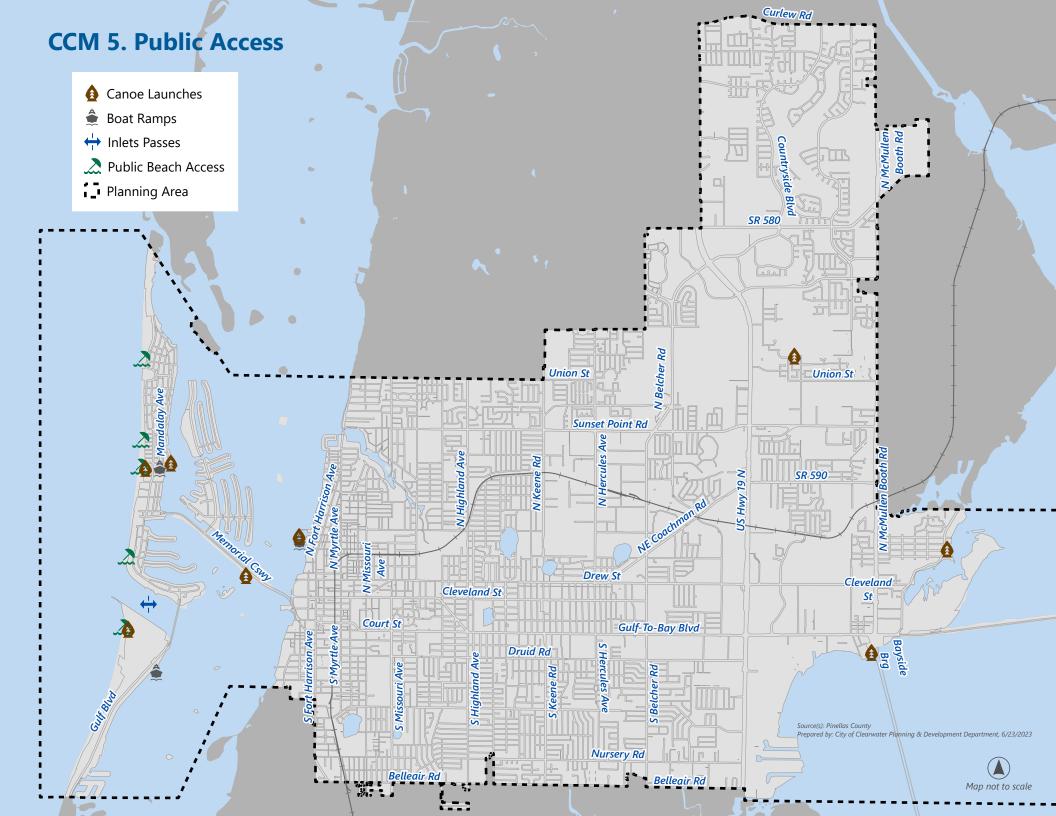
Butterfly on a flower. Photo credit: Nangelone, Week 2 Photo Contest Winner

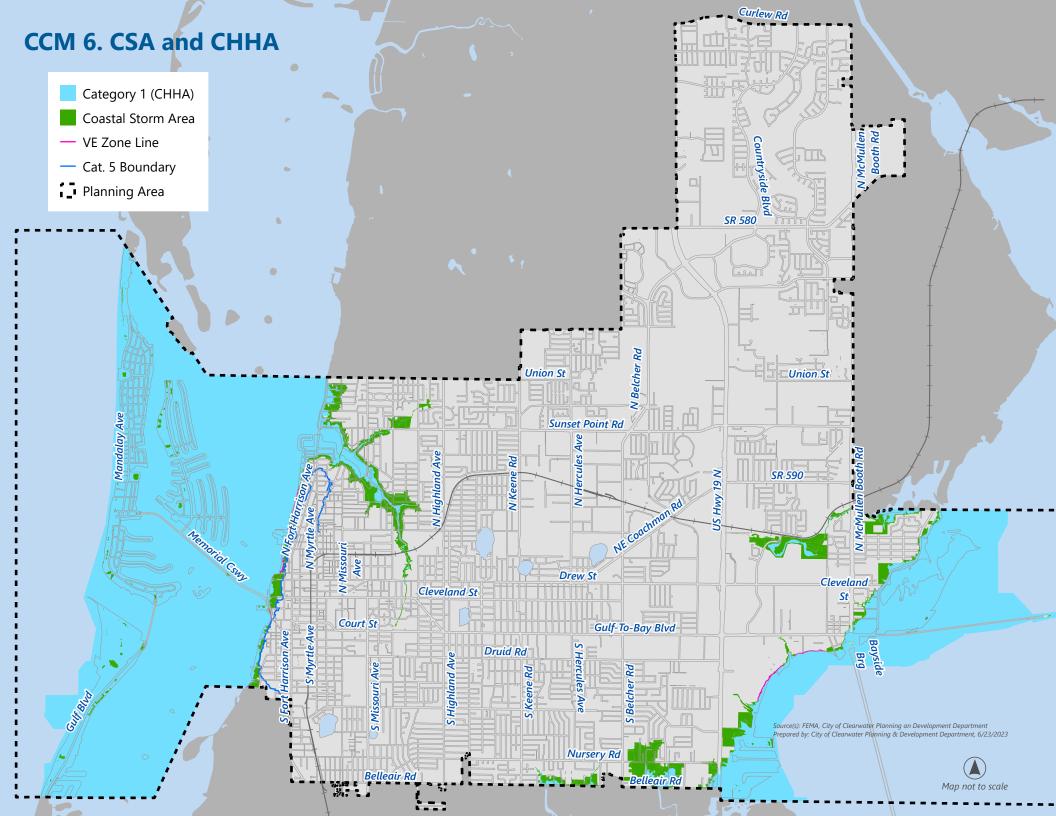












CCM 7. Flood Zones

A / 100 Year Flood, No Base Elevation Detected

Curlew Rd

Countryside

Blvd

Union St

SR 590

Source(s): FEMA

V 19 N

SR 580

Rd

N Belcher

NE COI

Gulf-To-Bay Blvd

S Belcher Rd

Belleair Rd

Union St

N

Rd

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Druid Rd

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Highland Ave

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Cleveland St

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Court St

S Missouri Ave

Belleair Rd

Anemorial Csus

Sunset Point Rd

AVP

2

Drew St

S Hercules

Ave

Nursery Rd

Rd

N McMuller Booth

Booth

N McM

Bayside Brg

Prepared by: City of Clearwater Planning & Development Department, 6/23/2023

Map not to scale

Cleveland

St

- AE / 100 Year Flood, Base Elevation Detected
- VE / Coastal Flood Area
- Planning Area

Mandalay, Ave

Gulf Blog

