





Conservation & Coastal Management

Conservation & Coastal Management Elements

CLEARWATER | 20
A bright and beautiful future. 45



Introduction

The Conservation & Coastal Management Chapter provides guidance on natural and built environment protection; improving air quality; sustainability and resiliency; post disaster redevelopment; and educational opportunities.

The city is uniquely situated between Old Tampa Bay, Clearwater Harbor, and the Gulf of Mexico. This location increases the city's vulnerability to flooding, tide, and storm events, and these vulnerabilities need to be assessed with every development or expenditure that occurs within the city, public or private.

Chapter policies focus on:

- Protecting natural resources from development and contamination;
- Protecting residents, visitors, properties, and public facilities and infrastructure from storm events and flooding;
- Promoting sustainability and resiliency through city programs, building techniques, and *Greenprint 2.0*;
- Ensuring post-disaster redevelopment complies with current code to reduce future losses; and
- Providing outreach and education on sustainability and disaster related topics.

Planning Context

Conservation, Sustainability, & Resilience

Conservation, sustainability, and resilience are overlapping themes guiding policy direction throughout this chapter.

Conservation involves the careful preservation and protection of finite resources. The city currently has protections for sensitive lands within the *Community Development Code (CDC)* and works with other agencies to protect and preserve sensitive coastal and other natural resources.

Sustainability focuses on addressing the interdependence of environmental, social, and economic systems through careful planning and management. The city committed to sustainability with its adoption of *Greenprint 2.0*, a policy document that when implemented will lower the city's reliance on fossil fuels and reduce 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 resilience with its hazard mitigation and disaster preparedness efforts as well as proactively seeking out resilient protections to include in the *CDC* to address sea level rise and storm-related events.

Climate Change and Sea Level Rise

Climate change is playing a role in sea level rise (SLR) and impacts are already being felt on the beach and in other low-lying areas of the city. Clearwater Beach, Island Estates, and Sand Key are experiencing increases in water pooling after rain events, during high-tide or king-tide, and “sunny day” flooding events. King-tide events occur when the moon causes high-tides to rise to even higher than normal levels. Sunny day events can occur during king-tide events, or even when winds or water currents push sea water through stormwater systems back into streets or yards. These events occur due to stormwater outfalls being constructed decades ago when high tides rose to lower elevations. With SLR, high tides now rise to higher elevations and can partially or completely block these outfalls, leading the stormwater to exit onto streets or into yards.

Protecting populations from the effects of flooding is another important component of this chapter. The state requires adoption of a Coastal High Hazard Area (CHHA) in coastal communities, which is the area below the elevation of a category 1 storm surge line as determined by the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model. The city has adopted a Coastal Storm Area (CSA) for flood prone areas to remove permanent populations and certain uses from these areas. The CSA is based off the CHHA, and includes all lands connected to the mainland of Clearwater by bridges or causeways, isolated areas that are inundated by a category 2 hurricane and above that are surrounded by

the CHHA or the CHHA and a body of water, and all land located within the Velocity (VE) Zone as designated by the Federal Emergency Management Agency (FEMA). In addition to those criteria, a parcel of land is within the CSA if 20% or more of that parcel falls within the CSA, excluding specific parcels located on the bluffs of Clearwater Harbor. **Map CCM 5. CSA & CHHA** denote these areas.

Flood Risk

With a large portion of the city’s economy being from tourism, development is plentiful on Clearwater Beach, and there are numerous homes and businesses on the shorelines of Clearwater Harbor and Old Tampa Bay, and inland around waterbodies such as Stevenson Creek. The development of Clearwater Beach over the past 20 years has allowed for new structures to be built to higher development standards, but North Clearwater Beach is still mainly comprised of single-family homes built prior to the 1960s. These older structures are more susceptible to flooding and storm-related damages, and with increases in high tide and king-tide flooding events, these older structures are likely to experience increased flooding. Currently, the city participates in the National Flood Insurance Program (NFIP) Community Rating System (CRS) and maintains a Class 6 CRS rating. The higher a class rating equates to larger discounts on homeowner’s insurance for residents.

Sensitive Ecosystems & Wildlife

With Clearwater being between three waterbodies, mangrove forests, seagrass and oyster beds, and beach and dune systems are present, and habitat and wildlife ecosystems include species of special concern which need additional protection. These areas are sensitive to events such as pollution, water quality degradation, red tide, and cold stress. There has been a slight decline in total seagrass, which can impact the marine ecosystem in numerous ways, including loss of food for marine organisms, decline in water quality, and destabilization of the sea floor. Mangroves and seagrasses help provide habitats for many aquatic plants and animals, but they also help provide shoreline and sea floor stability from storm surge and erosion. These natural protections are often the first line of defense during storms.

Additional species of special concern include megafauna like bottlenose dolphins and the Florida manatee; five species of sea turtles; and bird species including the American Oystercatcher, Snowy Plover, Black Skimmer, and Least Terns. All these species of special concern are sensitive to development and other human activities. Birds are protected through the federal U.S. Migratory Bird Treaty Act and through the Florida Endangered and Threatened Species Rule. The megafauna is protected by the federal Endangered Species Act or the Marine Mammal Protection Act in addition to Florida Fish and Wildlife Conservation Commission provisions which limit speed zones for vessels. Portions of

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Clearwater Harbor and Old Tampa Bay are assigned the most restrictive year-round speed zones. Mangroves and seagrasses are protected by state laws; mangroves through the Mangrove Trimming and Preservation Act, and seagrasses through imposing fines on boaters who damage seagrass with their boat propellers, through Section 253.04(3)(a), F.S.

Into the Future

Disaster Mitigation

As the city navigates to 2045, sea level rise and flooding will continue to increase, and additional steps will be needed to better protect structures, habitats, and people. Protections for mangroves and seagrass will need to be continued, and the use of natural shorelines using mangroves, seagrass, or other native vegetation as well as creating a dune system with native vegetation will be crucial in creating a strong first line of defense from storm surge events.

Redevelopment & Risk Reduction

After a storm event occurs, post disaster redevelopment needs to occur in a manner that reduces risks to populations and the built environment. Considerations will be needed to ensure that the built environment remains

resilient to future storm events including flooding and wind damage. Properties that experience repetitive losses to storms events should be relocated to limit risk, and methods and strategies to accomplish relocation will need to be studied as well.



Mangroves and baby mangroves along Old Tampa Bay

Sustainable Strategies

Focus will also need to shift to utilizing more sustainable and resilient techniques or strategies. The city should implement findings from the solar feasibility study by prioritizing a list of municipal buildings that should receive solar installations. This would allow the city to operate buildings using clean and renewable energy.

Additional techniques or strategies include the establishment of development standards for biophilic planning, which is a design technique that focuses on including natural objects such as trees, waterways, and plants into development, and utilizing natural shapes like curves or irregular arcs to mottle light. This type of design can improve mental health and air quality, both of which impact public health overall. Urban farming and food production standards should also be established or expanded. Both items allow for residents to grow their own food and process it locally, which can help protect against transportation inefficiencies or service disruptions, while also reducing stormwater runoff during heavy rainfall.

Education & Outreach

The city should sustain and expand educational and outreach efforts to build greater understanding about risk, mitigation, and adaptation planning. Wide ranging educational materials through assorted mediums can assist in spreading information to explain why these initiatives, techniques, and strategies are important to the widest audience possible, including residents, businesses, and visitors. For example, explaining that increased CRS scores can lead to lower homeowners' insurance rates could lead to greater support for flood reduction techniques. City staff will utilize various methods to share information including social media, the city's website, printed materials, and in person opportunities at events throughout the community.

Chapter Goals

This chapter contains six goals:

Goal CCM 1. Natural Resource Protection

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, and 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 hazard-related 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 shorelines, 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, 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 disturbances to 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 dunes and beach areas from any form of construction except for access to and from the beach utilizing elevated walkways.

CCM 1.1.4

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



Dunes and native vegetation are the first line of protection

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 prohibit development seaward of the Coastal Construction Control Line unless approved by the Florida Department of Environmental Protection (FDEP) and the city.

CCM 1.2.3

Ensure that any construction within the 100-year floodplain (Zones A and AE, **Map CCM 1. 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 applicable city departments or divisions 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 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

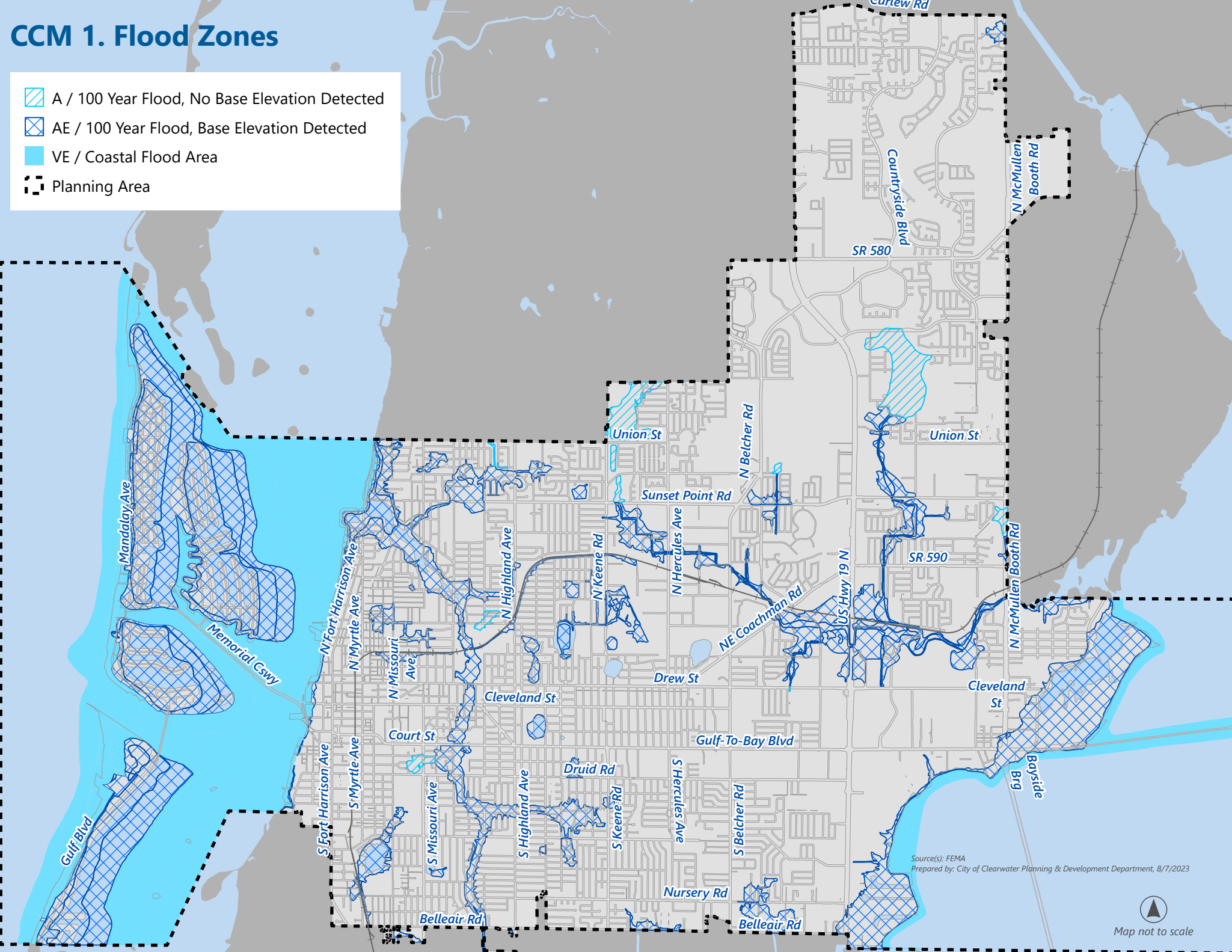
Continue to restore and enhance disturbed or degraded drainage systems and estuaries through upstream detention of stormwater, maintenance of existing drainage channels, widening of bridges, culverts, and other stormwater conveyance systems, limiting impacts to wetlands, and controlling operations of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

CCM 1. Flood Zones

-  A / 100 Year Flood, No Base Elevation Detected
-  AE / 100 Year Flood, Base Elevation Detected
-  VE / Coastal Flood Area
-  Planning Area



Source(s): FEMA
 Prepared by: City of Clearwater Planning & Development Department, 8/7/2023

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 as found on **Map CCM 2. Vegetation**.

CCM 1.3.2

Protect and conserve wetlands found on **Map CCM 3. 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 *CDC*.

CCM 1.3.6

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



Black Skimmers are protected birds. Photo credit: Pinellas County

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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 category and zoning district.









CCM 1.3.11

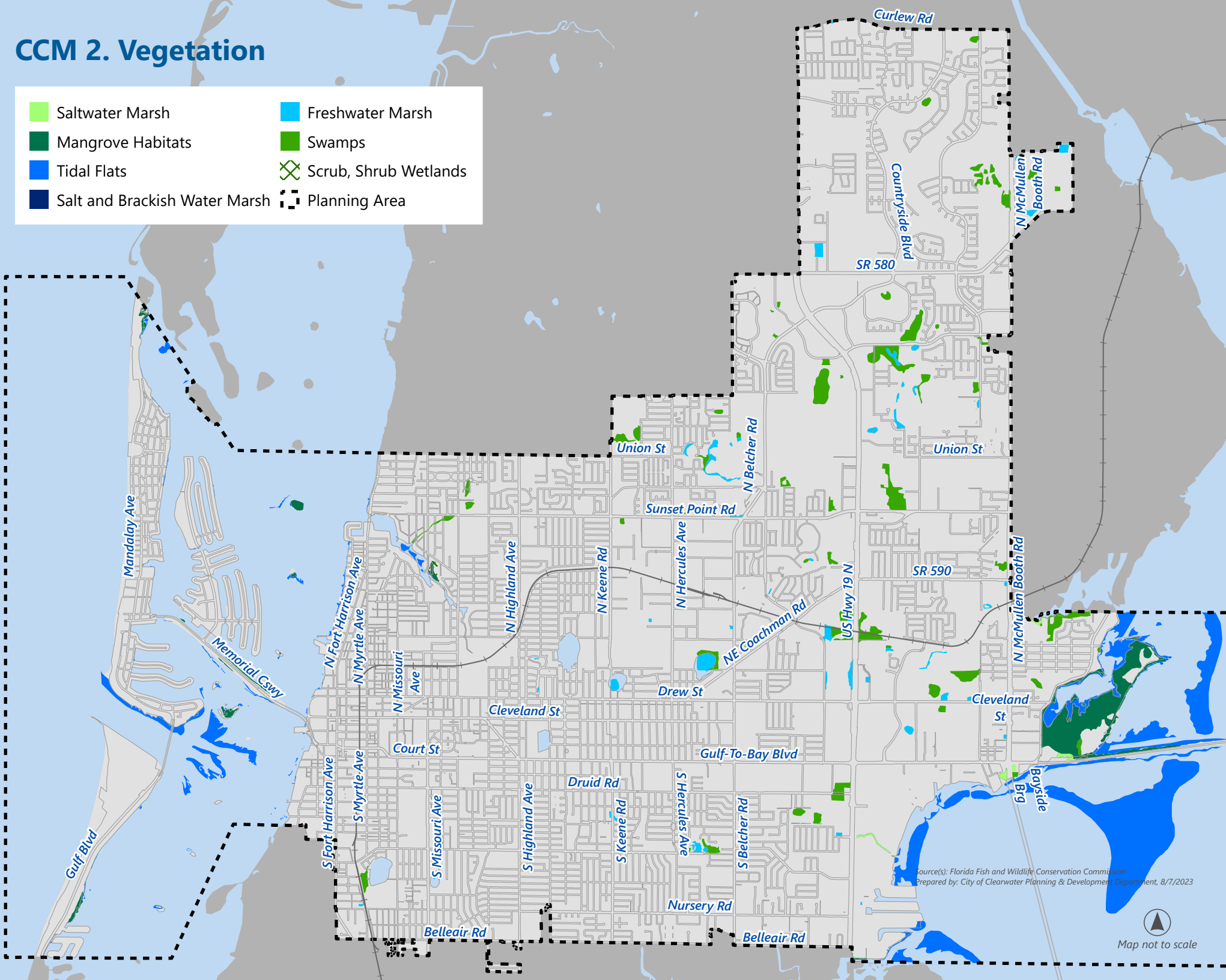
Support the Cooper's Point water quality project consisting of a new bridge opening in the Courtney Campbell Causeway and the restoration of a channel through Cooper's Bayou.



Kayak launching point at Coopers Bayou









CCM 2. Vegetation

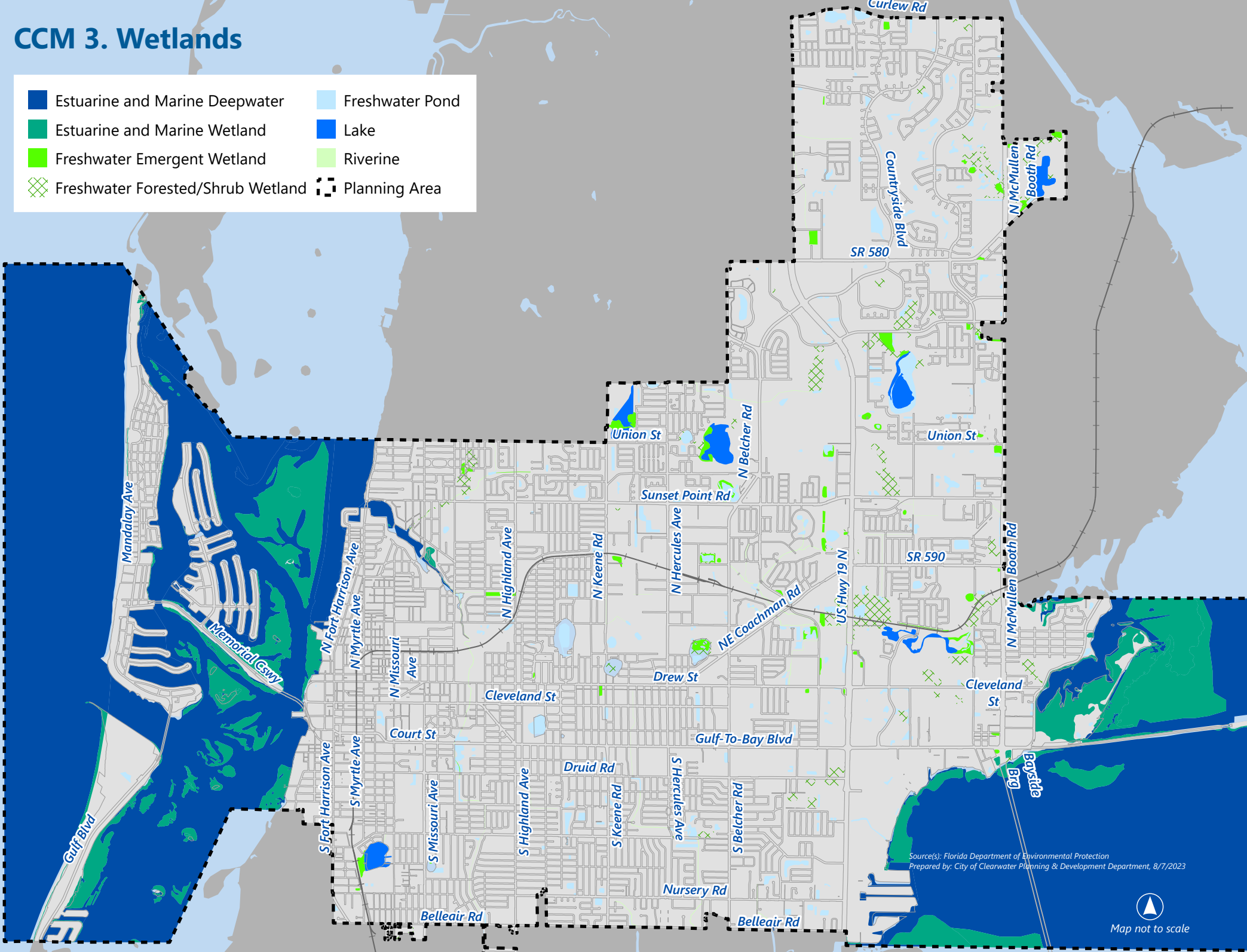
	Saltwater Marsh		Freshwater Marsh
	Mangrove Habitats		Swamps
	Tidal Flats		Scrub, Shrub Wetlands
	Salt and Brackish Water Marsh		Planning Area



Source(s): Florida Fish and Wildlife Conservation Commission
 Prepared by: City of Clearwater Planning & Development Department, 8/7/2023

CCM 3. Wetlands

	Estuarine and Marine Deepwater		Freshwater Pond
	Estuarine and Marine Wetland		Lake
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		Planning Area



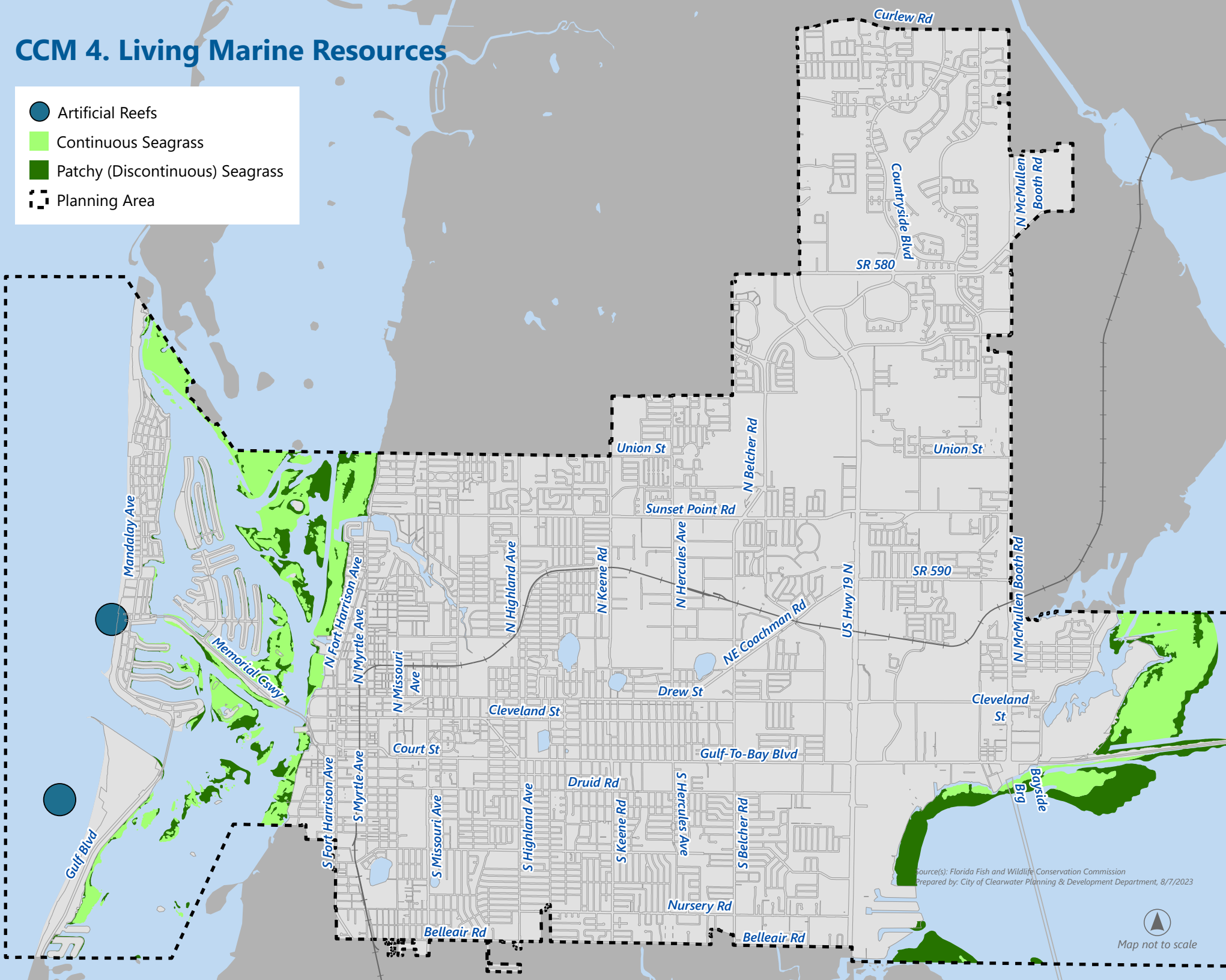
Source(s): Florida Department of Environmental Protection
 Prepared by: City of Clearwater Planning & Development Department, 8/7/2023



Map not to scale

CCM 4. Living Marine Resources

- Artificial Reefs
- Continuous Seagrass
- Patchy (Discontinuous) Seagrass
- Planning Area



Source(s): Florida Fish and Wildlife Conservation Commission
Prepared by: City of Clearwater Planning & Development Department, 8/7/2023

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.

CCM 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.



WATERGOAT stormwater system at Lake Bellevue

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, low-impact 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.



Stormwater management system in Kapok Park

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 *CDC*, the Florida Building Code, and the NFIP CRS Program.

CCM 2.1.2

Continue to bring non-compliant structures into conformance with FEMA standards, applicable building codes, and the *CDC*.

Objective CCM 2.2

Research and implement standards for sustainable and resilient protection within the city's *CDC* 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.

CCM 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 into the *CDC* to improve air quality and reduce urban heat effects.

CCM 2.2.6

Consider allowing community gardens to locate within additional zoning districts and allow for expanded urban agriculture and food production activities where appropriate.

CCM 2.2.7

Provide additional low-impact development techniques in the *CDC*.

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

Use the most recent sea level rise planning scenario identified in the *Tampa Bay Climate Science Advisory Panel Report* 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 (CSA, as shown on Map CCM 5. CSA & CHHA, which includes the CHHA).

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 CSA.

CCM 2.4.2

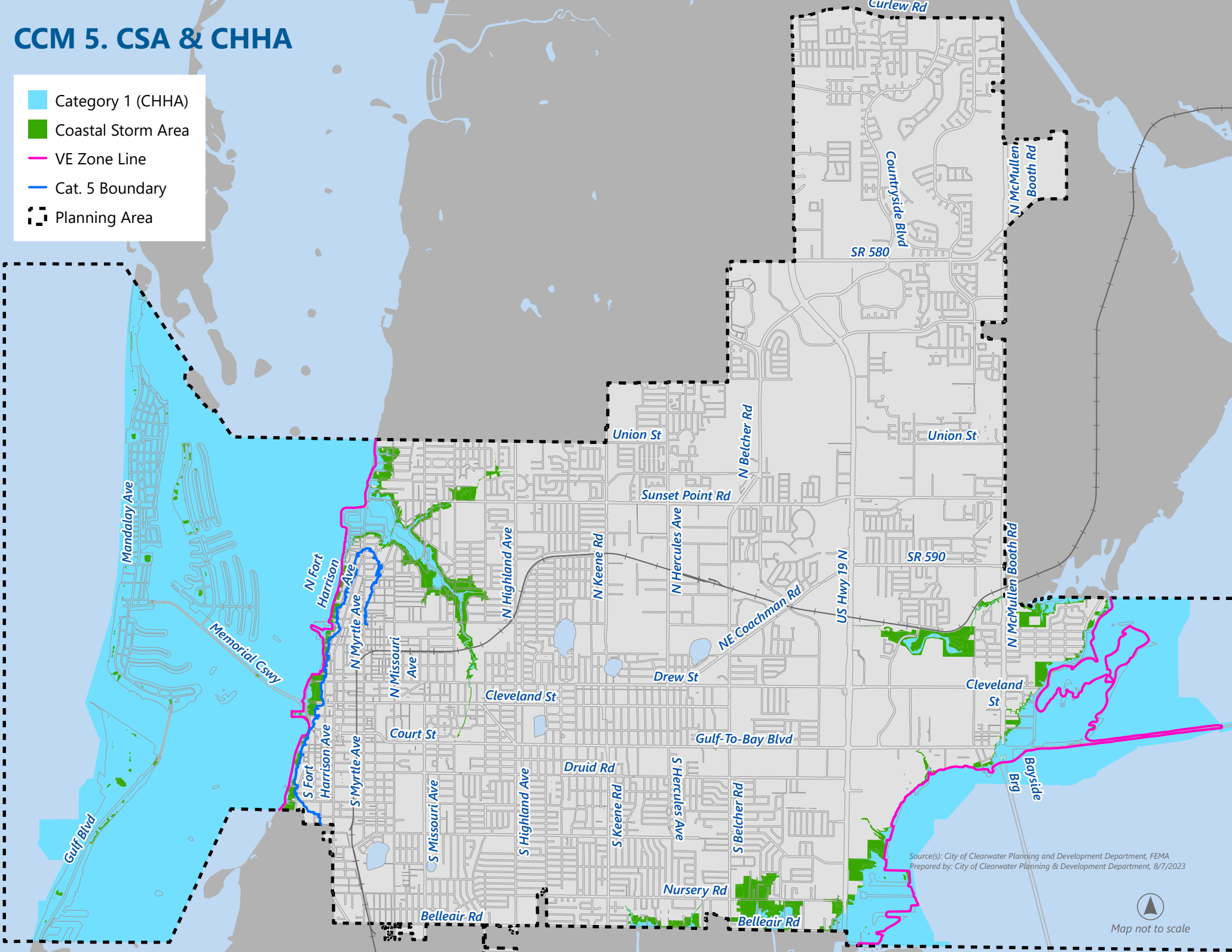
Prohibit the transfer of density or intensity and density or intensity averaging of properties or portions of properties within the CSA from outside of the CSA.

CCM 2.4.3

Limit residential densities on those portions of properties within the CSA in the US 19 Corridor to those that were in place prior to implementation of the US 19 future land use categories as shown on Map CCM 6. US 19 2016 Future Land Uses in CSA and those portions of properties within the CSA in Downtown Clearwater as identified in the *Clearwater Downtown Redevelopment Plan*.

CCM 5. CSA & CHHA

- Category 1 (CHHA)
- Coastal Storm Area
- VE Zone Line
- Cat. 5 Boundary
- Planning Area

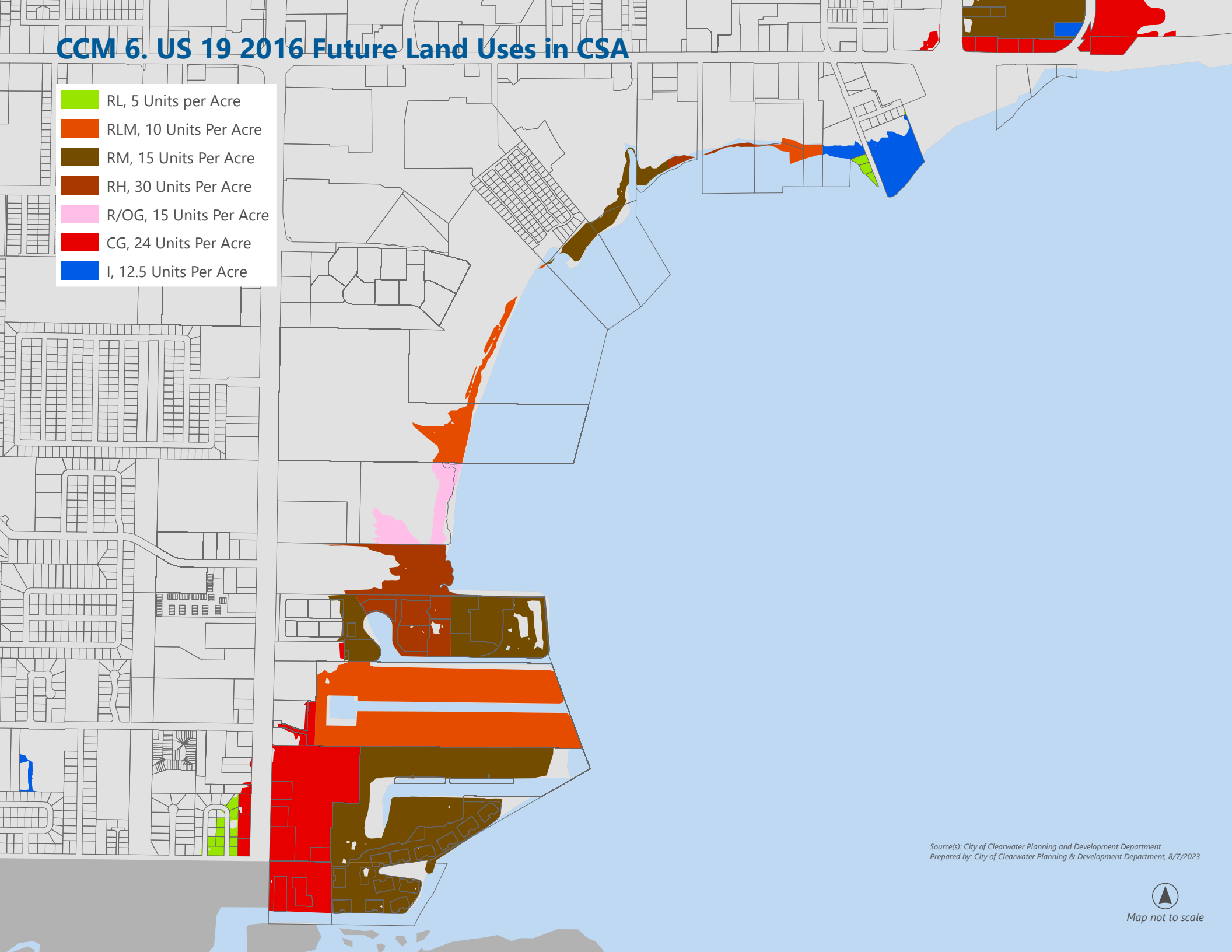


Source(s): City of Clearwater Planning and Development Department, FEMA
 Prepared by: City of Clearwater Planning & Development Department, 8/7/2023



CCM 6. US 19 2016 Future Land Uses in CSA

- RL, 5 Units per Acre
- RLM, 10 Units Per Acre
- RM, 15 Units Per Acre
- RH, 30 Units Per Acre
- R/OG, 15 Units Per Acre
- CG, 24 Units Per Acre
- I, 12.5 Units Per Acre



Source(s): City of Clearwater Planning and Development Department
Prepared by: City of Clearwater Planning & Development Department, 8/7/2023

CCM 2.4.4

Continue to allow development and redevelopment consistent with adopted densities and intensities and standards within the *CDC 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 city's Emergency Management Coordinator.

CCM 2.5.2

Require new or redeveloped, and encourage existing, overnight accommodation uses located within the CSA to have a city-approved hurricane evacuation plan for all guests.

CCM 2.5.3

Continue to use 16-hours (Evacuation Zone A) 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

Evaluate development on Clearwater Beach or Sand Key to ensure evacuation mitigation strategies are provided 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 7. Evacuation Zones**, during storm warnings and update the map as needed.

CCM 2.5.6

Continue to review and update **Map CCM 8. 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.

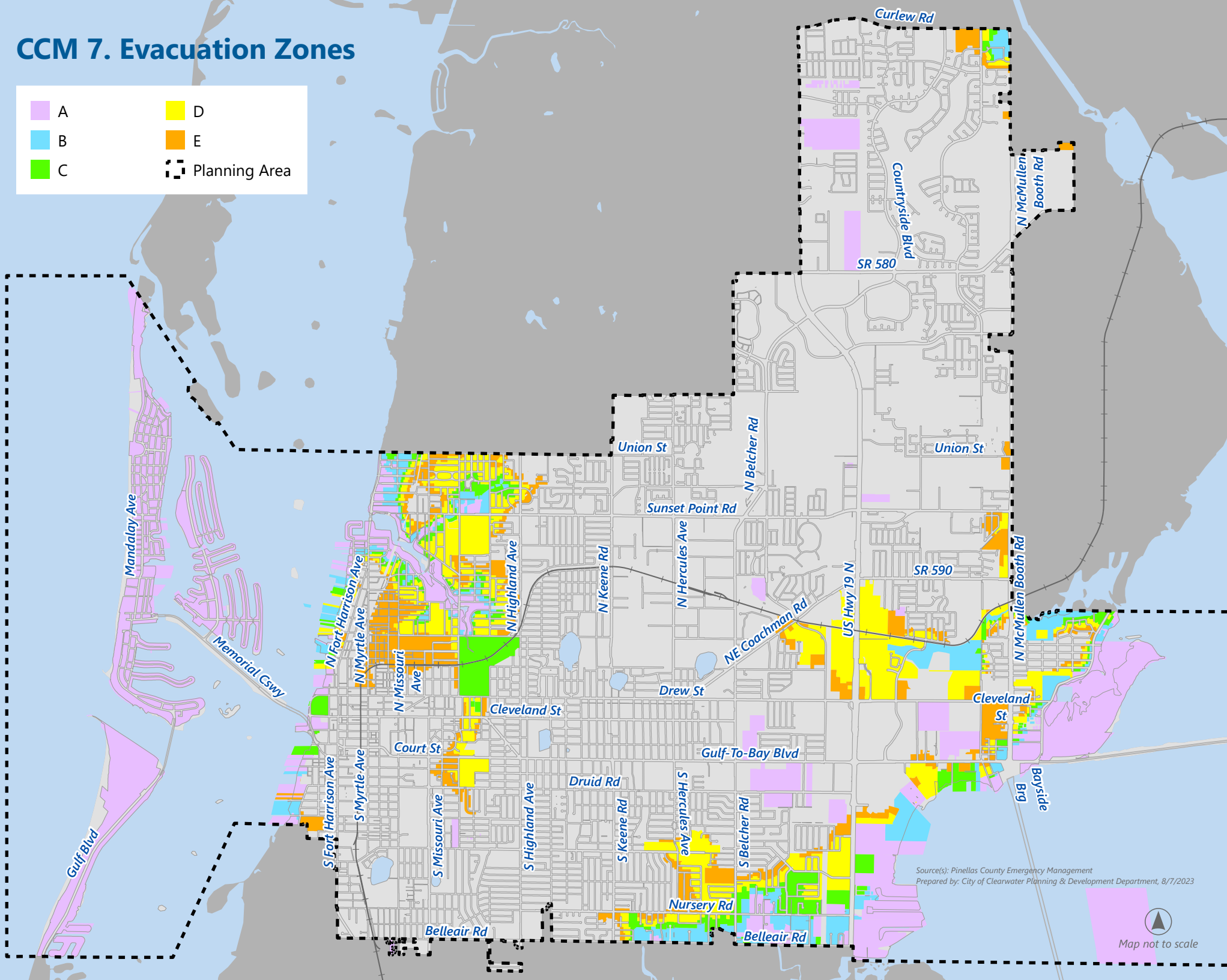
CCM 2.6.2

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.

CCM 7. Evacuation Zones

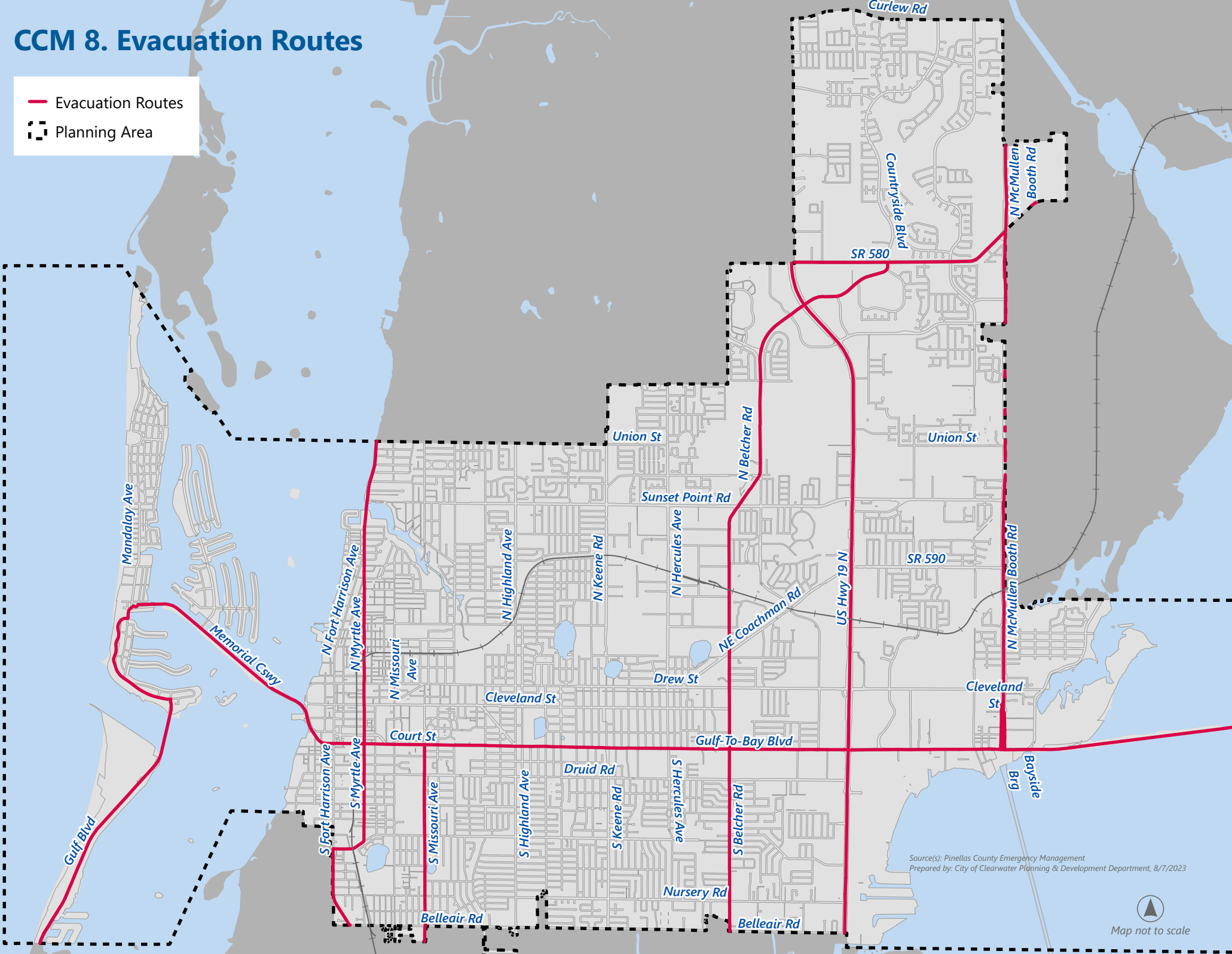


Source(s): Pinellas County Emergency Management
Prepared by: City of Clearwater Planning & Development Department, 8/7/2023



CCM 8. Evacuation Routes

- Evacuation Routes
- - - Planning Area



Source(s): Pinellas County Emergency Management
Prepared by: City of Clearwater Planning & Development Department, 8/7/2023



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

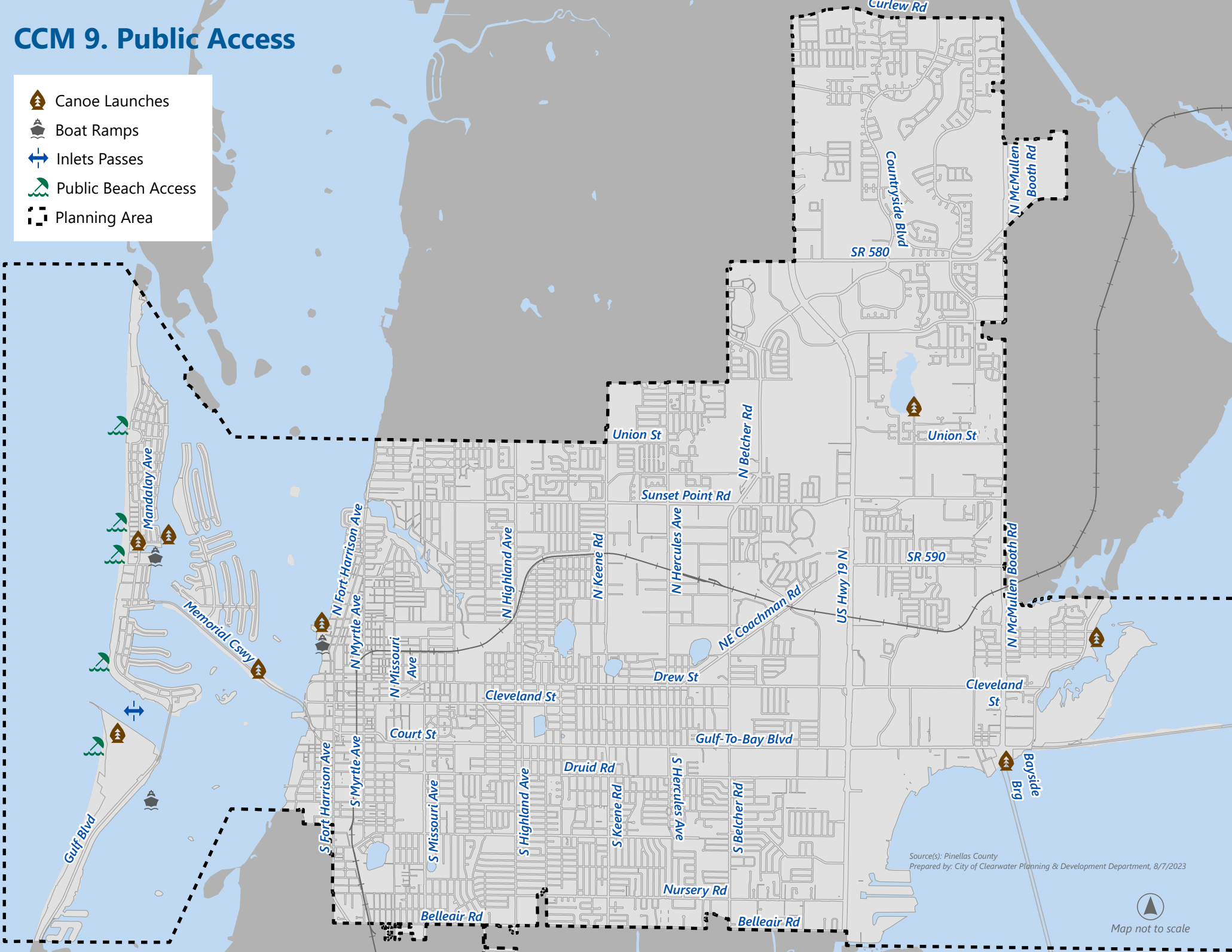
Continue to enforce the Coastal Zone Protection Act of 1985 by prohibiting vacations of existing or future beach access ways and recognizing that all public access ways, street ends, waterfront parks, and parking areas are beach access easements.



Public beach access on North Clearwater Beach

CCM 9. Public Access

-  Canoe Launches
-  Boat Ramps
-  Inlets Passes
-  Public Beach Access
-  Planning Area



Source(s): Pinellas County
 Prepared by: City of Clearwater Planning & Development Department, 8/7/2023



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*, FDEP rules, or other codes.

CCM 3.1.2

Research methods and strategies, such as anti-idling policies, to reduce air pollution caused by motor vehicles or other equipment.

CCM 3.1.3

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



Child standing behind a butterfly garden at Plaza Park

Goal CCM 4

Integrate sustainable and resilient techniques into land use, transportation, housing, and 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.

CCM 4.1.3

Explore the creation of a vertical oyster garden at suitable municipal locations.

CCM 4.1.4

Consider creating a residential rain barrel program.

CCM 4.1.5

Explore restarting a solar co-op program.

CCM 4.1.6

Consider creating community garden or other grants to help increase the use of sustainable or resilient techniques.

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

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 4.2.3

Develop incentives for LEED- and FGBC-certified buildings.

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

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

CCM 4.2.6

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

Objective CCM 4.3

Continue to implement and evaluate *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.



Solar installation on The Sound

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 reduces future risks, restores natural resources, and limits public expenditures to only those necessary.

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 CSA 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 CDC, and FEMA requirements.

CCM 5.1.6

Continue to require that structures rebuild to current building codes, CDC 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, and future requirements to have 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.









CCM 6.1.8

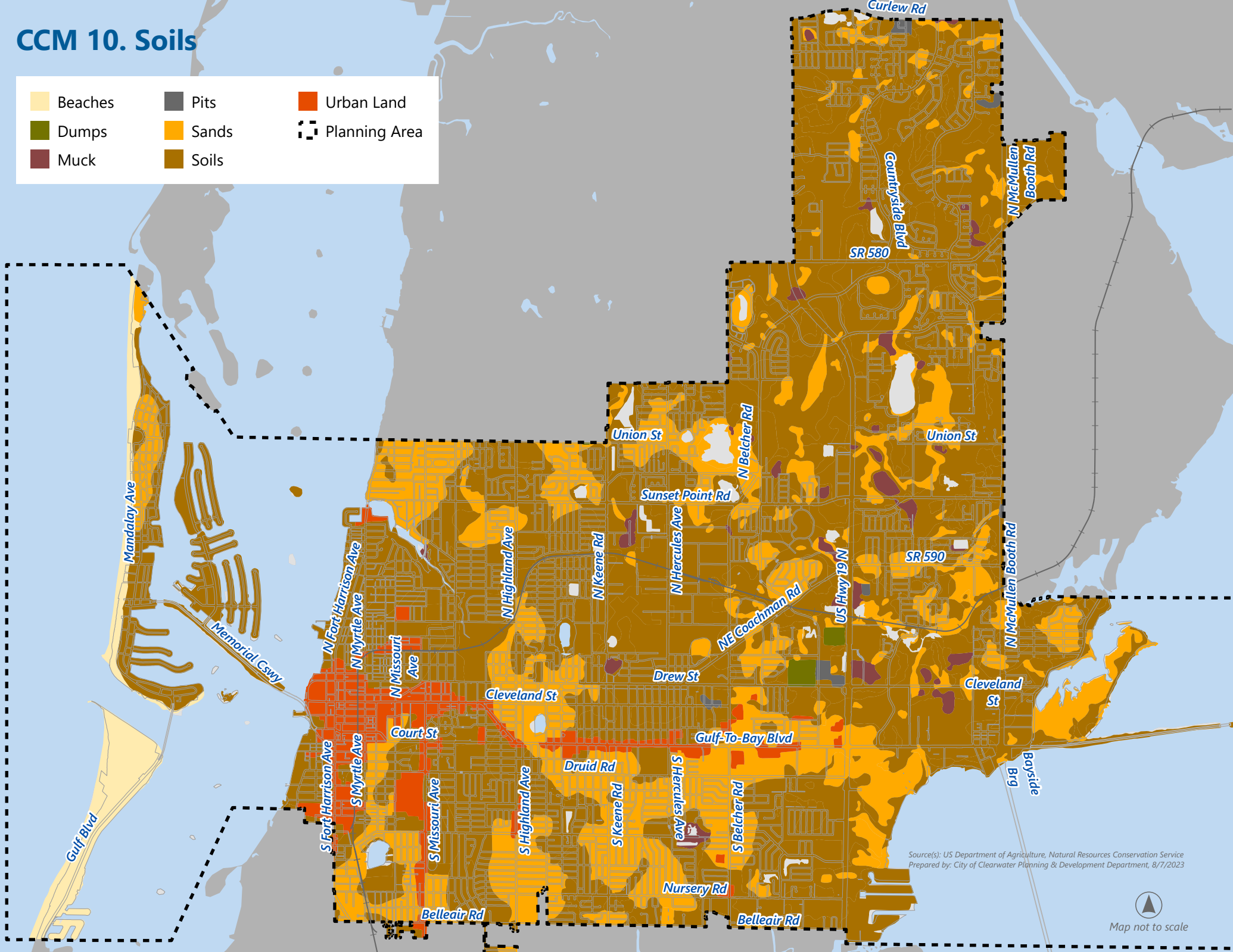
Educate residents on the benefits of using energy-efficient appliances and fixtures.



Sustainability community outreach event

CCM 10. Soils

 Beaches	 Pits	 Urban Land
 Dumps	 Sands	 Planning Area
 Muck	 Soils	



Source(s): US Department of Agriculture, Natural Resources Conservation Service
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