

CHAPTER 11
COASTAL MANAGEMENT ELEMENT

I. INTRODUCTION

A. Purpose

The purpose of the Coastal Management Element is to provide for the reasonable use and management of coastal resources related to development activities, protection of human life, the limitation of public expenditures in areas subject to natural disaster, and protection of wildlife and natural habitat. This element is required by Section 163.3177(6)(g), Florida Statutes. Additionally, in 2015, the Florida Legislature passed legislation to address redevelopment components in coastal management elements that outline the principles that must be used to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise relating to the effects of coastal flooding.

B. Coastal Volusia

Volusia County includes sixteen (16) municipalities, which makes the central concept of the Element the promotion of consensus among and between coastal communities so that common problems can be identified and common solutions proposed and implemented. The intent is to emphasize cooperation in implementing and achieving the goals, objectives and policies. It is not the intent of the County to mandate certain requirements through this Element beyond their statutory authority. Rather, the approach taken is to stress intergovernmental coordination and mutual cooperation, utilizing interlocal agreements and recognized scientific studies to meet common goals.

The coastal study area includes all areas of Volusia County that drain to the estuarine areas of the County seaward of the St. John's River Basin. Demarcating the coastal area along the westward extent of the East Volusia drainage basin area is intended to facilitate a comprehensive management of the County's coastal resources. The existing drainage basin defines the boundary for the coastal area of Volusia County. Approximately 450.5 square miles of the County are included within this study area. It ranges from between four and 16 miles wide to approximately 50 miles long, and is bounded to the east by the Atlantic Ocean, west by the watershed boundary as determined by the U.S.G.S. Hydrologic Unit Map of Florida, and to the north by Flagler County, and to the south by Brevard County).

The six (6) watersheds within the study area boundary are:

- Tomoka River North
- Tomoka River South
- Halifax River
- Mosquito Lagoon/Indian River North
- Indian River South
- Spruce Creek

The Tomoka River South primary basin is further divided into five sub-basins, the Spruce Creek Basin into eight sub-basins, and the Halifax Basin and Indian River North Basin into three sub-basins.

The Volusia County Coastal Area is a complex, dynamic natural system comprised of barrier islands, estuarine and river systems, and mainland watersheds. The coastal wetlands are dominated by salt marsh and mangrove outside of the urban centers on the estuary. Freshwater wetlands are dominated by forested habitats generally occurring within the interior of the coastal zone, west of the estuary. The coastal wetlands are currently afforded some degree of regulatory protection by the U.S. Army Corps of Engineers (aided by the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and National Marine Fisheries Service), Florida Department of Environmental Protection (FDEP), St. John's River Water Management District (SJRWMD) and the County. The protective measures generally afforded by these agencies are limited only to wetlands. However, the County does regulate upland buffer areas adjacent to wetlands. In addition to the wetlands, the coastal zone contains a variety of native upland habitats including,

- Pine Flatwood
- Pine-Mesic Oak
- Temperate Hardwoods
- Coastal Scrub
- Prairie
- Cabbage Palm
- Rangeland
- Sand Pine
- Sand Live Oak
- Long Leaf Pine
- Live Oak

Volusia County and its municipalities are part of a coordinated effort to identify, evaluate, and manage these resources as interconnected systems, using watersheds as the basic management unit. The environmental impact of development can be mitigated if growth occurs within specific geographic areas, following design standards and principles that conserve vegetation and water quality and respect the natural features of the environment. By directing development away from areas most vulnerable to coastal storms, future losses of life and property can be minimized.

C. Resources

Volusia County has participated in a variety of local and regional efforts to support its coastal and floodplain initiatives. In 2012, the Volusia County Council approved the Sustainability Action Plan. In 2017, the county embarked upon an effort with the East Central Florida Regional Planning Council to develop a report called "Resilient Volusia

County” to build resiliency against flooding and sea level rise. That effort was followed by the council’s adoption of the Volusia County Integrated Floodplain Management Plan in 2018. The same year, the East Central Florida Regional Planning Council expanded on its “Resilient Volusia County” project by developing the “East Central Florida Regional Resiliency Action Plan,” which was prepared for Volusia and Brevard Counties. Volusia staff from Emergency Management, Environmental Management, Planning and Development Services, and Traffic Engineering were all involved in these processes and worked to incorporate local strategies into the regional planning process. The East Central Florida Regional Resiliency Action Plan was adopted by the council in July 2019. In the same meeting, the council directed staff to participate in a larger Central Florida resiliency collaborative. All of these initiatives and the resulting datasets have formed the basis for updates to the county’s comprehensive plan.

II. GOALS, OBJECTIVES, AND POLICIES

GOAL:

- 11.1 Conserve, protect and manage the coastal resources of Volusia County including the wetland and upland ecosystem so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.

OBJECTIVE:

- 11.1.1 Maintain management programs to ensure the long-term protection and enhancement of wetland habitats, water quality, and selected natural upland habitats. The primary means of accomplishing this objective will be through the retention of interconnected hydroecological systems where the wetlands and uplands function as a productive unit resembling the original landscape.

POLICIES:

- 11.1.1.1 The Volusia County Environmental Management Division will be responsible for developing management plans and standards that protect and conserve natural systems within the coastal area of unincorporated Volusia County and the county-managed beaches.
- 11.1.1.2 The Volusia County Coastal Division is responsible for implementing and updating the Ponce de Leon Inlet Management Plan (“IMP”). The IMP is required by the State of Florida and is based on sediment budget engineering analysis that characterizes the impacts the stabilized inlet channel has on adjacent beaches. The plan sets forth action steps intended to maintain safe inlet channel navigation while minimizing and mitigating the impacts the inlet channel may have on adjacent beaches and dunes.

- 11.1.1.3 Environmental system corridors will integrate critical native and upland habitats identified by the Environmental Management Division to the maximum extent possible as an interconnected system.
- 11.1.1.4 Areas of critical wetland and native upland habitats not connected to corridors that exhibit resource values should be evaluated for inclusion as conservation or recreation areas within future development plans. Secondary linkage to nearby corridors, even if by artificial means, should be considered and encouraged. Construction of new corridors or linkages should be considered as a form of mitigation where appropriate.
- 11.1.1.5 Volusia County shall continue to implement site-specific conservation, management, and development review standards during the development review process. Such reviews are intended to minimize long-term and cumulative impacts on coastal habitat by requiring site specific analysis during the review process.
- 11.1.1.6 Volusia County will continue to require an Environmental Impact Assessment for development sites in the Natural Resource Management Area prior to development approval.
- 11.1.1.7 Volusia County will continue to encourage coordination of significant corridors with the municipalities following annexation.
- 11.1.1.8 Volusia County will manage spoil islands so that they may become an integral component of lagoon ecology.
- 11.1.1.9 The Environmental Management Division will maintain standards for wetland habitat mitigation through the county's land development regulations.
- 11.1.1.10 For all habitat mitigation plans, programs or activities, the Environmental Management Division should identify quantifiable, realistic goals, maintain direct supervision through the construction and monitoring process, utilize a minimum of flexibility for minor or insignificant post-construction modifications and, if problems or failures result, be able to enforce permit conditions.
- 11.1.1.11 The Environmental Management Division will continue to support and sponsor estuarine, oceanfront, and shoreline habitat restoration and protection projects. Projects will target identified shorelines where restoration is required to offset impacts from existing upland development including stormwater discharges, bulk heading, dumping and land clearing. Restoration will include but not be limited to:

A. Removing debris and toxic materials.

- B. Stabilizing shorelines.
- C. Creating wetland habitat such as mangrove and salt marsh.
- D. Dune restoration.
- E. Relocating or eliminating storm water/domestic waste and effluent.
- F. Maintenance of stormwater facilities and retrofitting where needed.
- G. Regulation of urban shoreline redevelopment.

- 11.1.1.12 Development adjacent to estuarine and riverine shoreline areas shall maintain a habitat buffer zone to protect or conserve the canopy, understory and ground cover of native upland vegetation and wetlands.
- 11.1.1.13 Development in habitat areas that include species listed by the State of Florida or U.S. Fish and Wildlife Service as Endangered, Threatened, or Species of Special Concern shall not adversely impact that habitat or the listed species within it.
- 11.1.1.14 Volusia County has incorporated the Manatee Protection Plan ("MPP") approved by the County Council into its Comprehensive Plan. The County shall continue to protect manatees and manatee habitat through: implementation of the MPP, the continued enforcement of the State's Intracoastal Waterway Speed Zone Program; and through the implementation of the applicable sections of the land development regulations.

GOAL:

- 11.2 To conserve, protect, and restore coastal resources by managing growth and land use so as not to damage or destroy those resources.

OBJECTIVE:

- 11.2.1 Volusia County will continue to implement land use regulations that provide for the location, extent and distribution of land uses consistent with the protection of coastal resources.

POLICIES:

- 11.2.1.1 Land uses, development, or other actions which have significant adverse impact on coastal resources to the point where coastal resources would be degraded as a result shall be required to provide appropriate mitigation to those impacts.
- 11.2.1.2 Designated natural resource areas, significant environmental or ecological features, critical wildlife habitat, environmental system corridors or conservation areas shall be protected through a variety of mechanisms

including buffer zones, restoration, limiting density and intensity, conservation easements, acquisition, density transfers, transfer of development rights (TDRs), purchase of development rights or land exchanges.

- 11.2.1.3 The priority for new development shall be in areas of urban infill in order to contain sprawl, use existing developable lands, maximize the provision of urban services and facilities and protect remaining coastal habitat.

OBJECTIVE:

- 11.2.2 Continue to maintain standards for appropriate densities, intensities, buffer zones, resource protection and location for development adjacent to aquatic and natural preserves, wildlife refuges, and environmental system corridors to protect the natural character, scenic values and public benefit of these areas.

POLICIES:

- 11.2.2.1 Volusia County will continue to maintain or adopt zoning classifications in the unincorporated Coastal area consistent with the protection or conservation of coastal resources.
- 11.2.2.2 Utilize innovative or alternative zoning districts or techniques to protect coastal resources. Such techniques could include overlay districts, floating zones, bonus ordinances, performance standards, fast-tracking of development applications, quality development programs, Transferable Development Rights, or other incentive-based methods.
- 11.2.2.3 Cooperate and coordinate with local governments, state agencies, and special districts in developing consistent standards, criteria and land development regulations for protection of coastal resources.

OBJECTIVE:

- 11.2.3 Priorities for shoreline land use shall be given to water dependent uses over water related land uses and shall be based on type of water-dependent use, adjacent land use, water quality, impact on critical habitat, and impact on coastal resources.

POLICIES:

- 11.2.3.1 When reviewing applications for zoning, plan amendments or development orders, shoreline land uses shall have the following priorities:

- A. Water-dependent uses such as aquaculture and wildlife production, recreation, public access, marinas and navigation, and water-dependent utilities and industry, which do not create a significant adverse impact upon the waters or land use.
- B. Protection of coastal and natural resources.
- C. Water enhanced uses such as recreation, certain utilities, commerce and industrial uses.
- D. Low density residential.
- E. Non-water dependent or related activities such as intensive urban residential, non-water dependent industry and commerce.
- F. Of lowest priority are those uses which are non-water dependent, non-water enhanced which result in a reduction of coastal resources.

11.2.3.2 Land development reviews, for the purposes of siting, or expanding marinas or boat facilities shall include the following criteria with priority given to expansion of existing marinas:

- A. Consistency with provisions included in the Manatee Protection Plan for Volusia County.
- B. Sufficient upland areas to accommodate needed support facilities such as adequate parking, dry storage, work areas, stormwater management facilities, and other non-water dependent uses.
- C. Preference will be given to locating marinas and boat facilities in areas which require minimal dredging or no dredging or filling to provide access by either canal, channel or road.

OBJECTIVE:

11.2.4 Consistent with the Historic Preservation Element, protect and preserve historic and archaeological resources.

POLICIES:

11.2.4.1 Include coastal historic and archeological resources in land acquisition programs for open space, recreation, preservation, or conservation.

- 11.2.4.2 Volusia County shall maintain standards, regulations and guidelines for the protection of historic and archeological resources in the coastal area through the Volusia County Historic Preservation Ordinance.

GOAL:

- 11.3 To protect, enhance, and improve the quality of the estuarine environment throughout Volusia County.

OBJECTIVE:

- 11.3.1 To monitor and improve estuarine water quality by maintaining an ongoing water quality sampling and monitoring program, establishing base line conditions, and identifying standards as parameters to measure changes in water quality.

POLICIES:

- 11.3.1.1 A comprehensive water quality sampling and monitoring network shall be maintained for the coastal area. The data shall be evaluated to detect possible problems and to determine where corrective action is needed.
- 11.3.1.2 A water quality monitoring program shall be maintained so that point and non-point sources and facilities which are identified as potential water quality problems are regularly and periodically inspected.
- 11.3.1.3 Volusia County shall identify areas that utilize individual septic systems in the coastal area. These areas will be prioritized for incorporation into public wastewater treatment systems. The following criteria will be utilized for prioritizing areas:
- A. Soil type
 - B. Water table level
 - C. Proximity to Aquatic Preserves and Outstanding Florida Waters
 - D. Proximity to open shellfish harvesting areas
 - E. Proximity to other water bodies
 - F. Density of septic tank systems
 - G. Areas known or suspected to be impacting surface or ground water quality
 - H. Proximity to existing or planned public wastewater treatment systems
 - I. Directives of the Indian River Lagoon Act
 - J. Directives of the Northern Coastal Basin SWIM
- 11.3.1.4 Future individual on-site disposal systems in the Mosquito/Indian River

Lagoon area shall be managed under the Surface Water Improvement Management Area Overlay Zone requirements of the Volusia County Zoning Ordinance. If no central sewer is available, on-site sewage disposal systems within the subject overlay zone may be required to be advanced systems depending on soil type and water table parameters.

- 11.3.1.5 Volusia County will continue to maintain and upgrade existing sewage treatment plants in the coastal area in accordance with the Sanitary Sewer Element of the comprehensive plan.
- 11.3.1.6 Volusia County will continue to maintain erosion and sediment control provisions in the land development regulations.
- 11.3.1.7 The construction of future storm water management systems and the redesign of existing systems shall consider the timing of discharge of fresh water to the estuary and ocean, the hydroperiod of the wetlands as well as the potential loadings.
- 11.3.1.8 The use of pipes, ditches and canals which transport large volumes of fresh water rapidly to the estuaries and ocean shall be prohibited.
- 11.3.1.9 Volusia County will continue to implement the Stormwater Management Master Plan which provides guidance for the reduction of flooding and increased water quality as a result of stormwater runoff.
- 11.3.1.10 Volusia County will continue to implement its Water Quality Master Plan on an on-going basis .
- 11.3.1.11 The preparation of management plans, water quality studies, and sampling programs will be coordinated with the coastal municipalities, the SJRWMD, and the FDEP.
- 11.3.1.12 The findings and recommendations from the Surface Water Improvement Management (SWIM) programs will be incorporated into the county's plans and regulations.

- 11.3.1.13 Volusia County will continue water quality sampling and reporting requirements for assessing and monitoring impacts of cumulative development on storm water runoff and water quality.
- 11.3.1.14 Volusia County shall continue its commitment to improve and enhance water quality and estuarine conditions through intergovernmental cooperation with its municipalities and other affected agencies and groups .

GOAL:

- 11.4 Protect, enhance and restore the functioning of the beach and dune systems and prohibit development activities that would damage or destroy such systems.

OBJECTIVE:

- 11.4.1 Maintain standards to minimize the impacts of structures and development on beach and dune systems and where necessary initiate dune restoration programs.

POLICIES:

- 11.4.1.1 Continue to coordinate with the Bureau of Beaches and Coastal Systems concerning the Coastal Construction Control Line (CCCL).
- 11.4.1.2 Permits for new seawalls shall only be allowed to protect health, safety, principal buildings, public infrastructure, or to fill in small between existing seawalls. All new permitting of seawalls must receive proper permits from applicable federal, state, regional, and local agencies .
- 11.4.1.3 Seawall construction in the County shall be consistent with State requirements and should be of a low profile design that relates to local beach conditions. In addition, all new seawalls shall be designed and constructed to minimize adverse effects to adjacent properties.
- 11.4.1.4 All new or reconstructed seawalls shall include a provision of a vegetated dune system.
- 11.4.1.5 Created dune systems shall be maintained to emulate natural dune systems. No dune reconstruction or maintenance shall be done during the marine sea turtle nesting season.

- 11.4.1.6 FDEP and the Volusia County Beaches and Dunes Ordinance maintain standards for the maintenance and restoration of dune areas.
- 11.4.1.7 Coastal construction shall be planned, designed, and constructed to avoid the man made destruction or removal of existing dunes and dune vegetation. Where such impacts cannot be avoided, such impacts shall be mitigated.
- 11.4.1.8 Structural development along beaches fronting the Atlantic Ocean shall enhance and not further degrade the coastal beach and dune system.
- 11.4.1.9 Shoreline buffer zones shall be established to protect and preserve the coastal beach and dune systems fronting the Atlantic Ocean. Buffer areas shall be measured seaward from the existing or historical vegetative line and re-established upon changes to the new Coastal Construction Control Line.
- 11.4.1.10 Structures shall be prohibited within the established shoreline buffer areas except where overriding public interest is apparent for public park and recreation facilities, or for structures that are necessary for reasonable access and are elevated above the dune vegetation .
- 11.4.1.11 As part of the coastal resource function, exchange information and monitor data collection of the FDEP, the US Army Corps of Engineers, Florida Sea Grant College, universities, and other appropriate agencies.
- 11.4.1.12 In cooperation with the FDEP, develop information and education programs to inform citizens on how the coastline works. Provide technical assistance to land owners, citizens, community interest groups and local governments.
- 11.4.1.13 Utilize State and Federal grants and community resources to implement beach and dune restoration projects such as civic associations, community groups, private donations, or other similar techniques.
- 11.4.1.14 Incorporate dune restoration projects and revegetation into public improvement projects such as park, recreation facilities, and off-beach parking areas, adjacent to the beach, and vacant county owned land east of Coastal Construction Coast Line.
- 11.4.1.15 Volusia County will explore interlocal agreements with coastal cities and the State of Florida for the funding and development of beach maintenance and restoration programs and projects.
- 11.4.1.16 The stabilization and depth maintenance of Ponce DeLeon Inlet and the longshore transport of sediment relations to the Inlet zone of influence shall continue to be managed under the FDEP certified Inlet Management Plan.

- 11.4.1.17 The Volusia County Coastal Division will serve as the local sponsor for the federal inlet channel at Ponce de Leon Inlet and will partner with the State of Florida and U.S. Army Corps of Engineers to develop and implement the inlet management plan.
- 11.4.1.18 Redevelopment should be viewed as an opportunity to restore beach and dune systems, improve visual appearance, incorporate landscaping and buffer areas, improve traffic circulation, and upgrade stormwater management systems.

GOAL:

- 11.5 Lessen the impact of a destructive storm on human life, property, public facilities and natural resources by discouraging the location of new development in the coastal high hazard area through limitations to new public expenditures in these areas.

OBJECTIVE:

- 11.5.1 Volusia County will maintain the clearance time of the population in the Coastal high hazard area at a level of service (LOS) standard "D."

POLICIES:

- 11.5.1.1 Land use plan amendments in the coastal high hazard area shall strive to reduce and shall not increase the clearance time in the Coastal high hazard area beyond the adopted LOS.
- 11.5.1.2 Volusia County will continue to coordinate with the municipalities and the River to Sea Transportation Planning Organization to assess the impact of new development on the hurricane evacuation network.
- 11.5.1.3 Future roadway improvements shall minimize the impact of flooding and storm damage on evacuation route facilities.
- 11.5.1.4 Evacuation routes shall be designated in such a way as to distribute traffic demand to provide optimum utilization of available roadway facilities.
- 11.5.1.5 Volusia County shall coordinate the Comprehensive Emergency Management Plan with the coastal cities to ensure the orderly evacuation of the population in the Coastal high hazard area.

OBJECTIVE:

- 11.5.2 Volusia County shall designate hurricane evacuation shelters to protect the population in the Coastal high hazard area.

POLICIES:

- 11.5.2.1 Volusia County will continue to designate hurricane emergency shelter facilities to accommodate at least 10% of the population in the Coastal high hazard area, based upon a standard of 20 square feet of shelter space per person.
- 11.5.2.2 New hurricane emergency shelter space shall not be located in the Coastal high hazard area.

OBJECTIVE:

- 11.5.3 Volusia County will continue to ensure that development in the Coastal high hazard area minimizes danger to life and property.

POLICIES:

- 11.5.3.1 Public facilities shall be prohibited that will encourage new development inside the Coastal High Hazard Area. This prohibition does not include facilities associated with redevelopment or development of properties in accordance with previously approved subdivisions or site plans, public access and recreation facilities, facilities necessary for public health/safety/welfare, or resource restoration projects/facilities.
- 11.5.3.2 Prior to the development of public facilities in the Coastal High Hazard Area, it shall be determined that there are no other feasible sites outside that area.
- 11.5.3.3 If constructed, all public facilities in the Coastal High Hazard Area shall be flood proofed to ensure minimum damages from storms and hurricanes.
- 11.5.3.4 Construction activities seaward of the Coastal Construction Control Line shall be consistent with the requirements of Chapter 161, Florida Statutes .
- 11.5.3.5 All development in the coastal high hazard area shall be consistent with or more stringent than the flood resistant construction requirements in the Florida Building Code and applicable floodplain management regulations set forth in 44 CFR, Part 60.
- 11.5.3.6 The County shall continue to participate in the National Flood Insurance Program (NFIP).

- 11.5.3.7 The County shall maintain, and pursue improvement of, its insurance rating under the NFIP Community Rating System (CRS).
- 11.5.3.8 County-owned infrastructure presently within the Coastal High Hazard Area shall be relocated outside of said area when repairing/replacing the infrastructure. If relocation of the infrastructure is deemed by the County to not be feasible, any reconstruction or repair of the infrastructure shall be designed so as to minimize potential damage (i.e., wind and/or flooding) from hurricanes or other storms.
- 11.5.3.9 Volusia County will continue to implement its FEMA-approved Local Mitigation Strategy to reduce damage in areas of repetitive loss due to flooding.
- 11.5.3.10 The County shall continue to direct growth away from the Coastal high hazard area by utilizing land use controls, acquisition techniques, and other methods as deemed appropriate.
- 11.5.3.11 New or expanded manufactured or mobile home housing developments or recreational vehicle developments shall be required to include a hardened central clubhouse or similar structure to serve as a shelter for residents. The clubhouse or similar structure shall be hardened to withstand 150mph winds.
- 11.5.3.12 Volusia County shall locate future well fields in a manner as to protect against salt water intrusion.
- 11.5.3.13 The Level of Service for the provision of wastewater treatment in the unincorporated portions of the coastal area shall be consistent with the Sanitary Sewer Element of the Comprehensive Plan.
- 11.5.3.14 The level of service standard for roads in the Coastal area shall be consistent with the Transportation Element, except where expressly modified pursuant to Interlocal Agreement between Volusia County and the individual coastal cities.
- 11.5.3.15 The County shall continue to enforce rules/regulations governing the proper disposal of solid waste in the unincorporated portion of the Coastal area.

- 11.5.3.16 The Tomoka Farms Landfill shall continue to be monitored and the monitoring program evaluated to ensure ground water and surface water samples are collected. Water samples will meet federal and state water quality standards. This data shall be incorporated into the water quality sampling program.
- 11.5.3.17 The Level of Service standard for solid waste shall be as identified within the Solid Waste Element.
- 11.5.3.18 The County shall continue to investigate and review the available technology for resource recovery, recycling and other alternatives to solid waste management consistent with the protection and conservation of environmental resources and water quality.
- 11.5.3.19 Development or redevelopment activity shall not result in increasing hurricane evacuation times above the clearance time identified by the Emergency Management Division.
- 11.5.3.20 Volusia County and the coastal cities shall coordinate all hurricane evacuation activities through the Volusia County Emergency Management Division.

OBJECTIVE:

- 11.5.4 Volusia County with the East Central Florida Regional Planning Council and the coastal cities, as appropriate, shall continue to develop plans and regulations to mitigate for the threat to human life and to control proposed development and redevelopment in the coastal environment.

POLICIES:

- 11.5.4.1 Volusia County will consider land areas that should not be reconstructed, limiting redevelopment in documented areas of repetitive loss, abandonment and/or relocation of buildings, rebuilding of public facilities, reconstruction with structural modification and distinguishing between immediate repair/cleanup actions and actions needed to protect public health and safety and long-term repair and redevelopment.
- 11.5.4.2 Volusia County and its partners will also identify structures in the Coastal High Hazard Area that might be of some utility for public access to coastal beaches and waterways, and make recommendations for acquisition when post-disaster opportunities arise. It shall establish guidelines for determining priorities for the acquisition of storm-damaged property in the Coastal High Hazard Area.

11.5.4.3 Volusia County will establish principles for repairing, replacing, modifying, or relocating public facilities in the Coastal High Hazard Area.

11.5.4.4 For hurricane damaged structures in the coastal high hazard area, structures damaged less than fifty (50%) percent of their replacement cost, at the time of damage, may be rebuilt to their original condition subject only to current building and life-safety code.

Structures damaged more than fifty (50%) percent of their replacement cost, at the time of damage, can be rebuilt to their original square footage and density, provided that they comply with:

- A. Federal requirements for elevation above the 100-year flood level.
- B. Building code requirements for flood proofing.
- C. Current building and life-safety codes.
- D. Regulations relating the Coastal Construction Control Line.
- E. Any required zoning or other land development regulations (other than density or intensity), unless compliance with such regulations would preclude reconstruction otherwise intended by the county's land development regulations.

11.5.4.5 The Volusia County Comprehensive Emergency Management Plan for post-disaster recovery provides for immediate repair and clean up actions in the form of disaster assessment, the provision of temporary housing, and individual assistance. These efforts shall be coordinated between Volusia County and the coastal cities. Reconstruction shall be consistent with the Recovery Annex of the Comprehensive Emergency Management Plan, as appropriate.

GOAL:

11.6 Maintain and improve public access to the sovereign lands of the Coastal Management Planning Area through the provisions of coastal beach access facilities, fishing piers, boat ramps and marinas.

OBJECTIVE:

11.6.1 In the areas of unincorporated Volusia County, except Ormond-by-the-Sea, Coastal Beach Access Facilities (Vehicular Beach Ramps, Walkways, or Walkovers) shall be provided at no greater than 2 mile intervals, except for

the area north of Bass Drive and the area in Canaveral National Seashore. In the area of unincorporated Ormond-by-the-Sea, Coastal Beach Access Facilities shall be provided every ¼ mile, on average. Volusia County shall be responsible for the actual provision, maintenance, and operation of these facilities unless otherwise indicated.

POLICIES:

- 11.6.1.1 Beach Access Facilities shall, to the greatest extent possible, be provided in accordance with the County's Beach Management Plan and the County's Beach and Dune Ordinance.
- 11.6.1.2 Volusia County, shall ensure that all Coastal Beach Access Facilities shall include access to a public road.
- 11.6.1.3 The establishment and/or improvement of vehicular beach ramps, including ramp expansion and improved handicapped access shall be consistent with the County's Beach Management Plan and federal ADA requirements.
- 11.6.1.4 The priority for new pedestrian access shall be pedestrian walkovers or other alternatives that do not harm the dune system.
- 11.6.1.5 The County will, in cooperation with the appropriate coastal cities, continue to identify the need for any new parking areas to improve public beach access.
- 11.6.1.6 Volusia County shall prohibit the vacation of public right-of-way that provides or could provide public access to the beach or off-beach parking without an equivalent type of access.
- 11.6.1.7 Volusia County shall maintain a Beach Management Plan to maximize the protection of natural resources as well as to serve the need for public beach access.

OBJECTIVE:

- 11.6.2 In conjunction with the coastal cities and the Ponce DeLeon Port District, the County will endeavor to expand and construct pier opportunities to the greatest extent possible for the residents of the County.

POLICIES:

- 11.6.2.1 Volusia County, in cooperation with the appropriate coastal cities and Ponce DeLeon Port District, shall determine the appropriate location at which fishing pier space can be utilized in conjunction with existing bridges.

GOAL:

- 11.7 Public services and facilities shall be adequate and available to serve both current and future residents.

OBJECTIVE:

- 11.7.1 The land development regulations shall ensure that the provision of roads, potable water, sanitary sewer, drainage, recreation, mass transit, and solid waste facilities and services required to maintain the adopted Level of Service standards shall be consistent and phased with the level of development proposed in the Future Land Use Element.

POLICY:

- 11.7.1.1 Development or redevelopment within the coastal areas shall have public services and facilities available concurrent with the impacts of development.

GOAL:

- 11.8 Foster and encourage intergovernmental coordination in the Coastal Management Planning Area between Volusia County, the coastal cities, adjacent local governments, regional, state, and federal government entities.

OBJECTIVE:

- 11.8.1 Continue to cooperate with Volusia County Public Schools in selecting future sites for school facilities within the coastal area.

POLICIES:

- 11.8.1.1 Encourage Volusia County Public Schools to locate future school facilities outside of areas susceptible to hurricane storm damage or areas prone to flooding, or as consistent with Chapter 235, Florida Statutes regarding flood plain and school building requirements.

- 11.8.1.2 Cooperate with Volusia County Public Schools in the identification and designation of school facilities as hurricane evacuation and emergency shelters.

OBJECTIVE:

- 11.8.2 The Coastal Management Element is a guide in deciding issues of land use and zoning, the extension and provision of urban services, annexation, and the general location of environmental systems corridors in the Coastal area.

POLICIES:

- 11.8.2.1 Applications for land use amendments, zoning, and development shall consider the impacts on adjacent local governments.
- 11.8.2.2 The extension and provision of urban services and facilities shall be accomplished through the adoption of Interlocal Agreements.
- 11.8.2.3 The County and coastal cities shall cooperate in maintaining and updating land use information by watershed.
- 11.8.2.4 Volusia County will encourage consistency between the development standards of the coastal communities for issues/concerns which transcend jurisdictional boundaries .
- 11.8.2.5 Volusia County will continue to promote the identification and protection of environmental systems corridors to ensure the viability and continuation of these cross-jurisdictional systems.
- 11.8.2.6 Volusia County shall continue maintaining and updating the Florida Land Use Cover and Forms classification system, maps, and database.

OBJECTIVE:

- 11.8.3 Maintain an effective ongoing water sampling and monitoring system which shall be applied by Volusia County and the coastal cities on an area-wide basis.

POLICIES:

- 11.8.3.1 Volusia County will continue to work with the water management districts and local municipalities in implementing a long-term, inter-agency water and sediment quality monitoring strategy for Mosquito/Indian River Lagoon and the Halifax River.

- 11.8.3.2 Volusia County shall continue to implement its water quality monitoring program.
- 11.8.3.3 The County, in cooperation with the other appropriate jurisdictions, shall maintain and seek to expand the existing water quality monitoring program so that all point and non-point sources and facilities which are identified as potential water quality problems are regularly and periodically inspected.
- 11.8.3.4 Support the implementation of the Indian River Lagoon Comprehensive Conservation and Management Plan .
- 11.8.3.5 Volusia County and the coastal cities shall continue their commitment to enhance water quality and estuarine conditions through these additional intergovernmental coordination mechanisms:
- A. Participation in ad-hoc or other special technical advisory committees, as well as Volusia Managers and Elected Officials roundtables.
 - B. Exchange of data and information among and between Volusia County and the coastal cities, as well as Brevard and Flagler Counties.
 - C. Presentation and discussions with the Volusia Council of Governments.
 - D. Updating data in cooperation with FDEP and SJRWMD.
 - E. Participation in the SWIM programs.
 - F. Implementing the policies or recommendations of the Aquatic Preserve Management Plans.

OBJECTIVE:

- 11.8.4 Volusia County and the coastal cities shall ensure that beach and dune management is coordinated throughout the Coastal area.

POLICIES:

- 11.8.4.1 Seawall construction in the County shall be consistent with the State requirement mandating design and construction to withstand a 100-year storm event.
- 11.8.4.2 Volusia County and the coastal cities shall maintain uniform standards for the

maintenance and restoration of dune areas.

- 11.8.4.3 Volusia County, in cooperation with coastal cities, shall periodically review and determine the need for a beach and dune management plan.
- 11.8.4.4 The Port Authority, through its FDEP certified Inlet Management Plan, shall maintain a continuing scientific base and monitoring of Ponce DeLeon Inlet and the coastal beaches within the inlet's zone of influence, from FDEP monuments R-130 to R-165.
- 11.8.4.5 The Port Authority shall coordinate studies and monitoring efforts with the FDEP, and the U.S. Army Corps of Engineers (USCOE) for beach areas under the influence of the inlet as stated in the Inlet Management Plan (FDEP monuments R-130 to R-165).

OBJECTIVE:

- 11.8.5 Coordinate with fire, law enforcement, and emergency staff on issues in the coastal zone planning area.

POLICIES:

- 11.8.5.1 Provide for fire and law enforcement facilities commensurate with population growth and development in the coastal area.
- 11.8.5.2 Locate new fire and law enforcement facilities outside of the areas susceptible to hurricane storm damage or flooding where feasible.
- 11.8.5.3 Continue to update procedures as part of the Comprehensive Emergency Management Plan for emergency fire and police protection and response.

GOAL:

- 11.9 Volusia County will foster resiliency by coordinating with its municipalities, and state and federal partners, to exchange data and develop coordinated strategies to address the impacts of sea-level rise.

OBJECTIVE:

- 11.9.1 Develop strategies to identify and address issues related to the impacts of sea-level rise.

POLICIES:

- 11.9.1.1 Volusia County will continue to participate in and expand the Volusia County Local Mitigation Strategy in an attempt to reduce the human and economic costs of natural, technologic, and societal disasters.
- 11.9.1.2 Volusia County accepts the sea level rise projections and supports the recommendations of the East Central Florida Regional Resiliency Action Plan as a means to foster resilience throughout Volusia County and will continue to build on these efforts by participating in the Regional Resiliency Collaborative lead by the East Central Florida Regional Planning Council.
- 11.9.1.3 Volusia County will continue to implement the Volusia County Sustainability Action Plan in order to contribute to local sustainability efforts across Florida.
- 11.9.1.4 The Volusia County Integrated Floodplain Management Plan will continue to consider the impacts of sea level rise as part of the risk assessment and in the development of mitigation strategies.
- 11.9.1.5 Volusia County shall consider impacts such as increased temperatures, sea level rise, potentially shifting habitat, and ecosystem types, and the need to withstand increased storm surge in evaluating public infrastructure decisions.
- 11.9.1.6 Volusia County shall consider the potential impacts from climate change, including rising sea levels and shoreline stabilization needs, in its planning for infrastructure and public facilities.
- 11.9.1.7 Volusia County shall protect natural systems and habitats by incorporating climate change adaptation and mitigation strategies in its land acquisition policies.
- 11.9.1.8 Volusia County shall exchange data regarding local areas vulnerable to extreme high tides, storm surge, and coastal flooding with the FDOT, USDOT, FHWA relative to airport, transit, bridges, roads, and other transportation systems.
- 11.9.1.9 Volusia County will promote green infrastructure as a tool for resiliency and the protection of water quality and coastal systems.