

Exhibit A

Text proposed for deletion is shown stricken and text proposed for addition is shown underlined.

Supplement 57 provided by MuniCode is the base document for the EAR based changes shown.

Chapter 8 COASTAL MANAGEMENT ELEMENT

Adopted:	February 20, 1990	By Ordinance No. 373
Amended:	July 9, 1991	By Ordinance No. 400
Amended:	October 27, 1992	By Ordinance No. 419
Amended:	October 26, 1993	By Ordinance No. 430
Amended:	September 13, 1994	By Ordinance No. 448
Amended:	September 12, 1995	By Ordinance No. 477
Amended:	December 15, 1998	By Ordinance No. 537
Amended:	August 22, 2000	By Ordinance No. 577
Amended:	December 5, 2000	By Ordinance No. 584
Amended:	December 11, 2001	By Ordinance No. 606
Amended:	December 10, 2002	By Ordinance No. 627
Amended:	May 27, 2003	By Ordinance No. 630
Amended:	December 7, 2004	By Ordinance No. 660
Amended:	September 6, 2005	By Ordinance No. 677
Amended:	December 11, 2007	By Ordinance No. 780
Amended:	December 16, 2009	By Ordinance No. 849
Amended:	July 10, 2012	By Ordinance No. 913
Amended:	July 10, 2012	By Ordinance No. 915
Amended:	December 10, 2013	By Ordinance No. 945
Amended:	February 27, 2018	By Ordinance No. 1054
Amended:	September 10, 2019	By Ordinance No. 1110
Amended:	May 11, 2021	By Ordinance No. 1158
Amended:		By Ordinance No.

Acronyms used in this chapter:

<u>BMAP</u>	<u>Basin Management Action Plan</u>
<u>CERP</u>	<u>Comprehensive Everglades Restoration Plan</u>
<u>CGMP</u>	Comprehensive Growth Management Plan
<u>FDEP</u>	Florida Department of Environmental Protection
<u>FFWCC</u>	Florida Fish and Wildlife Conservation Commission
<u>PAMP</u>	Preserve area management plan
<u>SFWMD</u>	South Florida Water Management District
<u>SLOSH</u>	Sea, lake and overland surges from hurricanes (computer model)
<u>TMDL</u>	<u>Total Maximum Daily Load</u>

Section 8.1. Background

8.1.A. *Coastal resources.* Martin County is rich in water-related coastal resources and includes two types of shorelines: Atlantic and estuarine. The Atlantic shoreline of Martin County consists of two barrier islands: the southern end of Hutchinson Island, extending from the north border of the County approximately seven miles south to the St. Lucie Inlet, and the northern end of Jupiter Island, extending from the St. Lucie Inlet approximately 14 miles south to the south border of the County. The County's estuarine shoreline property is even more extensive than some other coastal counties due to the presence of the Indian River Lagoon, Intracoastal Waterway, St. Lucie River (both north and south forks), Manatee Pocket and Loxahatchee River (north and northwest forks). The County contains more than 135 miles of shoreline. Historically the population has always been situated along water bodies, though the concentrated settlement pattern seen today began in dates only from the late 1970s and 1980s.

Protection of natural resources and planning for water-related and water-dependent uses has been a concern of Martin County centered around the Comprehensive Plan adopted in 1982. A more recent issue is adequate protection of the health of natural systems and integrating resilience into development and redevelopment efforts. Resilience is the capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a disruption.

8.1.B. *Purpose and intent.* The Coastal Management Element aims to provide for understandable and predictable planning and regulation of coastal, natural, and recreational systems. This element is a tool for managing the forces affecting the coastal environment. Martin County believes that prudent management policies that protect, enhance and expand the quality of the environmental treasures in our coastal zone will preserve the best of Martin County, instilling pride in its residents. This element also identifies measures that Martin County will take to avoid loss of life and minimize property damage in the event of hurricanes, tropical storms or other natural disasters as well as reducing the flood risk in coastal areas from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise through resilience planning.

Section 8.2. Existing Conditions

8.2.A. *Land use.* ~~The Atlantic shoreline of Martin County consists of two barrier islands: the southern end of Hutchinson Island, extending from the north border of the County approximately seven miles south to the St. Lucie Inlet, and the northern end of Jupiter Island, extending from the St. Lucie Inlet approximately 14 miles south to the south border of the County.~~ The predominant land use along the shoreline is residential. While the water enhances land use, it is important to leave sufficient land for uses that are water-dependent, water-related, in a Community Redevelopment Area, or in a preferred marina siting location. Commercial and sport fishing and seasonal residents (tourism) are extremely important to the Martin County economy. In many instances, only redevelopment will allow water-dependent and water-related uses to recapture the shoreline from the more successful competition of residential land use. The shoreline has a finite capacity, and balancing competing uses for waterfront property can be extremely difficult. Finally, shorelines need to be restored, managed, and maintained to minimize flood damage, reduce storm surge, stabilize the shore, and maintain adaptability to future sea-level rise conditions, which will aid in preventing impacts to natural resources, public and critical infrastructure, and private property.

Though much of Martin County's shoreline is already preempted by residential uses and other uses not dependent on or related to the water, the south fork of the St. Lucie River and the St. Lucie Canal are exceptions. The amount of shoreline available for any urban use is further limited by the presence of sensitive environmental resources and stringent environmental protection programs. It is therefore essential to identify suitable sites for redevelopment and expansion of existing water-dependent and water-related uses, defined as follows:

1. *Water-dependent uses* are those requiring proximity to the water (e.g., commercial marinas, boat yards, industrial boat repair and manufacturing, and water sports recreational uses).

2. *Water-related uses* are those requiring association with the water (e.g., commercial trailered boat sales, bait/tackle shops, recreational resorts and institutional or educational research centers).

Figure 8-1 contains the coastal area land use map. This map shows the beach locations, the existing commercial marinas and marina industries, the boat ramps, the major roads, anchorage, parks, commercial waterfront areas, parks, conservation lands, and the coastal high hazard area for reference.

Figure 8-2 contains the coastal zone resources map. This map contains the historical resources along with the vegetative cover and coastal resources within the County coastal zone.

8.2.B. *Hurricanes and tropical storms.* Historically, hurricanes have caused significant property damage and loss of life in south Florida. Great storms in the late 1940s caused widespread damage and flooding in a much different Martin County than exists today. Significant development has since taken place in the coastal area. These effects will be compounded by increased flooding from the impacts of sea level rise, changing weather patterns, and destructive storms. Local efforts now focus on identifying and outlining measures that Martin County should consider to avoid loss of life and minimize property damage in ~~a~~ hurricanes, or other major storms, or tidal flooding and inundation.

The County has identified five evacuation zones (Category A through E) based on Storm Surge Models provided by the National Hurricane Center and shown on Figure 8-73. The maximum potential storm surge for a particular location depends on a number of different factors including; storm intensity, forward speed, angle of approach to the coast, central pressure, tidal elevation, and the shape and characteristics of coastal features such as bays and estuaries. A hurricane with landfall at 90 degrees to the coastline would have a considerably higher storm surge than the same storm either ~~a~~ paralleling or crossing the coastline hurricane. Emergency Management will issue evacuation orders based on Storm Surge Warnings issued by the National Hurricane Center.

Category A & B Storm Surge Zones. Residents within this designated evacuation zone will be included in the Evacuation Order, as well as all barrier islands. In addition, all residents of mobile/manufactured homes in the County are ordered to seek more secure shelter.

Category C & D Storm Surge Zones. All areas ordered to evacuate in a Category A & B storm are included in the evacuation of Category C & D zones. Residents within this designated evacuation zone will be included in the Evacuation Order.

Category E Storm Surge Zones. Residents within all designated evacuation zones will be included in the Evacuation Order. Evacuation routes are shown on Figure 8-4. For the most part, evacuees are routed to the Florida Turnpike or Interstate 95. Access to ~~h~~ Interstate 95 is via Port St. Lucie Boulevard, CRSR 713 (High Meadow Avenue in Palm City), SR 714 (SW Martin Highway in Palm City), SR 76 (S. Kanner Highway in Tropical Farms area) and CR 708 (SE Bridge Road in Hobe Sound). Evacuation traffic may also be routed to the Florida Turnpike via the Palm City exit. The only evacuation traffic in Martin County routed to the Florida Turnpike via the Jupiter exit is generated from areas south of Jonathan Dickinson State Park and from Jupiter Island south of Bridge Road by way of Indiantown Road (SR 706) in Palm Beach County.

Population estimates for ~~2016~~ 2022 indicate the County grew by ~~8.1~~ 10.3 percent ~~since the 2010~~ Census between 2010 to 2022. Tables 8-1 and 8-2 provide an estimate of the number of people expected to be jeopardized by hurricane storm surge events.

**Table 8-1
Vulnerable Population Requiring Evacuation
in Martin County**

Level of Threat (Storm Classification)	Number of People
Evacuation Zone A and B	10,720 <u>14,671</u>
Evacuation Zone C and D	12,038 <u>17,381</u>
Evacuation Zone E	<u>41,581</u>
<u>24,576</u>	

Note: Vulnerable population determined using Statewide Regional Evacuation Study Program for the 2025 regional scenario behavioral data and county provided evacuation zones. Vulnerable population numbers are not inclusive, meaning population numbers listed for a higher zone are not included in the lower zone. For example, vulnerable population listed for Evacuation Zone B does not include vulnerable population listed for Evacuation Zone A.

Source: Vulnerable Population in the Treasure Coast Region ~~for 2015~~, Florida Statewide Regional Evacuation Study Program Treasure Coast Hurricane Evacuation Study - updated June ~~2016~~2021.

**Table 8-2
Shelter Demand by Base Scenario**

Level of Threat (Storm Classification)	Number of People
Evacuation Zone A	2,771 <u>2,433</u>
Evacuation Zone B	3,239 <u>2,906</u>
Evacuation Zone C	3,639 <u>3,752</u>
Evacuation Zone D	4,529 <u>4,520</u>
Evacuation Zone E	5,731 <u>6,553</u>

Note: Shelter demand is the population in each county who will seek public shelter during their evacuation, either at an in-county shelter or an out-of-county shelter for the 2025 Base Scenario.

Source: Statewide Regional Evacuation Study Program - Treasure Coast Hurricane Evacuation Study — updated June ~~2016~~2021.

Editor's note(s)—Figures 8-43 and 8-74 are on file in the office of the Martin County Growth Management Department.

The time needed for evacuation can vary significantly, depending on ambient weather conditions (e.g., wind, rain, tide level), number of evacuating vehicles, response rate of area residents and roadway capacity. Evacuation of the barrier islands is a primary concern since they are potentially at greatest risk from a hurricane.

Table 8-3 indicates evacuation times for Martin County, by level of storm surge.

**Table 8-3
Evacuating Population by Base Scenario for ~~2015~~2025
Treasure Coast Hurricane Evacuation Study
Transportation Analysis**

	Evacuation Level A	Evacuation Level B	Evacuation Level C	Evacuation Level D	Evacuation Level E
Clearance Time to Shelter (In hours)					
Martin	12.5	12.5	13.0 <u>12.5</u>	14.0	18.0 <u>16.0</u>
In-County Clearance Time (In hours)					
Martin	13.5 <u>14.5</u>	13.5 <u>14.5</u>	16.0 <u>19.0</u>	20.5 <u>28.5</u>	27.5 <u>26.5</u>
Out of County Clearance Time (In hours)					
Martin	14.0 <u>5</u>	15.0 <u>14.5</u>	17.5 <u>19.0</u>	22.0 <u>28.5</u>	30.5 <u>26.5</u>

Florida Statewide Regional Evacuation Study Program, Hurricane Evacuation Clearance Times Transportation Analysis Overview, Treasure Coast Hurricane Evacuation Study Update updated June ~~2016~~2021.

The U.S. Army Corps of Engineers Evacuation Study suggests In order for the roadway network to be resilient in the face of a hurricane or other storms that may cause tidal flooding or storm surge, the County could reduce

flooding on the evacuation routes by elevating the roadways. This could be done whenever the roadway is reconstructed or widened or if the lifespan of the roadway may be impacted due to sea level rise induced flooding. The County will undertake a study to define roadway sections that are subject to flooding; and determine who is responsible for correcting the deficiency. Once completed, the roadway improvements will be integrated into the Martin County Capital Improvements Element. Continued removal of potential obstructions from the rights-of-way of evacuation routes, especially Australian pines, is another measure that will help to assure a safe and quick evacuation.

The problem of evacuating Hutchinson Island is further compounded because the Jensen Beach Causeway is used by residents of both Martin County and St. Lucie County. In fact, a larger proportion of evacuation trips across the Jensen Beach Causeway would be generated by residents of condominiums in St. Lucie County than from Martin County residents. St. Lucie County traffic leaving the island via the Jensen Beach Causeway has been incorporated into the ~~2016~~2021 Transportation Analysis Overview.

In 2021, the County completed a Sea Level Rise Report. The Sea Level Rise Report contained a vulnerability assessment and recommendations for responses to sea level rise and recommended developing programs that help property owners adapt their properties and mitigate future flood risk. Numerous recommendations include factoring future flood risk modeling into capital improvements planning, gaining more data about the County's infrastructure and assets and enhancing datasets related to rainfall, groundwater, sea level rise and storm surge. This report along with subsequent updates is the foundation for considering the County's existing conditions and how sea level rise and increased tidal flooding will impact infrastructure.

8.2.C. Water Quality. Water quality within the St. Lucie River and Estuary and Indian River Lagoon has been in decline. The FDEP established a TMDL Report "Nutrient and Dissolved Oxygen TMDL for the St. Lucie Basin" dated October 2008. The TMDL shows concentration targets for total nitrogen, total phosphorus, and dissolved oxygen. After the establishment of the TMDL, the County has been an active stakeholder in the BMAP, which was originally adopted in May of 2013, and its subsequent updates. The BMAP identifies projects that the County has completed to reduce the impacts of point source and nonpoint source pollution on estuarine water quality. FDEP and SFWMD regulated water quality standards within the County. Figure 8-5 shows the FDEP classifications of waters within Martin County as well as the boundaries for the pollution reduction plans adopted by FDEP.

The County also coordinates with SFWMD to plan for regional projects that capture stormwater runoff and treat it prior to discharging into the County's waterways. Figure 8-6 shows the CERP Proposed Lands, the natural storage land acquired by the County, and SFWMD stormwater treatment areas along with County stormwater retrofit projects. All of these projects aid in providing water quality treatment to the St. Lucie River and Estuary and Lake Okeechobee.

The County will continue to develop programs and projects to reduce the water quality impacts from point and non-point source pollution. In addition, the County will work with the local, state, and federal agencies on minimizing further impacts of water quality on estuarine and coastal systems and work together on local and regional solutions.

Section 8.3. Future Needs

Population estimates and projections have been developed by the Martin County Growth Management Department. The Census count for April 1, 2010~~23~~, found ~~146,318~~160,847 permanent residents countywide. The projected population for ~~2025~~2045 is ~~164,293~~184,686 permanent residents (Source: Florida Office of Economic & Demographic Research~~Population Technical Bulletin July 2017~~). Given the lack of undeveloped waterfront property in the County, it is essential to identify suitable sites for redevelopment and expansion of existing water-dependent and water-related uses.

8.3.A. Need for natural resource protection. The progressive loss of seagrass beds in the St. Lucie and Indian River lagoon system from continued residential and commercial development is a potentially significant impact on the natural resources of Martin County's coastal zone. Seagrasses, oysters, and coastal reefs are extremely sensitive to degradation of water quality from nonpoint source pollution. Martin County recognizes the

importance of protecting food sources for endangered species, which include seagrass and oyster beds used by manatees and turtles. They are an irreplaceable natural resource within the County. Loss of these seagrass, oyster, and coastal reefs is an unseen and unnoticed effect of pollution and development. The purpose of discussing water quality and biological resources in this element of the plan is to acquaint citizens and other interested parties with the nature, location and value of these living resources, and to demonstrate how their protection and preservation can be weighted in terms of other possibly conflicting land uses. Discussion of land uses within this element will identify water-dependent and water-related uses.

Every effort should be made to limit increases in volume and degradation of water quality in runoff to the estuary and through the St. Lucie Inlet into the marine ecosystem. This also includes the recognition that increasing tidal flooding and sea level rise further contribute to water quality degradation by carrying additional nutrients and other contaminants into nearshore waters when flood waters recede. This effect will only increase in the future. Additionally, tThe degree to which land in the coastal zone can be used depends largely on the available infrastructure and its functionality considering future flood risk. The key components of infrastructure are roadways, sewage treatment systems, potable water systems, parks, conservation lands, and manmade drainage systems, which are discussed in this element only as they pertain to coastal zone management and resilience. Public access to beaches and other waterways in the County is also discussed. A more complete analysis of public access is presented in the Recreation Element.

Primary concerns of Martin County are protection of (1) the beach and dune systems, (2) the natural vegetation that holds the dune and (3) nearshore reefs, as well as through the implementation of regular beach renourishment programs and activities as needed; and protection of the estuarine shoreline through regulation, living shorelines, and other activities as needed. This element identifies those measures that Martin County will take to avoid loss of life and to minimize property damage in the event of a hurricane, tropical storm and other natural disasters while recognizing the impacts of future flood risk.

To adequately improve water quality and minimize flood risk, an integrated water resource management plan is needed to evaluate water quality and flooding with the impact of sea level rise. The plan shall include an existing conditions analysis and a future conditions analysis that combines the needs of meeting water quality standards and flood reduction risk to infrastructure, development, and redevelopment.

8.3.B. *Need for marina and boat ramp siting criteria.* Boat registrations in Martin County from ~~2004~~2019 to ~~2008~~2023 are shown in Table 8-4.

Table 8-4
Boat Registrations in Martin County: ~~2012—2016~~2019 - 2023

Year	2012-2019	2013-2020	2014-2021	2015-2022	2016-2023
Boats	15,702-18,710	15,606-17,865	16,050-16,739	16,836-17,000	17,548-18,168

Source: Department of Motor Vehicles, *Alphabetical Vessel Statistics by County.*

8.3.C. *Need for resiliency planning and implementation.* Martin County’s location on the central east coast of Florida makes it vulnerable to the effects from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise, which consequentially impacts infrastructure and real estate. Martin County’s borders contains 135 miles of estuarine shoreline and 22 miles of Atlantic shoreline, which are all tidally influenced. This shoreline along with many smaller rivers and creeks flow through the County and are influenced by tidal differences. With the majority of the County’s residents and businesses concentrated along these waterfront areas, the need to establish a science-based vulnerability assessment with a climate adaptation plan is necessary to identify adaptation measures to mitigate for existing and future impacts. This plan should include hydrologic and hydraulic modeling to capture the operation and assets of the County’s stormwater management system to identify vulnerabilities and to develop a capital improvement plan to mitigate the flood risk. This plan will not only help the County’s infrastructure but will aid in the County’s continued participation in the National

Flood Insurance Program Community Rating System administered by the Federal Emergency Management Agency to achieve flood insurance premium discounts for its residents.

Section 8.4. Goals, Objectives and Policies

Goal 8.1. To effectively manage, conserve, preserve and protect Martin County's coastal natural resources, giving consideration to an equitable balance of public and private property rights; by developing and implementing programs and procedures, limiting coastal development activities; ~~and~~ providing for mitigation of development impacts; and increase community resilience to protect property, cultural, and natural resources from natural vulnerabilities.

Objective 8.1A. To protect and enhance wildlife and fish populations and habitat in coastal areas.

Policy 8.1A.1. Manatee protection measures: Boat Facility Siting Plan. In accordance with Section 379.2431(2)(t)(4) of the Florida Statutes, Protection of Manatees or Sea Cows, the Boat Facility Siting Plan adopted by Martin County on March 5, 2002 and approved by the Florida Fish and Wildlife Conservation Commission (FFWCC) on June 27, 2002 is hereby incorporated into the Martin County Comprehensive Growth Management Plan (CGMP). All development orders regarding boat facilities and all development of boat facilities shall be consistent with the Plan.

Policy 8.1A.2. Manatee protective measures: Manatee Protection Plan.

- (1) Martin County shall work with the FFWCC to ensure adequate sign posting of speed zones throughout all applicable areas of the County. The waters in and around marinas and/or boat ramps shall be designated as a no-wake or idle speed zone, as determined by the FFWCC. Martin County shall work with the FFWCC, Martin County Sheriff's Office and other law enforcement agencies to ensure the availability of adequate resources and personnel to enforce the speed restrictions, present and future.
- (2) Martin County shall establish boater speed zones as permitted by state law. The County shall develop a procedure for ensuring these zones are adequately marked, and the signage is maintained. Interlocal agreements with other governmental agencies engaged in waterway sign management will be explored as a means of maintaining navigation signs.
- (3) The Board of County Commissioners shall establish a Manatee Protection Advisory Committee (MPAC). The Committee's primary responsibility will be to assess the progress and success of implementation of the Manatee Protection Plan and the Boat Facility Siting Plan by reviewing and analyzing new manatee and boating data, discussing manatee protection issues, evaluating enforcement efforts and making recommendations to the County for improving manatee protection in local waterways. The Boat Facility Siting Plan adopted in 2002 shall be updated as required by state statutes. The revised Plan shall be adopted, by reference, into the CGMP in the next available amendment cycle.
- (4) Martin County, through MPAC, shall work cooperatively with the FFWCC to monitor manatee mortality caused by collisions with watercraft in County waterways. If the annual rate of mortality shows an increasing or decreasing trend, speed zones will be reviewed for changes. The Manatee Protection Plan shall be reviewed; not less than every seven years with the County's CGMP as part of the Evaluation and Appraisal Report cycle and updated and modified as necessary.
- (5) Martin County shall work with the Florida Department of Environmental Protection (FDEP), U.S. Army Corps of Engineers, United States Fish and Wildlife Service and South Florida Water Management District (SFWMD) to enhance seagrass restoration. The purpose of the program is to enhance estuarine natural resources, Improve water quality and provide additional foraging habitat for manatees. Consideration will be given to creating a river bottom conducive to the natural recruitment of seagrasses. The County shall advocate to maintain established salinity

envelopes for estuarine areas to protect seagrass and oyster beds by providing input to the Army Corps of Engineers on Lake Okeechobee operations.

- (6) Martin County shall dedicate the level of funding and staff necessary to implement the goals and policies of the Manatee Protection Plan. Martin County shall fund this initiative through competitive grants, grants from the FFWCC and other sources as appropriate.

Policy 8.1A.3. Protection of sea turtles. Martin County shall continue to enforce existing provisions regulating activities disruptive to sea turtles and their nests and eggs. These provisions include:

- (1) Prohibition of horseback riding and campfires on or seaward of the primary dune during sea turtle nesting season, extending to all areas landward of the primary dune where sea turtles are known to nest;
- (2) Prohibition of disturbing, touching, harassing, killing or taking of any sea turtle, hatchling, egg or part of the same;
- (3) Submission of a sea turtle protection plan for Martin County approval, in consultation with the FDEP, for any development that involves coastal construction;
- (4) Standards for coastal construction to eliminate or minimize impacts on sea turtles and their nests and eggs;
- (5) Procedures for protection and/or mitigation;
- (6) Standards for site development that protect sea turtles;
- (7) Restrictions and standards on nighttime lighting for new and existing development, and additional restrictions during nesting season;
- (8) Standards for existing beach access points;
- (9) Standards for beach/dune preservation stabilization and/or restoration and standards for mechanical beach cleaning.

Objective 8.1B. To continue to support and participate in the Indian River Lagoon portion of the Comprehensive Everglades Restoration Plan. Water quality of the estuarine waters of Martin County is currently monitored by the SFWMD, FDEP, Harbor Branch Oceanographic Institute, ~~and the~~ Ocean Research Conservation Association, United States Geological Survey (USGS), the Florida Oceanographic Society, the County, and many other colleges, universities and non-profit organizations. A water quality monitoring program for marine waters proximal to coral reefs will be implemented by the FDEP beginning in 2017. In addition, Martin County shall continue to undertake the following efforts to improve estuarine water quality.

Policy 8.1B.1. Drainage system retrofit. When building, expanding or planning for new facilities the County shall consider engineering solutions that reduce the flood risk in coastal areas which results from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise. Substandard public drainage systems shall be retrofitted during repair, expansion or redevelopment activities. This policy is intended to address water quality problems resulting from inadequately maintained systems or systems constructed prior to a complete understanding of the negative effects of stormwater runoff on the marine environment. The County's stormwater program shall assure a new benefit to the estuary in terms of enhanced water quality and the rate, volume and timing of inflows, in accordance with policies in Chapter 13, Drainage and Natural Groundwater Aquifer Recharge.

Policy 8.1B.2. Surface and stormwater management regulations. The County shall continue to actively enforce established surface and stormwater management regulations so as to eliminate inadequately maintained or designed systems that are degrading water ~~quality~~ quality, in accordance with Chapter 13.

Policy 8.1B.3. Interagency cooperation for water release. The County shall continue to cooperate with the U.S. Army Corps of Engineers and the SFWMD in monitoring and minimizing the impacts to the St. Lucie Estuary from release of waters from Lake Okeechobee and surrounding agricultural areas.

Policy 8.1B.4. Intergovernmental cooperation for water quality. The County shall participate with surrounding local governments to improve water quality in the drainage basins in the County and assist in improving water quality in other shared drainage basins in adjacent counties, such as the C-23 and C-24 canals.

Policy 8.1B.5. Drainage basin plans. Drainage basin plans and the Stormwater Master Plan shall continue to be updated consistent with policies in Chapter 13, as new data becomes available, and shall consider future flood risks which may compromise the functionality of drainage infrastructure. To adequately improve water quality and minimize flood risk, the drainage basin plans and the Stormwater Master Plan need to be an integrated water resource management plan, which shall evaluate water quality and flooding with the impact of sea level rise. The plan shall include an existing conditions analysis and a future conditions analysis that combines the needs of meeting water quality standards and flood reduction risk to infrastructure, development, and redevelopment. This plan should include hydrologic and hydraulic modeling to capture the operation and assets of the County's system to identify vulnerabilities and to develop a capital improvement plan to mitigate the flood risk.

Policy 8.1B.6. Protection of local estuaries. Martin County shall cooperate and coordinate with other local governments in protecting local estuaries. This cooperation and coordination shall aim to assist agencies responsible for protecting and managing local estuarine systems.

Objective 8.1C. To protect and preserve the functions and values of the estuarine river systems, which serve a multitude of functions, including wildlife habitat, flood control, ~~and erosion control,~~ and shoreline defense for reducing coastal flooding due to extreme high tides, storm surge, flash floods, stormwater runoff and the related impacts of sea level rise.

Policy 8.1C.1. Shoreline performance standards. The County shall enforce shoreline performance standards in review of estuarine development proposals. This shall include the access to docks, which are defined as fixed or floating structures providing access to submerged lands. Martin County shall protect the estuarine rivers and the shoreline in order to protect the stability of the estuary, enhance water quality, reduce coastal flooding, and preserve shoreline mangrove communities, where they are not protected by policies established in Chapter 9, Conservation and Open Space.

- (1) *Shoreline protection zone.* The shoreline protection zone shall be defined as all estuarine waters within Martin County and all surface waters of the State that are both hydrologically connected to the estuarine waters and navigable. The shoreline protection zone shall extend 75 feet laterally upland from ~~the~~ mean high water. All new development shall provide a 75 foot shoreline protection zone, extending landward from mean high water, with which there shall be no construction within or reductions to the shoreline protection zone, except as set forth below. Within the waters described above, "wetlands" shall be protected as described in Objective 9.1G.

As used in this Policy, "navigable" shall include the following estuarine river systems in Martin County; St. Lucie River, Indian River and Loxahatchee River, including canals, tributaries and sovereign submerged lands regardless of the existence of a lease, easement or license. For purposes of applying a Shoreline Protection Zone, the term "navigable" shall not include;

- (a) Surface waters of the State that are connected to estuarine waters by a weir or other manmade structure, such as the S-80 lock;
- (b) Ditches, swales and other constructed conveyances that are connected to the estuary by a pipe or structure.

(2) *Mangroves.* The shoreline protection zone mangroves shall include mangrove communities containing red (*Rhizophora mangle*) and black (*Avicennia germinans*) mangroves. White (*Laguncularia racemosa*) and Buttonwood mangroves (*Conocarpus erectus*) may be included in the shoreline protection zone if they are integrally tied to the estuarine environmental system.

(3) *Performance standards.*

(a) *Vegetation.* Any mangrove or wetland vegetative communities that are isolated inland, separated from estuarine waters by non-wetland natural vegetation communities, and outside the shoreline protection zone, shall be preserved and protected in accordance with the provisions of Chapter 9, Conservation and Open Space. ~~But they shall not be subject to the restrictions of the shoreline protection zone of Policy 8.1C.1.~~

The existence of a narrow band of Australian Pine or other berm vegetation such as those created by mosquito impoundment dikes shall not constitute "isolation" as used above. This standard shall not be interpreted as allowing destruction of non-mangrove wetlands landward of the area protected by this standard when such wetlands are protected by other policies and standards in this element.

(b) *Protection of the shoreline protection zone.* Shoreline protection zones and any other designated upland preserve areas shall be protected from encroachment due to construction and/or building maintenance activities. Erosion control devices shall be installed and maintained throughout the duration of any construction activities adjacent to the shoreline protection zone.

New construction proposed for areas adjacent to the shoreline protection zone shall be set back a minimum of 10 feet (or greater if warranted by specific site conditions) for primary structures. Minimum setbacks for accessory structures (pool decks, screen enclosures, driveways, etc.) shall be 5 feet. Construction setbacks to the shoreline protection zone are required unless specifically identified in the exceptions in this Policy.

(c) *Water access.* Development shall not be permitted in the shoreline protection zone, extending landward from mean high water, defined in Policy 8.1C.1(1), except to provide the property owner reasonable access to the water. Water access shall be designed to minimize impacts to mangroves in the shoreline protection zone.

- 1) This development shall be restricted to accessways running perpendicular to the shoreline, and shall be no greater than 12 feet in width.
- 2) For properties designated for marine waterfront commercial use, access to the water may extend through the shoreline protection zone. This extension must be accomplished in a manner that is least disruptive to the existing native vegetation. The access must be accepted by the Growth Management Department. The alterations through the shoreline protection zone should generally not be wider than 60 feet. Where vehicle turnaround and maneuver areas are needed, the area of alteration shall likewise be limited to 60 feet in width as with the approach road, but these areas may be designed to be contiguous with the accessway. The access shall comply with all applicable state and federal regulations. Boat entry and retrieval facilities shall be allowed.
- 3) For properties designated for institutional use on the CGMP Future Land Use Maps, and where the properties are used for public boat ramps, docking, fishing piers and related facilities providing benefits exceeding those lost as a result of shoreline protection zone alterations, an accessway running generally perpendicular to the shoreline shall be no wider than 150 feet at its maximum

point. This exemption shall be used only to the extent necessary to provide access to the water.

- 4) For bridges proposed within public rights-of-way crossing estuarine waters or surface waters of the state, public access shall be allowed by clearing that portion of affected native vegetation, so long as a revegetation plan is reviewed and approved by Martin County and in accordance with applicable state regulations.
 - 5) The Growth Management Director (or designee) shall approve any request for access only after receiving a satisfactory plan of the proposed development. The plan shall demonstrate the need for access and shall designate the property boundaries to scale (including the limits of the shoreline protection zone). The plan shall also demonstrate the reason for the development and other information as may be required by the Land Development Regulations. The decision of the Growth Management Director may be appealed to the Board of County Commissioners.
 - 6) The Board of County Commissioners may approve the request upon a finding of need, together with a finding that the plan represents the minimum reasonable mangrove destruction needed for access.
- (d) *Shoreline uses.* Except as may otherwise be provided herein, no structure shall be permitted within the shoreline protection zone, except docks and bridges in public rights-of-way (waterward of the mangrove line) and elevated walkways, limited to those necessary for the use and enjoyment of the shoreline property owner and County-approved public utilities. Elevated walkways that cross over navigable waters of the state shall be reviewed by the Board of County Commissioners for compliance with the policies of this plan.
- (e) *Existing development.* ~~Authorization may be granted within the landward extent of the shoreline protection zone, no permits shall be as required for maintenance of existing uses or of other uses permitted by this section.~~
- (f) ~~Reserved~~ *Living shorelines.* Encourage shoreline softening in appropriate locations through vegetative projects, submerged vegetation, living shorelines, and other technologies in order to minimize flood damage, stabilize the shore, and maintain adaptability to future sea-level rise conditions. One or more of the following may be considered:
- 1) Expand the use of living shorelines and living breakwater systems as the preferred method of shoreline stabilization and storm surge reduction.
 - 2) Preserve and restore, as feasible, coastal ecosystems to maintain and enhance natural coastal barriers to natural hazards.
 - 3) Where the maintenance and/or alteration of existing hardened shoreline is allowed, the County may require mitigation for environmental impacts. Such mitigation may include but is not restricted to the installation of appropriate living shorelines and other technologies.
 - 4) Encourage the enhancement of existing hardened shorelines by installing oyster reefs, vegetation, and other technologies where appropriate and feasible.
 - 5) On sites with historically erosion prone shorelines, applicants shall ensure that appropriate shoreline protection measures will be taken.

6) Incorporate living shorelines into storm surge reduction projects, as feasible.

- (g) *Management plans.* The landward extent of the shoreline protection zone shall be designated as a Preserve Area, provided the minimum upland preserve area width requirements are met as established, by Policy 9.1G.8. Areas not meeting the minimum preserve area criteria will be sloped, revegetated and maintained free of invasive exotic vegetation to prevent the need for shoreline hardening. A management plan will not be required for a shoreline protection zone that does not meet minimum width requirements. A Preserve Area Management Plan shall not be required on publicly-owned land where a management plan has already been approved by, or required pursuant to an agreement with, the state of Florida.
- (h) *Exceptions.* For the purpose of this element, a lot of record is defined as a lot created prior to April 1, 1982. The following exceptions to Policy 8.1C.1 above are to be recognized:
- 1) For lots of record (~~April 1, 1982~~) with an upland area of one acre or less, the landward extent of the shoreline protection zone shall be reduced to 25 feet. The shoreline protection zone shall not require additional "construction setbacks" from the shoreline protection zone. However, required zoning setbacks from property boundaries shall remain applicable. Erosion control devices shall be installed and maintained throughout the duration of any construction activities adjacent to the shoreline protection zone. The shoreline protection zone shall not be subject to a preserve area management plan (PAMP) unless a PAMP has already been established pursuant to a development order, prior to August 13, 2013. If no native vegetation exists within this zone, there is no requirement to replant with this material.
 - 2) Where preservation areas or shoreline protection areas are identified on a plat approved for single-family residential lots before April 1, 1982, such lots may be developed in accordance with the standards for preservation or shoreline protection as described and dedicated for protection on the approved plat document. Single-family residential lots of record on plats approved after April 1, 1982 may be developed in accordance with the regulations (buffer, transition zone, setback, shoreline protection zone and performance criteria) in effect at the time that the plat was approved.
 - 3) Non-residential lots of record (~~April 1, 1982~~) more than one acre in size with hardened shorelines may reduce the shoreline protection zone from the mean high water line to 50 feet.
 - 4) Existing facilities within the shoreline protection zone may be maintained, rebuilt or reconstructed within the existing foot print.
 - 5) Replacement of existing structures within the shoreline protection zone shall not be subject to a 75 foot shoreline protection zone.
 - 6) Where an existing master plan which is in compliance with its original timetable and has been found to be in compliance with policies in effect at the time of approval, specifies a shoreline protection zone which differs from policies in effect at the time of final plan approval, the shoreline protection zone specified in the approved master plan shall be deemed consistent with this policy.
 - 7) Areas in the shoreline protection zone that have been voluntarily altered after the effective date of the Comprehensive Plan (adopted 1982) by planting wetland vegetation, including mangroves, shall be exempt from additional setbacks from such plantings. Such alterations must be documented; and must

not have been required for remedial purposes or as part of any prior development approval.

- 8) Removal of exotic vegetation or planting of appropriate native vegetation shall be allowed.
- 9) For residential lots of record (~~as of April 1, 1982~~) with an upland area of more than one acre but not more than two acres, the landward extent of the shoreline protection zone may be reduced to less than 75 feet but shall not be reduced to less than 25 feet for either primary or accessory structures. New principal structures on lots shall maintain a shoreline protection zone from mean high water equal to or greater than the average shoreline protection zone of the nearest principal residences on adjacent lots. The average shoreline protection zone of the nearest principal residences on adjacent lots shall be determined by measuring from the point of each of the existing principal residences nearest to mean high water.
- 10) Commercial marinas are water-dependent uses requiring proximity to the water. Commercial marinas that exist as of August 13, 2013 may be reconfigured and redeveloped, as provided below:
 - [a] Impervious surfaces and other encroachments ~~into~~ into the shoreline protection zone may be relocated within the shoreline protection zone provided, there is no net increase in the square footage of impervious surfaces.
 - [b] Planting of native vegetation shall not be required landward of vertical seawalls where no such vegetation exists.
 - [c] Existing commercial marinas shall maintain existing access through the shoreline protection zone for water-dependent uses and this area shall not be limited to the 60-foot-wide access provided for properties designated for marine waterfront commercial use, Policy 8.1C.1.(3) (c) 2).
 1. Where redevelopment of existing commercial marina developments requires relocation of boat entry facilities, access through the shoreline protection zone may be expanded beyond existing access where clear need is demonstrated.
 2. Where redevelopment of existing commercial marina developments is proposed, existing pedestrian access and access for loading between vehicles and vessels within the shoreline protection zone may be maintained.
 - [d] Commercial marinas with existing manmade boat basins or boat "cut-outs" may be allowed to reduce or eliminate the manmade basin provided, there is no impact to wetlands, seagrass or oyster beds. Elimination of a basin shall not permit the creation of upland area waterward of the natural shoreline, prior to man-made impacts.
 - [e] Any redevelopment, as authorized in this section, shall demonstrate that impact to the estuary from stormwater run-off will meet the minimum storm water requirements (in place at the time of the proposed redevelopment) for rate, quantity, quality, and timing of the discharge. Stormwater design shall include consideration of tidal inundation and sea

level rise impacts including the continued functionality of that system over its design life.

- [f] The shoreline protection zone shall not require additional "construction setbacks" from the shoreline protection zone. However, required zoning setbacks from property boundaries shall remain applicable. Erosion control devices shall be installed and maintained throughout the duration of any construction activities adjacent to the shoreline protection zone. The shoreline protection zone shall not be subject to a preserve area management plan (PAMP) unless a PAMP has already been established pursuant to a development order, prior to August 13, 2013.
- 11) The construction of state required public access facilities on Martin County conservation lands shall be allowed. Each project shall be reviewed to ensure that environmental impacts are kept to a minimum.
 - 12) As provided in Chapter 18 for land in a CRA with the Marine Waterfront Commercial or CRA Center future land use designation.

Policy 8.1C.2. Construction activity in estuarine systems and vegetation requirements. Hardening of the shoreline shall not be allowed without a clear demonstration that there is continuing erosion or flood inundation that causes a significant threat to property, infrastructure or assets held privately or publicly that cannot be resolved by nature-based solutions. Hardening shall be a last resort where it can be demonstrated that other ~~options~~ shoreline protection measures which maintain natural vegetation and a sloped shoreline, living shorelines or natural and nature-based features will not provide protection. The circumstances under which shoreline and flood protection measures shall be permitted shall be established by the County Engineer and the Growth Management Director and approved by the Board of County Commissioners. Any criteria and standards must incorporate the following:

- (1) Shorelines shall be stabilized using appropriate native wetland and/or transitional upland vegetation, wherever practicable.
- (2) Except as provided in Policy 8.1C.2.(3), shoreline hardening shall be allowed only when there is a clear demonstration that there is continuing erosion or flood inundation that causes a serious (significant) threat to life or property in light of the circumstances listed below, except as provided in Policy 8.1C.1.(3)(c)2 regarding boat entry/retrieval facilities and boat ramps. Native plant revegetation in combination with riprap materials, pervious interlocking brick systems, filter mats, living shorelines or natural and nature-based features and other similar ~~stabilization~~ shoreline and flood protection measures methods shall be used in lieu of, or in combination with ~~vertical~~ seawalls or retaining walls as circumstances warrant.

~~Vertical seawalls~~ Seawalls may be allowed to stabilize or harden a shoreline only when the Martin County ~~Engineering~~ Public Works Department, in coordination with the Martin County Growth Management Department, determines that significant erosion or flood inundation exists and no other protection method is suitable to the specific and unique conditions of the site considering flooding nuisance abatement and future conditions including increase tidal flooding and sea level rise. An example would be ~~a significantly eroding shoreline that drops so sharply that no suitable bank exists for placement of native plants, riprap or other materials used in similar stabilization methods.~~ persistent seasonal tidal flooding that impacts or poses a risk to the property. The lack of a suitable alternative to ~~vertical~~ seawalls must be field checked, reviewed and verified by Martin County prior to issuance of a building permit for construction of a ~~vertical~~ seawall. In the instance a seawall is permitted, the design shall incorporate native plant revegetation, rip rap materials, pervious interlocking brick systems, filter mats, living shorelines or natural and nature-based features to the extent practicable as determined by the Martin

County Public Works Department, in coordination with Martin County Growth Management Department.

- (3) ~~Bulkheads or vertical~~ Building permits for seawalls or retaining walls may be allowed under the following circumstances:
- (a) The lot ~~was~~ is a residential lot of record ~~as of April 1, 1982;~~ and
 - (b) The lot fronts on a manmade canal created prior to April 1, 1982; and
 - (c) At least 75 percent of the canal lots of the subdivision or plat have permitted bulkheads or vertical seawalls that existed as of January 1, 2000; and
 - (d) The lot was undeveloped as of January 1, 2000.
- (4) Shoreline hardening may be approved following extreme storm events that damage the estuarine shoreline. Where storm surge, wave action, tidal inundation, freshwater runoff, or some combination of impacts cause serious (significant) threat to life or property, the County Engineer may approve shoreline hardening, regardless of the presence of a shoreline protection zone or preservation area identified on a site plan or a recorded plat. A review for shoreline hardening shall be based upon the best available data at the time and gives consideration to environmental solutions, future tidal inundation, and any documented loss of shoreline.
- (45) In drafting the appropriate criteria and standards noted in Policy 8.1C.2(2) the above requirements must be met. In addition, the following factors, if applicable, shall be taken into consideration:
- (a) Existing shoreline protection trends as established within the immediate area where the shoreline protection measure is proposed;
 - (b) Special problems and opportunities associated with existing manmade canals;
 - (c) Invasion and domination of the native shoreline vegetation by undesirable exotic vegetation, including Australian Pine, Melaleuca and Brazilian Pepper, and
 - (d) Unique water-dependent requirements of existing and proposed marine waterfront commercial uses.
 - (e) There is a demonstrated tidal inundation or related impact of sea level rise that is a threat to life or public or private property, infrastructure or assets or that the shoreline protection measure is contemplated to be in service for a significant period of time and should be designed to take into consideration projected tidal inundation or sea level rise impacts.
- (56) Native indigenous vegetation shall be preserved within and adjacent to the estuary, including mangrove and upland vegetation, especially on slopes and bluffs. Such vegetation contributes to marine productivity and water quality; offers protection from erosion and flooding; and contributes to the natural soil building process. Vegetative and landscaping requirements should emphasize the importance of planting indigenous coastal vegetation to minimize irrigation.
- (67) All new development requiring submission of plats or site plans shall include sufficient preservation area to protect natural banks and prevent the necessity for future shoreline hardening. Where banks have been previously cleared or filled and are not sufficiently stabilized, they shall be resloped (if necessary) and revegetated with appropriate native vegetation. Living shorelines and natural and nature-based features (which can include upland and submerged vegetation along with breakwaters and/or oyster recruitment material) have been shown to aid shoreline stabilization and protection, enhance environmental function, and ~~are responsive to~~ mitigate the impacts of tidal inundation and sea level rise. The efficacy of living shorelines,
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natural and nature-based features as an aid to shoreline stabilization and protection should be evaluated in all instances.

- (78) In all cases where shoreline hardening is allowed, revegetation (including consideration of incorporating living shorelines, natural and nature-based features) shall be required with native shoreline vegetation appropriate to tidal and upland sections of the shoreline. This vegetation shall be protected and maintained in accordance with a PAMP approved by the Martin County Growth Management Department, where required. This requirement is intended to provide scenic buffering along the waterway, provide shoreline protection, and to improve and/or maintain the biological functions of the shoreline projection zone.
- (89) For residential lots of record, retaining walls for construction of primary or accessory structures located landward of the shoreline protection zone (Policy 8.1C.1(1)) can be placed up to five feet waterward of the shoreline protection zone line. The if-slopes waterward of the retaining wall shall be ~~are to~~ be maintained and the ~~transition zone~~ remainder of the shoreline protection zone shall be ~~is~~ replanted in native vegetation compatible with elevations and proximity to water; and, provided that all zoning district setback criteria are met.

Policy 8.1C.3. Alterations to natural tidal flushing patterns and circulation of estuarine waters. Martin County shall not permit significant alteration of tidal flushing and circulation patterns by development without demonstrated proof by the applicant that such alteration will not have a negative impact on the natural environment.

The phrase "significant alteration of tidal flushing and circulation patterns" is defined as an alteration that would:

- (1) Reduce water quality;
- (2) Cause erosion;
- (3) Reduce nutrient input into estuarine system (mangrove detrital matter);
- (4) Cause potential for saltwater intrusion into groundwater;
- (5) Cause siltation or shoaling;
- (6) Prevent or restrict tidal flushing.

Policy 8.1C.4. Prohibition of canals. Martin County shall prohibit the construction of canals, as defined in Chapter 2, Definitions.

Policy 8.1C.5. Coordination of development along the estuarine shoreline. Martin County shall coordinate review of estuarine shoreline development with appropriate federal, state, regional and local agencies to prevent irreparable or irretrievable loss of natural coastal resources. Intergovernmental coordination shall also provide cost-effective use of experts in marine biology, coastal engineering and soil conservation. To this end, as appropriate, the County shall coordinate with public agencies, including the U.S. Department of the Interior, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, U.S. Soil Conservation Service and U.S. Fish and Wildlife Service, the FDEP and Florida Fish and Wildlife Conservation Commission, the SFWMD, Treasure Coast Regional Planning Council, and potentially affected local governments.

Policy 8.1C.6. Technical assistance on estuary issues. Martin County shall make environmental education and management an integral part of park and recreation policies and programs. The County shall provide general information and referral services to citizens interested in the impacts of Martin County's physical development on natural resources and resource conservation. To this end, the Board of County Commissioners shall encourage the continued operation and maintenance of the Jensen Beach Environmental Studies Center and other similar facilities.

Policy 8.1C.7. Use of innovative techniques to preserve estuary functions. The County shall monitor new and effective growth management and shoreline protection techniques suitable to local conditions for preserving the value and function of the estuary system. The County shall evaluate the impact of growth management techniques on public and private property rights to assure equitable treatment of these rights. Effective new techniques shall be adopted and included in the County's implementation program for managing the estuary system as such techniques are identified and found cost-effective for local adaptation. Innovative management techniques such as transfer of development rights, tax incentives, public purchase or lease of development rights, or other innovative land and water management techniques shall be considered as approaches for resolving property rights issues equitably.

Policy 8.1C.8. Marine grassbeds and tidal marsh areas. Marine grassbeds and tidal marsh areas shall not be modified, except as permitted by local, state and federal regulations. Since these areas are sensitive to increased turbidity and other forms of pollution, water runoff and the introduction of nutrients shall be consistent with the historic requirements of the natural system. Any additions of contaminants, including excessive nutrients, shall be minimized, and the cumulative impact of proposed alterations shall be monitored through continued effective water quality management.

Access walkways may be permitted provided they are constructed and located so as to allow for continued propagation and expansion of existing seagrass beds.

Policy 8.1C.9. Mangrove protection. The County shall continue to actively enforce regulations to protect mangroves. Any modification to existing regulations must effectively address minimum criteria, standards and any adverse environmental impacts.

Objective 8.1D. To develop and implement criteria for prioritizing water-dependent and water-related land use activities within the most appropriate identified waterfront land use areas, recognizing that public-use boat ramps and marinas provide a significant public benefit by allowing the citizens of Martin County to have adequate access to public waters.

Policy 8.1D.1. Priority of waterfront land uses. The priority ranking of waterfront land use activities shall be:

- (1) Public boat ramps and public use marinas;
- (2) Other water-oriented recreation, including the development of public access to the water through county owned conservation lands;
- (3) Commercial fishing and sport fishing;
- (4) Water-dependent industries or utilities;
- (5) Targeted businesses that are water-dependent or water-related;
- (6) Water-related uses; and
- (7) Residential with marinas or other water-oriented recreation uses.

Policy 8.1D.2. Siting criteria for commercial marinas and multi-slip docking facilities. The following criteria shall be used by Martin County in reviewing site plans for all commercial marina projects and multi-slip docking facilities with more than 15 boat slips. These criteria shall be evaluated prior to the adoption of any new or revised Land Development Regulations. The design of such facilities and support facilities shall include consideration of future flood risk and/or tidal inundation contemplated for the useful life of the facility.

- (1) *Proximity and access to population centers and navigable water bodies.* Preference shall be given to facilities that are within reasonable traveling distance of significant populations of commercial marina users. Preference shall also be given to sites on large navigable water bodies that require

minimal site alterations. ~~And, and~~ preference shall be given where access can be obtained from existing or proposed major roadways.

(2) *Land use (existing and permitted).*

- (a) *Existing zoning:* Marinas shall not be sited in areas where Martin County zoning regulations specifically prohibit such use.
- (b) *Comprehensive plan:* Commercial marinas shall be located in areas designated in the approved CGMP for waterfront commercial land uses. Large multislip docking facilities may be located in areas of residential development in accordance with the locational criteria in this element.
- (c) *Existing use:* Preference shall be given to sites that have already been legally disturbed over sites requiring clearing of sensitive natural coastal habitat.
- (d) *Surrounding land use or zoning:* Preference shall be given to sites that do not conflict with the permitted land uses or zoning of adjacent properties.

(3) *Support services (utilities and public facilities).*

- (a) *Adequate upland and access:* Commercial marinas proposed on publicly owned submerged lands must demonstrate they have sufficient upland area to accommodate all needed and proposed utilities and commercial marina support facilities. If necessary, on-site utilities are not to be provided (i.e., sewage, electricity, etc.), and adequate access to such utilities must be demonstrated. The utilities/treatment requirements, off-site or on-site, must be consistent with the provisions of Chapter 10, Sanitary Sewer Services, and Chapter 11, Potable Water Services/Water Supply Plan Elements.
- (b) *Adequate traffic capacity:* Applicants must demonstrate that proposed on-site driveways and parking areas are consistent with the applicable Land Development Regulations. The County shall encourage the development of standards for pervious parking areas within the Land Development Regulations.
- (c) *Sewage capacity:* All applicants for new or expanded commercial marina construction permits must provide adequate sewage handling capacity in accordance with state and County statutes for their projected number of clients. Sewage handling capacity may be in the form of on-site pump-out or connection to a public treatment plant. All commercial marinas with fueling facilities must provide pump-out facilities at each fueling dock or location. Commercial marinas that provide for live-aboard or overnight transient traffic must provide sewage treatment facilities adequate to comply with requirements for sanitation facilities.
- (d) *Spill containment and hazardous waste handling procedures:* All applicants for site plan approval shall provide a documented plan in conjunction with submittal materials detailing their capacity to mitigate spills of petroleum products or other hazardous waste materials found within the boundaries of their property. The mitigation shall involve construction practices and/or the ability to rapidly respond to, clean up and dispose of any spills. The applicant shall submit a plan for approval that documents how he or she plans to valve off, secure, close down and/or remove any hazardous materials from the site prior to the landfall of a hurricane, and to secure these materials in a reasonably secure environment.

Applicants must make every effort to construct the site to limit storm damage linked to spills and hazardous waste. Regarding fueling, sewerage pump-out and any other hazardous chemical systems and infrastructure, these efforts shall include hardening, moving to the landward extent, ~~or~~ constructing below the area of erosion/scour probabilities and accounting for future flood risk from tidal inundation and seal level rise

for the useful life of the project. The applicant must also provide an approved plan for storing, handling and eventual disposal of all hazardous or toxic chemicals or waste products (such as oil sludge, paints, fiberglass resins, thinners and cleaners) that may accumulate in the normal operation of the commercial marina. Lists of chemical compounds and waste products considered hazardous or toxic by Martin County may be obtained from the Martin County Solid Waste Department and should be supplemented by review of lists of such chemicals and products from the FDEP and U.S. Environmental Protection Agency.

(4) *Environmental constraints.*

(a) *Sensitive areas:*

- 1) Marinas, public or private, shall not be allowed in portions of the Loxahatchee River federally designated as wild and scenic.
 - 2) Any applicant seeking a development order for a commercial marina or multislip docking facility in one of the following water bodies shall demonstrate to the satisfaction of Martin County that the proposal is not contrary to the public interest and would have no significant adverse environmental impacts on water bodies containing one of the following designation(s):
 - [a] Aquatic preserves;
 - [b] Outstanding Florida waters;
 - [c] Class 1 waters;
 - [d] Marine sanctuaries;
 - [e] Estuarine sanctuaries;
 - [f] Manatee sanctuaries or areas of critical manatee habitat;
 - [g] Areas approved by the FDEP for shellfish harvesting;
 - [h] Other highly productive or unique coastal habitats as determined by the FDEP based on vegetative communities or wildlife species present;
 - [i] Areas designated by the Florida Fish and Wildlife Conservation Commission as most sensitive to oil spills on the Environmental Sensitivity Index Maps; and
 - [j] Nonchannelized areas of the south fork of the St. Lucie River that have been selected for further study by the County.
- (b) *Water quality:* Maintenance of water quality standards provided in Florida Statutes Chapter 403 shall be a condition of approval of any new marina facility or expansion of any existing marina facility. To ensure compliance, the applicant shall maintain a water monitoring program approved by the FDEP or SFWMD and the County shall be copied on all correspondence related to water quality.
- (c) *Water depth:* Marina facilities shall only be approved in areas having adequate water depth to accommodate the proposed boat use. A minimum water depth of four feet mean low water shall be required. Greater depths shall be required for facilities proposing to accommodate vessels having drafts of greater than three feet. These depths will also be required in all natural or created navigation channels connecting the proposed facilities to major, federally maintained navigation channels, inlets or deep water areas.

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- (d) *Access dredging:* Proposed marina or docking facilities that require minimal or no dredging shall be given preferential treatment. In instances where dredging is required to create or maintain access channels, the applicant shall develop a plan that will minimize both the initial dredging and any subsequent maintenance dredging required. This section does not restrict maintenance dredging by the U.S. Army Corps of Engineers or any other entity required to maintain improvement in any existing navigable or residential channels.
- (e) *Erosion prevention:* On sites historically prone to erosion along the St. Lucie canal, marina applicants shall be required to (1) adequately stabilize the shoreline within the bounds of their property and (2) demonstrate that the projected increase in boat traffic for their marina will be managed so as to avoid aggravating existing problems along the waterway. These requirements do not allow the construction of vertical seawalls, except where necessary to allow access for trailers, forklifts or travelifts at access points to the water.
- (f) *Environmental restoration:* In cases where environmental degradation occurs for any reason, an applicant shall develop a restoration or mitigation plan under Florida Statutes Chapter 403 and Martin County's mangrove and estuarine protection requirements. This plan shall be considered along with the application for development approval. Such mitigation and restoration plans shall be reviewed by Martin County in terms of the following criteria:
- 1) Type of unavoidable environmental or resource degradation involved;
 - 2) Suitability of the proposed plan to compensate for the anticipated public resource loss;
 - 3) Adequacy of existing and proposed restoration technology to accomplish the stated objectives of the plan; and
 - 4) Time-frame in which the restored habitat will reach a functional parity with the habitat to be sacrificed.

In certain cases where the applicant has not developed a mitigation or restoration plan as part of the permit application and the degradation of public resources appears likely, a restoration or mitigation plan may be developed by appropriate local and state agencies and made a requirement for issuance of the requested permit.

- (g) *Impacts on archaeological or historic resources:* Marina facilities shall be approved only after the applicant has demonstrated they will not result in any adverse effect on any archaeological or historical resource, as defined by the Martin County CGMP and the Florida Department of State. In the event a previously undiscovered historical or archaeological site is discovered during construction of a marina project, construction will stop until knowledgeable experts can be brought in to evaluate the discovered resource and make provisions for its removal or preservation in accordance with the policies in Section 16.4 of the CGMP.
- (h) *Hurricane evacuation and protection:* Applicants for permits for new or expanded marina facilities shall document sufficient capacity to provide maximum practicable protection from the effects of hurricane winds, wave action and associated water surge for the contents and property of their proposed clients while they are on the premises. All proposed structures shall meet the coastal zone construction standards of Martin County and the State of Florida.
- (i) *Access markers:* As determined by the FFWCC, all proposed marinas accessing major government-maintained waterways shall provide access channel markers showing speed limits, depth restrictions and other pertinent information where appropriate.
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- (j) *Public access*: Preference shall be given to marina applications in which all proposed facilities, docks, restaurants, shops, etc., will be open to the general public on a first-come, first-served basis.
 - (k) *Flushing*: Proposed marina waters shall have good flushing characteristics with adjacent water bodies in accordance with state and federal permitting standards.
 - (l) *Critical species protection*: Rare, threatened or endangered flora and fauna shall not be adversely affected by a potential marina use.
 - (m) *Vegetative cover*: A proposed marina use shall not adversely affect specific critical habitat supporting rare, threatened or endangered species of special concern.
 - (n) *Seagrass beds*: Commercial marinas and multislip docking facilities shall not be permitted to be constructed over seagrass beds, except for access walkways to the dock(s). The access walkways shall be constructed and located so as to allow for continued propagation and expansion of seagrass beds.
 - (o) *Manatees*: Commercial marinas and multi-slip docking facilities shall be reviewed for compliance and consistency with the criteria in the county's Manatee Protection Plan and Boat Facility Siting Plan, as adopted in this element.

~~*Policy 8.1D.3. City/County coordination.* Martin County shall cooperate and coordinate with the City of Stuart on marina siting criteria so that the County and the City have effective, consistent criteria in their development and site plan procedures for marina projects.~~

Policy 8.1D.3. City/County coordination. Martin County shall cooperate and coordinate with the City of Stuart on marina siting criteria so that the County and the City have effective, consistent criteria in their development and site plan procedures for marina projects.

Policy 8.1D.4. Boat ramp siting criteria. Martin County shall use the following criteria in reviewing developments and site plans for all boat ramp projects. The design of such facilities and support facilities shall include consideration of future flood risk and/or tidal inundation contemplated for the useful life of the facility:

- (1) *Utilization and public demand.* The size and location of boat ramps throughout Martin County should be determined based on population centers and projected needs. Proposed boat ramps should be near significant population centers and offer access to large navigable bodies of water.
 - (2) *Land use (existing and permitted).*
 - (a) *Comprehensive plan*: Public boat ramps shall be located in areas delineated for institutional use on the future land use maps of the CGMP. Private boat ramps may be located within other land use designations if a need for such facilities can be demonstrated.
 - (b) *Existing use*: Preference shall be given to sites that have already been legally disturbed.
 - (3) *Support facilities.*
 - (a) *Non-water-related facilities*: All boat ramp facilities, such as restrooms, trash bins, pump-out stations and parking, shall be located in upland areas and shall comply with all applicable CGMP policies.
 - (b) *Adequate traffic capacity*: Boat ramps shall require public road access adequate for their intended capacity, and adequate upland areas for all required facilities associated with the proposed ramp.
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- (c) *Sewage capacity*: Larger regional boat ramp facilities shall provide adequate sewage disposal. Such facilities shall consist of restrooms, pump-out facilities and dumping stations, where appropriate.
 - (4) *Environmental constraints*.
 - (a) *Sensitive areas*:
 - 1) Boat ramps shall not be allowed in portions of the Loxahatchee River federally designated as wild and scenic.
 - 2) In the following sensitive areas, the applicant shall be required to demonstrate to the satisfaction of Martin County that the proposed boat ramp is not contrary to the public interest, does not have any significant adverse environmental impacts and that a more suitable site is not available:
 - [a] Aquatic preserves;
 - [b] Outstanding Florida waterways;
 - [c] Marine sanctuaries;
 - [d] Estuarine sanctuaries;
 - [e] Manatee sanctuaries or areas of critical manatee habitat; and
 - [f] Other highly productive or unique habitats.
 - (b) *Water depth*: Boat ramps shall be approved only in areas having sufficient water depths to accommodate the type of boats projected to be used at the site. Water depth restrictions shall be clearly posted at all boat ramps.
 - (c) *Access dredging*: Preference shall be given to sites where no dredging is required. Boat ramps may be permitted in locations requiring only maintenance dredging.
 - (d) *Erosion prevention*: Boat ramps located in areas historically prone to shoreline erosion may require a shoreline stabilization plan as part of their permitting procedure. Such plans will be aimed at ensuring that erosion is not aggravated either by the boat ramp or by the anticipated increase in boating it causes.
 - (e) *Access markers*: As authorized by the FFWCC, channel markers showing the locations and depth limits of all County-maintained boat ramps and connecting channels shall be placed along the major adjacent waterway.
 - (f) *Surface water drainage*: Surface water drainage in the area of boat ramps should be designed to prevent siltation and poor quality runoff.

Objective 8.1E. To develop procedures and standards to protect, enhance and restore beach and dune systems and minimize construction-related impacts on the Atlantic Coast.

Policy 8.1E.1. Barrier island restrictions. The County shall continue to actively enforce development restrictions on the barrier island (Hutchinson Island) through:

- (1) Density limitations that restrict development on vacant uncommitted properties to single-family units;
 - (2) Beach/dune protection provisions that prohibit development in the dune preservation zone except for approved shore protection, beach restoration, dune crossovers or activities related to beach safety; and
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- (3) Site plan design standards applying to all developments that require site plan approval and that specify provisions for open space, buffer areas, minimum building separations, maximum height of structures and requirements for setbacks, park and recreation, transportation, public safety and stormwater systems. Minimum elevations shall be established in order to protect property and public infrastructure from flood risk from high tides events, storm surge, flash floods, stormwater runoff, and related impacts of sea level rise.

Policy 8.1E.2. Coastal construction code. The County shall ~~examine any changes to the Florida Department of Economic Opportunity's Model Coastal Construction Code and modify regulations on coastal construction, where necessary, to be consistent with established state requirements in Chapter 161, Florida Statutes.~~ Any construction activities seaward of the coastal construction control lines established pursuant to s. 161.053 must be consistent with Chapter 161.

Policy 8.1E.3. Enforcement of existing regulations. Martin County shall enforce existing regulations regarding protection of sea turtles and the beach dune environment in accordance with the special barrier island component of the Land Development Regulations.

Policy 8.1E.4. Cumulative impacts on beach/dune systems. Land use decisions shall consider the specific and cumulative efforts of development and redevelopment activities on beach and dune systems. Existing barrier island regulations shall guide developments affecting beach and dune systems, as specified in Coastal Management Policies 8.1E.1 and 8.1E.3.

Policy 8.1E.5. Shoreline preservation and restoration. In collaboration with the U.S. Army Corps of Engineers, FDEP and other interested parties, the County shall continue to monitor and evaluate major factors, including sea level rise and tidal inundation, causing shoreline erosion and measures to prevent erosion and preserve and restore shorelines.

Policy 8.1E.6. Erosion control structures. Martin County shall stabilize the shoreline by protecting, enhancing and preserving indigenous vegetation that contributes to natural dune building. Therefore, shoreline erosion control measures shall be limited to techniques that do not interfere with natural beach and dune systems and do not adversely affect adjacent public or private properties; sea turtle nesting and hatching activities; or coastal natural resources such as Sabellariid worm reefs. Structural means (i.e., permabags, seawalls, etc.) may be used only if:

- (1) Nonstructural means are not suitable to the specific and unique conditions of the site; and
- (2) Structural means do not negatively affect adjacent public or private properties by creating more erosion potential or deteriorating land values.
- (3) Existing erosion control structures that are damaged or destroyed may be repaired or replaced only with structures that are compatible with this policy and found to be necessary to protect existing, previously approved structures.

Policy 8.1E.7. Beach and dune protection. Motorized vehicles shall be prohibited from operating on the beach and primary dune system, except in an emergency or as approved by special permit from the FDEP and the Martin County Board of Commissioners.

Policy 8.1E.8. Landscaping materials permitted on primary dune. All landscaping material used on the primary dune system shall be native indigenous plants adapted to the site's soil and climatic conditions. Native plants selected must also function to stabilize the dune and trap wind-blown sand. On other portions of barrier islands at least half of all landscaped areas shall be planted with native or drought-tolerant plants adapted to the site's soil and climatic conditions. To the maximum extent feasible, compliance with these requirements should be achieved by preserving existing native plant material.

Policy 8.1E.9. Clearing restrictions. Martin County shall restrict the clearing of beach and dune vegetation and excavation of dune materials in the dune preservation zone.

Policy 8.1E.10. Floodproofing of sanitary sewer systems. New sanitary sewer facilities in the hurricane vulnerability zone shall be floodproofed to prevent raw sewage from leaking into sanitary sewer during floods related to tidal inundation or storm events. New septic tanks shall be fitted with backflow preventers.

Policy 8.1E.11. Designation of the St. Lucie near-shore reef as a national marine sanctuary. Martin County shall coordinate with the FDEP, Federal Marine Sanctuary Program and Treasure Coast Regional Planning Council to evaluate the designation of the St. Lucie near-shore reefs, located at Bathtub Reef Park, as a national marine sanctuary. Evaluation of the designation should include the maintenance of a protective dune to safeguard MacArthur Boulevard as an emergency evacuation route, underground utilities extending into Sailfish Point, park infrastructure and continued reasonable use of Bathtub Reef Park. The County should coordinate with FDEP to establish a conservation and restoration plan and assist in its implementation.

Policy 8.1E.12. Beach renourishment. The County shall continue to coordinate all applications for beach renourishment with applicable federal, state and regional agencies. It shall also cooperate with other local sponsors in a review and comment function for beach renourishment proposals that may have an effect on the resources of Martin County.

Policy 8.1E.13. Beach renourishment impacts. The County shall only undertake a beach renourishment project where it is documented that the project will not (1) diminish the extent and quality of sea turtle nesting habitat or (2) result in excessive turbidity and sedimentation in the near-shore reef formations.

Policy 8.1E.14. Beach renourishment project standards. Beach renourishment projects shall meet the following level-of-service standards to the maximum extent practicable:

- (1) Beach fill must include a protective berm high enough to prevent flooding by a 10-year storm to the maximum extent practicable considering future conditions for resilience; and
- (2) Beach renourishment projects shall have a design life of at least five years or as feasible based on environmental conditions.

Objective 8.1F. To acquire and maintain sufficient beach and shoreline access areas to meet projected public need in Martin County.

Policy 8.1F.1. Cove Road Park. The County has established a small park at the eastern terminus of Cove Road. Additional improvements to the site that would facilitate access to St. Lucie Inlet State Park are subject to approval by the Board of County Commissioners.

Policy 8.1F.2. Parking, support facilities and maintenance. Access, parking and support facilities shall be developed and maintained for all County-owned shoreline recreation areas. Maintenance shall include regular trash collection and beach cleanup.

Policy 8.1F.3. Shoreline improvement projects. Publicly funded projects that improve, change or in some way support shorefront development shall provide for public access to the shoreline, as well as the necessary support facilities and services, such as boardwalks, beach/dune walkovers, parking lots, restrooms and trash collection.

Policy 8.1F.4. Enforcement of public access provisions. Martin County shall continue to enforce the public access provisions of the 1985 Coastal Zone Protection Act. A development may alter an access point only if:

- (1) The alteration is of similar quality and convenience;
 - (2) The alteration is consistent with this element and all other applicable regulations of the Martin County Code of Ordinances and elements of the CGMP; and
 - (3) The alteration is approved by the local government.
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Policy 8.1F.5. Acquisition of waterfront parcels. The County shall continue the program of acquiring and developing waterfront resource-based parcels with public access through the Martin County Land Acquisition Selection Program in conjunction with other federal, state and regional agencies; specifically, the Federal Bureau of Land Management's Land and Water Conservation Funds Grants, the SFWMD's State Land Acquisition Program and the Florida Inland Navigation District.

Policy 8.1F.6. Public access acquisition. When considering parcels for acquisition along the ocean or on estuarine waters, parcels with public road right-of-way access shall be ranked higher than parcels without public road right-of-way access.

Policy 8.1F.7. Beach access in Southern Martin County. Martin County shall continue to support programs and activities to increase beach access south of the St. Lucie Inlet. Martin County shall continue to work with the FDEP and the staff with the St. Lucie Inlet State Park to increase access to the State Park.

Objective 8.1G. To prevent loss of historic resources on County-owned property and protect, preserve or use historic resources on private property in a manner that will allow their continued existence, in accordance with Chapter 16, Arts, Culture and Historic Preservation.

Goal 8.2. To protect human life and capital facilities from the destructive effects of hurricanes and other natural disasters by limiting public expenditures and development activities in identified coastal high-hazard areas, providing for safe and effective emergency evacuation and establishing procedures for post-disaster redevelopment.

Storm surge evacuation zones A thru E were introduced in Section 8.2 of this chapter as an improved method of describing storm impacts and issuing evacuation orders. Storm surge is not directly proportional to the storm's Saffir-Simpson hurricane wind scale. The evacuation zones A-E more accurately describe the areas requiring evacuation based on storm surge models provided by the National Hurricane Center. Objective 8.2B will reference storm surge evacuation zones A-E. However, Chapter 163.3178(2)(h), Florida Statutes, continues to require plan policies based on storm events measured on the Saffir-Simpson hurricane wind scale, Categories 1-5.

Category 1, Hurricane. Sustained winds 74-95 miles per hour or 119-153 kilometers per hour. Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.

Category 2, Hurricane. Sustained winds 96-110 miles per hour or 154-177 kilometers per hour. Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.

Category 3, Hurricane. Sustained winds 111-129 miles per hour or 178-208 kilometers per hour. Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.

Category 4, Hurricane. Sustained winds 130-156 miles per hour or 209-251 kilometers per hour. Catastrophic damage will occur: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Category 5, Hurricane. Sustained winds 157 miles per hour or higher. Sustained winds 252 kilometers per hour or higher, Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Objective 8.2A. To limit public expenditures in the designated coastal high-hazard area to necessary public services.

Policy 8.2A.1. Coastal high-hazard area. The County shall use best practices to reduce flood risk in coastal areas which results from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise. The Florida coastal high-hazard area is the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. The Flood Insurance Rate Maps (FIRM) depiction of the coastal high-hazard area (also known as the V, V1-30, and VE Zones) is the area subject to high velocity water including waves and is mapped with base flood elevations that reflect the combined influence of stillwater flood elevations, primary frontal dunes and wave effects 3 feet or greater. All development will be subject to review using both the SLOSH coastal high-hazard area and the FIRM coastal high-hazard area methodologies, with the most restrictive measures from both methodologies prevailing, Martin County shall:

- (1) Be consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R. part 60.
- (2) Reduce losses due to flooding and claims made under flood insurance policies issued in the county.
- (3) Participate in the National Flood Insurance Program Community Rating System administered by the Federal Emergency Management Agency to achieve flood insurance premium discounts for their residents.

Policy 8.2A.2. Limitation of public expenditures. To limit public expenditures in the coastal high-hazard area, Martin County shall:

- (1) Continue to approve only detached single-family development in residentially designated parts of the Hutchinson Island area, not exceeding two units per gross upland acre;
- (2) Supply water and/or sanitary sewer services necessary to correct deficient systems that are polluting the Indian River Lagoon or other environmentally sensitive water bodies. Septic tanks shall only be approved on lots one-third acre (14,520 square feet) or larger, provided they are served by central water and comply with Florida Administrative Code requirements for septic tanks;
- (3) Provide services necessary to ensure public access to beaches and/or other public waterfront recreation/conservation areas;
- (4) Provide services needed to minimize evacuation times during emergencies as specified in Goal 8.2; and/or
- (5) Provide services that restore or enhance natural resources.
- (6) Provide services that reduce flood risk from high tides events, storm surge, flash floods, stormwater runoff, and related impacts of sea level rise and provide resilience to future potential threats.

Policy 8.2A.3. Public services. Necessary public services are defined as:

- (1) Water and/or sanitary sewer services necessary to correct deficient systems that are polluting the Indian River Lagoon or other environmentally sensitive water bodies;
 - (2) Services necessary to ensure public access to beaches and/or other public waterfront recreation/conservation areas;
 - (3) Services needed to minimize evacuation times during emergencies; and/or
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(4) Services that restore or enhance natural resources.

(5) Services that reduce flood risk from high tides events, storm surge, flash floods, stormwater runoff, and related impacts of sea level rise and provide resilience to future potential threats.

Policy 8.2A.4. Infrastructure or service expansion restrictions. Public funds shall not be used for infrastructure or service expansion or improvements to areas designated as coastal high-hazard areas unless such funds are necessary to provide:

- (1) Services to existing subdivisions (structures approved for development prior to the adoption of this policy);
- (2) Adequate evacuation in the event of an emergency;
- (3) Recreational needs and other appropriate water-dependent and water-related uses;
- (4) Support to public and private land development specifically designed to minimize storm hazards as deemed necessary for such public facilities by the Land Development Regulations.
- (5) Services that reduce flood risk from high tides events, storm surge, flash floods, stormwater runoff, and related impacts of sea level rise and provide resilience to future potential threats.

Policy 8.2A.5. Expansion of Barrier Island Ordinance. Martin County may investigate using development restrictions in other parts of the coastal high-hazard area just as the barrier island regulations restrict development on Hutchinson Island.

Policy 8.2A.6. Relocation of infrastructure. Martin County shall consider relocating infrastructure outside the coastal high-hazard area when funding opportunities occur. ~~No such relocation shall reduce the level of service standard for existing residents.~~

Objective 8.2B. To encourage low-density land uses in the coastal high-hazard area in order to direct population concentrations away from this area.

Policy 8.2B.1. Coordination of Land Development Regulations and infrastructure improvements. Land Development Regulations and limits on urban infrastructure improvements shall both be used to limit development on coastal barrier islands and other high-hazard coastal areas to prevent a concentration of population or excessive expenditure of public and private funds.

Policy 8.2B.2. Barrier island development regulations. Martin County shall continue to enforce the barrier island development regulations, which address, at a minimum:

- (1) Maximum residential densities;
- (2) Wetland preservation;
- (3) Shoreline protection;
- (4) Flood damage prevention;
- (5) Endangered species habitat protection;
- (6) Potable water and wastewater requirements;
- (7) Site design standards;
- (8) Recreation and open space standards;
- (9) Transportation standards;
- (10) Public safety standards; ~~and~~
- (11) Stormwater quality standards;

(12) Exposure to future flood risk and tidal inundation associated with sea level rise.

Policy 8.2B.3. Acquisition of coastal high-hazard area lands. Martin County shall identify funding sources for buying land in the Category 1, 2 and 3 hurricane surge areas (as established by the most recent application of the SLOSH model) for public access, conservation or open space.

Policy 8.2B.4. Construction restrictions in hurricane surge areas. Martin County shall continue its existing limits on construction in the Category 1, 2 and 3 hurricane surge areas as established by the most recent application of the SLOSH model.

Objective 8.2C. Hurricane evacuation. To protect the public safety during emergency evacuation by maintaining or reducing emergency evacuation clearance time and maintaining an adequate emergency evacuation roadway system.

Policy 8.2C.1. Emergency evacuation plan. Martin County shall maintain an in-County emergency evacuation clearance time of ~~13~~26.5 hours for a Category 5 hurricane as documented in the Treasure Coast Regional Hurricane Evacuation Study Update ~~2021~~2016.

Policy 8.2C.2. New development evacuation plans. All new development proposed within the Category 1, 3 and 5 storm surge areas shall include detailed plans and procedures for evacuation in the event of a hurricane. Hurricane storm surge areas shall be mapped and updated using the most recent application of the SLOSH model.

Policy 8.2C.3. Emergency evacuation mitigation requirements. All new developments projected to increase emergency evacuation clearance times above the County's adopted emergency evacuation clearance time shall mitigate their impacts fully prior to issuance of certificates of occupancy.

Policy 8.2C.4. Emergency shelter space requirements. All residential developments vulnerable to coastal flooding shall provide emergency shelter space to accommodate the 25 percent of development residents who are expected to seek shelter locally, or as technical studies find appropriate. The requirement to provide emergency shelter space is in addition to the emergency evacuation mitigation requirements of Policy 8.2C.3. Emergency shelter space shall be allocated at 20 square feet per person, or as recommended by the guidelines for hurricane evacuation shelter selection (ARC 4496) and the State of Florida Model Hurricane Evacuation Shelter Selection guidelines.

New mobile/manufactured home developments outside areas vulnerable to flooding shall provide shelter space as required above that meets established requirements for wind load, cyclical load and impact resistance in the Florida Building Codes. Shelter space may be established either on-site or off-site, provided this space is located, equipped and stocked with provisions and maintained and retained in accordance with the specifications provided by the Martin County Fire Rescue Emergency Management Director. No emergency storm shelters shall be approved on the barrier islands.

The on-site shelter space option shall not be available to developments that lie in areas vulnerable to surge as identified on Figure 8-53 of this element.

Editor's note(s)—Figure 8-53 is on file in the office of the Martin County Growth Management Department.

No certificates of occupancy shall be issued for any units until the developer can verify, through an inspection by the Martin County Fire Rescue Emergency Management Agency, that emergency shelter space is available to accommodate the needs generated by the development. Emergency shelter space, once verified by the developer and the Martin County Fire Rescue Emergency Management Agency, shall not be modified, changed or used in any manner that would render it unusable as a shelter. This requirement shall be imposed on successor owners or operators of the property so designated as a shelter.

Policy 8.2C.5. Emergency evacuation road improvements. As part of the ~~2016~~2020 Statewide Regional Evacuation Study, Martin County shall examine emergency evacuation routes to determine those that may be inadequate. Inadequate roadway links are those that (1) have insufficient traffic capacity as determined by level of service and (2) are subject to flooding and prone to blockage by fallen trees in high winds. The study will determine responsibility for the costs of improvements. Roadway links this study finds inadequate will be given priority in the Capital Improvements Element. Roadway links that are insufficient due to the probability of tree fall shall be corrected by the County's ongoing tree trimming and/or removal program.

Policy 8.2C.6. Hazardous tree fall program. An ongoing program to be administered by the Martin County Road Department shall remove Australian pines and other trees prone to wind damage along identified emergency evacuation routes to eliminate hazardous tree falls along these routes.

Policy 8.2C.7. County/City cooperation. Martin County, the City of Stuart and all other inter-County municipalities shall coordinate hurricane evacuation plans. As part of that coordination, Martin County shall request the participation of the City of Stuart in determining what emergency evacuation routes may be inadequate.

Policy 8.2C.8. Density limitations on Hutchinson Island. New development on Hutchinson Island that is not vested (vacant uncommitted parcels) shall continue to be limited to single-family residences.

Policy 8.2C.9. Emergency technical data updates. Technical data reports and plans used in managing hurricanes, floods, nuclear power plant emergencies and other emergencies should be updated annually to reflect changes in population size and distribution, location of high-risk populations, adequacy of transportation systems and shelters, tidal inundation flood risk and changes in sea level rise ~~predictions~~ projections, and the latest scientific findings affecting emergency management.

Policy 8.2C.10. Public information responsibilities. The Emergency Management Director shall continue to develop and disseminate data on who should evacuate, how to evacuate and what services are available for the population in a hurricane.

Objective 8.2D. Post-disaster redevelopment. To establish, maintain and update a Post-Disaster Redevelopment Plan.

Policy 8.2D.1. Post-Disaster Recovery Task Force. Martin County shall convene a Post-Disaster Recovery Task Force including, at a minimum, the Building Department Director, Emergency Management Director, ~~Engineering~~ Public Works Department Director and Growth Management Director, along with other members at the discretion of the County Administrator. Staff shall be provided by the departments whose directors sit on the task force.

Policy 8.2D.2. Post-disaster procedures. The Post-Disaster Recovery Task Force shall adhere to the procedures of the Comprehensive Emergency Management Plan.

Policy 8.2D.3. Cleanup and repair priorities. Immediate cleanup and repair actions needed to protect the public health and safety shall receive first priority (within two weeks of the storm) in emergency permitting decisions. These actions include the following:

- (1) Repairs to potable water, wastewater and power facilities;
- (2) Removal of debris and inspection for hazardous materials;
- (3) Stabilization or removal of structures about to collapse;
- (4) Minimal repairs to make dwellings habitable; and
- (5) An environmental assessment by the Martin County Environmental Health Unit.

Policy 8.2D.4. Redevelopment activities. Long-term redevelopment activities shall be postponed until the task force has completed its work. Then Martin County shall encourage activities consistent with

the Comprehensive Emergency Management Plan and specific redevelopment plans developed by the task force.

Policy 8.2D.5. Streamlined development approvals. Martin County shall develop procedures to streamline the post-disaster development approval and building permit approval process for property owners who meet all conditions for rebuilding within coastal areas, as described in Policies 8.2D.6 through 8.2D.11.

Policy 8.2D.6. Redevelopment of parcels. After a hurricane or other declared natural disaster, parcels that have been damaged may be redeveloped, provided the new development does not exceed the density and/or intensity of use of the previous development.

Policy 8.2D.7. Rebuilt structures. Structures that suffer cumulative damages in excess of 50 percent of their appraised value within any five-year period shall be rebuilt to meet all current building code requirements, including those enacted since construction of the structure.

Policy 8.2D.8. Structures with repetitive damage. Structures that suffer repeated damage to pilings, foundations or load-bearing walls shall be required to rebuild landward of their current location, ~~or to~~ modify the structure to delete the areas most prone to damage, or elevate the structure based on the cause of the damage. Water-dependent uses shall be exempt from the requirement to rebuild landward of their current location if, when rebuilt, the structure is modified to minimize future damages.

Policy 8.2D.9. Repair of seawalls. Repair or reconstruction of seawalls will be permitted in accordance with the County's Land Development Regulations and ~~only if it~~ meets the provisions of Policy 8.1C.2.

Policy 8.2D.10. Coordination on hurricane technical report update. The County should coordinate with the Treasure Coast Regional Planning Council in updating the hurricane technical report to ensure a unified local mitigation strategy for the Category 1, 2 and 3 hurricane surge area as established by the most recent application of the SLOSH model. The strategy should involve:

- (1) Identifying structures within the Category 1, 2 and 3 hurricane surge areas;
- (2) Inventorying assessed value of these structures;
- (3) Judging the utility of the land for public access; and
- (4) Making recommendations for acquisition when post-disaster opportunities arise.

Policy 8.2D.11. Hutchinson Island development order restrictions. Development shall be limited both before and after a natural disaster on Hutchinson Island by enforcing the following Hutchinson Island development restrictions:

- (1) Prior to a hurricane or other declared natural disaster, Martin County shall limit development on Hutchinson Island by continuing to enforce the barrier island development restrictions.

Objective 8.2E. Coastal infrastructure. To maintain established levels of service and phased and maintained infrastructure to assure that adequate public facilities and services are available to existing and projected residents and visitors to the coastal high-hazard area. The most current data shall be incorporated into the infrastructure planning process related to future flood risk, tidal inundation, and sea level rise projections to inform the design and location of such infrastructure.

Policy 8.2E.1. Level-of-service standards. The level-of-service standards adopted for public facilities in Chapter 14, Capital Improvements Element, and the additional standards under this objective shall be applied by the Martin County Growth Management Department whenever development orders or permits are requested. Level of service standards should consider existing and future flood risk caused by high tide events, storm surge, flash floods, stormwater runoff and the related impacts of sea level rise into consideration in the planning and design for public and private facilities.

Policy 8.2E.2. Level-of-service guidelines for new development. The Martin County Growth Management Department shall require all applicants for development permits in the coastal high-hazard area to demonstrate that the project will comply with the adopted levels of service for necessary public facilities as stated in the Capital Improvements Element and shall consider existing and future flood risks related to sea level rise.

Policy 8.2E.3. Infrastructure. The County shall ensure concurrency in the coastal high-hazard area as required in the Capital Improvements Element for all levels of service, including evacuation clearance time specified in Policy 8.2C.1.

Policy 8.2E.4. Road improvements. Evacuation routes shall have a high priority when ranking road improvement projects are ranked in the annual update to the Capital Improvements Element.

Policy 8.2E.5. Natural disaster. The Martin County Emergency Services Department and Emergency Management Agency shall review developments in areas of potential natural and manmade disasters for safety factors such as adequacy of shelter for residents and ability of internal and surrounding roads to accommodate emergency traffic.

Policy 8.2E.6. Wastewater treatment. Public and private wastewater treatment facilities that have a history of malfunctioning should be repaired immediately or replaced by the responsible governmental entity or private operator.

Policy 8.2E.7. Public utility hookup guidelines. All new and existing developments using septic tank and package sewage treatment facilities shall comply with the requirements of Chapter 10, Sanitary Sewer Services.

Policy 8.2E.8. Storm or surface water runoff. Any surface water or stormwater runoff into coastal water shall comply with the requirements of Chapter 13, Drainage and Natural Groundwater Aquifer Recharge.

Policy 8.2E.9. Future flood risk and sea level rise. The County shall review public and private infrastructure projects and make recommendations to increase their resilience. All proposed public infrastructure projects shall account for future flood risk for the life of the project through tools approved by the County.

Goal 8.3. To actively plan for, and adapt to, the perils of flood associated with high tide events, storm surge, flash floods, stormwater runoff and the related impacts of sea level rise. The County shall utilize principles to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise.

Objective 8.3A. The County shall include in its planning efforts for development and redevelopment principles, strategies, and engineering solutions that reduce flood risk in coastal areas and across the community, which results from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise along with climate changes in rainfall, temperature, and storm frequency.

Policy 8.3A.1. The County shall continue to conduct vulnerability assessments that incorporate sea level rise projections to inform adaptation measures and priorities. The vulnerability assessment shall help prioritize capital improvement planning to address near term vulnerabilities. The vulnerability assessment shall be updated as needed to incorporate a review of data to determine the most recent and appropriate sea level rise projections. Subsequent updates of the vulnerability assessment shall be consistent with applicable state law including but not limited to Section 380.093, F.S. related to requirements for conducting vulnerability assessments.

Policy 8.3A.2. The County shall continue to improve analysis and mapping capabilities for identifying areas of the County vulnerable to sea level rise, tidal flooding, and other impacts. Activities shall include, but not be limited to, the development of data sources, work products and plans such as the acquisition of increasingly accurate Light Detection and Ranging (LiDAR) data, or other state-of-the

art elevation data and obtaining more data on its assets such as survey data on stormwater assets, building finish floors, roadway crowns, and seawalls.

Policy 8.3A.3. The County shall include each year the approved capital improvement projects that are within vulnerable areas as projects that should mitigate for future flood risks for the life of the projects and are considered part of the most recent approved vulnerability assessment.

Policy 8.3A.4. The County shall evaluate the shoreline and develop a strategy to identify locations to protect and enhance the built and natural environments from erosion, flooding and sea level rise impacts prioritizing nature-based solutions to the extent practicable. Shoreline conditions, structures, outfalls and elevations shall be included as baseline information in the development of the strategy. As part of this process, the County shall also identify locations for new or enhanced natural or living shorelines including strategies for funding, restoring, permitting, and construction of such projects.

Policy 8.3A.5. The County shall integrate capital project planning, land development, resiliency, land acquisition and infrastructure strategies into the Local Mitigation Strategy, the Martin County Comprehensive Emergency Management Plan (CEMP), and other county disaster management planning procedures to respond to current and future flood risk.

Policy 8.3A.6. The County shall coordinate within its agency, infrastructure, other service providers such as the United States Army Corps of Engineers, the National Oceanic and Atmospheric Administration, the United States Geological Survey, the Florida Department of Transportation, the FDEP, the SFWMD, and other regional and local partners to exchange climate and sea level rise data, plans, programs and solutions to address future vulnerability and flood risks. The County shall continue to actively coordinate with the FDEP on the Resilient Florida Grant Program, Comprehensive Statewide Flood Vulnerability and Sea Level Rise Dataset, Assessment and Plan developed pursuant to Section 380.093, F.S. The County shall also coordinate activities with the Office of Economic and Demographic research in the development of their analysis of future expenditures to minimize the adverse economic effects of inland and coastal flooding.

Policy 8.3A.7. When building, expanding, retrofitting, or planning for facilities, the County shall consider engineering solutions that reduce the flood risk in coastal areas which results from high-tide events, storm surge, flash flood, stormwater runoff, and the related impacts of sea-level rise. Substandard public drainage systems shall be retrofitted during repair, expansion, or redevelopment activities.

Policy 8.3A.8. The County shall continue to actively establish surface and stormwater management regulations to eliminate inadequately maintained or designed systems that degrade water quality, in accordance with Chapter 13, and where functionality is comprised due to increased tidal flooding and sea level rise impacts.

Policy 8.3A.9. All County owned and financed projects initiated and undertaken by a state-financed constructor in the coastal building zone related to major and non-habitable major structures, as defined in Section 161.54, F.S., using funds appropriated from the state shall comply with the requirements of Section 161.551, F.S. and Rule 62S-7, F.A.C.

Objective 8.3B. The County shall encourage the use of best practices development and redevelopment principles, strategies, techniques and engineering solutions at the site level that will result in the reduction of losses due to flooding and claims made under flood insurance policies. These best practices shall include the consideration of the removal of coastal real property from flood zone designations established by the Federal Emergency Management Agency.

Policy 8.3B.1. The County shall support the efforts of federal, state and local agencies to develop, assess, and recommend a suite of planning tools and adaptation strategies to maximize opportunities to protect coastal resources from impacts of increased frequency of storms, surge and flooding and aid in the reduction and removal of coastal real property from flood zone designations. The County shall adopt and implement applicable planning tools and adaptation strategies that become available to address vulnerable coastal development, infrastructures, transportation facilities, and natural resources.

Policy 8.3B.2. As funding permits, the County shall explore acquisition opportunities to protect natural systems to address shifting habitats from a rising sea, potential threats and loss of marine ecosystems and habitat, erosion, and ecosystem-based approaches to exotic species and vegetation management.

Policy 8.3B.3. The floodplain administrator or their designee shall review all permit applications and plans to determine that the proposed development or redevelopment can be constructed such that it is reasonably safe from flooding. If a proposed development or redevelopment site is located in a special flood hazard area, all site development activities including new construction and substantial improvements shall be designed and constructed with methods, practices and materials that will minimize the potential for flood damage.

Policy 8.3B.4. The County shall continue to enforce setbacks, buffers and elevation requirements to promote the protection and safety of life and property. Expansions to the existing setback and buffer requirements contained in the land development regulations shall be considered as a means of reducing property damage caused by storms.

Objective 8.3C. The County shall maintain regulations consistent with, or more stringent than, the flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R. Part 60.

Policy 8.3C.1. The County shall maintain, review and update its Floodplain Management Regulations to:

- (1) Minimize unnecessary disruption of commerce, access, and public service during times of flooding;
- (2) Require the use of appropriate construction practices in order to prevent or minimize future flood damage;
- (3) Manage filling, grading, dredging, mining, paving, excavation, drilling operations, storage of equipment or materials, and other development which may increase flood damage or erosion potential;
- (4) Manage the alteration of Special Flood Hazard Areas, watercourses, and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain;
- (5) Minimize damage to public and private facilities and utilities;
- (6) Help maintain a stable tax base by providing for the sound use of and development within the Special Flood Hazard Areas;
- (7) Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events; and
- (8) Meet the requirements of the National Flood Insurance for community participation as set forth in 44 CFS 59.22.

Policy 8.3C.2. The County shall continue its policy of reviewing the Land Development Regulations and, as appropriate, adopt structural standards and site alteration restrictions that meet or exceed the minimum FEMA requirements and that consider data from the vulnerability assessment related to varying types of flood threats including tidal, sea level rise, surge, rainfall, and combination flooding.

Policy 8.3C.3. The County shall maintain consistency with the program policies of the NFIP administered by FEMA and shall monitor new cost-effective programs for minimizing flood damage. Such programs may include modifications in construction setback requirements, shoreline protection zone, or other site design techniques, as well as upgraded building and construction techniques. The County's adopted flood protection regulations shall be amended as necessitated by changes in FEMA regulations.

Objective 8.3D. The County shall participate, and seek to enhance participation, in the National Flood Insurance Program (NFIP) Community Rating System (CRS) administered by the Federal Emergency Management Agency (FEMA) to achieve flood insurance premium discounts for their residents.

Policy 8.3D.1. The County shall continue to participate in the NFIP CRS to protect the County's floodplain and to the maximum extent possible shall seek to improve its current CRS Class rating to improve the County's flood resiliency and providing discounts on flood insurance rates.

Policy 8.3D.2. The County shall continue to coordinate intergovernmental efforts related to participation in CRS including outreach, resiliency planning, emergency management initiatives, and natural systems management to maximize County and Flood insurance policy holder benefits.

Policy 8.3D.3. The County shall continue to develop data and dedicate the funding necessary to maintain or enhance its current CRS Class rating through County resources, grants, and/or partnerships. As part of this effort, the County shall work towards the development of a CRS-compliant Watershed Management Plan.