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## COASTAL MANAGEMENT ELEMENT

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### DATA INVENTORY AND ANALYSIS

#### Purpose

The purpose of the Coastal Management Element is to protect human life and to limit public expenditures in areas that are subject to destruction by natural disaster. It is also to plan for, and where appropriate, restrict development activities where such activities would damage or destroy coastal resources.

#### COASTAL PLANNING AREA

The Coastal Planning Area for St. Lucie County includes unincorporated areas abutting the ocean and estuarine shorelines and the shoreline of the North Fork of the St. Lucie River and its tributaries. Map CST-1 Coastal Planning Area delineates the coastal planning area of the County.

For the oceanic and estuarine systems the eastern boundary is the Atlantic Ocean and the northern and southern boundaries are the respective county lines. The western boundary is delineated at U.S. 1 north of the AIA south causeway and by the Florida East Coast Railroad south of the causeway. Lands within these boundaries that fall within the corporate limits of St. Lucie Village and the Cities of Fort Pierce and Port St. Lucie are not components of the County Coastal Planning Area.

The boundary for the riverine system is the area along the North Fork of the St. Lucie River and its tributaries that falls within the "Coastal High Hazard Area". Pursuant to Chapter 163.3178(2)(h) of the Florida Statutes, the "Coastal High Hazard Areas" (also referred to as "high-hazard coastal areas") is the area below the elevation of the category 1 storm surge line as established by a Sea, Lakes, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. And again, lands within this boundary that fall within the corporate limits of the Cities of Fort Pierce and Port St. Lucie are not components of the County Coastal Planning Area.

#### Land Use in the Coastal Area

The existing land uses within the coastal planning area are also shown on Map CST-1. Table 5-1 Coastal Planning Area Existing Land Uses identifies the number of parcels within or containing a portion of the coastal planning area, and identifies the existing use on the parcel and the parcel acreage. Overall the uses can be broadly categorized as commercial, residential, public and conservation/recreation. Of the total acreage of the parcels, commercial comprises 6% of the total area, residential is 33%, public is 35% and conservation/recreation is 26%. At this time 15% of the total area still remains vacant land, the bulk of which is allocated for residential development.

The future land uses within the coastal planning area identified on Map FLU-1. Future Land Use.

<b>TABLE 5-1 Coastal Planning Area Existing Uses</b>		
<b>USE</b>	<b># PARCELS</b>	<b>ACRES</b>
Agriculture	22	256.94
Commercial	45	283.91
Commercial Vacant	62	186.25
Industrial	22	59.95
Mixed Use	2	6.53
Commercial uses 6% of area	Commercial Uses Acreage Subtotal	793.58
<b>USE # PARCELS ACRES</b>		
Residential Mobile Homes	1,790	97.69
Residential Multifamily	311	593.91
Residential Single Family	3,070	2,257.77
Residential Vacant	1,806	1,486.90
Residential 33% of area	Residential Uses Acreage Subtotal	4,436.27
<b>USE # PARCELS ACRES</b>		
Public Services	196	3,831.11
Public Services Vacant	8	277.32
Right of Way	100	352.95
Transportation	20	176.30
Public Uses 35% of area	Public Uses Acreage Subtotal	4,637.68
<b>USE # PARCELS ACRES</b>		
Conservation/Recreation	120	3,474.97
Con/Rec. 26% of area	Conservation/Recreation Acreage Subtotal	3,474.97
<b>TOTAL ACREAGE ALL USES</b>		<b>13,342.50</b>

Source: St. Lucie County Growth Management, 2009

St. Lucie County has twenty-one miles of Atlantic Ocean shoreline, much of which is currently undeveloped. Through the efforts of the residents of St. Lucie County and the State of Florida, approximately seven miles of this unincorporated oceanfront are under public ownership. Another two miles of oceanfront property are owned by the Florida Power & Light Company, and are to be maintained in their present natural state in conjunction with the operation of the St. Lucie Power Plant facilities. The balance of the remaining oceanfront properties is held in private ownership and available for development activities, which have historically been residential in character. Presently, approximately 45% of this privately held frontage is developed.

Within the overall coastal planning area, conflicts in shoreline uses are restricted with 26% of the area conservation/recreation in nature and 35% controlled under public ownership. Additionally the County has the opportunity to explore planning mechanisms that may be available to direct the remaining vacant lands to non-conflicting uses.

The County has not officially designated any areas as having conditions of slum and blight, but is continuing to monitor aging areas and implementing needed programs and improvements. The County has no Community Redevelopment Agency.

### **Natural Resources in the Coastal Area**

Immediately interior to the coastal barrier island, located between the barrier island and the Atlantic Coastal Ridge, is the Indian River Lagoon (IRL). The IRL is a linear estuarine system that extends along more than a third of Florida's east coast, over 155 miles, from Ponce de Leon Inlet in Volusia County south to Jupiter Inlet in Palm Beach County. Numerous freshwater wetlands and sloughs undergo a transition into riverine systems that connect directly to the IRL. The lagoon interacts with the saline waters of the Atlantic Ocean through the inlets, providing tidal exchange with fresh water discharged into the lagoon from the inland rivers. Along the IRL the associated mangrove and salt marsh communities provide valuable filtration, stabilization and habitat and the seagrass beds provide foraging for manatees. The Conservation Element provides additional details on IRL characteristics and restoration programs.

The St. Lucie River (SLR) is divided into four sections: North Fork, South Fork, Middle Estuary and Lower Estuary. The North Fork of the St. Lucie River falls almost exclusively within the St. Lucie County. The creation of St. Lucie Inlet in 1892 connected the Indian River Lagoon to the Atlantic Ocean at the mouth of the SLR. This project ultimately converted this freshwater tributary to a riverine estuary (freshwater in the upper reaches and saltwater in the middle and lower sections). This unique salinity gradient changed the natural resources found in the SLR. Because of its geographic location and tidal connection through the St. Lucie Inlet, the North Fork supports high species diversity and serves as an important nursery ground for a variety of fish and wildlife. The Conservation Element provides additional details on SLR characteristics and restoration programs.

Along the ocean shoreline the barrier island contains beach, dune, and coastal strand. The U.S. Fish and Wildlife Service (FWS) *South East Florida Multi-Species Recovery Plan* describes the characteristics of these habitats as follows:

**Beach Dune, Coastal Strand** – The Beach dune and coastal strand communities are the closest communities to the high-energy shoreline. The coastal dune and coastal scrub habitat occupies the immediate Atlantic coast on Hutchinson Island. Within this high-energy zone, there are a number of daily, naturally occurring events such as wave action, sand burial, and salt spray. Closest to the coast, the upper beach is regularly disturbed by waves of high tides or storms and regularly re-colonized by driftline annuals and trailing perennials such as railroad vine (*Ipomoea pes-caprae*). Above the reach of annual wave action is the foredune, built by coarse, rhizomatous grasses; primarily sea oats (*Uniola paniculata*), that thrive under constant burial from sand blown off the beach. Beyond the zone of constant sand burial are the dwarfed trees and shrubs of the coastal strand. The species growing in this

zone are kept at a low stature by salt spray, which kills the upward-growing leader shoots. Species composition within the coastal strand communities that are located on the Gulf and Atlantic coasts differ. Maritime hammocks are low forests of evergreen broadleaved trees found inland from coastal strand communities on the Atlantic coast. The canopy may be composed of trees with either temperate affinities (*Quercus virginiana*, *Sabal palmetto*, *Persea borbonia*) or (usually on more calcareous substrates) of trees with tropical affinities (*Bursera simarouba*, *Ficus aurea*, *Coccoloba uvifera*).

Hutchinson Island is recognized as one of the major nesting beaches in South Florida for the federally listed marine turtles. Marine turtles typically nest at night from March through November, with incubation lasting approximately 55 days. Threats to marine turtle nests are both man-made and naturally occurring. Detrimental activities include: physical disturbance of dune systems by development; the placement of physical obstructions on the beach entrapping adults and hatchlings; high raccoon predator populations; the encroachment of the invasive Australian pine trees, whose root mats interfere with nest excavation; or the disorientation of hatchlings from direct lighting of the beaches at night. Natural occurring coastal erosion causing cliffing and, although not frequent, hurricanes causing serious beach erosion or accretion are also detrimental.

The federally listed southeastern beach mouse, which is restricted to sea oats dunes, was formerly abundant from Ponce de Leon (Mosquito) Inlet, Volusia County to Hollywood Beach, Broward County. In South Florida, this species is now restricted to scattered localities in Indian River and St. Lucie counties. Many shorebirds use beaches in South Florida for nesting or wintering or both. Florida is the main wintering ground of the federally threatened piping plover which breeds in northern North America. Formerly seen wintering in all South Florida counties except Martin, this species is now absent from Indian River, Palm Beach, and Broward counties and has become rare in Miami-Dade and Sarasota counties.

The St. Lucie County Mosquito Control District contains 301 square miles. The District manages 4000 acres of coastal mangrove swamps and salt marshes to abate saltmarsh mosquitoes and sandflies. The District staff manages the saltmarsh impound areas, conducts research, provides public education and has an acquisition/mitigation/donation program. The District land acquisition and preservation efforts have been successful at Bear Point, Middle Cove, Blind Creek, Kings Island, Queens Island, Pepper Park Addition, and the Indian River Lagoon Blueway.

### **Water Access Facilities**

The Recreation and Open Space Element provides specific details on the all public park and recreational facilities. The following table provides a list of those facilities that provide water access.

**Table 5.2 Public Facilities Providing Water Access**

<b>Facility Name</b>	<b>Location</b>
Avalon Beach	5290 N SR Highway A1A
Blind Creek Beachside	5460 S Ocean Dr
Blind Creek Riverside South	5101 S Ocean Dr
Blue Heron Beach	2101 Blue Heron Blvd
Byrn Mawr Beach Access	5056 N SR Highway A1A
DJ Wilcox Riverside	399 Wilcox Rd
Dollman Park Beachside	9200 S Ocean Dr
Dollman Park Riverside	9101 S Ocean Dr
Frederick Douglass Memorial Park	3600 S Ocean Dr
Hermans Bay Beach	7880 S Ocean Dr
Indrio Savannahs Preserve	5275 Tozour Rd
John Brooks Park Beachside	3300 S Ocean Dr
John Brooks Park Riverside	2601 S Ocean Dr
Middle Cove Beach	4600 S Ocean Dr
Normandy Beach	8550 S Ocean Dr
Ocean Bay Beachside	7600 S Ocean Dr
Pepper Park Beachside	3302 N SR Highway A1A
Pepper Park Riverside	3375 N SR Highway A1A
River Park Marina	500 SE Prima Vista Blvd
St Lucie County Marine Center	420 Seaway Dr
Stan Blum Boat Ramp	613 N Causeway Dr
Walton Rocks Beach and Dog Park	6700 S Ocean Dr
Waveland Beach Park	10350 S Ocean Dr
Avalon State Park	5601 N A1A Hwy
Blind Creek Riverside North	4651 S Ocean Dr
DJ Wilcox Preserve	300 Michigan St
Ft Pierce Inlet State Recreation Area	905 Shorewinds Dr
George Lestrangle Preserve	4911 Ralls Rd
Gordy Road Recreation Area	3650 Gordy Rd
Indrio Scrub Preserve	5100 Old Dixie Hwy
Jack Island State Preserve	900 Jack Island Access Rd
Kings Island Preserve	900 Jack Island Access Rd
Ocean Bay Riverside	6851 S Ocean Dr
Oxbow Eco Center	5400 NE St James Dr
Queens Island Preserve	4653 SR N Highway A1A
Savannas Preserve State Park	9551 Gumbo Limbo Lane
Savannas Recreation Area	1400 E Midway Rd
Spruce Bluff Preserve	611 SE Dar Ln
Sweetwater Hammock Preserve	4100 S 25th St
Ten Mile Creek Preserve	3401 Gordy Rd
Wildcat Cove	3399 N SR Highway A1A

<b>Facility Name</b>	<b>Location</b>
Lakewood Park Natural Area	5990 Emerson Ave
North Fork Parcels	Various sites along the North Fork

### **Estuarine Pollution Conditions**

Overall, the natural hydrologic regime of the IRL has been heavily influenced over the years by human activities. Residential and commercial construction in the late 1800s and early 1900s increased the need for inlets to increase commerce. Local interests in 1921 originally constructed the Fort Pierce Inlet. In 1935, the Federal Government took over operation and maintenance responsibility. Since 1978, maintenance dredging of the entrance channel has been conducted on a biannual basis with disposal of the beach compatible dredged material on the adjacent downdrift beach south of the inlet. Construction of a spur jetty attached to the south jetty was completed in 1997. The last time maintenance dredging of the channel occurred was in 1998. During the 1880's a shallower inlet known as the Indian River Inlet previously existed approximately 2.7 miles north of the present Fort Pierce Inlet.

In the 1930s and 1950s much of the lagoon salt marsh was impounded for mosquito control purposes and the Atlantic Intracoastal Waterway was expanded and deepened to allow for more navigable waterways, both of which further altered the hydrology of the IRL. Over 40,000 acres of the salt marsh acreage in the Indian River have been impounded for mosquito control. Many of the 192 impoundments are still isolated from the lagoon. Over 40 percent of the impoundments are privately-owned, another 40 percent are federally-owned and the rest are county-owned. Most of the impoundments in Indian River and St. Lucie County can be restored through reconnection with the lagoon. The County continues to evaluate the functionality of the managed and unmanaged impoundments.

In the early 1900s, extensive drainage canals were constructed for agricultural purposes, and flood control projects were initiated in the 1930s following several destructive hurricanes. The County has three major primary drainage and flood control canals, the C-23, C-24 and C-25 which are part of the Central and South Florida Flood Control project and are managed by the South Florida Water Management District (SFWMD). In addition, the Fort Pierce Farms Water Control District and the St. Lucie River Water Control District manage numerous secondary canal systems. These canals are solely dependent on rainfall as a source of inflow and are important sources of agricultural irrigation water. Canals C-23, C-24 and the North Fork of the St. Lucie River Water Control District canals drain into the North Fork of the St. Lucie River and its major tributaries. The C-25 Canal and Fort Pierce Farms Water Control District (Basin 1) canals empty directly into the Indian River lagoon nearly opposite the Fort Pierce Inlet. At this time, all but a small area in southwestern and northeastern St. Lucie County is drained by these primary and secondary canal systems.

Another flood control and navigation project was conducted from the 1920s to the 40s to straighten portions of the North Fork of the St. Lucie River. In the process of straightening the river, the dredged spoil was piled into berms (mounds) along the banks of the new channel. These spoil piles, which can measure up to 50 feet wide and 25 feet tall, block former river bends and oxbows as well as isolate a large portion of the North Fork floodplain. Historically, the slow and meandering path of the North Fork allowed

suspended solids to settle out of the water and nutrients to be filtered by vegetation, but the direct river-course does not, which now effects the water quality and sediment loads reaching the estuary.

The North Fork is located in the Eastern Valley region which is composed of long, low narrow ridges ranging from 15 to 30 feet in elevation. The natural topography of the watershed is generally flat with few natural rises. The hydrology of the North Fork and its headwaters was altered in the early to mid 1900s to support the growing demands of development and navigation. This began with a network of agricultural and residential canals and drainages. The canals were primarily designed to address flood control and drainage for land reclamation. Prior to these drainage efforts, the North Fork St. Lucie River (SLR) watershed encompassed 187 square miles. Construction of these drainage canals expanded the watershed to 821 square miles by diverting flows from other areas to the North Fork.

Alteration and expansion of the historic watershed coupled with ecologically-degrading land use practices have set the stage for the current impaired condition of the North Fork and most other SLR watershed basins. Prior to these manmade alterations, wet season rains pooled broadly across the SLR watershed and moved toward the naturally lower elevations surrounding the river. Historic wetland ecosystems facilitated dynamic watershed storage and sheet flow. Reduced movement through natural features kept wetlands flooded and provided for movement of groundwater to the river during the dry season. This made historic wetlands and estuaries less vulnerable to Florida's variable rainfall. Today, much of the watershed runoff from the North Fork drainage basins flows quickly from smaller, residential canals into large canals that cross the coastal ridge instead of being detained, evaporated, cleansed, and held by natural systems. Since most of the development in the County pre-dates the required Best Management Practices for stormwater run-off, un-pretreated run-off is still a non-point source water quality issue for the lagoon

Through the cooperative efforts by a variety of federal, state, county and local governments, as well as non-governmental organizations, efforts have begun to address the long term health and viability of the estuarine lagoon and associated wildlife. A variety of organizations have monitoring and research underway in the IRL and its watershed. The Indian River Lagoon Surface Water Improvements and Management (SWIM) Program has been designed to develop and execute a combination of research and practical implementation projects to protect or restore the environmental resources of the Indian River Lagoon. This joint program, administered cooperatively through the St. John's River Water Management District (SJWMD) and the South Florida Water Management District (SFWMD), has three goals:

- Attain and maintain water and sediment of sufficient quality to support a healthy, seagrass-based estuarine ecosystem;
- Attain and maintain a functioning seagrass ecosystem which supports endangered and threatened species, fisheries and wildlife; and
- Achieve heightened public awareness and coordinated interagency management.

*Ten Mile Creek Water Preserve Area.* A feature of the IRL – SWIM Plan is construction of the Ten Mile Creek Water Preserve Area (WPA). This is one of the largest stormwater and restoration improvement projects to impact the St. Lucie Estuary and River in

advance of the federal Comprehensive Everglades Restoration Program (CERP) *IRL - South Plan* proposed projects. The purpose of the Ten Mile Creek WPA is the seasonal or temporary storage of stormwater from the Ten-Mile Creek Basin. The Ten-Mile Creek Basin is the largest sub-basin and contributes the second largest volume of stormwater to the St. Lucie River Estuary. Stormwater will be captured in the reservoir and then passed through a polishing cell for additional water quality treatment before being released into the North Fork. Stored water can be released in the drier winter months to augment current insufficient flows. Additional project details are contained in the Conservation Element.

*Indian River Lagoon-South Plan*. The component of the federal Comprehensive Everglades Restoration Program (CERP), referred to as the *IRL - South Plan* proposes various projects designed for stormwater attenuation to the estuary to control salinity and reduce nutrient and sediment loads, and to provide an additional source of agricultural water supply. Additional project details are contained in the Conservation Element on the following IRL-South projects proposed within St. Lucie County:

- C-23/24 North Reservoir
- C-23/24 South Reservoir
- C-23/24 Stormwater Treatment Area (STA)
- Cypress Creek Complex - Natural Storage and Treatment Area
- C-25 Reservoir and Stormwater Treatment Area
- North Fork Floodplain Restoration
- Muck Remediation

### **Spoil Islands**

The Atlantic Intracoastal Waterway (ICW), which runs off the mainland coast of the County, runs within the IRL. The ICW is managed and maintained by the Florida Inland Navigation District (FIND), a Special State Taxing District. Maintenance dredging has created spoil islands that run along the eastern edge of the ICW and there are a series of spoil islands in the IRL at the northern end of the County. The Spoil Island Working Group (SIWG), which consists of 12 Federal, State, and County government agencies and 6 non-governmental organizations, was created to implement the Indian River Lagoon Spoil Island Management Plan put forth by the Florida Inland Navigation District (FIND). The Spoil Island Project is a coordinated effort for managing the spoil islands for recreational and environmental interests. Within St. Lucie County, the Indian River Aquatic Preserve office and the St. Lucie County Mosquito Control District have partnered with the SIWG to initiate a full-island enhancement on St. Lucie County spoil island SL3. SL3 is immediately adjacent to the Florida Atlantic University facility at the Harbor Branch Oceanographic Institution.

The St. Lucie County Erosion District has partnered with the Indian River Lagoon Aquatic Preserve, the Florida Oceanographic Society, and Florida SeaGrant to restore an approximately 0.75-acre oyster reef on spoil island SL 18B. This island is south of the Fort Pierce Inlet.

## **Historic Resources**

The Bureau of Archaeological Research within the Florida Office of Cultural and Historic Preservation maintains the Florida Master Site File (MSF); a database that contains information on archaeological and historic resources in Florida. The state MSF also contains those sites listed on the National Register. Map CST-2. Historic Sites, identifies and locates the historic resources contained in the MSF that are located in the County's coastal planning area; a listing of these resources is contained in Appendix 5-A.

## **Infrastructure in the Coastal Area**

Significant infrastructure in the coastal planning area includes A1A, and A1A the north and south causeways, U.S. 1, Indian River Drive and Old Dixie Highway north of the Port of Fort Pierce. The County provides potable water to north Hutchinson Island, but the Martin County and the Fort Pierce Utility Authority (FPUA) provides potable water to South Hutchinson Island. The County operates a regional wastewater treatment plant on North Hutchinson Island and one on South Hutchinson Island; they provide wastewater treatment service for approximately 75% of North Hutchinson Island and for all of South Hutchinson Island except the Island Dunes residential development that maintains their own private plant. The Infrastructure Element of this plan provides greater detail on these facilities.

Although not publically owned, it must be noted that the Florida Power and Light (FPL) nuclear power plant is located in the coastal planning area on South Hutchinson Island. This facility provides a significant amount of the power to the region.

## **CBRA Zone**

The Coastal Barrier Resources Act (CBRA) of 1982 and later amendments, removed the Federal government from financial involvement associated with building and development in undeveloped portions of designated coastal barriers. The County has conveyed concerns to the U.S. Department of Interior as it pertains to their digital mapping pilot project of the CBRA zones within St. Lucie County.

One of those concerns directly relates to the potential construction of an inlet sand trap for sand bypassing. The sand trap would be located within a federally maintained inlet, which could result in the elimination of future federal participation since this area is under consideration for reclassification as a CBRA zone. In addition, St. Lucie County has initiated a non-federal project to address the severely deteriorated conditions of the South County shoreline while paralleling the development of a federal shore protection project to provide for future renourishment of the beaches in the project area. A future federal project would eliminate property located within a CBRA zone from receiving any federal funding.

## **COASTAL HIGH HAZARD AREA**

Pursuant to Chapter 163.3178(2)(h)F.S the "Coastal High Hazard Areas" (also referred to as "high-hazard coastal areas") means the area below the elevation of the category 1 storm surge line as established by a Sea, Lakes, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. Map CST-3. Coastal High Hazard Area identifies the Coastal High Hazard Area (CHHA) within the County.

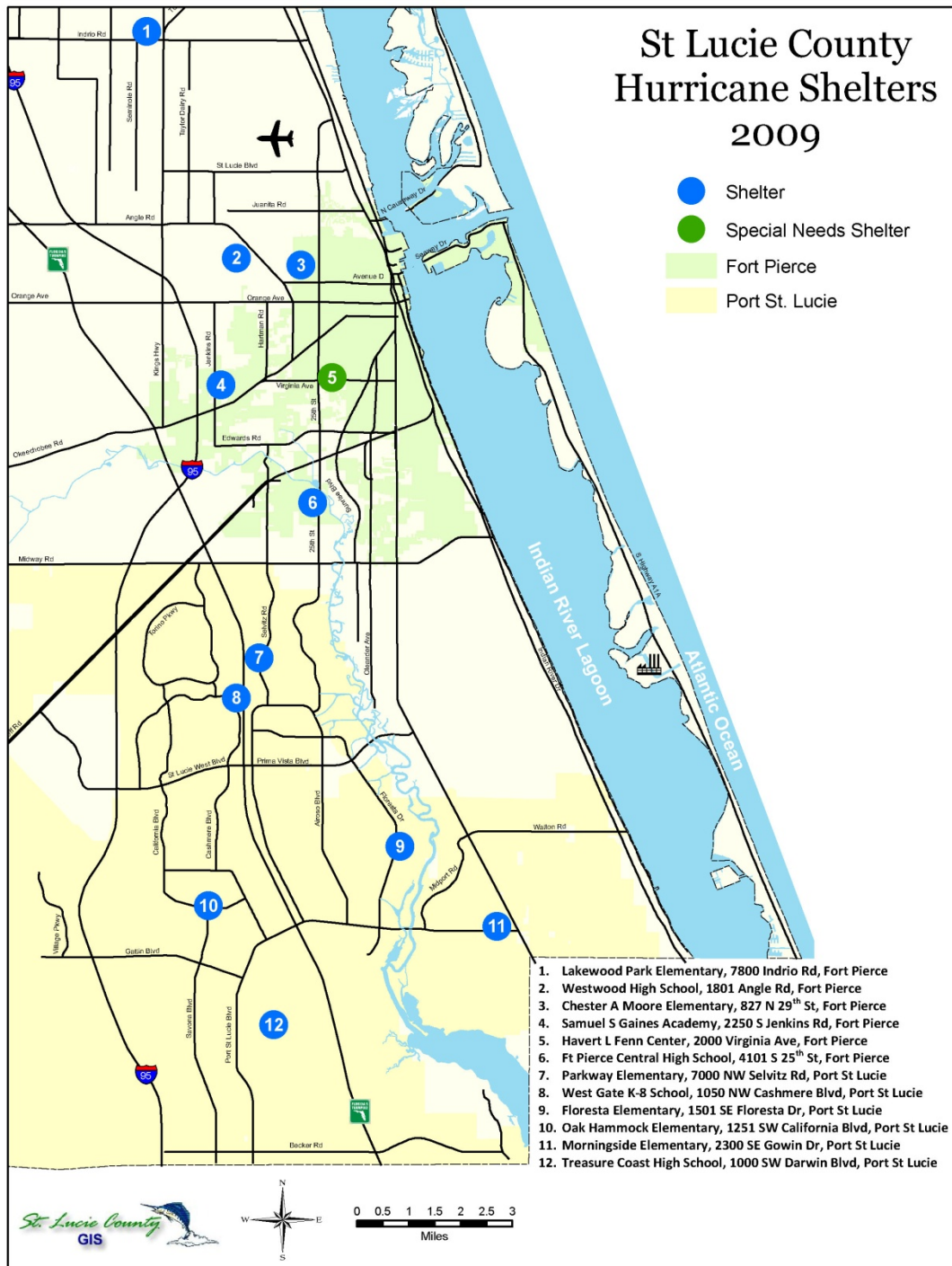
## **Infrastructure in the Coastal High Hazard Area**

The significant infrastructure in the CHHA is the same as in the coastal planning area and includes A1A and A1A north and south causeways, U.S. 1, Indian River Drive and Old Dixie Highway north of the Port of Fort Pierce, as well as the potable water and wastes water infrastructure servicing the existing development. The County operates a regional wastewater treatment plant on North Hutchinson Island and one on South Hutchinson Island. The Infrastructure Element of this plan provides greater detail on these facilities.

## **NATURAL DISASTER PLANNING**

As identified in the County's local mitigation strategy (LMS), the following natural hazards pose a risk to the County: floods, hurricanes/tropical storms, tornadoes, severe thunderstorms/lightning, drought, temperature extremes, muck fires, wildfire/urban interface fires and erosion. And, although not listed in the LMS, there are two relatively small areas in the County at risk from sink holes. Hurricanes/tropical storms and floods are given the highest priority.

*Hurricanes.* Hurricanes have the potential to occur from June through November; heavy rainfall, high winds, storm surge and widespread flooding may accompany these storms, as well a potential for associated tornadoes. During a hurricane evacuation, a significant number of vehicles will have to be moved across the local and regional road network. The quantity of evacuating vehicles will vary depending upon the magnitude of the hurricane, publicity and warnings provided about the storm and particular behavioral response characteristics of the vulnerable population. The County must be prepared to evacuate highly vulnerable populations on critical routes, often concurrently with evacuees from outside the County. Map CST-4. Evacuation Routes identifies the designated evacuation routes and Figure 5-1. Emergency Shelters, identifies the locations of the shelters within the County.



Source: St. Lucie Growth Management, 2009

The St. Lucie County Division of Emergency Management provides a coordinating point for the effective management of local emergencies to catastrophic events in and around St. Lucie County. It is the lead organization in coordinating disaster response from a municipal level to state and federal. Recovery planning and financial assistance from the State of Florida and FEMA are established through the Division's emergency operations

center. The County disseminates information concerning the need for residents to evacuate at various hurricane threat levels and strives to educate the general citizenry regarding emergency preparedness plans and evacuation shelter assignments. The County maintains special needs shelters. The County also strives to maintain or improve hurricane evacuations times.

The County has developed and has in place a Comprehensive Emergency Management Plan and has in place a mutual aid agreement with the State and the local municipalities. The County also participates in the Unified Local Mitigation Strategy and the National Flood Insurance Program. The County does have defined post development disaster procedures and policies but does not have an official Post-Disaster Redevelopment Plan document.

Post-disaster redevelopment planning should ensure that actions needed to protect the public health and safety will receive the first priority in emergency permitting decisions. These actions include the following:

1. Repairs to potable water, wastewater and power facilities;
2. Removal of debris from roadways and required infrastructure;
3. Stabilization or removal of any structure which is about to collapse;
4. Minimal repairs to make structures habitable; and
5. Emergency repairs related to environmental damage.

Additionally, post-disaster redevelopment planning should provide a basis to:

1. Ensure a means to restore economic activity;
2. Establish a framework for deciding whether to implement a temporary moratorium on building activity as may be required for public safety;
3. Develop procedures for reviewing and deciding upon emergency building permits;
4. Coordinate with State and Federal officials to prepare disaster assistance applications;
5. Analyze and recommend to the Board of County Commission hazard mitigation options, including reconstruction or relocation of damaged public facilities;
6. Recommend amendments to the Local Peacetime Emergency Plan and other appropriate policies and procedures; and
7. Ensuring timely re-entry by County residents following an evacuation.

Included in post-disaster redevelopment planning should be the basis for evaluating future options for damaged public facilities following a hurricane or other disaster event; which includes but is not limited to abandonment, repair in place, relocation and reconstruction with structural modifications. The following considerations will impact final determination:

1. Construction and maintenance costs;
2. Recurring damages;
3. Impacts on land use, the environment, and the public sector;

4. Repair to any public facilities that are included in the inventory of the National Register of Historic Places shall be guided by the Secretary of the Interior's Guidelines for Rehabilitation;
5. Consistency with federal funding provisions; and
6. Consideration of structural integrity and safety.

St. Lucie County falls within the Treasure Coast Regional Planning area. The Treasure Coast Region also includes Indian River, Martin and Palm Beach Counties. The *Treasure Coast Regional Planning Council Transportation Analysis Hurricane Evacuation Study, update 2003*, was prepared for the U.S. Army Corps of Engineers Jacksonville District by Post Buckley Schuh and Jernigan, Inc. The 2003 study identified the following projected data in-county clearance times for a category 1-2 hurricane and a category 3-5 hurricane, the times are shown in the following table.

**TABLE 5-3 County Evacuation Clearance Times**

<b>Projected (2008) County Clearance Times Category 1-2 Hurricane</b>		
Year 2008 Clearance Times in Hours – Category 1-2 Hurricane		
	<b>Low Season Occupancy</b>	<b>High Season Occupancy</b>
Rapid Response	9.5	12.75
Medium Response	10	13
Long Response	12	14
<b>Projected (2008) County Clearance Times Category 3-5 Hurricane</b>		
Year 2008 Clearance Times in Hours – Category 3-5 Hurricane		
	<b>Low Season Occupancy</b>	<b>High Season Occupancy</b>
Rapid Response	10	13.25
Medium Response	10.5	13.5
Long Response	11.25	14.25

Source: Treasure Coast Regional Planning Council Transportation Analysis Hurricane Evacuation Study Update, 2003

The 2003 evacuation study also identified the critical roadway location segments within St. Lucie County as:

- Okeechobee Road from US 1 to Hawley Road;
- North Beach Causeway at US 1;
- Seaway Drive at US 1;
- US 1 from South Bridge/Seaway Drive to Orange Avenue; and
- Orange Avenue at I-95.

Currently, improvements to Midway Road and Prima Vista Boulevard are proposed. Prior to completion of these improvements, the County proposes to reverse the flow of traffic for one eastbound lane for Midway Road, Prima Vista Boulevard and Port St. Lucie Boulevard to facility evacuation during periods of emergency evacuation.

Overall the County population grew by 41% between 2000 and 2009. The County's population includes the City of Port St. Lucie which was the fastest growing City in the nation in 2003. In 2005, the County was the second fastest growing County in Florida. During the same period, the unincorporated population grew by 10% even with

numerous annexations of unincorporated areas by the City of Fort Pierce. The County and unincorporated County population will continue grow and reflect development for approved DRIs, the Towns, Villages and Countryside designated area, and infill development. To address the current conditions, the Regional Planning Councils across the State and the Department of Community Affairs are in the process of re-evaluating the assessment methodologies of the existing, and dated, evacuation reports and are working on producing updated evacuation reports for each region. The County will remain apprised of these developments and review any documents produced and incorporate applicable findings as appropriate.

*Flooding.* The County experiences flooding on a regular basis from severe thunderstorms and tropical storms. The 1992 Stormwater Master Plan document and the County staff have compiled a listing of problem areas that are known to be floodprone historically. Details are available in the Master Plan document. Overall the Master Plan confirmed, "Flooding is far more prevalent in the secondary and local network systems that drain into the primary drainage canal system. The Plan also recognizes that "throughout unincorporated St. Lucie County, many isolated areas have little or no real drainage improvements and no access to a primary or secondary drainage system." Much of this was created when land was subdivided without proper planning of drainage and drainage outfalls. Other problem areas lie within the floodplain of natural creeks or streams. Solutions to these types of problems will require extensive engineering analysis and expensive capital improvements, thus establishing a need for a dedicated funding source for Stormwater Management in the unincorporated areas of the County.

*Fire and Sinkhole:* Fire hazards can be addressed through public education, by requiring firewise design concepts and ensuring water sources are readily available for development in vulnerable areas. In karst-sensitive areas the County can require geotechnical evaluations prior to development approvals.

### **St. Lucie Nuclear Power Plant**

The Florida Power and Light (FPL) St. Lucie Nuclear Power Plant is located in the County on south Hutchinson Island. The population closest, within the 10 mile emergency planning zone (EPZ), to the nuclear power plant is considered at greatest risk of exposure to radiation and radioactive materials in the unlikely event of an emergency. State and local officials, together with FPL, have prepared a detailed emergency plan for people within the 10 mile EPZ of the plant.

Nuclear energy production is monitored closely by the Nuclear Regulatory Commission (NRC), a federal agency. Daily inspections are conducted at the St. Lucie Plant to guarantee compliance. Several identical safety systems are in place so that if one fails, others automatically go to work. The purpose of radiological emergency preparedness is to protect people from the effects of radiation exposure after an accident at a nuclear power plant. Evacuation is the most effective protective measure because it protects the whole body (including the thyroid gland and other organs) from all radionuclides and all exposure pathways. However, in situations when evacuation is not feasible, in-place sheltering is substituted as an effective protective action. In addition, administering potassium iodide is a reasonable, prudent, and inexpensive supplement to both evacuation and sheltering. When the population is evacuated out of the area, and potentially contaminated foodstuffs are interdicted, the risk from further radioactive iodine exposure to the thyroid gland is essentially eliminated.

In the unlikely event of radiation contamination, the environmental impacts could range from modest to catastrophic on a wide ranging, long term scale. Long term commitments at the federal level will be required in the event of a significant emergency. At the local level, the County should continue to endorse the beach nourishment efforts to repair and stabilize the segment of critically eroded beach that is recognized as a threat to the power plant and should consider all current technological advances to address radiation exposure when periodically updating their CEMP.

### **Port of Fort Pierce**

The 2002 update of the Port of Fort Pierce Master Plan was adopted by the St. Lucie County Board of County Commissioners, Ordinance 02-014. The Master Plan provides general goals, objectives and policies to encourage gentrification of the port through a mix of recreational, commercial residential and industrial uses. The plan was also written to strengthen local control over the port uses, and provide flexibility to ensure governmental coordination. The Port Master Plan reflects a vision of how the Port could capitalize on its unique potential for diversified maritime and other waterfront uses of both a public and private nature. That vision sees the Port as a distinctive destination, serving as a catalyst for complementary and recreational development.

The Port of Fort Pierce Master Plan establishes the St. Lucie County Board of County Commissioners as the overall Port Authority, ensuring compliance with applicable state laws that guarantee the financial feasibility of any publicly funded infrastructure within the port. However, it is recognized in the Port of Fort Pierce Master Plan that 85% of the Port is within the jurisdictional limits of the City of Fort Pierce. The Port Sub-Element provides objectives, goals and policies for the Master Plan.

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## **COASTAL MANAGEMENT ELEMENT GOALS, OBJECTIVES AND POLICIES**

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Goal 75.1: Balancing growth and coastal resources. All development proposed in the future land use element in the coastal area shall occur in a manner which protects, conserves, and enhances the natural resources of the coastal area and the environmental, social and economic benefits attributed to them.

Objective 75.1.1: Future Development in the Coastal Area. St. Lucie County shall continue to protect the natural resources of the coastal area from adverse impacts caused by future development through the implementation and strengthening of existing environmentally related laws and the assignment of appropriate Future Land Use designations.

Policy 75.1.1.1 - Future development in the coastal area shall be limited to those land uses which are resource dependent or compatible with the physical and environmental characteristics of the coastal area, or to those uses which can occur without degradation of important environmental values or interference with legally used public access to coastal area shorelines.

Policy 75.1.1.2 - All ~~land development regulations~~ Land Development Code adopted pursuant to this element shall be consistent with:

- a. The Future Land Use Element and Map;
- b. The County's Hutchinson Island Residential Development Ordinance;
- c. Vested development rights;
- d. The County's Hutchinson Island Coastal Area Protection Ordinance, and the Sea Turtle Protection Ordinance; and
- e. The goals, objective and policies of this element and the Conservation Element concerning the protection, appropriate use, and conservation of natural resources.

Policy 75.1.1.3 - Erosion control measures shall be limited to those that do not interfere with the natural resources and processes of the coastal area.

Policy 75.1.1.4 - Future development or redevelopment within the coastal area shall provide infrastructure to service the development or redevelopment at the Level of Service standards adopted in the appropriate elements of this Comprehensive Plan, and which is consistent with the coastal resource protection, access, and safe evacuation requirements of this Comprehensive Plan, and as further provided for in the Capital Improvements Element.

Policy 75.1.1.5 - The County shall continue to coordinate with appropriate State agencies in meeting the goals and policies of the Indian River Lagoon Aquatic Preserves Management Plan, the North Fork of the St. Lucie River Aquatic Preserve Management Plan, the Indian River Lagoon Surface Water

Improvement and Management Plan, and the Indian River Lagoon Comprehensive Conservation & Management Plan. Coordination will consist of, at a minimum, continual participation on applicable committees and task forces as well as the provision of administrative and fiscal support.

Policy ~~75~~.1.1.6 - The County shall provide eco-tourism opportunities within the coastal area in a manner that does not degrade or reduce the long-term viability of the functions and values of coastal waters and adjacent uplands. Lands purchased through Federal, State and local natural resource protection programs shall provide public access and recreational improvements in a manner that minimizes impacts to the natural areas and does not compromise the long term viability of the protected resources.

Policy ~~75~~.1.1.7 - St. Lucie County land use and coastal planning area development decisions shall conduct a study that results in the provision of an eco-tourism zoning designation and land development standards that provide for the development of sustainable eco-tourism support facilities encourage and support the preservation of working waterfronts as defined in 342.07 of the Florida Statutes.

Policy 5.1.1.8 - Approval for development or redevelopment of a site within the coastal planning area shall require the following conditions:

- a. The removal of all invasive exotic vegetation from the site;
- b. A site appropriate re-vegetation plan of native species;
- c. A long-term maintenance plan to continue to keep the site free of invasive exotic vegetation; and
- d. A soil stabilization plan for areas disturbed by the removal of vegetation.

Policy 5.1.1.9 – Through the development review process the County shall continue to monitor the condition and characteristics of the coastal dune and other natural resources; conservation management policies shall be revised and refined as needed to remain responsive to evolving problems or issues.

Policy 5.1.1.10 - The County shall continue to monitor all credible climate change and sea level rise data and what direct and potential effects this has on the coastal system natural resources. Based on this data the County shall evaluate and update the resource protection standards of the Land Development Code and this plan as necessary.

Policy 5.1.1.11 The County shall direct all inappropriate future land uses away from the coastal planning area and shall ensure that its code compliance process continues to identify and address all non-compliant uses.

Objective ~~75~~.1.2: Protecting Wetlands and Wildlife Habitat. The County shall support the protection, conservation, or enhancement of coastal uplands and wetlands. The County shall include within its ~~Land Development Regulations~~Land Development Code criteria and standards for the protection and enhancement of the remaining native plant

communities in the County. There shall be no net loss of existing wetland functions and values ~~which are regulated by Federal and State agencies.~~ The ~~land development regulations~~Land Development Code shall include open space requirements, upland buffers and clustering of density units ~~as means to protect existing coastal uplands or wetlands, and native communities.~~ Measures to mitigate for any unavoidable impacts shall also be included.

Policy ~~75.1.2.1~~ - The County shall continue to implement and enforce ~~land development regulations~~Land Development Code that require the use of native or drought tolerant vegetation adapted to existing soil and climatic conditions in landscaping in the coastal area.

Policy ~~75.1.2.2~~ - The County shall require the removal and eradication of all nuisance and exotic vegetation such as Australian pine, Brazilian pepper, and Melaleuca during construction of new development and replacement with native or drought tolerant plant species ~~that are consistent with Policy 75.1.2.1.~~

Policy ~~75.1.2.3~~ - The County shall continue to implement and enforce ~~land development regulations~~Land Development Code which requires a minimum 50-foot buffer zone of native upland and transitional vegetation along rivers, creeks, and estuaries, to be maintained from the landward extent of State waters or from mean high water of the rivers, creeks, and estuaries, whichever is greater. ~~However, setbacks for the North Fork of the St. Lucie River shall be governed by those set out in the Land Use Element to the extent that those requirements may be more restrictive.~~

Policy ~~75.1.2.4~~ - ~~A buffer zone of native upland edge (i.e., transitional) vegetation shall be provided and maintained around isolated wetlands and deep water habitats which are constructed or preserved on new development sites. The buffer zone may consist of preserve or planted vegetation but shall include canopy, understory, and ground cover of native species only. The edge habitat shall begin at the upland limit of any wetland or deepwater habitat. As a minimum, ten square feet of such buffer shall be provided for each linear foot of wetland or deepwater habitat perimeter that lies adjacent to uplands. This upland edge habitat shall be located such that no less than 50 percent of the total shoreline is buffered by a minimum width of ten feet of upland habitat. The Land Development Code shall require the installation or preservation of a native vegetative transitional buffer adjacent to all wetlands, submerged lands, or other surface waters, regardless of whether these be naturally occurring or manmade.~~

Policy ~~75.1.2.5~~ - ~~All~~Mosquito impoundments shall continue to be assessed to determine if they provide multiple functions of marine fisheries habitat, water quality enhancement, and adequate mosquito control. Particular attention shall be given to the differences between impoundments that are managed versus those that are breached or unmanaged.

Policy ~~75.1.2.6~~ - The County shall, through the development review process, in cooperation with the appropriate wetland regulatory agencies, continue to conserve and protect coastal wetlands from detrimental physical and hydrological alteration and prohibit unmitigated encroachment into coastal wetlands. The regulation of activities in, on or over wetlands or other surface waters and the

management and storage of all surface waters shall be pursuant to applicable Local, State and Federal requirements. The most restrictive of these shall be enforced. County regulations shall include criteria to evaluate and preserve wetlands, based upon their functional characteristics including types, size, values, functions, conditions and location.

Policy ~~75.1.2.7~~ - The County shall continue to evaluate erosion problems and implement erosion control measures, along Indian River Drive south of Fort Pierce. Erosion control measures shall be consistent with requirements for native or drought tolerant vegetation. ~~Policy 75.1.2.1.~~

Policy ~~75.1.2.8~~ - There shall be no net loss of existing wetland functions or values ~~which are regulated by Federal and State agencies~~. The County shall implement this policy through the site plan and building application permitting process. ~~Any approved mitigation plan shall result in a no net loss of wetlands acreage or function within St. Lucie County, unless waived by the Board of County Commissioners.~~

Policy ~~75.1.2.9~~ - The County shall support and implement programs, in line with the administrative and fiscal constraints of the County, to restore, enhance, and maintain the functions and values of natural waterways and adjacent upland habitats within the coastal area. Through State and local programs, St. Lucie County will continue to encourage the preservation and enhancement of floodplain wetland functions through public purchase and restoration of the floodplain wetlands and adjacent upland buffers along the North Fork of the St. Lucie River and the Indian River Lagoon, including their natural tributaries.

Policy ~~75.1.2.10~~ - Management and recreation development plans for lands purchased through State and local natural resource protection programs (Environmentally Significant Lands, Save Our Coasts, Preservation 2000) shall only allow for development that minimizes impacts to natural resources and does not degrade the long-term viability of existing natural resources on the site. Where possible all plans should assist to restore the biodiversity of plant and animal species in the coastal area while providing reasonable public access.

Objective ~~75.1.3~~: Protection of Living Marine Resources. St. Lucie County shall protect, conserve, or enhance living marine resources and continue to implement regulations to reduce adverse impacts caused by development.

Policy ~~75.1.3.1~~ - The County shall continue to implement the Sea Turtle Protection Ordinance. The Sea Turtle Protection Ordinance shall be periodically reviewed and updated as necessary to ensure adequate protection for sea turtles in St. Lucie County.

Policy ~~75.1.3.2~~ - The St. Lucie County Manatee Protection Plan, dated March 1, 2002, is hereby included within this Comprehensive Plan by Reference. All development activities affected by this plan shall be governed accordingly.

Policy ~~75.1.3.3~~ - The County shall cooperate with the appropriate regulatory and management agencies to implement comprehensive and coordinated management plans for the Indian River Lagoon in order to improve the biological health of the Lagoon.

Policy ~~75~~.1.3.4 - St. Lucie County shall support the continued periodic monitoring of seagrass bed conditions within the County. The County shall protect shorelines containing significant seagrass habitat and shall seek to restore seagrass coverage, where possible.

Policy ~~75~~.1.3.5 - St. Lucie County shall assist the FDEP upon request in establishing well marked stacking and mooring areas for ships and boats in order to protect reefs and seagrass beds.

Policy ~~75~~.1.3.6 - ~~Specific and cumulative impacts of navigation improvements to the Fort Pierce Inlet upon the Sabellariid worm reefs shall be evaluated to ensure the maintenance of viable natural and educational functions of the reefs.~~ The County shall support the mapping of the natural reefs abutting the Atlantic Ocean shoreline and the establishment of appropriate protective measures for these reefs.

Policy ~~75~~.1.3.7 - Spoil islands shall be retained in public ownership and ~~modified managed to serve as green areas for wildlife habitat, bird roosting, nesting, and feeding areas and/or,~~ when appropriate, water-dependent public recreation areas. ~~Revegetation efforts on all spoil islands will utilize 100 percent native vegetation adapted to existing soil and climatic conditions and will include the elimination of exotic species.~~ The County will use native vegetation during revegetation projects and eradicate or manage for exotic species insofar as possible, if required by the appropriate State agency. The disposal of spoil material shall be consistent with Policy 5.1.4.5.

Policy ~~75~~.1.3.8 - ~~Efforts between t~~The County and local interest groups shall support efforts be made to designate the St. Lucie nearshore and Oculina Reefs as Federal marine sanctuaries in accordance with the Federal Marine Sanctuary Program ~~with the intent of reaching this designation by January 1, 2003.~~

Policy ~~75~~.1.3.9 ~~–~~ The County shall continue to review and evaluate information on aAlternative sources for borrow material for the Fort Pierce Feeder Beach Restoration Project shall be evaluated, to eliminate the degradation of to protect nearshore and offshore natural reefs.

Policy ~~75~~.1.3.10 - The County shall discourage development activities on submerged lands.

Policy ~~75~~.1.3.11 - The County shall continue efforts to reconnect all impounded marshes to the Indian River Lagoon.

Policy ~~75~~.1.3.12 - The County shall coordinate with pertinent State and regional agencies to identify natural area greenways and wildlife corridors to link existing public parks, preserve areas and similar public areas for conservation and habitat preservation purposes through the creation of a system of natural area greenways and wildlife corridors that will protect ecological communities in the coastal area. The greenway system shall also encourage non-motorized transportation through the connection of sidewalks and bike lanes and by locating greenway hubs in close proximity to mass transit stops.

Policy 75.1.3.13 - The County shall continue the acquisition and preservation of environmentally significant lands to preserve, protect and restore the biological diversity, integrity and productivity of ecological communities.

Policy 75.1.3.14 - The County shall cooperate with and assist the Florida Department of Environmental Protection, the U.S. Fish and Wildlife Service, the Florida Fish and Wildlife Conservation Commission and the National Marine Fisheries Commission in the implementation of protective and recovery programs for the West Indian Manatees, sSea tTurtles, and other listed species.

Policy 75.1.3.15 - The County shall require that land development projects within the coastal area demonstrate nondegradation of water quality for all discharges into receiving waters designated as "Conditionally Approved" or "Approved" Department of Environmental Protection Shellfish Harvesting Area.

Policy 5.1.3.16 –The Artificial Reef Program shall continue to construct diverse habitats that will benefit listed and regulated species.

Objective 75.1.4: St. Lucie County shall strive to obtain or maintain water quality and trophic State index classifications of "good" for the Indian River Lagoon, Five Mile Creek, Ten Mile Creek, and the North Fork of the St. Lucie River. The County shall enact appropriate regulations which provide for the maintenance or improvement of water quality.

Policy 75.1.4.1: No new untreated point source discharges into coastal waters for stormwater runoff and wastewater effluent will be permitted.

Policy 75.1.4.2 - In order to reduce the impact of effluent from sewage treatment plants on the Lagoon, all existing regulated wastewater plants in the unincorporated areas of Hutchinson Island shall connect to regional waste treatment facilities within the applicable service areas, unless excepted by St. Lucie County through a Memorandum of Understanding.

Policy 75.1.4.3 - New causeways across the Indian River Lagoon shall be prohibited in order to reduce further constriction of water circulation. New infrastructure must be demonstrated to meet all of the measures spelled out in Goal 75.1.

Policy 75.1.4.4 - In order to reduce nonpoint source pollutant loadings and improve the functioning of the County's drainage system, the County shall continue to use a franchise hauler to collect residential solid waste in the urban unincorporated County.

Policy 75.1.4.5 - St. Lucie County shall coordinate with, and assist, the Florida Inland Navigation District in the identification of dredge/spoil disposal sites associated with maintaining the Atlantic Intracoastal Waterway in St. Lucie County. Dredge disposal sites within the jurisdiction of the County should first be used to serve the needs of St. Lucie County and then, if sufficient capacity in the County sites exists, extraterritorial depositions may be permitted. All spoil from the dredging of the Lagoon shall be placed on uplands once an upland site is established.

Policy ~~75~~.1.4.6 - The County shall prohibit shoreline alteration and construction which degrades existing estuarine productivity with exceptions such as necessary access to marine resources, and the abatement of serious and significant erosion, when the projects are not expected to result in long-term or permanent degradation of water quality or habitat value.

Policy ~~75~~.1.4.7 - The County shall continue to address point and nonpoint pollution problems through its stormwater management program. The County shall request assistance from appropriate agencies in addressing high priority problems through Federal, State and Regional programs that provide technical and fiscal resources.

Policy ~~75~~.1.4.8 - The County shall continue to address water quality problems identified in the data and analysis section of this element through:

- a. continual cooperation in SWIM (Surface Water Improvement and Management) programs;
- b. the implementation of the St. Lucie County Stormwater Master Plan;
- c. enforcement of regulations to improve control of illegal dumping into canals, ditches and waterways, and increase implementation of urban and agricultural best management practices;
- d. Aggressively lobbying and taking leadership to plan and locate water preserve facilities within St. Lucie County ~~by January 1, 2005. Facilities will be built~~ in order to attenuate storm water discharge, eliminate agricultural pollutants, and manage salinity in the St. Lucie River and the Indian River Lagoon.
- e. Public purchase and protection of upland buffer area along all natural waterways.

Policy ~~75~~.1.4.9 - The County shall continue to construct stormwater management improvements in a manner that enhances receiving waters and provides habitat for native animal and plant species.

Policy ~~75~~.1.4.10 - The County shall increase public awareness about the Indian River Lagoon and the North Fork of the St. Lucie River, their diverse resources and value, as well as threats to these resources. Increase public awareness of and involvement in programs to protect, enhance and restore the estuaries, including efforts to reduce the impacts of stormwater and freshwater discharges.

Policy ~~75~~.1.4.11 - The County shall continue to evaluate and update the Stormwater Master Plan to address water quality issues.

Objective ~~75~~.1.5: Beaches and Dunes. St. Lucie County shall provide for the protection and restoration of beaches and dunes through enforcement and ongoing review of the Coastal Area Protection Ordinance. ~~A comprehensive beach and dune management program shall be adopted by 2003 which enhances the natural functioning of the beach-dune system while reducing unnatural disturbances of the primary dune.~~

Policy ~~75.1.5.1~~ - The County shall ~~prohibit only allow~~ construction seaward of the Coastal Construction Control Line including construction of coastal or shore protection structures, ~~except where upon issuance by the Florida Department of Environmental Protection has issued of~~ the applicable permit authorizing that construction.

Policy ~~75.1.5.2~~ - Techniques for inlet maintenance which provide for long-term beach stability through facilitation of normal littoral processes shall be supported.

Policy ~~75.1.5.3~~ - The beach renourishment projects currently recommended by the U.S. Army Corps of Engineers and Florida Department of Environmental Protection shall be supported if shown to comply with the measure of Goal ~~75.1~~. ~~Mitigation must be in kind, acre for acre or greater.~~

Policy ~~75.1.5.4~~ - The County shall explore the feasibility for providing ~~require~~ provisions for public access to state-owned beaches created through renourishment projects conducted at the public's expense.

Policy ~~75.1.5.5~~ - Access to the beach for ~~new~~ development will be confined to ~~elevated~~ walkways designed to that protect dune systems, subject to the Florida Department of Environmental Protection approval.

Policy ~~75.1.5.6~~ - The County shall enforce regulations which prohibit motor vehicles on public lands within the coastal strand and scrub upland habitats that lie east of the Coastal Construction Control Line, unless authorized by the appropriate Federal, State, or local agency.

Policy 5.1.5.7 — The Land Development Code shall provide guidelines for evaluating removal of previously existing manmade alterations on a dune, beach or shoreline system when reviewing applications for redevelopment.

Policy 5.1.5.8 - The County shall support and, when appropriate, assist the conservation efforts of public and private organizations which protect and promote the protection of marine turtles and turtle nesting habitat.

Policy 5.1.5.9 - The County shall maintain a program for the removal of invasive exotic vegetation, re-vegetation with appropriate species and maintenance of County-owned beaches and beach dune areas. Restoration projects shall be completed as funding is established and sources become available. Local, state, federal and private funding sources shall be pursued and used to support restoration projects.

Objective ~~75.1.6~~: The County shall ~~implement and strengthen regulations that provide for the protection, preservation, or sensitive reuse of historic resources in the coastal area, through enforcement and implementation of the including the adoption of a Historic Preservation Ordinance by 2002.~~

Policy ~~75.1.6.1~~ - As an alternative to preserving historic or archaeological sites, excavation of a site conducted by the Florida Division of Historic Resources or their approved alternate prior to development shall be allowed. Should a site be scientifically excavated then development may proceed without preserving the

site unless [it is] found to be of great significance.

Policy ~~75.1.6.2~~ - In the case of historic or archaeological sites, vegetation removal shall be prohibited unless the vegetation to be removed is a part of a bona fide scientific excavation or is a part of an approved development plan.

Policy ~~75.1.6.3~~ - Donations of significant historic or archaeological sites shall be considered for acceptance by the Board of County Commissioners.

Policy ~~75.1.6.4~~ - The County shall continue to review the effectiveness of the criteria for the identification of historic resources shall be developed for incorporation into the Historic Preservation Ordinance and amend as conditions necessitate. required pursuant to the Future Land Use Element.

Policy ~~75.1.6.5~~ - The following shall be components of the Historic Preservation program accomplished:

- a. The ongoing identification, designation, and mapping of any structures or sites that meet the criteria contained in developed pursuant to Policy ~~75.1.6.4~~, for incorporation into the Historic Preservation Ordinance for designation as an historic site required pursuant to the Future Land Use Element; and
- b. The submission of a list of any such designated historic resources to the U.S. Department of the Interior for inclusion of the National Register of Historic Places and Florida Department of State Division of Historic Resources for consideration for inclusion in the Master Site File.

Policy ~~75.1.6.6~~ - A list of historic resources shall be continually updated as appropriate information becomes available.

Policy ~~75.1.6.7~~ - Historic resources and their environments should be included and protected in public acquisition programs for recreation, open space and conservation.

Policy ~~75.1.6.8~~ - By December 31, 2002, the County historic preservation shall enact regulations that will further protect the integrity of sites identified by St. Lucie County as significant historic resources. At a minimum the regulations shall provide that:

- a. No existing archaeological sites shall be excavated, scraped, leveled, or altered without supervision of a professional archaeologist utilizing acceptable techniques;
- b. An archaeological survey may be required as part of development reviews;
- c. If evidence of historical or archaeological value is exposed through construction or site preparation, work on that location will be temporarily suspended until evaluated by the County or their designees.

Objective ~~75.1.7~~: As outlined in the Boating Facilities Siting component of the Manatee Protection Plan marina siting study, St. Lucie County shall balance the need for

environmental protection and restoration with the demands for public, as well as private boating facilities.

Policy ~~75~~.1.7.1 - The County shall require prospective marina developers to complete the "Preliminary Screening Checklist For Marinas" and review the information with the County ~~Planning Manager~~ Planning and Development Service Director to discuss the potential issues for development of marinas in the Indian River Lagoon and North Fork of the St. Lucie River. An official pre-application meeting should be held with the St. Lucie County Planning Manager for early identification of siting issues.

Policy ~~75~~.1.7.2 - Marinas shall be compatible with the St. Lucie County Future Land Use Map and natural resource protection standards in terms of the types and intensities of uses and the provision of methods to offset and mitigate impacts to natural coastal area resources.

Policy ~~75~~.1.7.3 - New marina facilities shall be located in areas that minimize adverse environmental impacts.

Policy ~~75~~.1.7.4 - St. Lucie County shall encourage the expansion of existing marina facilities and any new water-dependent development to take place in disturbed areas.

Policy ~~75~~.1.7.5 - Adequate and effective measures shall be taken to prevent contamination of area waters from spillage or tank storage leakage. A fuel spill operations and contingency plan will be prepared for all new fueling operations in St. Lucie County. The plan will include operation and safety procedures and contingency plans for cleanup of a potential spill.

Policy ~~75~~.1.7.6 - Due to the direct economic impact of the marine industry, St. Lucie County shall encourage continued orderly growth of this industry in a manner that maintains the economic value of coastal resources.

Policy ~~75~~.1.7.7 - Public marinas, beaches, and other recreational facilities shall be sited with access to major transportation systems, including non-motorized facilities and existing and proposed mass transit stops.

Policy ~~75~~.1.7.8 - New and expanded marina facilities shall utilize dry storage, where possible. St. Lucie County shall encourage the use of dry storage in a manner that protects coastal resources and adjacent lands. Review of proposed dry storage area shall consider setbacks, height limitations, parcel size, color, maintenance, etc.

Policy ~~75~~.1.7.9 - St. Lucie County shall consider zoning classifications for marina development and adopt performance standards and other controlling measures cited in the ~~marina~~ siting study for implementation through the development review process.

Goal ~~75~~.2: Reducing vulnerability to ~~hurricanes~~ hazards. St. Lucie County shall strive to protect the people and property in St. Lucie County from the effects of hurricane storm damage and other hazards. St. Lucie County shall weigh future development as to the impact it would have on the ~~county's~~ County's ability to protect the people and property in St. Lucie County from the effects of hurricanes, wildfires, sinkholes or other potential

hazards, storm damage.

Objective 75.2.1: The County shall address development and redevelopment in the coastal area in the County's Hurricane Evacuation Plan.

Policy 75.2.1.1 - ~~The coastal high hazard area shall be defined as all of those properties located within a category one evacuation area. This area includes all mobile home parks, the barrier islands, and any area shown on the [U.S.] Army Corp of Engineers Hurricane Surge Maps as being susceptible in a category one storm surge, pursuant to Chapter 163.3178(2)(h)F.S as the area below the elevation of the category 1 storm surge line as established by a Sea, Lakes, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model.~~

Policy 75.2.1.2 - ~~New sanitary sewer facilities in the coastal high hazard area hurricane vulnerability zone shall be flood-proofed to prevent inflow and insure that raw sewage does not leak from them during flood events.~~

Policy 75.2.1.3 - ~~The construction of County-funded public facilities in the coastal high hazard area shall be prohibited, unless the facility is necessary for public access, natural resource restoration or enhancement, or to provide for recreational facilities and other appropriate water dependent facilities.~~

Policy 75.2.1.4 - ~~New development and redevelopment within V or A flood zones as designated by the Federal Emergency Management Agency shall employ building construction techniques which are consistent with the requirements of the Federal Emergency Management Agency Flood Insurance Program and the County's Coastal Construction Code.~~

Policy 75.2.1.5 - ~~The County shall prohibit the use of public funds for infrastructure expansion or improvements in coastal high hazard areas unless such funds are necessary to:~~

- ~~a. Provide services to existing development (structures approved for development prior to the adoption of this Comprehensive Plan);~~
- ~~b. Provide adequate evacuation in the event of emergency; or~~
- ~~c. Provide for appropriate water dependent uses including the restoration or enhancement of natural resources within the coastal area.~~

The County shall through land use designation and development review, regulate and limit the type of uses in the designated Coastal High Hazard Area. Protection of human life and protection of natural resource system shall be maximized. The County shall direct population concentrations away from known or predicted High Hazard Areas.

Policy 5.2.1.6 - The County shall consider the most current and credible sea level rise data when planning long term infrastructure and capital improvement expenditures and land use amendments in areas less than 10 feet in elevation.

Policy 5.2.1.7 - The County shall increase public awareness of hazards and their impacts by providing hazard mitigation information to the public and to County personnel. Information shall address evacuation, sheltering, building techniques to reduce hurricane and storm hazards. Additionally, wildfire safety information, and any other hazard mitigation issues that could help prevent loss of life and

property shall be addressed.

Policy 5.2.1.8 - The County shall coordinate and cooperate with emergency management officials when making land use decisions, capital improvements, and creating other planning initiatives. County planners shall incorporate the recommendations of the hazard mitigation annex of the local peacetime emergency plan and applicable existing interagency hazard mitigation reports, as deemed appropriate into planning programs.

Policy 5.2.1.9 - The County shall ensure that its code compliance process continues to identify and require the removal and/or rehabilitation of structures that are a hazard to the public health, safety and welfare.

Policy 5.2.1.10 - The County shall maintain consistency with the program policies of the National Flood Insurance Program (NFIP) administered by the Federal Emergency Management Administration (FEMA) and shall monitor new cost effective programs for minimizing flood damage. Such programs may include modifications in construction setback requirements 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.

Policy 5.2.1.11 – The County shall provide public information about wildfire hazards and encourage the removal of fuel sources near structures.

Policy 5.2.1.12 – The County shall consider hazard mitigation initiatives when determining capital improvement expenditures.

Policy 5.2.1.13 – The County shall continue to coordinate with the U.S. Department of Interior as it pertains to their digital mapping pilot project of the CBRA zones within St. Lucie County and potential funding issues.

Objective 75.2.2: The County shall promote the construction of publicly owned buildings that can be safely utilized as public hurricane shelters.

Policy 75.2.2.1 - On all newly constructed public buildings, the County shall explore the feasibility of construction to the standards for utilization of the building as a qualified emergency shelter space. County-funded buildings shall include the function of public hurricane shelter in their design. Some of the elements to be considered in the design are:

- a. ~~— Flooding potential;~~
- b. ~~— Accessibility;~~
- c. ~~— Rain surcharge on roofs;~~
- d. ~~— Window/door glass exposures;~~
- e. ~~— The use of dedicated roll up/down hurricane shutters;~~
- f. ~~— Adequate sanitary facilities;~~
- g. ~~— Emergency power supply; and~~
- h. ~~— Emergency water supply.~~

Policy 75.2.2.2 - Request in writing that other governmental entities in the County

design new buildings to the standards for utilization of the building as a qualified emergency shelter space consistent with Policy 75.2.2.1 when practicable and ask the County's Emergency Management Director to review and comment on proposals for new public buildings.

Policy 75.2.2.3 - Structural and functional designs of County buildings shall be reviewed and retrofitted for public shelters where it is cost effective and/or practical.

Policy 75.2.2.4 - All new residential development in excess of 50 units in areas subject to coastal flooding shall provide shelter space for 20 percent of the residents at a spacing requirement of 40 square feet per person, or demonstrate the availability of the shelter space.

Objective 75.2.3: The County shall maintain the worst-case 22.5-hour hurricane evacuation time.

Policy 75.2.3.1 - Midway Road, and Prima Vista Boulevard shall be improved as soon as economically feasible so as to achieve and maintain a Level of Service D.

Policy 75.2.3.2 - Prior to the completion of the improvements described in Policy 75.2.3.1, the direction of traffic flow for one eastbound lane of each of these roadways (Midway Road, Port St. Lucie Boulevard, and Prima Vista Boulevard) shall be reversed, if necessary, during periods of emergency evacuation.

Policy 75.2.3.3 - St. Lucie County shall continue to implement the Treasure Coast Hurricane Evacuation Plan.

Policy 75.2.3.4 - St. Lucie County shall require environmental impact studies and appropriate mitigation for any capital projects within the coastal area.

Policy 75.2.3.5 - All hurricane evacuation studies and plans conducted by or for the County shall be provided to the Treasure Coast Regional Planning Council, nearby counties, and all municipalities within St. Lucie County for review for consistency with regional and local plans. Conversely, St. Lucie County shall request for purposes of review, all hurricane evacuation studies and plans for nearby counties, municipalities within St. Lucie County, and the Treasure Coast Regional Planning Council.

Policy 75.2.3.6 - If the Florida Department of Transportation, in conjunction with Martin County, decides to widen the Jensen Beach Bridge to South Hutchinson Island, discuss possible St. Lucie County participation in the project with the appropriate parties.

Objective 75.2.4: The County shall provide immediate response to post-hurricane situations through the implementation of post-disaster response and redevelopment plans as set forth in the policies outlined below ~~Treasure Coast Hurricane Evacuation Plan~~.

Policy 75.2.4.1 - After a hurricane, but prior to re-entry of the population into

evacuated areas, a special meeting of the Board of County Commissioners shall be convened to hear preliminary damage assessments, appoint a Recovery Task Force, and consider a temporary moratorium on building activities not necessary for the public health, safety, and general welfare.

Policy 75.2.4.2 - A Recovery Task Force shall be named to include the ~~Community Development~~ Planning and Development Services Director, Emergency Management Director, County Engineer, and Sheriff, and other members as directed by the Chairman of the County Commission. Staff shall be provided by the departments whose directors sit on the Task Force. The Task Force shall be disbanded after implementing its responsibility.

Policy 75.2.4.3 - The responsibilities of the Recovery Task Force shall include: review and issuance of emergency building permits; coordination with State and Federal officials to prepare disaster assistance applications; analysis and recommendation of hazard mitigation options to the County Commission, including reconstruction or relocation of damaged public facilities; development of a redevelopment plan; and recommendation of amendments to the Comprehensive Plan, Local Peacetime Emergency Plan, and other appropriate policies and procedures.

Policy 75.2.4.4 - The following post-emergency activities shall be pursued: immediate repairs to potable water, wastewater, and power facilities; removal of debris; stabilization or removal of structures about to collapse; and minimal repairs to make dwellings habitable. These actions shall receive first priority in permitting decisions. Long-term redevelopment activities shall be postponed until the Recovery Task Force has completed its tasks.

Policy 75.2.4.5 - If appropriate to rebuild structures which suffer damage in excess of 50 percent of their appraised value, current requirements shall be met including those enacted since construction of the structure including the Coastal Construction Control Line.

Policy 75.2.4.6 - Structures which suffer repeated damage to pilings, foundations, or load-bearing walls and are proposed to be rebuilt shall be required to rebuild landward of their current location or modify the structure to delete the areas most prone to damage.

Policy 75.2.4.7 - Repair or reconstruction of seawalls shall be accompanied by beach fill or other appropriate material authorized by the appropriate Federal or State permitting agencies.

Policy 75.2.4.8 - The County shall assess the value of all structures in the coastal high hazard area and the utility of the land for public ~~access~~, and evaluate the potential for acquisition, relocation, or other appropriate measures in line with fiscal constraints when post disaster opportunities arise.

Policy 75.2.4.9 - The Recovery Task Force shall review all interagency hazard mitigation reports as they are produced and make recommendations for amendments to the comprehensive plan accordingly.

Policy 5.2.4.10 – By the beginning of the 2011 hurricane season, the County

shall develop a Post-Disaster Redevelopment Plan.

Policy 5.2.4.11 – The Post-Disaster Redevelopment plan should ensure that actions needed to protect the public health and safety will receive the first priority in emergency permitting decisions. These actions should, at minimum, include the following:

1. Repairs to potable water, wastewater and power facilities;
2. Removal of debris from roadways and required infrastructure;
3. Stabilization or removal of any structure which is about to collapse;
4. Minimal repairs to make structures habitable; and
5. Emergency repairs related to environmental damage.

Policy 5.2.4.12 – The Post-Disaster Redevelopment plan should provide a basis to:

1. Ensure a means to restore economic activity;
2. Establish a framework for deciding whether to implement a temporary moratorium on building activity as may be required for public safety;
3. Develop procedures for reviewing and deciding upon emergency building permits;
4. Coordinate with State and Federal officials to prepare disaster assistance applications;
5. Analyze and recommend to the Board of County Commission hazard mitigation options, including reconstruction or relocation of damaged public facilities;
6. Recommend amendments to the Local Peacetime Emergency Plan and other appropriate policies and procedures; and
7. Ensuring timely re-entry by County residents following an evacuation.

Policy 5.2.4.13 – The Post-Disaster Redevelopment plan should provide the basis for evaluating future options for damaged public facilities following a hurricane or other disaster event; which includes but is not limited to abandonment, repair in place, relocation and reconstruction with structural modifications. Final determination should at a minimum consider the following:

1. Construction and maintenance costs;
2. Recurring damages;
3. Impacts on land use, the environment, and the public sector;
4. Repair to any public facilities that are included in the inventory of the National Register of Historic Places shall be guided by the Secretary of the Interior's Guidelines for Rehabilitation;
5. Consistency with federal funding provisions; and
6. Consideration of structural integrity and safety.

Goal 75.3: The amount of public access to oceanic, estuarine, and riverine coastal resources shall be increased.

Objective ~~75.3.1~~: The County shall not experience a net loss of public beach, lagoon, and river access. The County shall continue to increase the ~~number of parking spaces~~, lagoonal shoreline access, boat ramps, and non-boat fishing access points. Programs for the acquisition of public access facilities shall be consistent with the financing ability of the County.

Policy ~~75.3.1.1~~ - The County shall enact regulations which provide for the maintenance of existing legally used public access to the beach and lagoon shoreline by new development, and require that existing legally used public beach access points be identified on the site plans for new beachfront development with continuation of the access point relocation of it on the site, or donation of it to the County.

Policy ~~75.3.1.2~~ - The County shall ~~require~~ provide parking as needed for and access to all public recreation facilities.

Policy ~~75.3.1.3~~ - By December ~~31, 2004~~12, the County shall explore the financial feasibility of conducting a study to identify ~~of those areas along State Road A1A where paved designated parking could be provided for access to either the beach or lagoon shall be completed. The study shall be presented to the County Commission for inclusion in the Capital Improvements Element of this Comprehensive Plan and subsequent implementation in a year decided upon by the Commission.~~

Policy ~~75.3.1.4~~ - The recommendations of the County's Boating Facility Siting Plan shall be utilized for the identification of those areas most appropriate for the location of additional boat ramps for access to coastal waters.

Policy 5.3.1.5 - In developing land use policies for shoreline uses, first priority shall be directed toward:

- a. Non-structural shoreline protection uses such as native shoreline re-vegetation programs;
- b. Approved water-dependent estuarine shoreline uses such as: fish and wildlife production, recreation, pervious accessways, small dock facilities and residential multi-slip dock facilities without commercial fuel tanks or other commercial services;
- c. Water related or enhanced uses such as utilities requiring access to water, water enhanced recreation, and other water related uses consistent with the land development code. Lowest priority shall be directed to non-water dependent uses.

Second priority shall be directed toward water-related uses such as:

- a. Parking facilities for shoreline access;
- b. Residential structures which comply with the building code for structures within the coastal building zone; and
- c. Recreational facilities which comply with applicable codes.

Goal ~~75.4~~: Public facilities shall be adequate and available to serve the residents of and visitors to the ~~county's~~ County's coastal area.

Objective ~~75.4.1~~: The appropriate Level of Service standards within this Comprehensive Plan (~~including those in the Capital Improvement Element and Traffic Circulation Element~~) and the standards under this objective shall be applied to infrastructure facilities during the development approval process. The service area and phasing of such facilities shall be consistent with the goals, objectives, and policies of this and all other elements of this Comprehensive Plan.

Policy ~~75.4.1.1~~ - The County shall prohibit the use of public funds for infrastructure expansion or improvements in coastal high hazard areas unless such funds are necessary to:

- a. Provide services to existing development (structures approved for development prior to the adoption of this Comprehensive Plan);
- b. Provide adequate evacuation in the event of emergency; or
- c. Provide for appropriate water dependent uses including the restoration or enhancement of natural resources within the coastal area.

Policy ~~75.4.1.2~~ - ~~The County shall develop criteria for use in the implementation of the regulations required in Policy 75.4.1.1 above. When state funding is anticipated to be needed for the relocation, mitigation, or replacement of existing infrastructure in the Coastal High Hazard Area, the County shall consider the feasibility and benefits of pursuing such actions should funding become available.~~

Policy ~~75.4.1.3~~ - The County shall cooperate with State and Federal guidelines for all beach renourishment projects which are consistent with the St. Lucie County Comprehensive Plan. ~~Beach renourishment projects shall have a design life of at least five years.~~

Policy ~~75.4.1.4~~ - The County shall prohibit development proposals that would reduce the Level of Service provided by an adjacent renourished beach below locally determined criteria.

Policy ~~75.4.1.5~~ - The County shall limit future development within water and sewer service areas to the capacity of the facilities to supply the appropriate Level of Service standards established in this Comprehensive Plan.

Policy ~~75.4.1.6~~ - The County shall require turn lanes, parking lanes, or other paved areas, particularly at appropriate intersections, for new or improved roads, which can be used to increase the number of traffic lanes for hurricane evacuation.

Policy ~~75.4.1.7~~ - Drainage systems within the coastal area that are operating below the Level of Service standards shall be maintained in accordance with the Drainage Sub-Element of this Comprehensive Plan.

Policy ~~75.4.1.8~~ - The County shall continue to coordinate with the U.S. Army Corps of Engineers and the State of Florida to implement the Fort Pierce Inlet

~~Management Plan, and shall act as local sponsor when the Fort Pierce Inlet Management Plan is consistent with all provisions of the St. Lucie County Comprehensive Plan.~~

~~Policy 75.4.1.9 – Within one year of adoption of the Plan amendments, the land development regulations Land Development Code shall require that public restroom and water disposal facilities shall be provided at waterfront developments accessible by the boating public.~~

~~Policy 5.4.1.10 – The County shall ensure that required infrastructure is available to serve the development or redevelopment in the coastal planning area at the densities proposed by the future land use plan, consistent with coastal resource protection and hurricane evacuation needs.~~

~~Goal 7.5: By October 1, 2001, St. Lucie County shall develop a new port master plan for the Port of Fort Pierce to replace the existing 1989 Port Master Plan.~~

~~Objective 7.5.1: Incorporate into the Port Master Plan existing and proposed expansions including the 1996 Port of Fort Pierce Charrette report.~~

~~Policy 7.5.1.1 – Develop the Port Master Plan consistent with Chapter 163.3178(2)(a-k).~~

~~Policy 7.5.1.2 – The Port Master Plan shall address the environmental conditions of the Indian River Lagoon and its interaction with existing and proposed port activities.~~

~~Policy 7.5.1.3 – The Port Master Plan shall address all aspects of port management and operation including safety and security of commercial, industrial, recreational, and environmental activities.~~

~~Policy 7.5.1.4 – Coordinate with the City of Fort Pierce to ensure consistency with the City's Comprehensive Plan including the Port Sub-Element and Coastal Management Element.~~

~~Policy 7.5.1.5 – Coordinate with the St. Lucie County MPO and other appropriate local, State, and Federal agencies to ensure adequate intermodal access and adequacy of public facilities and infrastructure.~~

~~Policy 7.5.1.6 – Develop funding mechanisms to implement the Port Master Plan such as a Tax Increment Financing District, Community Development Area, as well as exploring other funding mechanisms such as grants.~~

~~Policy 7.5.1.7 – Throughout the development of the Port Master Plan ensure and encourage public participation of all affected parties through a formalized public participation process.~~