

**INDIAN RIVER COUNTY, FLORIDA**

**M E M O R A N D U M**

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**TO:** Jason E. Brown  
County Administrator

**THROUGH:** Stan Boling, AICP  
Community Development Director

**THROUGH:** Roland M. DeBlois, AICP  
Chief, Environmental Planning & Code Enforcement

**FROM:** Steven S. Hitt, M.S.  
Senior Environmental Planner

**DATE:** May 16, 2018

**SUBJECT:** FINAL PUBLIC HEARING: County Initiated Request to Amend the Text of the Coastal Management Element and Future Land Use Element of the County's Comprehensive Plan Relating to Sea Level Rise

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It is requested that the following information be given formal consideration by the Board of County Commissioners at its regular meeting of June 5, 2018.

**DESCRIPTION AND CONDITIONS**

This is a county-initiated request to amend the text of the Coastal Management Element and Future Land Use Element of the county's Comprehensive Plan. The purpose of this amendment is to revise the Coastal Management Element and Future Land Use Element to update information and incorporate goals, objectives and policy changes related to planning for sea level rise impacts as mandated by the state.

**Comprehensive Plan Amendment Review Procedures**

Although the number of plan amendments that the county may consider is not limited, the County's Comprehensive Plan regulates the frequency with which the county may amend its Comprehensive Plan. According to the County's Comprehensive Plan, plan amendments are limited to four times per calendar year. For that reason, the county accepts general plan amendment applications only during the "window" months of January, April, July and October. In this case, the subject application was submitted during the January 2018 window.

The procedures for reviewing a Comprehensive Plan amendment involve several steps. First, the Planning and Zoning Commission, as the Local Planning Agency, conducts a public hearing to review the request. At that hearing, the Commission makes a recommendation to the Board of County Commissioners to approve, approve with modifications, or deny the requested amendment.

Following the Planning and Zoning Commission action, the Board of County Commissioners conducts two public hearings. The first of those hearings, known as the transmittal hearing, is for a preliminary decision on the amendment request. At that hearing, the Board determines whether or not the amendment warrants transmittal to state and regional review agencies for their consideration.

If the Comprehensive Plan amendment is transmitted, state and regional review agencies review the amendment as it pertains to each agency's area of focus. Review agencies then send their comments directly to the county and the State Land Planning Agency. Subsequent to staff and/or the applicant addressing any issues raised in the review agency comments, a second and final Board of County Commissioners public hearing, known as the adoption hearing, is conducted. If the Board approves the request at the final hearing, then the approved amendment is submitted to the State Land Planning Agency and to the other review agencies. The amendment becomes effective 31 days after the State Land Planning Agency determines that the approved amendment submittal is complete, unless a challenge is filed by an affected party.

### **Planning and Zoning Commission Action**

At its regular meeting of February 8, 2018, the Planning & Zoning Commission voted 5-0 to recommend that the Board of County Commissioners approve the proposed amendments to the Coastal Management Element and Future Land Use Element for transmittal to state and regional review agencies (see attachment #1).

### **Board of County Commissioners Action (Transmittal Public Hearing)**

After the Planning & Zoning Commission hearing, the Board held its transmittal hearing on March 20, 2018, and voted 4-0 to transmit the proposed comprehensive plan text amendment to state and regional review agencies (see attachment #2). Subsequently, staff transmitted the proposed amendment to state and regional review agencies.

### **State Agency Review**

After transmittal and review of the proposed amendment, no state or regional reviewing agency had any objections to the comprehensive plan text amendment (see attachment #3).

### **BCC Final Public Hearing**

The June 5, 2018 public hearing is the final step in the Comprehensive Plan amendment process. At that hearing, the BCC must decide whether or not to approve the proposed amendment. If the BCC approves the amendment, then staff must transmit the approved amendment to state and regional review agencies. The amendment becomes effective 31 days after the state land planning agency notifies the county that the plan amendment package is complete, if there are no timely objections to it.

## **BACKGROUND**

The Coastal Management Element is one of 12 elements comprising the Indian River County 2030 Comprehensive Plan. The County adopted its comprehensive plan in accordance with Florida Statutes

(FS) Chapter 163 (Part II), which sets forth requirements and criteria for local government comprehensive plans.

Within FS Chapter 163, Section 163.3178 pertains specifically to coastal management. Under that section, the description of the Legislature’s intent is “that local government comprehensive plans restrict development activities where such activities would damage or destroy coastal resources, and that such plans protect human life and limit public expenditures in areas that are subject to destruction by natural disaster.” In fulfilling that intent, the County’s current Coastal Management Element, among other things, includes policies that limit certain development, public infrastructure and facilities in the Coastal High Hazard Area (CHHA), which is defined as the area below the storm surge line of a Category 1 hurricane.

### **Senate Bill 1094**

In 2015, the State enacted Senate Bill 1094, relating to “peril of flood”. Senate Bill 1094 modified FS Subsection 163.3178(2)(f) and requires local governments in Florida to “include development and redevelopment principles, strategies, and 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” within coastal management elements of comprehensive plans. Although the County’s current Coastal Management Element references sea level rise as a concern for future impacts to coastal resources and property, the Element does not evaluate and provide policy on the issue. This past year, county staff consulted state staff to determine if the County’s current plan adequately addresses potential sea level rise impacts in compliance with Senate Bill 1094 revisions. County staff was advised by the state that an amendment is in fact necessary to meet the sea level rise impact assessment and planning requirement. On August 15, 2017, staff reported the state’s findings to the Board of County Commissioners (Board) and the Board authorized staff to initiate the comprehensive plan amendment process. To that end, staff has drafted proposed amendments to the Coastal Management Element and, for cross-reference purposes the Future Land Use Element, to address the potential impacts of sea level rise. Based on the fact that no state agency, including the Florida Department of Economic Opportunity (DEO), had any objections or comments regarding the proposed amendments, the amendments will meet the requirements of Senate Bill 1094 and associated Florida Statutes.

### **ANALYSIS**

In drafting the proposed amendments, staff researched and evaluated various projections of sea level rise, as those projections relate to Florida and particularly Indian River County. Staff also researched and evaluated the best available information on local inundation scenarios, likely potential impacts during a 40+ year planning horizon (the year 2060), and appropriate policies to address potential impacts.

### **Sea Level Rise Projections**

In Florida, baseline relative sea level measurements can be derived from historical tide gauge records of mean monthly sea level. In fact, average monthly sea level measurements have been recorded at tide stations located in Key West, Cedar Key, and Fernandina Beach for more than a century. The yearly averages of these historic data indicate a gradual trend of rising mean sea level between 1897 and 2017.

Based on those data sets, sea levels at Key West, Cedar Key, and Fernandina Beach rose approximately 12.72”, 12.66”, and 15.63” over the last 100 years.

Regional mapping and vulnerability assessment studies related to sea level rise were initially developed by federal, state, and local government agencies in the early 2000s. Circa 2009, development of consistent regional climate change adaptation strategies became the basis for formation of the Southeast Florida Regional Climate Change Compact (SFRCCC), which was represented by four coastal counties: Monroe, Miami-Dade, Broward, and Palm-Beach. The SFRCCC created a Unified Sea Level Rise Projection for Southeast Florida in 2011 based on U.S. Army Corps of Engineers Engineering Circulars guidance documents, historical tidal data from Key West (1913-1999), and available scientific literature on the subject at the time. This Unified Sea Level Rise Projection was later revised in 2015 based on updated guidance documents from the United States Army Corps of Engineers (USACE), National Oceanic and Atmospheric Administration (NOAA), and the United Nations Intergovernmental Panel on Climate Change (IPCC). According to the revised (2015) projection, the region may experience between 14 inches and 34 inches of sea level rise (above 1992 mean sea level) by 2060. All projections show at least some degree of acceleration in the rate of sea level rise compared to the 1897 to 2017 time period.

Based on the best available data from the NOAA Coastal Service Center sea level projection models and best available local projected inundation data, including LiDAR elevation data, county staff has mapped one, two, and three foot sea level rise inundation scenarios, for incorporation into the Coastal Management Element (Figures 9.16, 9.17, and 9.18 of the proposed amendments). For planning purposes the three foot (36”) sea level rise scenario represents the worst case projection for 2060 (34” rise).

## **Proposed Amendments**

The proposed amendments to the Coastal Management Element consist of three main sections:

- Revisions to the Existing Conditions section;
- Revisions to the Analysis section; and
- Revisions to the Goals, Objectives and Policies section.

The proposed revisions to the Existing Conditions section summarizes various sea level rise measurements, assessments and projection studies that have occurred to date, as previously summarized in this memorandum.

Under the Analysis section, the proposed revisions delve into acreage estimates of possible and likely sea level rise impacts to various geographic areas under the one, two, and three foot sea level rise inundation scenarios. Also evaluated are potential sea level rise impacts to existing public facilities and infrastructure. Staff’s findings, as reflected in the revisions, are summarized as follows:

- Privately owned estuarine wetlands and undeveloped lagoon island conservation areas appear to be the most vulnerable to SLR inundation impacts. It is estimated that more than 85% of existing coastal wetlands are at risk of inundation under the three foot sea level rise scenario.
- Most physical infrastructure such as roadways, power plants, airports, landfills, hospitals and schools in the County that are considered critical facilities would not be substantially impacted

under the one, two and three foot sea level rise scenarios. Areas that would potentially be affected are as follows: facilities along the Indian River Lagoon which incorporate coastal mosquito impoundments and estuarine marshes, and approximately 6.8 acres to 16.5 acres of undeveloped (and not filled/elevated) acreage associated with the Indian River Medical Center. It should be noted that existing Medical Center facilities and infrastructure are elevated and would not be impacted under the 1', 2', or 3' inundation scenarios.

- The vast majority of the worst case scenario inundation impacts (3' or 36" rise by 2060) are projected to occur within the Coastal High Hazard Area (CHHA, the area below the storm surge line of a Category 1 hurricane). In fact, in many areas the CHHA is more conservative (more upland located) than the 3' inundation area. The CHHA generally encompasses areas located east of US Highway 1 and Indian River Boulevard on the mainland and the majority of the land west of SR A1A on the barrier island. On the northern barrier island areas such as Windsor, Summerplace, Sea Oaks Beach and Tennis Club and eastern portions of John's Island lie east of (outside of) the CHHA. Similarly, the Vero Beach Estates and Riomar Subdivisions are predominantly east of the CHHA within the City of Vero Beach/central region of the barrier island. On the southern barrier island, the CHHA follows along SR A1A essentially covering all lands west toward the Indian River Lagoon.
- Mitigation strategies that will likely have the greatest effect on reducing exposure to inundation risk due to one, two and three foot SLR scenarios involve reducing the population and development potential within the CHHA. Strategies that accomplish these goals include prohibiting development density increases and reducing public infrastructure expenditures in at risk areas identified on the inundation maps, prohibiting new assisted living facilities and similar facilities for special needs population within the CHHA, and acquiring conservation and open space lands in the CHHA when opportune. To effect such policies within the CHHA, the proposed amendments designate the CHHA as an "Adaptation Action Area" (AAA) for special sea level rise policies, as provided in the state's guidance on sea level rise strategies.

Based on the analysis and findings, staff is proposing a new Coastal Management objective (Objective 15) for sea level rise adaptive strategies, with eight new proposed policies to serve that objective. The proposed Objective 15 reads as follows:

*Through 2060, the County shall adopt, implement, and pursue strategies that increase community resiliency and protect property, infrastructure, and cultural and natural resources from the impacts of sea level rise.*

The eight proposed policies serving the objective are summarized as follows:

- Policy 15.1: By 2022, the County shall conduct an inventory and identify public facilities, coastal wetlands, and infrastructure that may be at risk to sea level rise, and shall consider resiliency improvements and infrastructure relocations as part of capital improvements plans where warranted.
- Policy 15.2: During major plan evaluations and updates, sea level rise projections shall be considered when evaluating or updating policies related to sea level rise.

- Policy 15.3: Beginning in 2022, the County shall periodically review and update (every five years) sea level rise projections used in the Coastal Management Element.
- Policy 15.4: On an on-going basis, the County shall coordinate with local municipalities on sea level rise adaptation and mitigation measures.
- Policy 15.5: The County adopts the CHHA as an “Adaptation Action Area” (AAA) for mitigation measures and resiliency improvements, as well as an area for limiting public infrastructure expenditures (similar to existing CHHA policy and land development regulations).
- Policy 15.6: By 2023, the County shall re-evaluate flood zone requirements and mitigation strategies within the AAA.
- Policy 15.7: The County prohibits within the AAA new adult congregate living facilities, nursing homes, and other similar facilities that serve special needs populations (similar to existing CHHA policy and land development regulations).
- Policy 15.8: The County prohibits within the AAA increases in land use designation densities (similar to existing CHHA policy).

### **Future Land Use Element Cross-reference Amendment**

For purposes of cross-reference, Future Land Use Element Policy 17.5 is proposed to be revised to reflect the designation of the CHHA as an AAA, subject to the new Coastal Management Element sea level rise policies.

### **Consistency with Comprehensive Plan**

Comprehensive Plan amendment proposals are reviewed for consistency with all applicable policies of the comprehensive plan. As per section 800.07(1) of the County Code, the “Comprehensive Plan may only be amended in such a way as to preserve the internal consistency of the plan.”

In evaluating a proposed comprehensive plan amendment for internal consistency, the most important consideration is Future Land Use Element Policy 14.3. This policy requires that one of four criteria be met in order to approve a comprehensive plan amendment. These criteria are:

- The proposed amendment will correct an oversight in the approved plan;
- The proposed amendment will correct a mistake in the approved plan;
- The proposed amendment is warranted based on a substantial change in circumstances; or
- The proposed amendment involves a swap or reconfiguration of land use designations at separate sites, and that swap or reconfiguration will not increase the overall land use density or intensity depicted on the Future Land Use Map.

In this case, the proposed comprehensive plan amendments meet Policy 14.3’s third criterion, in that there has been a substantial change in circumstances. That change is two-fold. First, there has been a change in the state’s requirements for local planning (through enactment of Senate Bill 1094) that all

local government comprehensive plans analyze and plan for sea level rise as it relates to “peril of flood” risks to coastal areas. Second, there has been a developing body of evidence that planning for potential sea level rise impacts in coastal areas is prudent if not necessary.

## **SUMMARY**

As described herein, Senate Bill 1094, enacted in 2015, requires local governments to consider the effects of sea level rise in coastal management elements of comprehensive plans. The proposed amendments summarize and take into account sea level rise projections as they affect coastal resources, infrastructure, facilities and development in coastal areas. Staff’s finding is that most impacts under one, two and three foot sea level rise inundation scenarios would occur to estuarine wetlands, lagoon islands, and lands currently identified as within the Coastal High Hazard Area (defined as the area below the storm surge line of a Category 1 hurricane). The proposed objective and policies call for and implement certain strategies to reduce impacts to areas and infrastructure projected to be subject to sea level rise inundation in future years. Based on a positive review from state agencies (no objections or comments), the proposed sea level rise amendments will meet the requirements of Senate Bill 1094 and associated Florida Statutes.

## **RECOMMENDATION**

Based on the analysis, staff recommends that the Board of County Commissioners approve the proposed Comprehensive Plan text amendments by approving the attached ordinance and authorize the Community Development Director to transmit the ordinance and any related materials to the state land planning agency and interested parties.

## **ATTACHMENTS**

1. Minutes from the February 8, 2018 PZC Meeting
2. Minutes from the March 20, 2018 BCC Meeting
3. Letter from Department of Economic Opportunity and Related Correspondence from Review Agencies
4. Adoption Ordinance (includes Appendix A Proposed Comprehensive Plan Text Amendments)