HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HM 539 Indian River Lagoon Restoration Project and the Lake Okeechobee and Estuary Recovery Plan
SPONSOR(S): Harrell and others
TIED BILLS: **IDEN./SIM. BILLS:**

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR
1) Water & Natural Resources Committee	9 Y, 0 N	Blanchette	Lotspeich
2) Local Government Council			
3) State Resources Council			
4)			
5)			

SUMMARY ANALYSIS

The memorial urges the United States Congress to promptly enact pending legislation to authorize the Indian River Lagoon Restoration Project and requests the President of the United States to sign that legislation into law. It also requests the President to work with the Congress to develop and enact a comprehensive planning and funding initiative to be implemented in coordination with Governor Bush's Lake Okeechobee and Estuary Recovery Plan announced on October 10, 2005.

The memorial does not have a fiscal impact.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. HOUSE PRINCIPLES ANALYSIS:
This bill does not appear to implicate any of the House Principles.

B. EFFECT OF PROPOSED CHANGES:

Background

The Indian River Lagoon
The South Florida Water Management District ("SFWMD") and the U.S. Army Corps of Engineers completed a Final Integrated Project Implementation Report and Environmental Impact Statement in March 2004 that covers central and southern Florida. The SFWMD describes the Indian River Lagoon as a "series of three distinct, but interconnected, estuarine systems, which extend 156 miles from Ponce Inlet to Jupiter Inlet on Florida's east coast."[1] The northern portion of the lagoon is within the St. Johns River Water Management District, while the lagoon's southern section is located within the SFWMD in St. Lucie, Martin and northern Palm Beach counties.[2]

The Indian River Lagoon has been described as the most bio-diverse estuarine system in all of North America, providing shelter to manatees, dolphins, sea turtles, and seahorses.[3] Part of the Indian River Lagoon is an estuary of national significance, recognized by the U.S. Environmental Protection Agency National Estuary Program and designated a Florida Aquatic Preserve and Outstanding Florida Water.[4] Moreover, the lagoon supports multimillion dollar fishing, clamming, tourism, agricultural and recreational industries.[5]

SFWMD defines a lagoon as a "broad, shallow estuarine system separated from the ocean by a barrier island, generally paralleling the shoreline and limiting exchange with the sea through inlets."[6] An estuary is defined as an "area where saltwater from the sea mixes with freshwater from the land, such as a bay, the mouth of a river, a salt marsh, or a lagoon."[7] Estuarine systems are important for the "survival of many species of birds, mammals, fish and other wildlife, some of them rare and endangered."[8] There are several benefits that saltwater grasses and other estuarine plants provide to their surroundings which include erosion prevention and stabilizing shorelines.[9]

Both SFWMD and the U.S. Army Corps of Engineers have stated in the Final Integrated Project Implementation Report that the southern Indian River Lagoon ecosystem is in imminent danger of ecological collapse.[10] "The estuary system has been degraded by large and frequently occurring discharges of freshwater, and by excessive accumulation of muck in estuary and lagoon bottoms."[11] This has produced a reduction in water clarity and ultimately "exceeded the salinity tolerances of

[1] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_lagoon/2_wrp_ce_lagoon.html.
[2] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[3] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[4] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[5] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_lagoon/2_wrp_ce_lagoon.html.
[6] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_lagoon/2_wrp_ce_lagoon.html.
[7] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_lagoon/2_wrp_ce_lagoon.html.
[8] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_lagoon/2_wrp_ce_lagoon.html.
[9] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_lagoon/2_wrp_ce_lagoon.html.
[10] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[11] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.

submerged vegetation and benthic animals."[12] Because so much of the income of Martin and St. Lucie Counties relies on recreational and commercial fishing and other marine-related activities, further degradation of the lagoon ecosystem may have a direct adverse impact on the regional economy.[13]

Adequately and reliably meeting the water supply demands of the agricultural interests in the south Florida area is also an issue. Historically, most rainwater soaked into the ground in the region's short hydroperiod wetland systems.[14] As Martin and St. Lucie Counties developed, some of these wetlands were converted into agricultural and urban land issues. For some of the remaining wetlands, the network of drainage canals worked too efficiently and drained too much water off the land too quickly. The net result is that insufficient water is stored for all agricultural use in the dry season, and agricultural interests are forced to rely on the moderately saline Floridan aquifer to supplement irrigation needs.[15] Reliance on this source for extended periods of time can lead to decline in productivity and potential die-off of crops. According to the SFWMD and U.S. Army Corps of Engineers, without the features contained in the Indian River Lagoon – South Restoration Plan, these adverse impacts to regional agriculture will continue.[16]

Indian River Lagoon - South Restoration Plan

The Indian River Lagoon – South (IRL-S) Restoration Plan one of the highly interrelated components of the Comprehensive Everglades Restoration Plan ("CERP"), a joint federal-state effort to restore hydropattens in the Everglades area. However, the United States Congress must authorize implementation of the IRL-S Restoration Plan in order for restoration activities to proceed.

The IRL-S Restoration Plan will allow significant restoration of physically and biologically degraded areas in the southern Indian River Lagoon area, while providing for other water-related needs of the region, including sustainable agricultural water supply and maintenance of existing flood protection.[17] The IRL-S Restoration Plan recommends a plan for Martin, St. Lucie, and Okeechobee Counties that will improve water quality within the St. Lucie Estuary and the Indian River Lagoon by reducing the damaging effects of watershed runoff, reducing high peak freshwater discharges to control salinity levels, reducing nutrient loads, pesticides and other pollutants.[18] The project will also provide water supply for agriculture to offset reliance on the Floridan aquifer.[19] "The IRL-S Restoration Plan includes building and operating approximately 12,600 acres of new reservoirs, approximately 8,700 acres of new stormwater treatment areas, restoring natural hydrology on approximately 92,000 acres in the watershed, restoring approximately 3,100 acres of floodplain wetlands in the North Fork of the St. Lucie River, and muck removal and habitat restoration actions inside the estuaries."[20]

The IRL-S Restoration Plan recommends the following: "building pumps, levees, canals and other water control structures to operate and interconnect project features and provide a mechanism for re-

[12] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[13] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[14] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[15] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[16] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[17] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[18] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[19] www.evergladesplan.org/pm/projects/proj_07_irl_south.cfm
[20] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.

directing freshwater discharges."[21] As a result, there will be significant reduction in harmful discharges into the estuaries, water quality treatment will be provided, native wetland and upland habitat in the watershed will be restored, and there will be improved habitat for natural populations of flora and fauna, including threatened and endangered species.[22]

Without the implementation of the IRL-S Restoration Plan, the southern Indian River Lagoon ecosystem will continue to deteriorate and will remain in imminent danger of ecological collapse. A small level of ecological improvement within the south Florida ecosystem is expected to occur by 2050 as a result of implementation of Federal, state, and local projects currently planned outside of the CERP program.[23] Some of these projects would beneficially affect the study area. However, the cumulative, regional benefits from these projects would not result in restoration of the Indian River Lagoon ecosystem and its watershed. While the IRL-S Restoration Plan addresses to a significant degree the restoration needs associated with impacts from the watershed, the balance of the CERP further contributes to the restoration of the Indian River Lagoon by providing additional storage of excess regional water from Lake Okeechobee and its enormous watershed.[24] The success of the IRL-S Restoration Plan is ultimately dependent upon the implementation of the overall restoration plan for the south Florida ecosystem.

The Caloosahatchee River and Estuary

The 2004 hurricane season generated unprecedented rainfall, dumping up to 13 million gallons of water each minute into Lake Okeechobee at its peak. Lake Okeechobee rose by more than five and a half feet in less than three months -- from just over 12 feet in early August to more than 18 feet by mid-October. The high winds, heavy rainfall and recent warm weather contributed to murky waters, poor water quality and a decline in the health of the Lake. Regulated freshwater discharges needed to lower lake levels and prevent flooding have impacted not only the health of the St Lucie River and its estuary but also the Caloosahatchee River and its estuary.

The SFWMD describes the Caloosahatchee River estuary as an area "where the waters of the Gulf of Mexico mix with the freshwater inflows from the river, sloughs and overland sheetflows in the basin."[25] In the lower reaches of the river and estuary are sand flats, a shallow bay and extensive seagrass beds.[26] Widespread mangrove forests dominate undeveloped areas of the shoreline.[27] Southwest Florida estuaries are habitat to more than 40 percent of Florida's rare, endangered and threatened species. [28] "The Caloosahatchee River and estuary extend about 70 miles from Lake Okeechobee to San Carlos Bay on Florida's southwest coast."[29] Pine Island Sound, Matlacha Pass, Charlotte Harbor aquatic preserves and Telegraph Swamp are all noteworthy natural system resources within the Caloosahatchee River watershed.[30]

The following are major issues affecting the Caloosahatchee River watershed: water supply availability, salinity variations and nutrient levels.[31] "Water quality within the Caloosahatchee River basin is threatened by altered freshwater inputs, nutrient loads from agricultural activities, trace elements as

[21] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[22] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[23] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[24] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.
[25] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[26] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[27] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[28] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[29] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[30] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[31] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html

well as overall urban growth and development within the watershed."[32] The value of riverine and estuarine ecosystems depends on water quality. As water quality diminishes, so does the overall quality of the system.[33]

The Lake Okeechobee and Estuary Recovery Plan

Governor Bush announced the Lake Okeechobee and Estuary Recovery Plan ("Plan") on October 10, 2005. The Plan is designed to reduce pollution and better manage the flow of water from Lake Okeechobee to the St. Lucie River and the Caloosahatchee River while meeting south Florida's flood control and water supply responsibilities.[34] "Under the $200 million recovery plan, the State is expanding water storage areas, constructing treatment marshes and expediting environmental management initiatives to enhance the ecological health of the lake and downstream coastal estuaries."[35] As part of the Plan, State agencies are working together to improve farming practices by raising standards and strengthening permitting criteria for new development.[36] "The State will also begin implementing a new lake regulation schedule with the U.S. Army Corps of Engineers to lower water levels and reduce freshwater discharges to the St. Lucie and Caloosahatchee estuaries to improve current conditions."[37] Governor Bush's Lake Okeechobee and Estuary Recovery Plan involves the following agencies: South Florida Water Management District, Department of Environmental Protection, Department of Community Affairs and Department of Agriculture and Consumer Services.[38]

Governor Bush intends to ask the Florida Legislature to provide a second installment of $25 million in next year's budget (FY 2006-2007), building on an initial investment of $30 million this year - $25 million in growth management funding from the Department of Environmental Protection and $5 million from the Department of Agriculture and Consumer Services.

Effect of Proposed Changes

The memorial urges the United States Congress to promptly enact pending legislation to authorize the Indian River Lagoon Restoration Project and requests the President of the United States to sign that legislation into law. The memorial also requests the President to work with the Congress to develop and enact a comprehensive planning and funding initiative to be implemented in coordination with Governor Bush's Lake Okeechobee and Estuary Recovery Plan announced on October 10, 2005.

The implementation of the IRL-S Restoration Plan is contingent on the appropriation of funds by the United States Congress for the work to be completed. It is currently estimated that $1.3 billion will be needed to fully implement the IRL-S Restoration Plan.[39]

C. SECTION DIRECTORY:

The memorial format does not contain sections.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

[32] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[33] www.sfwmd.gov/org/wrp/wrp_ce/2_wrp_ce_estuary/cal.html
[34] www.dep.state.fl.us/secretary/news/2005/10/1010_01.htm.
[35] www.dep.state.fl.us/secretary/news/2005/10/1010_01.htm.
[36] www.dep.state.fl.us/secretary/news/2005/10/1010_01.htm.
[37] www.dep.state.fl.us/secretary/news/2005/10/1010_01.htm.
[38] www.dep.state.fl.us/secretary/news/2005/10/1010_01.htm.
[39] Personal communication with U.S. Army Corps of Engineers staff on January 25, 2006.

2. Expenditures:

None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

None.

D. FISCAL COMMENTS:

The total initial cost for the implementation of the Indian River Lagoon – South Restoration Plan is estimated to be just over $1.3 billion.[40] The annual operation and maintenance costs are estimated at $6,145,000 including $1,954,500 for project monitoring.[41]

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable, because this bill does not appear to: require the counties or cities to spend funds or take an action requiring the expenditure of funds; reduce the authority that cities or counties have to raise revenues in the aggregate; or reduce the percentage of a state tax shared with cities or counties.

2. Other: None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE & COMBINED BILL CHANGES

None.

[40] Personal communication with U.S. Army Corps of Engineers staff on January 25, 2006.

[41] Final Integrated Project Implementation Report and Environmental Impact Statement, U.S. Army Corps of Engineers & SFWMD, March 2004.