

# SENATE STAFF ANALYSIS AND ECONOMIC IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

BILL: CS/SB 540

SPONSOR: Natural Resources Committee and Senators Bennett and Posey

SUBJECT: Manatee Protection

DATE: April 19, 2004

REVISED: \_\_\_\_\_

|    | ANALYST | STAFF DIRECTOR | REFERENCE | ACTION |
|----|---------|----------------|-----------|--------|
| 1. | Molloy  | Kiger          | NR        | Fav/CS |
| 2. | _____   | _____          | AGG       | _____  |
| 3. | _____   | _____          | AP        | _____  |
| 4. | _____   | _____          | _____     | _____  |
| 5. | _____   | _____          | _____     | _____  |
| 6. | _____   | _____          | _____     | _____  |

## I. Summary:

The committee substitute (CS) conforms state law to federal law by creating an exception for any activity that is otherwise prohibited by the "Florida Manatee Sanctuary Act" if the activity is reasonably necessary to prevent the loss of human life or a vessel in distress, or if the activity is necessary to render necessary assistance to persons or a vessel in distress. The CS provides that in regions where measurable biological goals for manatees are being achieved, a presumption exists that existing manatee protection rules are adequate and additional rules are unnecessary.

The CS directs that subject to a legislative appropriation, the Fish & Wildlife Conservation Commission (FWC) must contract with Mote Marine Laboratory to conduct a manatee habitat and submerged aquatic vegetation assessment at warm water discharge sites at power plants, and establishes requirements for the assessment. Mote Marine Laboratory is required to submit an interim report that details the progress of the assessment to the FWC, the Legislature and the Governor by September 1, 2006, and a final report containing recommendations to protect manatee habitat in warm water discharge sites by January 1, 2007.

The CS establishes the Legislature's intent that the FWC conduct a signage and boat speed assessment to determine the effectiveness of manatee protection signs and sign placement, and assess boat speed, and establish requirements for the assessment. The signage and boat speed assessment must be completed by January 1, 2007, and a findings report must be submitted to the Governor and the Legislature by February 1, 2007.

The CS authorizes the FWC to develop and implement the use of genetic tagging to improve its ability to assess the status and health of the manatee population.

Beginning in fiscal year 2004-2005, the sum of \$325,000 is appropriated from the Marine Resources Conservation Trust Fund to the FWC for the purposes of implementing the signage and boat speed assessment.<sup>1</sup>

The CS substantially amends ss. 370.12 and 372.072, Florida Statutes, and creates s. 370.1202, Florida Statutes.

## II. Present Situation:

### **Florida Manatee (West Indian Manatee species): *Trichechus manatus latirostris***<sup>2</sup>

Manatees in Florida are members of the West Indian manatee species, and can be found throughout our rivers, estuaries, and bays. Manatees are warm-blooded and seek refuge from cold temperatures in natural springs such as Blue Springs on the St. Johns River, and the springs that form the Homosassa and Crystal Rivers on Florida's west coast. Manatees also congregate in man-made sources of warm water such as power plants and other industrial facilities with thermal plumes. The water temperature danger level for manatees is about 55° F.

Manatees breath air and surface about every four minutes although they are capable of remaining submerged for up to 20 minutes. Manatees average 10 feet in length, about 1200 pounds in weight, and weigh approximately 66 pounds at birth. Two front flippers help manatees gather as much as 200 pounds of sea grass and other aquatic plants per day. Manatees have a wide, paddle-shaped tail, small eyes that can distinguish colors, shapes, and patterns, and ear openings that allow them to hear at low frequencies.

Florida's first manatee protection law was enacted in 1893 and restricted manatee hunting. Additional protections include the federal Marine Mammal Protection Act of 1972 which prohibited the hunting of marine mammals, the federal Endangered Species Act of 1973 which declared manatees an endangered species, and the Florida Manatee Sanctuary Act of 1978 which authorized the state to establish and enforce boating restrictions to protect manatee habitat.

Aerial surveys conducted by the FWC show that manatee populations have increased in recent years. In February 1991, the aerial count was 1,462. In January 1997, the aerial count was 2,229. In March 1999, the aerial count was 2,353; in January 2002, 3,276 manatees were counted; and in January 2003, 3,113 manatees were counted. The aerial survey conducted by the FWC in February of 2004 counted 2,568 manatees but this lower count is attributed to warmer weather which resulted in a smaller congregation of manatees at warm water discharge sites.

### **Marine Mammal Protection Act of 1972 (Federal)**

The Marine Mammal Protection Act (MMPA), enacted in 1972 and reauthorized in 1994, designates manatees as a marine mammal in danger of extinction or depletion due to human activities. The primary purpose of the Act is to prohibit the taking of marine mammals except under certain conditions such as conducting scientific research or enhancing the recovery or survival of a species. Portions of the Act authorize the "incidental taking" of marine mammals

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<sup>1</sup> The 2003 Legislature enacted ch. 2003-156, Laws of Florida, to transfer fuel tax collected at marinas (commonly called "marina fuel tax") from the Fuel Tax Collection Trust Fund to the Marine Resources Conservation Trust Fund within the FWCC.

<sup>2</sup> "Manatees, Florida's Gentle Giants", Sea Stats, June-2001, Florida Marine Research Institute, FWC

but only upon the condition that such a taking will have a negligible impact upon the species. This "incidental taking" by industries such as development or commercial fishing cannot be intentional.

In circumstances where persons possessing "incidental take" permits are found to have violated the "incidental take" permit, or failed to comply with provisions of the MMPA, the Secretary of the Interior is authorized to withdraw or suspend "incidental take" permits, thereby effectively stopping construction of marinas, docks, boating facilities, or any other structure, including single-family homes, where destruction of manatee habitat may result in an "incidental take" of the species.

### **Endangered Species Act of 1973 (Federal)**

The Endangered Species Act (ESA), enacted in 1973 and amended in 1996, designates that species of fish (including marine mammals), wildlife and plants which are so depleted they are in danger of or threatened with extinction must be conserved. Section 9 of the Act provides that it is illegal for persons to "take" any species, or violate any regulation protecting any species that are designated as threatened or endangered. Section 10 of the Act provides for "incidental take" permits in the same manner as the MMPA, and Section 17 of the ESA provides that no provision of the Act, may take precedence over provisions of the MMPA.

### **Florida Manatee Sanctuary Act - s. 370.12 (2), Florida Statutes (Ch. 78-252, L.O.F.)**

The Florida Manatee Sanctuary Act (Act) was adopted in 1978 and is designed to protect the manatee from injury or harm due to the operation and speed of motorboats in the areas specified within the Act. The Act declared that the entire State was a refuge and sanctuary for manatees, and provided that in order to protect manatees from harmful collisions with boats, the former Department of Natural Resources (DNR) was to initiate rules under ch. 120, F.S., to establish seasonal speed zones within Brevard, Broward, Citrus, Hillsborough, Indian River, Lee, Palm Beach, St. Lucie and Volusia counties. Areas affected by the rules included springs, rivers, and power plant discharge areas. The DNR was directed to adopt rules regulating the operation and speed of motorboat traffic for any new power plant, or other new source of warm water discharge, whenever a concentration of manatees were attracted to the area. Responsibility for law enforcement was shared with the former Game & Fresh Water Fish Commission (now the FWC).

In 1982, the Legislature amended the Act to provide for seasonal speed zones in Sarasota, Collier and Martin counties, and added language stating that the Legislature did not intend DNR to generally regulate boat speeds within the areas thereby interfering with recreational or commercial waterway users. In 1983, the Act was amended to remove requirements for seasonal speed zones and allow the DNR to regulate the operation and speed of motorboats on a year-around basis. Additional areas in Manatee and Dade counties were identified, further provisions for Brevard County were added, and the DNR was authorized to adopt manatee protection rules in all areas of the state where manatees were frequently sighted.<sup>3</sup>

The last major amendment to the Act occurred in 2002, when the Legislature enacted ch. 2002-264, L.O.F., to provide for increased public access to the FWC's rule development process by

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<sup>3</sup> see ch. 83-81, L.O.F.

requiring that counties create local rule review committees to review and make recommendations on rules that propose to regulate the operation and speed of motorboats for purposes of manatee protection. The FWC was required to work with the USFWS to establish a measurable biological goal to define manatee recovery and the FWC was required to conduct boater compliance studies. Counties that should have already submitted a manatee protection plan as required in the 1989 Policy Directive were required to do so by July 1, 2004. All manatee protection plans for counties identified by the FWC as counties of substantial risk for manatee mortality must be completed by July 1, 2006.

Although the number of manatee deaths from water-related incidents such as collisions with boats or other watercraft continues to be of concern, the 2003 mortality rate for manatee deaths (73) as a result of water-related incidents was the lowest since 1998 and a 23 percent reduction over the 2002 total when 95 manatees were killed due to watercraft.

### **Manatee Protection Plans**

In June of 1989, the Governor and the Cabinet directed the DNR (now the Department of Environmental Protection or DEP) to develop recommendations for specific actions to protect manatees, and to make the state's waters safe for boaters. These recommendations were presented to the Governor and the Cabinet in October 1989, and were contained in a report entitled *Recommendations to Improve Boating Safety and Manatee Protection for Florida Waterways*. The report recommended the following actions with relation to manatee protection:

- Establish shoreline slow speed zones.
- Create new manatee protection zones.
- Designate manatee preserves.
- Improve speed zone sign posting.
- Institute an Interim Boating Facility Expansion Policy
- Amend the Florida Manatee Sanctuary Act (s. 370.12 (2), F.S.).
- Education and Information Campaign.

The report recommended that in thirteen key counties (Brevard, Broward, Citrus, Collier, Dade, Duval, Indian River, Lee, Martin, Palm Beach, St. Lucie, Sarasota and Volusia) shoreline slow speed zones should be established for all inland waters accessible to manatees. The counties would be responsible for posting manatee information signs and speed zone signs at key access points such as marinas, boat ramps, and waterfront parks. The report suggested that county governments develop site-specific manatee protection regulations and recommended a schedule for development of those regulations. To provide an incentive, the report suggested that boundaries for shoreline slow speed zones should be increased if manatee regulations were not in place by the recommended deadline.

The report suggested that the construction of new or expanded boating facilities within the thirteen counties would be limited to a maximum of one powerboat slip per hundred linear feet of shoreline owned or controlled by the permit applicant unless a county had developed and implemented a manatee protection plan approved by the DNR, and a boating facility siting policy applicable to facilities with more than five boat slips or expanding to more than five boat slips. Approval of a local ordinance was to be based on a determination that the ordinance did not permit dock densities harmful to manatees, did not allow destruction of essential habitat, and

did not allow dock construction in areas used by manatees. Manatee protection plans were to be based on comprehensive manatee mortality, abundance, and distribution data, and interim plans could be developed using the best available information as approved by the DNR.<sup>4</sup>

The Governor and the Cabinet adopted the recommendations contained in the report, and the requirement for counties to adopt and implement a manatee protection plan was put in place through the permitting process. The responsibilities for manatee protection were statutorily transferred to the FWC in 1999. To date, the FWC has approved manatee protection plans for Brevard, Citrus, Collier, Dade, Duval, Indian River, Martin, and St. Lucie counties. Partial plans have been approved for Broward and Volusia counties. No plan has been approved for Palm Beach County, draft elements of the Lee County plan have been approved, the Sarasota County plan is under contract with the FWC.<sup>5</sup>

### **Emergency Assistance - Prohibited Activities**

Subpart J of Title 50, Code of Federal Regulations, Part 17 relates to Manatee Protection Areas. Section 17.105 provides for an exception to activities prohibited by the ESA for persons engaged in activities otherwise prohibited if the activity is reasonably necessary to prevent loss of life or property due to weather conditions or other reasonably unforeseen circumstances, or to render necessary assistance to persons or property. The Florida Manatee Sanctuary Act does not contain a similar exception.

### **Measurable Biological Goals**

In the "Florida Manatee Recovery Plan, 3rd Revision", the USFWS established population related benchmarks for certain aspects of manatee demographics to help determine the success of manatee conservation. The benchmarks were derived from the "Manatee Population Status Working Group's Recommendation of Population Benchmarks to Help Measure Recovery" which were based on published estimates of survival, reproduction, and population growth rate. The current benchmarks established by the USFWS are:

- a. statistical confidence that the average annual rate of adult manatee survival is 90 percent or greater;
- b. statistical confidence that the average annual percentage of adult female manatees accompanied by first or second year calves in winter is 40 percent or greater; and
- c. statistical confidence that the average annual rate of population growth is equal to or greater than zero.

The population benchmarks should be achieved within a 95 percent level of statistical confidence in each of the four regions for a 10-year period of time before the manatee can be reclassified to threatened status at the federal level. For purposes of analyzing the status and trends of manatee populations, Florida is divided into the four following regions:

- Northwest Region, which includes the rivers along the Big Bend coast;
- Upper St. Johns River Region, which covers the upstream St. Johns River, south of Palatka and includes the Blue Spring warm-water refuge;

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<sup>4</sup> "Recommendations to Improve Boating Safety and Manatee Protection for Florida Waterways", Final Report to the Governor and Cabinet, October 24, 1989, Florida Department of Natural Resources.

<sup>5</sup> "Status of Developing Manatee Protection Plans", Bureau of Protected Species Management, FWC, <http://floridaconservation.org/psm/manatee/mpp.htm>

- Atlantic Coast Region, which includes the lower St. Johns River, the east coast, and the Florida Keys; and
- Southwest Region, which covers Tampa Bay southward to Whitewater Bay.

In January 2003, the FWC adopted the population benchmarks as the "measurable biological goals" required by s. 370.12 (2), F.S., to be used to define manatee recovery and to be used in the development of management plans and in evaluating the progress of species recovery. However, the FWC required that the measurable biological goals be reviewed within one year from adoption. (Please see Appendix A attached to this analysis for a document provided by the FWC entitled "Status of Manatee Measurable Biological Goals by Regions" dated April 2004.)

### **Sea Grasses**

Sea grasses are flowering plants that live underwater but produce oxygen. The depth at which sea grasses are found is limited by water clarity because they require light. Sea grasses can be found throughout the coastal areas of the state, but are most abundant from Tarpon Springs northward to Apalachee Bay. Florida has an estimated 502,000 acres of sea grasses that among other things, serve as a primary food source for manatees and serve as nursery areas for many forms of marine life such as shrimp and crabs.<sup>6</sup> Manatees will eat sea grass beds (each adult manatee eats about 100 pounds of sea grass per day) down to the sand and will quickly move off to another feeding area. Sea grass beds damaged by boat hulls and propellers take many years to recover, but sea grass beds used by manatees as a forage area recover very quickly.<sup>7</sup>

### **Warm Water Refuges**

Manatees in Florida are at the northernmost reaches of their range. During the warm season, manatees range throughout the Florida peninsula, and travel west to Texas and north of the southeastern coastal states. Manatees prefer water temperatures above 68° F, and water temperatures below that range can cause loss of body heat and poor digestion which lead to "cold stress" or death.<sup>8</sup>

During the winter months, water temperatures can fall below the thermal minimum. As a result, manatees seek warm water sources to meet their thermal needs. These can be natural sources such as springs, but in Florida, large numbers of manatees congregate at the artificial warm water areas created by power plant outfalls. Research conducted by the FWC indicates that manatees return to the same site year after year, and that manatees travel from one power plant to another during the winter.

According to the FWC, "the presence of power plants have permitted manatees to spend the winter in areas like Brevard County and Tampa Bay, which are considered to be north of their historical range. Manatees that winter this far north are much more reliant on these refugia for survival than those manatees using a power plant in south Florida."<sup>9</sup> Areas of concern regarding the creation and continued use of artificial warm water refugia include what happens to manatees

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<sup>6</sup> [www.dep.state.fl.us/coastal/habitats/seagrasses.htm](http://www.dep.state.fl.us/coastal/habitats/seagrasses.htm)

<sup>7</sup> "Manatee Life", Columbus Zoo & Aquarium, [www.colszoo.org/animalareas/shores/manatee\\_coast/manateeLife/life-eating.html](http://www.colszoo.org/animalareas/shores/manatee_coast/manateeLife/life-eating.html)

<sup>8</sup> Why are Warm Water Refuges Important to Manatees?, <http://floridaconservation.org/psm/habitat/importancewarmwater.htm>

<sup>9</sup> Summary of Artificial Warm Water Refugia Issues, <http://floridaconservation.org/psm/habitat/warmwat.htm>, pgs. 1-2

when power plants fail or are closed, and water quality and vegetation affected by water contaminants associated with industrial discharges.

Florida has 8 primary and 4 secondary industrial warm water manatee refuges. Florida Power & Light operates 5 of the primary sites while Progress Energy of Florida, the Tampa Electric Company (TECO) and Reliant Energy operate the other 3 primary sites. Secondary sites are operated by Progress Energy, the City of Vero Beach, the Ft. Pierce Utilities Authority, and TECO.<sup>10</sup>

### **Power Plant Manatee Protection Plans**

In 1995, the DEP was authorized by the federal Environmental Protection Agency (EPA) to assume the permitting duties for the federal National Pollutant Discharge Elimination System (NPDES), which includes permitting of power plants which pump cool water through the facility and discharge warm water back into the water. As part of the permitting process, the United States Fish and Wildlife Service (USFWS) and the Bureau of Protected Species Management (BPSM) at the FWC determine if the power plant provides a critical manatee habitat. If it is determined that the power plant does or will provide a critical manatee habitat, the power plant must develop a manatee protection plan that is incorporated into the NPDES permit. Protection plan components include how the plant will monitor the water temperature in the discharge canals, how the plant intends to maintain a steady water temperature, and notification to the appropriate agency when manatees appear to be in distress within the discharge area.

NPDES permits are issued for no more than 5 years. Each time a permit is up for renewal, the USFWS and the BPSM review the power plant's manatee protection plan to determine if the plan is sufficient or if it needs revision.<sup>11</sup>

### **Florida Marine Research Institute (FMRI)<sup>12</sup>**

The FMRI, transferred from the DEP to the FWC in 1999, is the state's technical point for conducting applied marine research and ensuring the scientific needs of the FWC's marine resource managers are met. The FMRI has more than 130 research projects covering more than 150 key marine resources including commercial and recreational fisheries, endangered and threatened marine species, and harmful algal blooms such as red-tide. Funding sources include the Marine Resources Conservation Trust Fund and the Save the Manatee Trust Fund.

The Endangered & Threatened Species Section of the FMRI is responsible for aerial surveys that monitor manatee populations, abundance and distribution; carcass recovery and necropsy to determine age, life history, and causes of death; manatee rescue and rehabilitation; manatee ecology and migration studies, and implementing studies that help characterize the human impacts to manatees, primarily those relating to compliance with boating laws, and boater demography. Program partners include Mote Marine Laboratory, the University of Florida's College of Veterinary Medicine, the USFWS, and the United States Geological Survey Sirenia Project.

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<sup>10</sup> Industrial Warm-Water Manatee Refuges Map created by the FWC Bureau of Protected Species Management, April 2004.

<sup>11</sup> Information provided by staff of the Industrial Wastewater Program at the DEP.

<sup>12</sup> Programs of the Florida Marine Research Institute 2002-2003, FWC, pgs. 34-37

**Warm Water Task Force**

The Warm Water Task Force (task force) is a component of the Habitat Working Group developed as recommended in the USFWS' "Florida Manatee Recovery Plan." The task force, which first met in September 2000, consists of the USFWS, the FWC, the USGS, the DEP, Save the Manatee Club, several energy companies, Southwest Florida Marine Industries, the federal Marine Mammal Commission, and the Wildlife Trust Association.

The specific goals of the task force include developing and implementing strategies to ensure safe and dependable warm-water refuges for manatees. Development of conceptual plans for a long-term network of warm water refuges, and developing plans to reduce the potential loss of manatees when power plants do go off-line are some the actions being taken by the task force.<sup>13</sup>

**Mote Marine Laboratory**

The Mote Marine Laboratory located in Sarasota, Florida is more than 40 years old, and is an independent, nonprofit research organization that focuses on marine science. Of the \$9.4 million Mote Marine received in research funding in 2002, almost 23 percent came from the state, 27 percent was federal funds, and the balance came from other sources. Mote Marine participates in cooperative ventures with many partners, one of whom is the FWC.

Mote Marine has been involved in manatee research and conservation activities since 1985. The Center for Marine Mammal and Sea Turtle Research at Mote Marine runs the Manatee Research Program. Projects include aerial surveys to document habitat use patterns and seasonal distribution, photographic identification using scars from boat strikes to identify individual manatees, telemetry research involving manatee tagging to follow movements and identify habits, and waterways management research to assess compliance with regulatory zones and the overall effectiveness of enforcement activities.<sup>14</sup> Mote Marine also studies the effects of red tide on manatees.

**Signage**

Manatee protection zones are marked by 3' x 4' or 5' x 7' signs that have an orange circle in the center and an orange border in addition to the regulatory information. The rule number is shown on the lower right-hand corner and the permit number is shown in the lower left-hand corner. No specific numerical speed is assigned to an Idle Speed (minimum speed that will maintain steerage) or Slow Speed (speed at which vessel proceeds when it is fully off plane and fully settled in the water) signs.

The FWC has two types of approved permanent manatee signs that may be required by permit or lease: educational signs which are non-regulatory in nature, and awareness signs. Sign site plans must be approved by the BPSM at the FWC. Applicants must be notified within 30 days after receipt of the sign placement proposal only if the signs and locations are unacceptable. Any applicant who has not received a response from the FWC within the 30-day period can assume that the sign site plan is approved.<sup>15</sup>

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<sup>13</sup> Information provided by Bureau of Protected Species Management at the FWC.

<sup>14</sup> Mote Marine Laboratory, Research Projects, <http://www.mote.org/research/cmmstr/mer/tempage2.htm>

<sup>15</sup> "Regulatory Sign Posting on Manatee Protection Zones", FWC, <http://floridaconservation.org/psm/signs/signsreg.htm>



### III. Effect of Proposed Changes:

**Section 1.** Amends s. 370.12 (2), F.S., to:

- Create an exception for violations of manatee protection laws, rules or ordinances for persons engaged in activities reasonably necessary to prevent the loss of human life or a vessel in distress due to weather conditions or other reasonably unforeseen circumstances, or in order to render emergency assistance to persons or a vessel in distress.
- Provide a presumption that existing state manatee protection rules shall be adequate and additional rules unnecessary in a region where measurable biological goals established pursuant to s. 372.072 (6), F.S., are being achieved.
- Establish that the presumption does not prevent the FWC from amending existing rules or adopting new rules to address risks or circumstances in a particular area or waterbody to protect manatees.

**Section 2.** Creates s. 370.1202, F.S., to provide that the FWC shall implement and administer an enhanced manatee protection study designed to increase knowledge of the factors that determine the size and distribution of the manatee populations in state waters, and to use that knowledge to develop science-based policies that provide maximum manatee protection while allowing maximum recreational use of the state's waterways.

As part of the enhanced manatee protection study, the FWC must contract with Mote Marine Laboratory to conduct a manatee habitat and submerged aquatic vegetation assessment that considers:

- Manatee populations that congregate in the warm water discharge sites at power plants in the state and the potential risks for disease resulting from increased congregation of manatees at these sites,
- Development of research, monitoring, and submerged aquatic vegetation restoration priorities for manatee habitat in and near the warm water discharge sites at power plants in the state, and
- The potential impacts on manatees and manatee habitat if power plants that provide warm water discharge sites where manatees congregate are closed, including how closure will affect the size and health of submerged aquatic vegetation areas.

Mote Marine Laboratory must submit an interim report detailing the progress of the assessment to the Governor, the Legislature, and the FWC by September 1, 2006. No later than January 1, 2007, the final report must be submitted to the Governor, the Legislature, and the FWC, and must contain recommendations for the protection of manatee habitat at warm water discharge sites at power plants in the state.

Provides that the FWC must ensure that funds allocated under this act are expended in a manner consistent with the requirements of the act. Allows the FWC to require an annual audit of the expenditures. If an audit is performed, copies of the audit must be provided to the appropriate substantive and appropriations committees of the Florida Senate and the Florida House of Representatives as the audits become available.

As part of the enhanced manatee protection study, the FWC must conduct a signage and boat speed assessment to:

- Evaluate the effectiveness of manatee protection signs and sign placement, and assess boat speeds,
- Evaluate existing data on manatee mortality before and after existing manatee protection zones were established,
- Evaluate boater compliance and comprehension of regulatory signs and buoys,
- Evaluate changes in boating traffic patterns, and manatee distribution and behavior, and
- Provide recommendations on innovative marker designs that are in compliance with federal aids to navigation system.

The signage and boat speed assessment must address the following:

- The effectiveness of signs and buoys to warn boaters of manatee slow-speed zones with a goal of developing federally approved standards for marking manatee protection zones,
- Determining where buoys may be used in place of pilings for boating safety purposes, and
- An evaluation of higher speed travel corridors in manatee zones to determine the most effective speed to balance safe boating, recreational use, vessel operating characteristics, and manatee protection.

The signage and boat speed assessment must be completed by January 1, 2007, and a findings report must be submitted to the Governor, the President of the Senate, and the Speaker of the Florida House of Representatives by February 1, 2007. The findings report must detail the results of the assessment to identify specific recommendations for developing state and local policies relating to the appropriate placement of signs, including innovative markers, in manatee slow-speed zones.

The FWC is authorized to develop and implement a genetic tagging program to improve its ability to assess the status and health of the manatee population, including the health and reproductive capacity of manatees. The genetic tagging program may be done in cooperation with federal agencies or other non-commission entities such as genetic laboratories at schools within the state university system.

**Section 3.** Amends s. 372.072, F.S., to provide that not later than July 1, 2005, the FWC must develop rules to define how measurable biological goals will be used by the commission when evaluating the need for additional manatee protection rules.

**Section 4.** Directs the FWC to contact with Mote Marine Laboratory for the manatee habitat and submerged aquatic vegetation assessment subject to legislative appropriations. Beginning in fiscal year 2004-2005, appropriates \$325,000 from fuel taxes transferred to the Marine Resources Conservation Trust Fund to the FWC to conduct the signage and boat speed assessment.

**Section 5.** Provides that the act shall take effect on July 1, 2004.

**IV. Constitutional Issues:**

## A. Municipality/County Mandates Restrictions:

None.

## B. Public Records/Open Meetings Issues:

None.

## C. Trust Funds Restrictions:

None.

## D. Other Constitutional Issues:

**V. Economic Impact and Fiscal Note:**

## A. Tax/Fee Issues:

None.

## B. Private Sector Impact:

The CS provides that subject to legislative appropriation, Mote Marine Laboratory, a nonprofit organization, will receive funding from the FWC to perform the manatee habitat and submerged aquatic vegetation assessment.

## C. Government Sector Impact:

The CS appropriates \$325,000 from fuel taxes transferred to the Marine Resources Conservation Trust Fund, to the FWC for the signage and boat speed assessment.

**VI. Technical Deficiencies:**

None.

**VII. Related Issues:**

Section 20.331(6)(c), F.S., requires the FWC to follow the provisions of the administrative procedures act (APA) when adopting rules that implement statutory authority, including responsibilities relating to research and management of marine species listed as endangered or threatened. This provision was upheld by the Florida Supreme Court which concluded that the Legislature did not usurp the FWC's constitutional authority when it established the FWC's statutory responsibilities over manatees and sea turtles. Caribbean Conservation Corporation, Inc., v FWCC, 838.So.2d 492 (Fla. 2003).

Section 372.072(6), F.S., requires the FWC to "develop measurable biological goals that define manatee recovery" and to use the goals in the development of management plans or work plans, when evaluating existing or proposed manatee protection rules. In January 2003, the FWC approved measurable biological goals at a meeting held in Fort Myers, Florida; however the FWC has not adopted a rule through the APA to formally adopt the measurable biological goals as being applicable throughout the state.

**VIII. Amendments:**

None.

This Senate staff analysis does not reflect the intent or official position of the bill's sponsor or the Florida Senate.

**STATUS OF MANATEE MEASURABLE BIOLOGICAL GOALS BY REGION  
APRIL 2004**

| <b>Manatee MBG Criteria</b>   | <b>Northwest</b> | <b>St. Johns</b> | <b>Atlantic</b>  | <b>Southwest</b> |
|---|------------------|------------------|------------------|------------------|
| <b>a. Survival greater than 90% meets goal</b>  |                  |                  |                  |                  |
| Upper statistical confidence limit  | <b>97.8</b>      | <b>99.0</b>      | <b>95.0</b>      | <b>93.2</b>      |
| Mean estimate   | <b>97.0*</b>     | <b>95.5</b>      | <b>94.0</b>      | <b>90.3</b>      |
| Lower statistical confidence limit  | <b>96.0</b>      | <b>93.4</b>      | <b>92.7</b>      | <b>86.2</b>      |
| [Data from C. A. Langtimm et al, in press, Marine Mammal Science]   |                  |                  |                  |                  |
| <b>b. Reproduction greater than 40% of females with calves meets goal (statistical confidence not calculated)</b> | <b>49.3</b>      | <b>52.8</b>      | <b>38.2</b>      | <b>45.9</b>      |
| [Data from M. Runge et al., in press, Marine Mammal Science]  |                  |                  |                  |                  |
| <b>c. Population growth greater than 0 meets goal</b>   |                  |                  |                  |                  |
| Upper statistical confidence limit  | <b>5.6</b>       | <b>8.1</b>       | <b>2.9</b>       | <b>2.4</b>       |
| Mean estimate   | <b>3.7</b>       | <b>6.2</b>       | <b>1.0</b>       | <b>minus 1.1</b> |
| Lower statistical confidence limit  | <b>1.6</b>       | <b>3.7</b>       | <b>minus 1.2</b> | <b>minus 5.4</b> |
| [Data from M. Runge et al., in press, Marine Mammal Science]  |                  |                  |                  |                  |
| <b>Meets current overall goal</b>   | <b>YES</b>       | <b>YES</b>       | <b>NO</b>        | <b>NO</b>        |

Green shading – meets goal  
Red shading – does not meet goal

- a. statistical confidence that the average annual rate of adult manatee survival is 90% or greater;
- b. statistical confidence that the average annual percentage of adult female manatees accompanied by first or second year calves in winter is 40% or greater; and
- c. statistical confidence that the average annual rate of population growth is equal to or greater than zero.

\* for the years 1996-2000 only, average mean estimate for the past 10 years is 95.6% (no confidence interval calculated).