

**FLORIDA MANATEE MANAGEMENT PLAN**  
**SEPTEMBER 2007**  
**EXECUTIVE SUMMARY**

Manatees (*Trichechus manatus latirostris*) were first added to Florida's imperiled species list as a threatened species in 1974 and later changed to endangered status in 1979. At that time, the state's listing process was qualitative and did not have the quantitative measures that are part of the current listing process. However, listing the manatee as endangered on the state list was consistent with the U.S. Fish and Wildlife Service (USFWS) which in 1967 listed the manatee as endangered.

In response to the designation as an endangered species, tremendous resources from local, state, and federal government agencies and the private sector have been directed towards research, protection, and conservation of manatees. While little was known about manatees when they were first listed, they are now considered one of the most researched and well studied of all marine mammals. The manatee conservation effort has become a case study in endangered species public policy and is chronicled in books, periodicals, and virtually all types of media. Manatees have become a Florida icon and engender an international level of public support.

This management plan provides an overview of the myriad programs, initiatives, and strategies implemented to protect and conserve manatees. While a number of the conservation actions have benefited manatees, many of these actions have had economic and social impacts as well. Public debate on how to balance manatee conservation with other social values has resulted in one of the nation's most contentious and polarized environmental issues.

In 1999, the Florida Fish and Wildlife Conservation Commission (FWC) adopted new rules to standardize how species are evaluated for possible inclusion on the state imperiled species list. In 2001, the FWC received a petition to reclassify the manatee. Final action on that petition was delayed until April 2005 while the listing process received additional review and revisions in response to public input. In 2005, using the revised listing rules, a biological review panel (BRP) consisting of biologists from the FWC, the USFWS, the U.S. Geological Survey (USGS), academia, and the private sector examined the best available scientific information regarding the potential risk of manatee extinction. Based on the criteria established by the FWC rule (68A-27.0012, F.A.C.), the biological review panel concluded the manatee meets two of five criteria for designation as a threatened species. "Threatened" is defined in the state rule as "having a very high risk of extinction."

The biological review panel used the core biological model (CBM) to predict the probability of future declines over three generations or approximately 60 years. The models showed that there is virtually no chance of an 80% decline (the threshold for endangered) but there is slightly more than a 12% chance of the manatee population declining by as much as 50% in the next 60 years (the threshold for threatened). The review panel concluded that a 12% chance was significant enough to merit meeting

Criterion A and being listed as threatened under the state rule. In addition, the panel concluded there are less than 2,500 mature adults in the population and that, coupled with an estimated chance of at least a 20% decline in the next two generations (40 years), also met Criterion C which additionally qualifies the manatee for threatened status.

The FWC Commissioners accepted the findings of the biological review panel in June 2006. This completed phase one of the listing process. Phase two requires development and Commissioner approval of a management plan before the manatee can be reclassified. FWC chartered a team to draft the management plan. Public input and ultimately public acceptance are essential to the success of FWC management plans; accordingly, a number of steps were taken to ensure public participation. There was a 45-day comment period to solicit written comments during the development of the initial draft. The Manatee Forum, a group of 22 stakeholder organizations, provided suggestions on topics to include in the plan. In addition, FWC staff met individually with specific stakeholders to discuss their vision of the management plan prior to development of the first draft. The first draft was made available to the public and was presented to the Manatee Forum in November 2006. During the public comment period on the first draft, FWC staff received and reviewed over 900 public comments. Changes were made and a second draft was released for additional public comment, presented to the Manatee Forum in April 2007, and presented to the FWC Commission at their June 2007 meeting. Over 3,600 comments were received on the second draft. This final plan has incorporated many of the suggestions and recommendations provided through the public comment process and has greatly benefited from extensive public participation.

The Florida Manatee Management Plan provides the framework for conserving and managing manatees in Florida. It is a planning document; not a rule or a regulation. Upon approval, the only rule change will be removing the manatee from 68A-27.003, the list of endangered species, and adding it to 68A-27.004, the list of threatened species. The plan addresses the key tasks outlined in the federal Florida Manatee Recovery Plan (2001) and is complementary with that plan. The goal of all federal recovery plans is to remove the species from the list of federally endangered and threatened species. In addition to this stated goal, federal recovery plans identify management actions and criteria that must be met in order for the species to be reclassified and removed from the list. Like the federal recovery plan, this plan is intended to reduce the threat of extinction to a level where the manatee can be removed from the list of imperiled species. However, this management plan differs from the federal recovery plan because it will be used to guide management efforts to conserve the population even after the species is delisted. Therefore, once the threat of extinction is removed, the manatee will be actively managed by the FWC and will be protected under federal and state laws.

Humans have radically altered the manatee's habitat in many ways: the dredging of canals, inlets, and bays; damming of rivers; the introduction of non-native plants; destruction of seagrasses; and the proliferation of artificial warm-water discharges. All of these human actions have likely had some effect on the distribution and seasonal abundance of manatees. However, historical records indicate that, before these alterations, manatees ranged throughout Florida and into other southern states.

Accordingly, this management plan calls for the management and conservation of manatees throughout Florida, from Nassau County to Monroe County on the Atlantic coast; Monroe County through the Florida Panhandle on the Gulf coast; and the numerous rivers in interior Florida including the St. Johns and Suwannee river systems and the Okeechobee waterway. While the state listing criteria considers the statewide population, it is helpful to consider the progress of management actions on a regional basis. To ensure manatees thrive in all parts of Florida, the plan divides the state into four management units: the Atlantic coast, the Southwest coast, the Northwest coast, and the upper St. Johns River. These four management units are the areas referred to as sub-populations in the Federal Recovery Plan of 2001.

Implementation of the many tasks described in this plan will require the cooperation of many state agencies, the federal government, local governments, and the private sector. The FWC will not be the lead agency on some critical tasks, such as setting minimum flows and levels of springs, which is a state responsibility that will depend upon implementation by the respective water management districts. Inclusion of tasks in this plan for which the FWC is not the lead agency constitutes a commitment that the FWC will work to influence and assist the responsible agencies to accomplish the targeted tasks.

To reduce or eliminate the threat of extinction for manatees, the FWC and its partners must implement the many tasks described in this plan. Adequate funding will be necessary to achieve success. Present projections indicate the Save the Manatee Trust Fund will be inadequate to support the existing level of management and research within the next few years. Additional commitments of funds, from state, federal, or private sector sources, will be needed to continue the existing manatee program and to accomplish new tasks called for in this plan.

The conservation goal of this plan is to remove the manatee from the state imperiled species list and effectively manage the population in perpetuity throughout Florida by securing habitat and minimizing threats. The plan identifies six primary objectives to accomplish this goal.

#### Objectives:

- (1) Within three years, implement peer-reviewed and statistically sound methods to estimate the manatee population and monitor trends.
- (2) Reduce human-caused annual manatee mortality rate by minimizing human-related threats, including those attributed to watercraft, water-control structures, entanglement and entrapment.
- (3) Within five years, in full cooperation with electric utilities, develop and implement plans to prevent significant future manatee mortality caused by potential changes in power plant operation.

- (4) Within five years, in cooperation with the water management districts, establish minimum flows at Florida springs that protect the warm-water habitat requirements of manatees.
- (5) Within five years, enhance management practices, such as a statewide monitoring program, that help ensure sufficient abundance and distribution of seagrasses and freshwater vegetation to support the manatee population in perpetuity.
- (6) Use measurable biological goals (MBGs) in an ongoing fashion to measure progress toward recovery and to assist in the evaluation of the need for future research, regulatory, and management actions. The MBGs focus on adult survival rates, availability of habitat, and the number of mature individuals in the population.

Radical changes to existing conservation measures already established to manage manatees are not necessary to accomplish the conservation goal and objectives of this plan. The latest population models indicate that the manatee population is growing in three out of four management units with the population in southwest Florida likely declining. However, population growth alone will not necessarily move the manatee to a lower risk category under the state listing system. In order for that to happen, we will need to eliminate or reduce existing and future threats to acceptable levels so that the chances of significant future declines are very small. The primary focus of management efforts over the past 35 years has been to control, and to eliminate where possible, human-caused manatee mortality. The best available science indicates that increasing adult survival rates (reducing death rate) have a profound impact on manatee population growth. The emphasis on human-caused sources of mortality as opposed to natural mortality, such as disease, has been largely pragmatic. The responsibility for human-caused mortality is ours, and there is more opportunity for controlling and mitigating these factors. Therefore, efforts to reduce risks from watercraft collisions, structure-related deaths, and other human-caused mortality factors will continue. In addition to human-caused mortality, the FWC is also concerned with manatee mortality from causes such as red tide. However, red tide has broad ecological, economic, and human health implications and is addressed and studied from a broader perspective. The impacts of red tide on manatees are discussed in this plan, but a thorough discussion of red tide is beyond the scope of this manatee management plan.

The plan recognizes the need to address the public policy implications of long-term manatee reliance on warm water produced by power plants. A predicted decline in the manatee population resulting from the potential loss of warm-water sources is a key factor contributing to listing the manatee as threatened. If steps are taken to reduce the likelihood of a major population reduction, manatee status could be reevaluated and perhaps reclassified. Accordingly, the plan calls for an increased emphasis on warm-water issues and will develop contingency plans and management plans to reduce the potential loss of life in the event of a change in power plant operation.

Floridians can be proud of past efforts to protect and conserve manatees and it is encouraging that manatee numbers are growing in most areas of the state. However, there is still much to be done. The listing of manatees as threatened under the state system means the species still has a very high risk of extinction. Florida's predicted human population growth will make achieving the conservation goal very challenging. Human population growth and associated development will compete for available fresh water, alter coastal habitats and submerged aquatic resources, and make efforts to control human-caused mortality increasingly difficult. Nevertheless, provided appropriate state and federal resources are dedicated to accomplishing the many tasks outlined in this plan, we are optimistic the status of manatees will improve, their long-term survival will be secured, and they will remain a unique and treasured part of Florida.