



Florida manatee
revised draft management plan
May 2007

Conservation goal

- 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



Conservation objectives

- Within three years, implement peer-reviewed and statistically sound methods to estimate the manatee population and monitor trends
- Minimize annual manatee mortality rate to prevent prolonged population declines by managing human-caused threats including watercraft, water-control structures, and entanglement



There are many action items or tasks in the plan: most will fit under one of the conservation objectives.

FWC has minimum counts from the synoptic surveys. But we do not have a method to estimate the population with statistical confidence intervals.

Adult survival is a key parameter that affects the manatee population model. By minimizing mortality rate (increasing adult survival) the likelihood of future extinction is reduced.

Conservation objectives

- 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



Potential future loss of warm water sites is a major concern that impacts the manatee population model. By reducing the risk associated with potential warm water loss, the risk of future extinction is also reduced.

Conservation objectives

- Within five years, in cooperation with the water management districts, establish minimum flows and levels at Florida springs that protect the warm-water habitat requirements of manatees



Securing the long term existence of natural springs, to supplement available warm-water habitat, is particularly important if power plant warm water is reduced.

Conservation objectives

- 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



Manatees currently have ample forage resources, but it is important to ensure that these food sources are maintained into the future.

Conservation objectives

- 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



In 2004, the Florida Legislature required the FWC to develop measurable biological goals (MBGs) that “define manatee recovery” and assist in the development of management plans for the species, and in the evaluation of existing and proposed manatee protection rules [§372.072(6)].

In particular, the legislation dictates that the MBGs be used for “determining progress in achieving manatee recovery.”

The following Measurable Biological goals were developed and are described in the plan:

- 1) Mature population size exceeding 2,500 mature individuals statewide.
- 2) Sufficient regional adult survival rates to maintain a stable or increasing manatee population.
- 3) Sufficient regional warm-water carrying capacity to maintain a stable or increasing manatee population.

Proposed regulations

- Remove the manatee from Rule 68A-27.003 (endangered species)
- Add the manatee to Rule 68A-27.004 (threatened species)



There are no other regulations that will result from approval of the Management Plan.

There will be no loss of protection.

Speed zones will be unaffected by approval of the plan.

The plan calls for the evaluation of future changes to regulations, but those will require a separate rule making process that will involve additional public involvement, Local Rule Review Committees, and additional Commission approval.

Permitting framework

- FWC does not provide state permits to posses or take manatees
- FWC is authorized to issues permits to commercial fishers that allow operation of vessels at higher speed than the posted regulations
- Plan proposes to initiate future rule making that would eliminate many of the commercial fishing permits



Florida Statutes 370.12(c) states "Whenever the Fish and Wildlife Conservation Commission is satisfied that the interest of science will be subserved, and that the application for a permit to possess a manatee or sea cow (*Trichechus manatus*) is for a scientific or propagational purpose and should be granted, and after concurrence with the United States Department of Interior, the commission may grant to any person making such application a special permit to possess a manatee or sea cow, which permit shall specify the exact number which shall be maintained in captivity." However, under agreement with the US Fish and Wildlife Service (USFWS), the FWC does not provide state permits to possess manatees. Permits to possess manatees for scientific or enhancement purposes may be issued by USFWS. The Marine Mammal Protection Act does not allow take of manatees.

Permits for commercial fishers varies considerably from zone to zone. In some areas netters, crabbers, and commercial fishing guides are permitted to travel at speeds up to 20 mph in slow zones. In other areas boats are only allowed to exceed slow speed when in the act of setting a net. These permits create enforcement problems, and undermine public compliance with manatee zones. In addition, the U.S. Fish and Wildlife Service does not recognize these permits in federal manatee zones.

Management actions

- 80 action items are listed in Chapter 7
- Major areas of focus:
 - Review existing speed zones, areas with no speed zones, and effectiveness of speed zones
 - Improve enforcement efforts
 - Continue and improve review of development permits



Management actions in chapter 7 are a blueprint for actions over the next five years.

Some of the proposed actions will require participation by other agencies that are the lead on that issue. For example setting minimum flows of springs must be done by water management districts. Having these tasks in this plan represents a commitment by FWC to work with the responsible agency in an influencing capacity.

Management actions

- Major areas of focus:
 - Complete last two county MPPs of the original 13, review existing MPPs for updates, evaluate new counties for MPP development
 - Protect warm water habitat (natural and artificial)
 - Protect aquatic vegetation
 - Complete water control structure retrofitting
 - Develop new outreach initiatives



MPP=Manatee Protection Plan

Not all the answers to difficult management problems are known at this time. For example, it is not clear what actions must be taken to reduce the risk of manatee mortality from future power plant retirements. The plan calls for increased work on these topics so that potential solutions can be developed.

Implementation

- Implementation will require cooperation of local, state, and federal agencies, and the private sector
- Planning horizon is five years
- Plan will be updated in five years but can be revised as needed
- Budget projections indicate that additional funding is needed to accomplish all the tasks in this plan



Action items in this plan that are the lead responsibility of another agency will need to be approved by that agency. Inclusion of those tasks in this plan represents the FWC opinion that these actions are needed if we are to eventually de-list the species.

The plan can be changed if new information or data become available that suggest a change is needed.

Projections show a decrease in revenues that are deposited into the Save the Manatee Trust Fund, primarily as a result of reduced revenues from sales of the Save the Manatee License plate. Steps are being taken to increase license plate sales, but additional sources of funding will likely be needed to fully implement the plan.

Economic impacts

- The economic impacts of manatees and manatee conservation are difficult to assess
- A number of studies done in the 1990s indicate both costs and benefits to the state of Florida from manatees
- A new study to assess the economic cost/benefits of manatee conservation would cost in excess of \$ 100,000 and take 1-2 years
- Implementation of the management plan will be costly for government agencies to undertake



Studies have generally found greater economic benefits related to manatees than economic costs.

Bendel and Bell, (1995), recommend that efforts to protect the West Indian manatee population be estimated at a minimum of \$2.6 billion based on Floridians reported willingness to pay for conservation actions.

Fishkind and Associates (1993) have estimated that the imposition of speed limit regulations has a net positive benefit of more than \$240 million annually.

The existing studies do not support the conclusion that manatee speed zones are negatively impacting the recreational boating industry in any significant manner. Boaters appear to redistribute boating activities as a result of the imposition of speed zones, but the overall level of boating is not significantly reduced (Michael Thomas and Nick Stratis, 1995).

Manatees are important for tourism, particularly in certain areas of the state such as Citrus County.

Staff recommendations

- Conceptual approval of the management plan and rules
- Bring plans and rules for final public hearing in September



- For additional information, visit [My FWC.com](http://MyFWC.com)