

**MANATEE PROTECTION PLAN
A DESCRIPTION OF THE HISTORIC AND CURRENT PRESENCE, ABUNDANCE AND
PROTECTION OF WEST INDIAN MANATEES AND A PLAN TO PROMOTE THEIR
CONTINUED EXISTENCE IN
ST. JOHNS COUNTY, FLORIDA**

INTRODUCTION

A. General Manatee Information

Manatees are members of the scientific Order Sirenia, large air-breathing aquatic mammals that inhabit both fresh and saltwater areas, including oceans, estuaries, rivers, canals and dredged channels. Manatees prefer warm-water areas, become physically stressed when water temperatures are below the mid-70's and therefore in the United States, they are found primarily in Florida. Although they may range northward to other states during the summer, manatees migrate to south Florida and/or natural or artificial warm-water refuges during the winter.

Adult manatees average approximately 11.5 feet in length and weigh about 2,200 pounds (USFWS, 2000). They feed primarily on aquatic and floating plants and can eat 10-15 percent of their body weight in aquatic vegetation each day. Manatees spend 6-8 hours per day foraging, and 2-12 hours resting. Although intervals between breaths vary with the amount of activity, manatees typically come to the surface to breathe every 3-5 minutes. A resting manatee may remain submerged for as long as 20 minutes. During periods of high activity a manatee may surface to breathe as often as every 30 seconds. They have seal-like bodies, a large spatulate-shaped tail for locomotion, and two forelimbs that are often used in combination with a muscular upper lip to pull food into their whiskered mouths.

Manatees have two comparatively small eyes that are equipped with inner membranes that can be drawn across the eyes for protection. They have fairly good underwater visual acuity and can distinguish between different sized objects, different colors and patterns, although sight is significantly affected by water clarity. Despite a lack of ear lobes, manatee hearing is reasonably good within a relatively narrow low-frequency band. Observations and studies have revealed that manatees emit sounds to communicate with one another, with these vocalizations often being between a cow and its calf. Evidence suggests that despite their relatively good hearing, manatees have difficulty in localizing the source and direction of sound.

Several closely related species of Sirenia are found in tropical areas throughout the world. The subspecies that is present in Florida, the Florida manatee (*Trichechus manatus latirostris*), has been designated as an endangered species by the federal government and the State of Florida. It has also been designated as the state marine mammal of Florida.

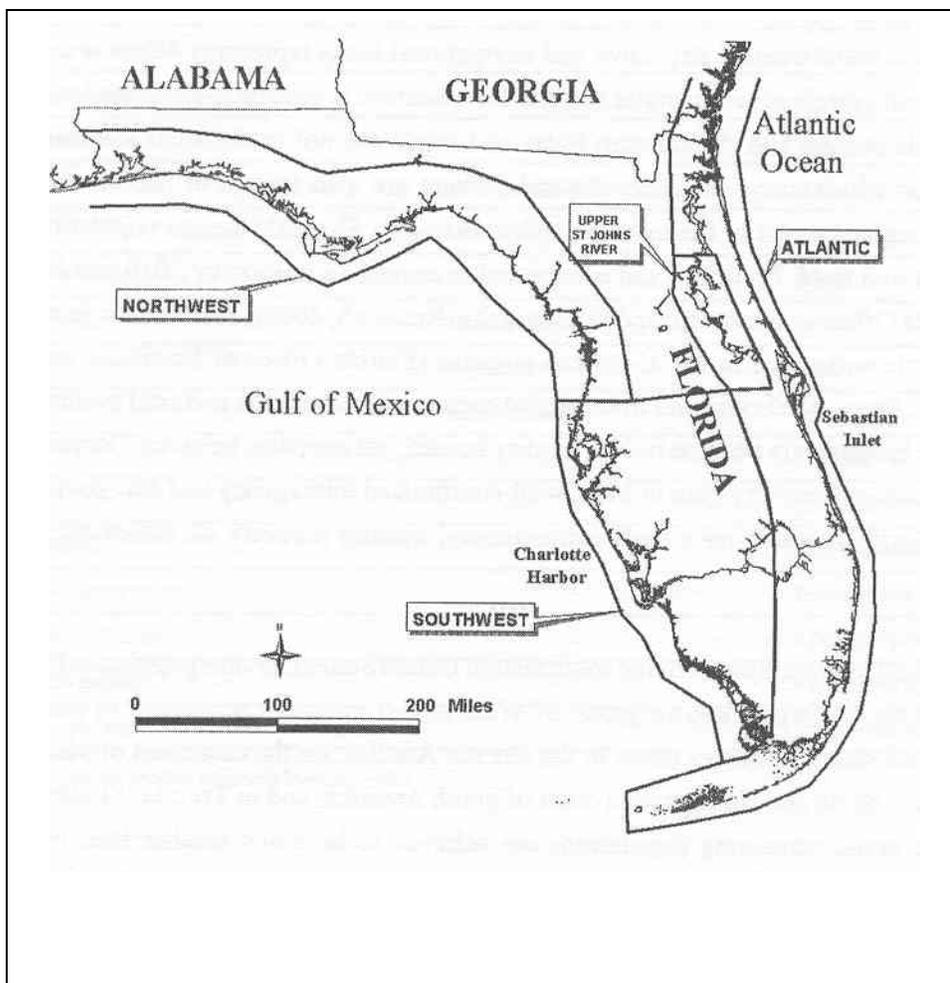
Although the precise number of manatees in Florida is not known, aerial censuses have documented the population to be at least 3,276 individuals (FWRI, 2001). Although there may be some interchange, the federal recovery plan (U. S. Fish and Wildlife Service (FWS), 2000) indicates that this statewide population of manatees can be separated into the following four distinct subpopulations:

- Atlantic (47 Percent of Florida Population);
- Southwest (37 Percent of Florida Population);
- Northwest (12 Percent of Florida Population); and

- Upper St. Johns River (4 Percent of Florida Population).

The general boundaries of these sub-populations as identified by FWS are shown on Figure 1.

Figure 1
General Regions of Sub-populations of Manatees in Florida
Source: FWS Florida Manatee Recovery Plan, 2001



There are no permanent physical barriers that totally isolate one sub-population from another, and tracking of some individual manatees suggests that although these populations may be generally separate, some individuals move from one region to another.

Manatees in St. Johns County may be part of either: a) the Atlantic Region, which includes the Matanzas and Tolomato Rivers and their tributaries, or: b) the Upper St. Johns River populations. Analyses are ongoing by the Manatee Population Status Working Group of the federal Recovery Team to determine the extent to which each sub-population may be increasing, decreasing or remaining steady, and a statement from this group released in 2001 states:

“Evidence indicates that the Northwest and Upper St. Johns River subpopulations have steadily increased over the last 25 years. This population growth is consistent with the lower number of human-related deaths, high estimates of adult survival, and good manatee habitat in these regions. Unfortunately, this good news is tempered by the fact that the manatees in these two regions probably account for less than 20% of the state’s manatee population.” (FWS, 2001).

Manatees are relatively long-lived, with estimates of maximum life expectancy being about 60 years. Females enter their reproductive cycle at 3-4 years of age, and the mean age when they first give birth is five years. The gestation period is approximately 11-14 months, and a calf remains dependent on its mother for approximately 1-2 years.

Prior to the mid 1970’s, there was comparatively little documentation and/or research that was focused on manatees, but there is no question that *Trichechus manatus latirostris* is a naturally occurring member of Florida’s biota. Little is known about the pre-1970’s population of this native species in Florida, but the fossil and historic records indicate that manatees and their ancient ancestors have been present in Florida for 45 million years (Domning, et al. 1982).

B. Present Status of Legal Protection

The federal government and State of Florida each have criteria through which they determine the extent to which an individual species of plant or animal merits protection under their respective endangered species laws and rules. An individual species that is numerous in Florida but rare in other areas of the country may be given protection only under federal laws. Another species that may be abundant in other areas of the U.S. but is rarely found in Florida may be protected only by state laws. Occasionally the federal and state designations of an individual species are identical.

1. Federal Protection

As described in the Florida Manatee Recovery Plan (FWS, 2001):

“The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et. seq.) (ESA) establishes policies and procedures for identifying, listing and protecting species of wildlife that are endangered or threatened with extinction. The ESA defines an “endangered species” as “any species that is in danger of extinction throughout all or a significant portion of its range.” A “threatened species” is defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”

The West Indian Manatee, *Trichechus manatus*, was listed as endangered throughout its range for both the Florida and Antillean subspecies (*T. manatus latirostris* and *T. manatus manatus*) in 1967 and received federal protection with the passage of the ESA in 1973.

West Indian manatees also are protected under the Marine Mammal Protection Act (MMPA) of 1972 as amended (16 U.S.C. 1461 et. seq.). The MMPA establishes, as national policy, maintenance of the health and stability of marine ecosystems, and whenever consistent with this primary objective, obtaining and maintaining optimal sustainable populations of marine mammals. It also