



Meet the Manatees

A closer look at five individuals at
Big Bend Power Station

The Florida Manatee



- Marine mammal
- Native to Florida
- Subspecies of the West Indian manatee
- Threatened species
 - 6,131 manatees counted in January 2018
- Lack blubber and need water warmer than 68F to survive

Why is it important to study manatees?

- Florida Manatee are a Threatened Species
- Protected Under:
 - Marine Mammal Protection Act of 1972
 - Endangered Species Act of 1973
 - Florida Manatee Sanctuary Act of 1978
- Identify Human-Related Impacts



Photo credit: USGS

What can we learn from identifying individuals?

- Genetics
- Behaviors
- Site Fidelity (tendency to return to a specific location)
- Adult Survival Rates
- Reproductive Rates
- Overall Population Trends



Photo credit: Manatee Viewing Center

How to ID an individual?

- You can identify a manatee by looking at its scar patterns
- Different injuries leave different scars
 - Scar Cause
 - Scar Location
- Temporary/Seasonal
 - Algae
 - Barnacles
 - Mud



Skeg

Hull

Propeller



Cold Stress

Entanglement

Photo credit: Lauren Gomez

TB007, Comma

- Female
- First Big Bend sighting Jan 12, 1988
- Documented with 12 calves over the years
- Has been photographed 193 times at Big Bend!



Photo credit: FWC. Activities were conducted under USFWS permit MA7733494

TB008, Adelaide

- Female
- First sighting in Alafia River Jan 21, 1983
- First Big Bend sighting Feb 1, 1992
- Documented with 6 different calves over the years
- Tagged as part of the “Movements of Radio-tagged Manatees in Tampa Bay and Florida’s West Coast 1991-1996”
- Tagged and tracked for 804 days visiting Tampa Bay south to Charlotte Harbor and had a calf
- Allowed researchers to learn more about habitat preferences, migratory routes, and life-history of the manatees using the Tampa Bay area



Photo credit: FWC. Activities were conducted under USFWS permit MA7733494

TB372, Seeker

- Female
- First sighting Dec 17, 2002 at Apollo Beach Nature Park
- Documented with 7 calves over the years
- Part of the study “Estimation of Detection Probability in Manatee Aerial Surveys at a Winter Aggregation Site”
- Large vinyl flags were attached to the manatees using a standard padded peduncle belt
- Detection probability is the likelihood that a manatee will be seen during a survey is crucial to improving the design of aerial surveys and better estimate population size
- Factors affecting detection include deep water, poor water clarity, observer fatigue, glare, cloud cover, sea state and ground vs aerial survey



Photo credit: FWC. Activities were conducted under USFWS permit MA7733494

TB582

- Sex unknown
- First Big Bend sighting Jan 27, 2010
- Seen 16 times at Big Bend, once at Bayside



Photo credit: FWC. Activities were conducted under USFWS permit MA7733494

TB645, Occhiolino

- Female
- First Big Bend sighting Dec 30, 2004
- Seen 15 times at Big Bend



Photo credit: FWC. Activities were conducted under USFWS permit MA7733494

What we have learned about manatees?

- Great deal of evidence for high site fidelity of manatees to the TECO Big Bend power plant
- Manatees seen at Big Bend have also been documented through photo ID at many different sites along the west coast of Florida and occasionally along the east coast of Florida or sites outside of Florida (Alabama, Bahamas, and Cuba)

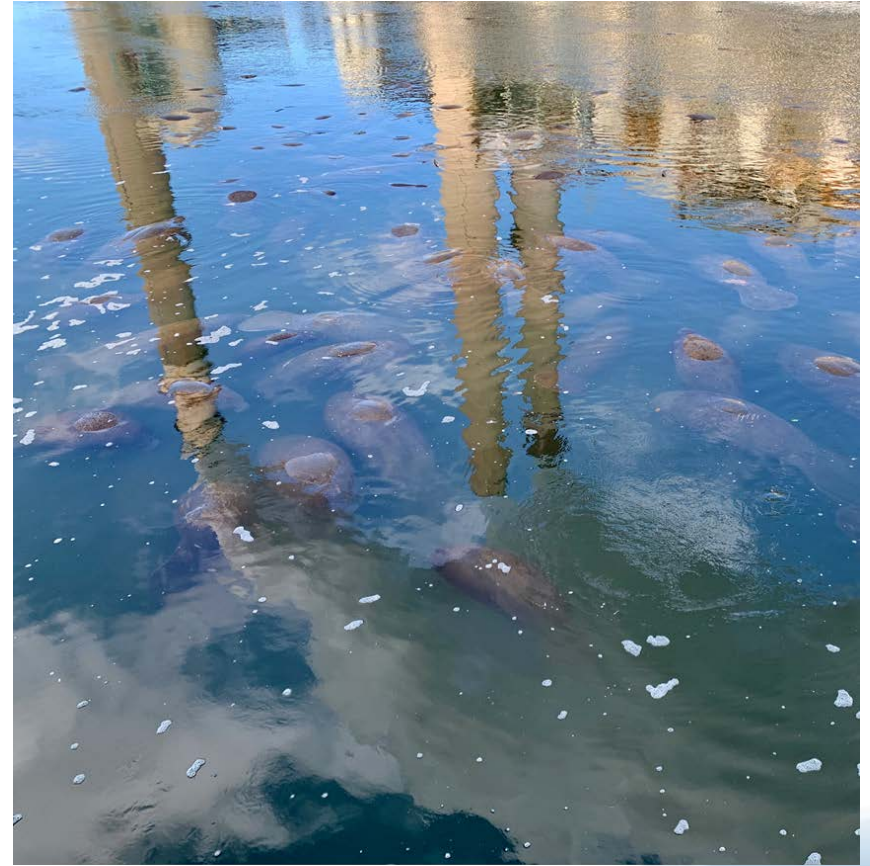


Photo credit: Manatee Viewing Center

What we have learned about manatees?

- 18 different animals have been sighted over 100 times at TECO Big Bend power plant
- TB007, Comma has been seen 193 times at Big Bend!
- 35 manatees have been sighted for 20 or more years at Big Bend
- Currently the longest sighting history of a manatee that has used Big Bend is 38 years (TB215: Nov1982-Jan2020)

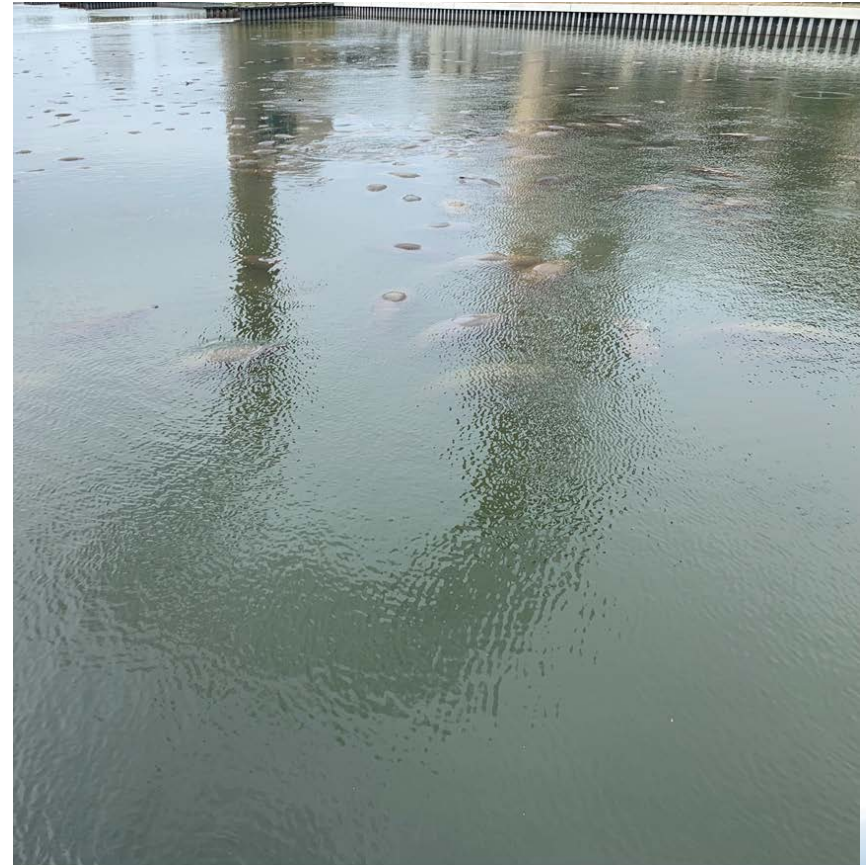


Photo credit: Manatee Viewing Center

What we have learned about manatees?

- Photo identification is an accurate and excellent way to identify individual manatees
- Provides insights into:
 - Manatee Movement
 - Site Fidelity
 - Adult Survival and Reproductive Rates
 - Reproductive Parameters such as Calving Intervals (time between births)
 - Length of Calf Dependency



Photo credit: Manatee Viewing Center