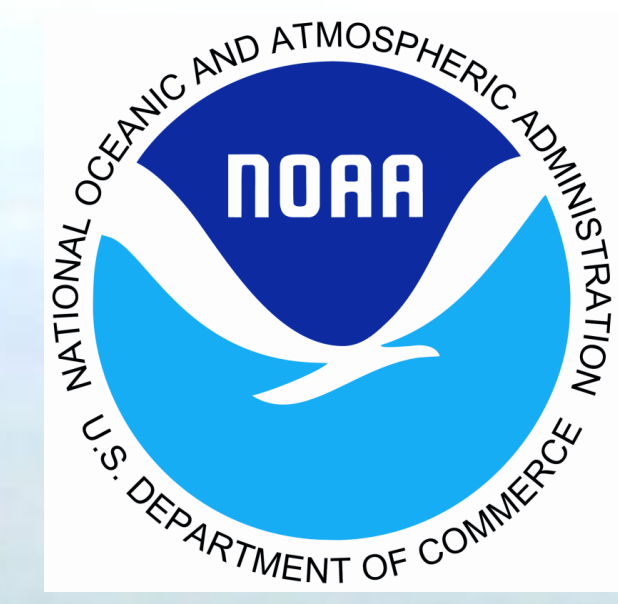




# Guana Tolomato Matanzas National Estuarine Research Reserve



## Management Plan July 2009 – June 2014

### Introduction

In 2007 the GTMNERR began the process of updating its original Management Plan written in 1999 when the research reserve was first created.

The Reserve received vital input from the general public, reserve volunteers and staff, and the Management Advisory Group made up of local stakeholder agencies and citizens. A draft plan was produced and made available to the public for review and comment in early 2007. Throughout 2007 and 2008, improvements and updates were made. On April 3, 2009, the management plan was approved by the State of Florida's Acquisition and Restoration Council (ARC). The plan was approved by the Governor and Cabinet on May 13, 2009 and approved by the National Oceanic and Atmospheric Administration (NOAA) on July 1, 2009. This Management Plan will serve to guide the reserve's activities through June 2014.

GTM Research Reserve management efforts are in direct response to its local issues. Issues-based management is a means through which any number of partners may become involved in addressing an issue allowing for all departments (research, stewardship and education) to work together toward addressing a particular issue. The issues of the GTM Research Reserve can be categorized under five topic headings listed below.

### Priority Issues and Goals

#### Public Use

Ensure user experiences are sustainable and consistent with natural and cultural resource protection for the benefit of existing and future generations.

#### Habitat and Species Management

Improve the conservation of natural biodiversity by implementing the principles of adaptive management and ecosystem science.

#### Watershed Land Use

Reduce the impact of watershed land use on coastal resources by identifying priority pollutants and encouraging best management practices.

#### Cultural Resource Preservation and Interpretation

Enhance understanding, interpretation, and preservation of the GTM Research Reserve's cultural resources.

#### Global Processes

Serve as a clearinghouse of information concerning global and meteorological processes and as a demonstration site for green building technologies and practices.

**GTM Research Reserve Mission: To achieve the conservation of natural biodiversity and cultural resources by using the results of research to guide science-based stewardship and education strategies.**



### Introduction to Issue-Based Adaptive Management

Natural resource management efforts are in direct response to, and designed for unique local and regional issues.

Challenges of an identified issue are met by integrating research, education and stewardship strategies.

Objectives are measurable.

Continued monitoring allows the reserve to evaluate progress and, if needed, adaptively adjust strategies to achieve the desired objective.



**Over 73,000 acres are included within the reserve boundary. 62% 45,177 acres are directly managed by reserve staff. 94% of this directly managed area consists of tidal and submerged lands.**



### Success



#### Research

- Using the Reserve water quality data to estimate the productivity of the estuary.
- Estimating the **water filtration services** provided by oysters.
- Coordinated Florida's baseline sediment and water sampling in response to the **Deep Water Horizon Oil Spill**.
- Aquatic invertebrate sampling, marsh bird monitoring, night-flying insects, butterflies, mosquito population monitoring, and emergent trapping to monitor the **health of our marsh habitats**.
- Distribution of **shorebird birds roosting and foraging activity relative to disturbance by people and dogs**.
- Abundance and ecology of the **green mussel and pink barnacle**.
- GTM Research Reserve serves as a State Index Beach sea turtle monitoring. **300% increase in nest density this year** (230 nests versus an annual average of 72 nests).
- Mercury levels** in estuarine fish and oysters.



#### Education

- Over 2,500 K-12 students** visit the Environmental Education Center each year.
- Conduct **Teacher Training Workshops**.
- Host an annual **Leave No Family Inside** event.
- Host site visits by **International Visitor Corps** of Jacksonville.
- Conduct Public Workshops: **Invasive Plants, Solar Solutions** for the Home, **Managing Visitor Use** in Coastal and Marine Protected Areas.
- Provide a GTM Estuary Explorer **Summer Camp**.
- Host the Environmental and Land Use **Law Conference Field Trip**.
- Participation in the Clean Ocean and Coastal Waters technical working group of the **Governors' South Atlantic Alliance**.
- Provide Live Eco-nomically (**Sustainable Living**) Classes.
- Celebrate **National Estuaries Day**.



#### Stewardship

- Invasive Species Task Force:** Non-native invasive plant mapping and control efforts within the 220,000 acre watershed of the reserve.
- Participation in the **Natural Resources Subcommittee of the Regional Community Institute** (RCI) to provide an updated Strategic Regional Policy Plan (SRPP) to the Board of Directors of the Northeast Florida Regional Planning Council (NEFRPC).
- Matanzas Basin Special Basin Designation** (SJRWMD initiative).
- Northrup Gruman completed a **LiDAR survey** of the entire 9000 acre Guana peninsula.
- Prescribed fire** and mowing of 82 acres along A1A.
- Completed construction of a low water crossing to **restore a 58 acre fresh water marsh**.
- 170,000 visitors annually** utilize the recreational area for fishing, hiking, horseback riding, biking, and kayaking. 20,000 visitors per year.