

*Evaluation Findings
for the
Guana - Tolomato - Matanzas National Estuarine Research Reserve
for the period
From August 1999 through January 2004*

April 2005

Office of Ocean and Coastal Resource Management
National Ocean Service
National Oceanic and Atmospheric Administration
United States Department of Commerce

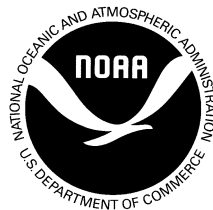


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Executive Summary

A. OVERVIEW

Section 312 of the Coastal Zone Management Act of 1972 (CZMA), as amended, requires NOAA's Office of Ocean and Coastal Resource Management (OCRM) to conduct a "continuing review" of the performance of states and territories with federally-designated National Estuarine Research Programs. This document sets forth the evaluation findings of the Director of the Office of Ocean and Coastal Resource Management (OCRM) with respect to the performance of the State of Florida's Guana - Tolomato - Matanzas National Estuarine Research Reserve (GTM NERR) for the period from August 1999 through January 2004. It contains an executive summary of the review findings; a description of the review procedures; a description of the Reserve; a summary of GTM NERR's major accomplishments during the review period; the evaluation findings and recommendations; a conclusion; and, appendices.

These findings conclude that the Guana - Tolomato - Matanzas National Estuarine Research Reserve is satisfactorily meeting its obligations under Section 315 of the Coastal Zone Management Act and implementing program regulations, 15 CFR 921. The State is adhering to the GTM NERR's approved management plan and to the terms of the NOAA financial assistance awards. The accomplishments, findings, and recommendations are summarized below.

B. ACCOMPLISHMENTS

The Evaluation Team documented a number of accomplishments of the GTM NERR. These include:

- 1. Partnerships.** The development and maintenance of partnerships with the many resource agencies and local governments which have shared responsibilities within and adjacent to the Reserve is truly impressive. The Reserve Manager and staff are to be congratulated for this exemplary effort.
- 2. Staffing.** The GTM NERR is fully staffed with qualified people and it was clear from comments received during the evaluation site visit and from direct observation that they work well as a team.
- 3. Facility Development and Acquisition.** The GTM NERR is commended for its ongoing successful efforts to provide quality facilities and good facility planning to meet current and future needs of Reserve staff and the various Reserve communities. Initially housed at the Whitney Marine Lab in Marineland, Florida the GTM NERR has transitioned from the temporary facilities to more permanent offices at the River to Sea Preserve. The Reserve is currently constructing an environmental education center in the northern section of the Reserve in Guana State Park.
- 4. Education and Outreach.** The education program has made great strides since Reserve designation and has developed a robust offering of information, support,

workshops and communication to the Reserve community and those interested in its activities.

5. **Coastal Training Program.** The Coastal Training Program (CTP) is on track for implementation this year and moving forward in a positive direction. The three Florida CTP coordinators are working together in an exemplary effort to develop a Florida Coastal Training program which contains common elements where suitable and is site specific where appropriate.
6. **Research.** The GTM NERR Research Program has developed into a central element in support of research in the northeast Florida region, and the monitoring program is fully functioning providing quality data to researchers and educators.
7. **System-Wide Monitoring Program.** The reserve is fully implementing the System-Wide Monitoring Program which includes operation and maintenance of 4 YSI data sondes, a weather station and ISCO sampler.
8. **Geographic Information System.** GTM NERR enjoys a fully functional GIS which provides products to support planning activities, presentations on Reserve issues, and education programming.
9. **Management Advisory Group.** The GTM NERR Management Advisory Group has been in place since designation and has been effective in advising the reserve on issues of northeast Florida.
10. **Volunteers and Friends.** Recently, the Friends of the Reserve and the Friends of Guana River merged to become the Friends of the GTM Reserve. This enthusiastic support group has approximately 250 members and a potential to grow.
11. **Reorganization.** The Florida Department of Environmental Protection (DEP) reorganized, shifting many employees in its Division of Recreation and Parks under the Coastal and Aquatic Managed Areas (CAMA) Section. Management and maintenance of the Guana River State Park and its personnel are now the responsibility of the GTM NERR Manager.

C. SUMMARY OF RECOMMENDATIONS

In addition to the significant accomplishments described above, OCRM has identified areas where the program may be improved. These evaluation findings identify one (1) recommendation which takes the form of a Necessary Action and is mandatory and five (5) recommendations which take the form of Program Suggestions and are not mandatory at this time.

1. **Finding.** *Grants Match.* NOAA's Grants Management Division requires that all Coastal Zone Management Act National Estuarine Research Reserve grants be matched by 30%. Over the past several years, NOAA has expressed concern that Florida Department of Environmental Protection reserve award recipients are not representing their true source of match for NERR funding.

Necessary Action: Immediately upon receipt of the Final Findings, the Florida Department of Environmental Protection must submit grant applications for NOAA funding that specifically identify the source of match funds and allocates those funds to the appropriate object class category (Standard Form 424A).

2. **Finding.** *Management Plan Update.* The Reserve program has grown significantly since the original management plan was developed. As mandated by 15 CFR 921, it is time for the Reserve to revise the management plan for all elements of the GTM NERR treating it as a coordinated program of land and water preservation for research, education and stewardship.

Program Suggestion. A time line and strategy for revising the GTM NERR Management Plan should be produced within 6 months of receipt of final findings. This strategy should establish realistic deadlines for product development which would include time frames for the development of education, stewardship and research strategies in concert with the overall management of the Reserve. Activities and progress in meeting this suggestion should be documented in future progress reports.

3. **Finding.** *Management Agencies Coordination and Support.* One of the hallmarks of the GTM NERR program is the degree to which actions are coordinated with the various resource management agencies, local governments and associated interest groups. Building on that success, GTM NERR should review existing memoranda of agreement (MOA) with its partners on a regular basis to assure that the intent of the agreement continues to be met.

Program Suggestion. GTM NERR should develop a memorandum of agreement with the Division of Forestry for properties within the Reserve as well as review the existing MOA to ensure their effectiveness.

4. **Finding:** *Addressing Development Pressures.* A number of resource use challenges were brought to the attention of the review team through discussions during the site visit. These include beach access and parking in the Guana area, pressure to develop a high school within the Reserve boundaries, dock construction, and other development pressures.

Program Suggestion. GTM NERR should continue to use its resources and its education and coordination mechanisms to stress appropriate land stewardship within and adjacent to its boundaries.

5. **Finding:** *Site Profile Development.* Development of a site profile for the GTM NERR is in its initial phase as the Research Coordinator evaluates what other reserves have done in carrying out their site profiles. Progress in meeting this suggestion should be documented in future progress reports.

Program Suggestion. A time line and strategy for developing the GTM NERR site profile should be produced within 6 months of receipt of final findings.

6. **Finding:** *Participation in the National System.* GTM NERR staff participation in national meetings, particularly the annual Program Manager's Meetings in the spring and the Reserve System Meeting in the fall has been limited at best.

Program Suggestion. GTM NERR participation at national meetings should be encouraged by the Florida Department of Environmental Protection.

I. INTRODUCTION

The National Estuarine Research Reserve System (NERRS) was established by the Coastal Zone Management Act (CZMA) of 1972, as amended. Sections 312 and 315 of the CZMA require NOAA's Office of Ocean and Coastal Resource Management (OCRM) to conduct a periodic review of the performance of states and territories with federally-designated NERRs. This document sets forth the evaluation findings of the Director of OCRM, National Ocean Service (NOS), NOAA, with respect to the performance of the State of Florida in the operation and management of the Guana - Tolomato - Matanzas National Estuarine Research Reserve (Reserve or GTM NERR) for the period of August 1999 through January 2004. This document contains an executive summary, review procedures, program description, accomplishments, review findings and recommendations, a conclusion, and appendices.

The recommendations made by this evaluation appear in bold type and follow the section of the findings in which the facts relevant to the recommendation are discussed. The recommendations may be of two types:

Necessary Actions address programmatic requirements of the CZMA, implementing regulations and of the Reserve management plan approved by NOAA, and must be carried out by the date(s) specified.

Program Suggestions denote actions that OCRM believes would improve the management and operation of the Program, but which are not mandatory at this time. If no dates are indicated, the State is expected to have considered these Program Suggestions by the time of the next CZMA Section 312 evaluation.

The findings in this report will be considered by NOAA in making future financial assistance award decisions relative to the Reserve.

II. Program Review Procedures

The Office of Ocean and Coastal Resource Management (OCRM) evaluation staff began review of the GTM NERR in December 2003. This included an analysis of previous and current award documents and performance reports, approval findings, correspondence relating to the GTM NERR, and other relevant information. Evaluation staff and Estuarine Reserves Division (ERD) staff coordinated to determine the issues which would become the main focus of the evaluation.

The Evaluation Team determined that the issues listed below would receive particular attention during the site visit:

- ▶ Fiscal management of individual financial assistance awards;
- ▶ Location of the GTM NERR within the State administrative structure and State support of GTM NERR activities;
- ▶ The relationship of the GTM NERR to the education and research communities and the status of research and education grants;
- ▶ The relationship of the GTM NERR to the relevant public and private interest groups and communities; and,
- ▶ The overall GTM NERR programmatic goals and administrative direction as a member of the National Estuarine Research Reserve System.

John H. McLeod, Evaluation Team Leader, Erica Seiden, Program Specialist, ERD; and Peter Wellenberger of the Great Bay National Estuarine Research Reserve, conducted a site visit February 9 through 12, 2004. The Evaluation Team met with representatives of State and local governments, Federal agencies, interest group representatives, and private citizens during the site visit.

A Public Meeting was held on Monday, February 9, 2004, at 6:00 pm, at the Reserves' Marineland office. (**Appendix A** lists persons contacted in connection with the evaluation; **Appendix B** lists persons who attended the Public Meeting; **Appendix C** contains NOAA's response to any written comment received.)

The GTM NERR program staff were instrumental in setting up meetings and arranging transportation. Their support is gratefully acknowledged.

III. Program Description

THE NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM

The Coastal Zone Management Act of 1972, as amended, established a system of National Estuarine Research Reserves (NERRs), which is funded cooperatively by NOAA's Office of Ocean and Coastal Resource Management (OCRM) and participating states or territories, and managed by the states or territories. A protected areas network of federal, state, and community partnerships, the NERR System serves to promote informed management of the Nation's estuarine and coastal habitats through linked programs of stewardship, education, and scientific understanding. The national system of Reserves is representative of various biogeographic regions and estuaries in the U.S.

To date, NOAA has designated 26 NERRs which collectively comprise over 1 million acres of estuaries and their associated terrestrial habitats, and represent 15 of the 29 biogeographic subregions identified by the program.

GUANA - TOLOMATO - MATANZAS NATIONAL ESTUARINE RESEARCH RESERVE

1. Description of the Site

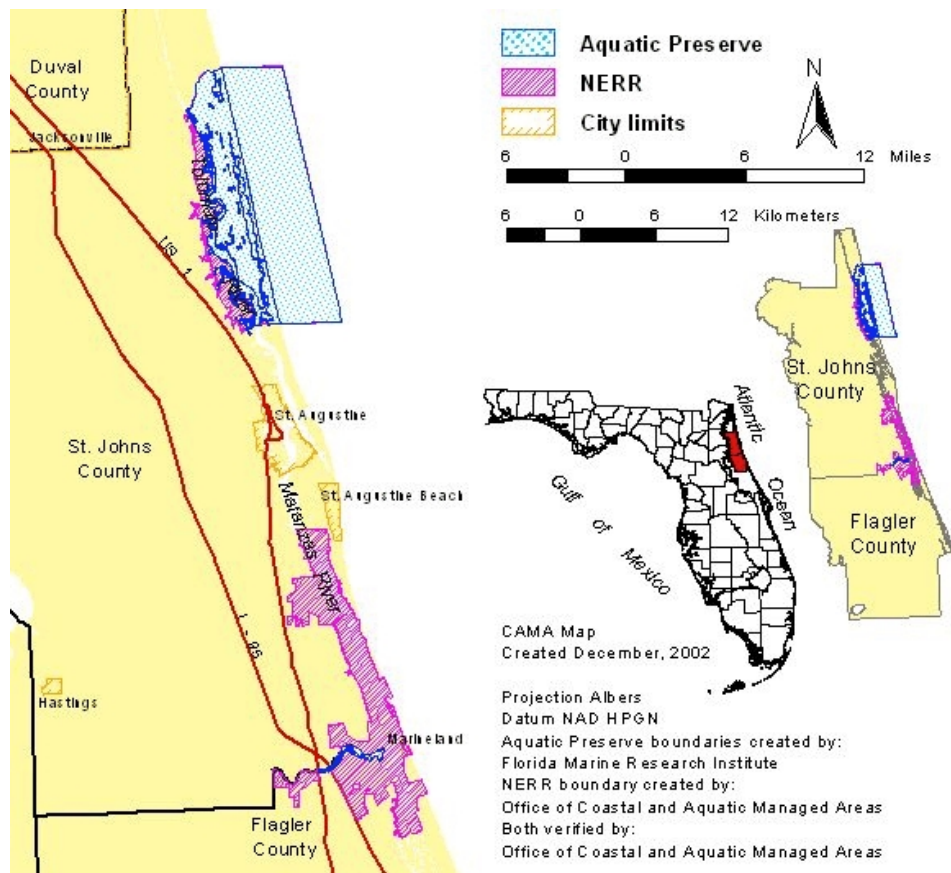
The Reserve is located within Florida's St. Johns and Flagler Counties. The cities of Jacksonville, St. Augustine and Palm Coast are adjacent to the Reserve. Interstate 95, US 1 and State Road A1A provide access to the area. The GTM NERR covers approximately 55,000 acres of publicly owned uplands, tidal wetlands, estuarine lagoons and offshore seas. It is located in the Upper East Coast Drainage Basin (part of the Florida East Coast Basin) which covers 467,196 acres. The basin has been further divided into two major drainage sub-basins: the Tolomato River (53,802 acres) and, the Matanzas River (167,599 acres) drainage basins. The natural hydrology of this system has been significantly altered by water control structures, such as the Intra-coastal Waterway which runs through it, dikes, inland wells, drainage ditches and a dam.

The GTM NERR is part of the temperate Carolinian biogeographic province. It represents a relatively undeveloped, coastal estuarine ecosystem in the southeastern U.S. The Tolomato, Guana and Matanzas River estuaries form a system of "bar-bounded estuaries that extend south from Jacksonville in Duval County to below Marineland in Flagler County behind the barrier island system. The Guana River estuary runs parallel to the Tolomato River estuary on the seaward side, with the two lagoons joining just north of the St. Augustine Inlet. Oceanic exchange occurs through the St. Johns River Inlet, a major navigational channel to the north, and the St. Augustine Inlet to the South. The Matanzas River estuary extends approximately 20 miles south from the St. Augustine Inlet to about eight miles south of the Matanzas Inlet. These tidal inlets form the oceanic exchange for the estuarine ecosystem. The St. Augustine Inlet has been stabilized with north and south jetties and is the major entrance to the Intra-coastal Waterway which runs through the Matanzas estuary. Matanzas Inlet is one of the last "natural" inlets on Florida's east coast. It has remained unimproved, with no dredged channel or armored shoreline,

and is suitable only for small water craft. The inlet is characterized by a transitory offshore bar and inner shoal with high tidal currents.

2. Reserve Administration

The GTM system has been designated as a National Estuarine Research Reserve and is administered by the Florida Department of Environmental Protection, Office of Coastal and Aquatic Managed Areas. Within the reserve area are 2 aquatic preserves, 2 state parks, 3 water management preserves, 2 State Forests, and all sovereign submerged land and other state owned lands. Waters within the Reserve contain Class II Shellfish Harvesting Waters and Class III Recreational fishing and swimming waters. Additionally waters within the two aquatic preserves are designated as Outstanding Florida Waters.



IV. Program Accomplishments

During the review period from August 1997 through January 2004 activities at the GTM NERR have resulted in many significant accomplishments. These accomplishments are directly attributable to the actions of the core staff members of the GTM NERR. In addition to the accomplishments listed below, the daily activity of staff requires coordination with a large number of groups and individuals, response to professional queries, interaction with other research reserves, and direct involvement in national studies in support of the overall Research Reserve System. The details of the most noteworthy of these accomplishments are listed below.

A) Partnerships.

The degree to which the development and maintenance of partnerships with the many resource agencies and local governments which have shared responsibilities within and adjacent to the Reserve is truly impressive. The Reserve Manager and staff are to be congratulated for this exemplary effort. Indeed, the accomplishments detailed below are, in part, due to the extensive coordination practiced in all elements of GTM NERR management and programming. Some examples include:

Education Program:

- * Teacher training (Sea Grant),
- * Exploring our Environment Day Camp for adults (Sea Grant, Whitney Marine Lab, Town of Marineland),
- * Monthly speaker series (Whitney Marine Lab), and
- * Brainstorming with land managers of the reserve about exhibits for the Environmental Education Center

Research Program:

- * Fish surveys [United States Geological Survey (USGS), St. Johns River Water Management District (SJRWMD)],
- * Abiotic and biotic monitoring [USGS, NOAA, SJRWMD, University of North Florida(UNF)],
- * GIS data from a plethora of sources,
- * System Wide Monitoring Program (SWMP) being used as a model for state-wide monitoring,
- * Involvement in Surface Water Improvement Program (SWIM) designation,
- * Future implementation of wireless network for environmental sensors and sensor networks (UNF), and
- * Future work with eco-regional planning tool (The Nature Conservancy)

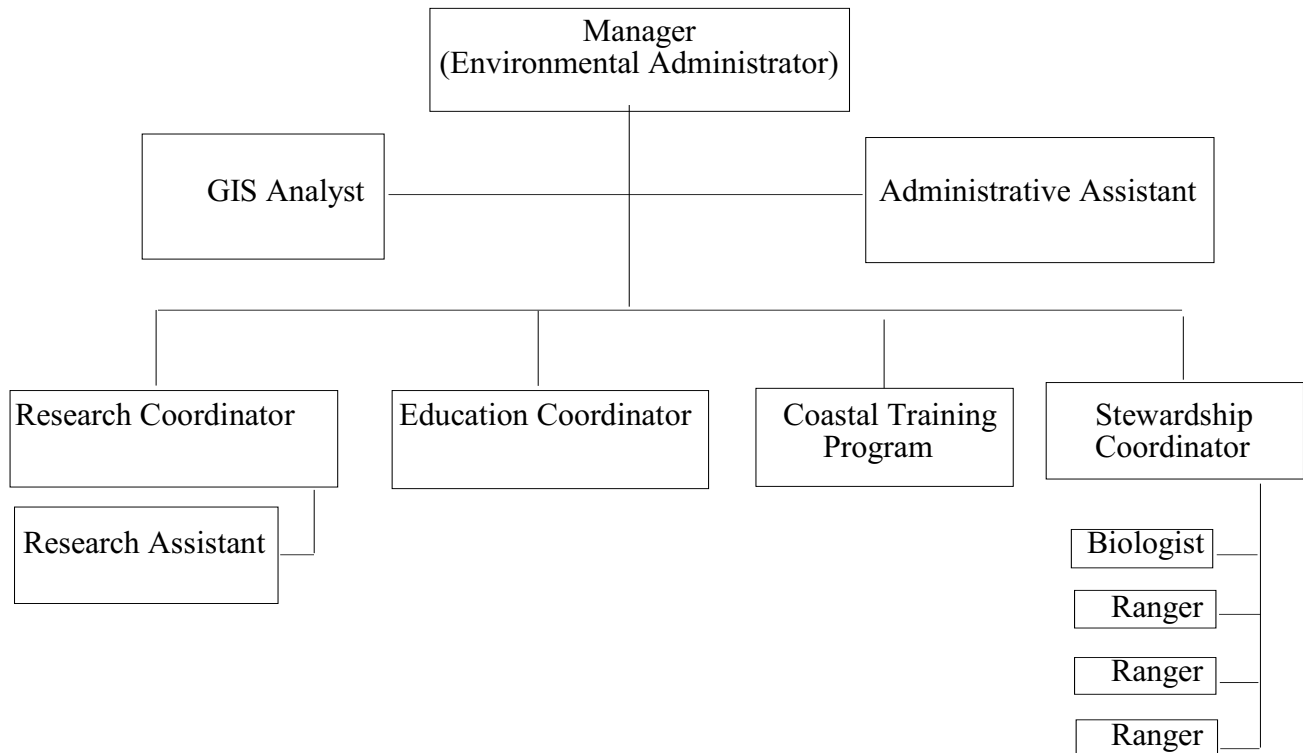
All agencies that met with the evaluation site visit team provided glowing descriptions of mutual interaction and support . The National Park Service, noted that “mission synergy” is derived from mutual boundaries and complimentary missions and stated:

“GTM NERR staff has provided valuable input during our management planning process, they have offered to assist us in establishing a GIS program support base, and their educational outreach programs including a very inclusive newsletter is effectively building coalitions and partnerships that did not previously exist.”

B) Staffing.

The GTM NERR is fully staffed with qualified people and it was clear from comments received during the evaluation site visit and from direct observation that they work well as a team. Staff members include: Reserve Manager, Administrative Assistant, Research Coordinator, Education Coordinator, Coastal Training Program Coordinator, GIS Technician, and Research Technician. Additional staff has been added to support the management and administrative transfer of the Guana State Park. The GTM NERR has evidenced an ongoing move from temporary to full time State funded employment as the staff has grown and at this point only the Manager is being paid with federal funds.

The organization chart is as follows:



C) Facility Development and Acquisition.

Initially the GTM NERR was housed at the Whitney Marine Lab in Marineland, Florida. It is significant that the GTM NERR has transitioned from the temporary facilities to more permanent offices at the River to Sea Preserve. The Marineland Offices were refurbished from facilities previously used as a local campground headquarters and now include Reserve office space, a conference room, kitchen, and a small research wet/dry lab. The parking lot for the facility is of pervious paving material to allow for water to enter the underground sheet flow as if it were entering an earthen area.

The Reserve is currently constructing an environmental education center in the northern section in Guana State Park to meet future staff and community needs. This facility will increase reserve capacity, provide a home for GTM Reserve volunteers, promote the visibility of the reserve and programs, as well as provide an opportunity for obtaining more funds through visitor fees and donations. With a groundbreaking ceremony in October 2002, the facility floor is now in place and the structure is beginning to take shape. In concert with the construction of the facility, planning for the exhibits is well underway. When opened, exhibits will feature a life-sized model of a Right Whale and pup, along with other suspended visuals. Interactive exhibits and training areas will invite visitors to participate in a number of learning activities designed to educate participants about the varied elements of the estuary, its associated resources and threats.



Girders rise from the floor of the Environmental Education Center in the GTM NERR

In addition to facilities, the Reserve has acquired approximately 8500 acres since designation. The parcels include 4,500 acres of the Matanzas State Forest and 4,000 acres of the Faver Dykes State Park. The boundary change will be part of the revised management plan which is currently under development. The GTM NERR is commended for its ongoing successful efforts to provide quality facilities and good facility planning to meet current and future needs of Reserve staff and the various Reserve communities.

D) Education and Outreach.

The education program has made great strides since Reserve designation and has developed a robust offering of information, support, workshops and communication to the Reserve community and those interested in its activities. The Reserve has been publishing a monthly e-mail newsletter to over 500 recipients, detailing activities and programs of the Reserve. Associated education and outreach activities such as organized trail walks, lectures and other programming in area parks, natural areas and preserves are also listed to support the overall programming within the communities surrounding the GTM NERR. These activities were singled out in many of the meetings with the evaluation site visit team as indicative of the programming service that is afforded by the GTM NERR in the region.

The Reserve offers quality programs including nature walks which routinely have 40 to 50 participants, master naturalist and master gardener programs, coastal decision-maker workshops on issues germane to northeast Florida. A specific example is the Learning in Florida's Environment program, a series of environmental science field laboratories on State lands designed specifically to support local school districts and improve the quality and effectiveness of educational programming within the DEP. [Details of this program are at [www/dep.state.fl.us/secretary/education/life.htm](http://www.dep.state.fl.us/secretary/education/life.htm).] Another example is the Florida Coastal Master Naturalist Program Workshops which trains the trainers who then take the information back to their schools for use in their science programs. Other examples of products and services include: traveling exhibits and participation in activities across the area to promote the reserve and its importance; the GTM NERR video produced by Live Oaks; and, publication of articles on research projects of the Reserve. The capability of the Reserve to produce education materials in-house saves money and time and bolsters the strengths of the overall program.

In keeping with the overall approach of coordination and cooperation, the GTM NERR works closely with other resource partners in shared efforts. Sea Grant and the Reserve work closely in teacher training programs, the estuaries workshop, and the Exploring Our River Program, a 5 day program of education through a hands on approach to learning. The Legacy Program which GTM NERR supports serves as another model of cooperation. Students carry out specific projects on public land with a learning objective (Examples include: building kiosks which provides technical skill training along with mathematics and design training, maintaining trails which also provides technical skill training, identification and cooking of local edible plants which provides education in botany, and lab work which provides scientific skill training as well as mathematical training through the conversion of numbers.) The Right Whale Monitoring Program, a local effort to document Right Whale numbers and calving success is also supported by the Reserve.

E) Coastal Training Program.

The Coastal Training Program (CTP) is on track for implementation this year and moving forward in a positive direction. At the time of the review site visit, the market analysis was underway and the needs survey was scheduled to begin on Monday, March 26, 2004. The goal was to have the needs assessment completed by the end of summer 2004. Subsequently, an implementation plan will be developed which will complete the required preparation to launch the program. In addition to the specific effort, the reserve is working on a CTP Web site which will be launched in approximately 6 months. The three Florida CTP coordinators are working together to develop a Florida Coastal Training Program which contains common elements where suitable and is site specific where appropriate.

F) Research.

The GTM NERR Research Program has developed into a central element in support of research in the north east Florida region, and the monitoring program is fully functioning providing quality data to researchers and educators. Before the GTM NERR was designated, local researchers and educators met quarterly to discuss mutual areas of interest, research activities, and needs. Once the Reserve was designated, the Research Coordinator immediately began to participate with this group as a full partner. Initially, the Reserve came to the management agencies for support in its efforts. However, over the short period that the reserve has been in existence this has reversed and the management agencies are now coming to the Reserve for support. While research was being conducted prior to the advent of the Reserve by

the SJRWMD, which has a strong commitment to research, and certainly by the Whitney Marine Lab, the Reserve has facilitated the expansion of research within the area and developed stronger coordination of effort in the area. A strength of the program is in avoiding duplication of effort through coordination of the efforts of the multiple jurisdictions resulting in data standardization and gathering of data throughout the larger system that is greater than any one management regime could have funded. The Research Coordinator has taken the initiative to meet with and work with other research communities and groups to expand the capabilities of the Reserve. Specific meetings include: a presentation at the National Aeronautics and Space Administration (NASA) Space Flight Center on the program with talks relating to the integrated ocean monitoring system; attending the Harbor Branch alliance for technology; working with NASA recovery ships to study reef formation; and attending the National Estuary Program Atlantic Fisheries meeting in Melbourne.

One indication of the strength of the program and its potential for research is that in a recent call for research grants from NOAA, grant applications to conduct research in the GTM NERR were more numerous than from any other reserve in the system. Currently, the reserve hosts a CICEET project which will develop a fiber-optic biosensor assay for real-time detection of pathogens in coastal waters. This research could result in considerable refinement of best management practices for coastal and estuarine systems. Coastal areas are increasingly impacted by development and pollution from storm water runoff and sewer discharges and hence, there is an increasing need to rapidly and specifically identify microbial pathogens that can affect human health. This project addresses that need. Other activities include:

- * Studies on exotic species (crabs/green mussels);
- * Exploring the best way to culminate and present the site profile/characterization, a required product of the reserve system;
- * Participating in network of observing systems (i.e. USGS discharge, NOAA data buoy near shore and offshore, WMD hydrodynamic stations);
- * Providing presentations to outside and local groups on the reserve and research occurring within the reserve;
- * Staying abreast of new technologies that can be advantageous to Reserve research (attended the Alliance for Technologies meeting at Harbor Branch Oceanographic Institute – showcasing new technology for environmental sensors – using the reserve as a testing ground for new technologies);
- * Conducting fisheries surveys in the northern coastal basin, funded by U.S. Geologic Survey (USGS) and St. Johns River Water Management District (SJRWMD) which provides information about juvenile fishes, their seasonal/habitat patterns (a study in its 3rd year);
- * Participating in an exotic crab study in collaboration with other Reserves;
- * Looking into doing joint modeling using collective data from different programs with the University of Florida, SJWMD, USGS and others; and
- * Investigating phytoplankton structure, phytoplankton bloom density and spread, an important issue related to animal and human health.

In addition, NOAA Graduate Research Fellow's projects conducted over the past 3 years include: the effect of salt spray, freshwater supply and forest seed source on ecological succession on dredge spoil islands along the intra-coastal waterway in northeastern Florida; and describing human uses, evaluating existing management and delineating ecological resources, the formulation of an estuarine planning strategy, A Case Study of the GTM NERR.

G) System-Wide Monitoring Program.

The reserve is fully implementing the System-Wide Monitoring Program which includes operation and maintenance of 4 YSI data sondes, a weather station and ISCO sampler. Collection sites are located at Pine Island, Ft. Matanzas, San Sebastian and Pellicer Creek. The Pellicer Creek site includes a weather station at the mouth of the creek on a platform which is aligned in true to the north and west. The Pellicer Creek site is to be telemetered with the system-wide effort to provide real time data.

GTM NERR has devised a procedures checklist for sonde deployment, calibration and maintenance ensuring consistent handling of the sondes which aids in providing quality data over the long-term. They have developed a strong partnership with the University of Florida (UF) who conducts the nutrient analysis. In partnership with UF, they are working to publish the results of the SWMP in peer reviewed journals.

SWMP site selection and placement was done in concert with other monitoring in the Reserve including water quality sites of the SJRWMD. They are deployed in a PVC tube, hanging from a stainless steel line so that the sensor protrudes below the tube in free flowing water. Nutrient samples are also collected at each site and tested for more than 14 parameters including nutrients (nitrite, nitrate, ammonium, total nitrogen, total soluble nitrogen, orthophosphate, total phosphorus, total soluble phosphorous, and silica), other chemical constituents (particulate organic carbon and color) and water column characteristics (chlorophyll *a*, phaeophytin, salinity, temperature, pH, light extinction coefficient, dissolved oxygen, total suspended solids and turbidity depth). The Reserve collects the data from the sites, performs quality assurance and control measures and submits the data annually to the Centralized Data Management Office in a timely manner.

H) Geographic Information System.

GTM NERR enjoys a fully functional GIS which provides products to support planning activities, presentations on Reserve issues, and education programming. The Reserve has a high performance workstation for executing applications software that is data and graphics intensive. Software includes ArcView 3.3, Spatial Analyst and ArcPress; a GTM NERR custom extension adding themes by category (such as hydrography or transportation) to create custom layouts (such as logo and disclaimer); a Custom Editing Extension for ArcView 3.3 for edit lines and creating closed polygon boundaries; and ArcGIS 8.3, Spatial Analyst and ArcPress. GIS data includes: Reserve boundary lines and polygons, monitoring stations and management boundaries; base layers and symbology (digital raster graphics at 24K, 100K and 250K; ecology; geology; habitats; hydrography; imagery; land use and/or land cover; physiology; political; soils; surface water basins; transportation; and wetlands); and, other layers. The GIS is used in educating the public about boundary locations and partnerships, and land use and development. It is also used by an environmental education class for field identifying water quality sampling stations and surrounding land use. Practical uses include identifying potential or existing burn areas and in delineating habitats for land management and planning. Research uses include supporting the

placement of SWMP stations and weather stations, identifying tributaries for bacteria sampling, identifying potential subsurface oyster beds and identifying potential spawning locations for Diamondback Terrapin.

D) Management Advisory Group.

The GTM NERR Management Advisory Group has been in place since designation and has been effective in advising the reserve on issues of northeast Florida. It is comprised of partner management agencies and local officials. Currently the Management Advisory Group is in the process of forming committees including research and education so that they can better support the growing programs at the reserve.

J) Volunteers and Friends.

Recently, the Friends of the Reserve and the Friends of Guana River merged to become the Friends of the GTM Reserve. This enthusiastic support group has approximately 250 members and a potential to grow. Until recently there were no land facilities to support an extensive volunteer organization but with the completion of the construction of the Guana Education Center and the opening of the Marineland offices and its adjacent properties, the situation will soon change. The emphasis is currently on the development and training of a cadre of volunteers to man the exhibit stations, support the gift shops and lead and support the popular nature walks. The goal is to have a full program of participatory opportunities available to the public when the Education Center opens this year.

K) Reorganization.

Recently the Florida Department of Environmental Protection (DEP) reorganized, shifting many employees in its Division of Recreation and Parks under the Coastal and Aquatic Managed Areas (CAMA) Section. This effectively placed the Guana River State Park staff within the organization of the GTM NERR, and its management and maintenance personnel, directly under the supervision of the GTM NERR Manager. While this reorganization facilitates certain aspects of the program, it increases the responsibilities of the reserve manager. It also drove the reorganization of support groups for the Reserve and for the Park into a more cohesive and expansive Friends organization discussed above.

V. Review Findings and Recommendations

During the period covered by these findings, August 1997 through January 2004, great progress has been made at both the administrative and programmatic levels. While program growth in research and education (detailed in the accomplishments section above) was exemplary, there remain a number of challenges to Reserve administration and management. The Office of Ocean and Coastal Resource Management (OCRM) finds that the GTM NERR is adhering to its approved management program, and is adhering to the programmatic terms of the NOAA financial assistance awards. The following documents some of the key management issues facing the State and contains a Necessary Action which must be met in the time frame identified, and Program Suggestions designed to challenge Reserve management to improve performance over the next few years.

A) Grants Match.

NOAA's Grants Management Division requires that all Coastal Zone Management Act National Estuarine Research Reserve grants be matched by 30%. The 30% match may be allocated in any object class category as long as the total match to the grant is 30%. Over the past several years, NOAA has expressed concern that Florida Department of Environmental Protection recipients of NERRS awards are not representing their true source of match for NERR funding. Formal correspondence occurred between NOAA and DEP in May 2003 regarding this concern. During the review period, the Guana Tolomato Matanzas Reserve matched their federal award with Florida fixed capital outlay (FCO) project funds which support maintenance of and projects within the State parks within the boundary of the reserve. This is a legitimate source of match. However, DEP shows that each task and each object class category within the agreement is matched by 30%, arguing that they simply reimburse 70% of their costs by object class with federal funds. Reserve specific and reserve system-wide projects are not part of State park maintenance and hence cannot be covered by those funds. Additionally, during the first years after Reserve designation, Reserve staff members were not supported by DEP funds, yet they showed that 30% of their salary came from DEP. DEP has been urged to show the correct allocation of funds.

As a result, in August, 2003, a teleconference was held among reserve partners including NOAA's Grants Management Division (GMD), NOAA's Estuarine Reserves Division (ERD), DEP's Coastal and Aquatic Managed Areas and DEP's Bureau of Finance and Accounting. During the teleconference, participants reviewed the Guana Tolomato Matanzas operations award and it was noted by DEP that the match sources were incorrect on their current award. Therefore, NOAA's GMD and ERD requested that a revision of the award be submitted showing the correct source of match as well as how this match is allocated per object class category. No revision has been received by either division at NOAA. During the interim period between the teleconference and the present, re-budgeting requests have been made by two Florida Reserves through DEP administration. One request was revoked by DEP prior to submission due to the inability to explain a discrepancy that was noted by NOAA's ERD. The other request was submitted without justification for re-budgeting of funds. NOAA ERD requested justification and none could be provided by DEP; hence, NOAA ERD has denied the request. The

reprogramming requests point to the difficulty in the application being presented as a 70/30 split for every object class and task. The reprogramming requests would not be necessary or could be justified if an original budget was submitted that reflected the reality of how funds would be spent. For example, if the grant is matched fully by state personnel costs, then all match funds should be shown under the personnel object class category.

NECESSARY ACTION

- 1) **Immediately upon receipt of the Final Findings, the Florida Department of Environmental Protection must submit grant applications for NOAA funding that specifically identify the source of match funds and allocates those funds to the appropriate object class category (Standard Form 424A).**

Follow-up: Since the evaluation site visit and the creation of the draft findings, Florida DEP has agreed to write grants according to NOAA's desired method of describing match. GTM NERR intends to prepare all future grants in this manner, but, to go back to previous grants and make corrections would be counter productive and further tax limited staff resources. There is no question that GTM NERR has met its grant match requirements of past grants.

B) Management Plan Update.

Substantial program growth has occurred since the original management plan was developed. Additionally, DEP has undergone a reorganization which directly affects the GTM NERR. It is time for the Reserve to revise their management plan to include coordinated strategies for land and water preservation, research, education and outreach, and stewardship. Likewise, the Aquatic Preserve Plans and the Plans for the incorporated Park properties are also in need of update. There are "grey areas" of authority and jurisdiction which need to be clarified. There are also existing memoranda of agreement (MOA) and management agreements which establish responsibilities and agreed to practices in incorporated lands that are otherwise managed by local and regional agencies. These need to be reviewed on an annual basis to assure that there is ongoing understanding of the intent of the agreement and to determine if changes are needed to further effectuate the agreement(s). To this end a comprehensive plan needs to be developed which will look at the properties and mixed responsibilities as a whole.

As part of this plan, the research and education staff should work to outline their priorities and strategies for meeting their 5 year goals. Despite a full portfolio of education programs and volunteer development, the education program is more opportunistic than driven by a clear plan of action. The significant expansion of educational opportunities afforded by opening the Guana area and the managerial and communication issues that accrue when programming must be provided in two separate areas, each containing its own focus for the Reserve, will require development of a plan of action.

The Reserve needs to take the time to develop and define priorities for the research program in GTM NERR. To date research has been opportunistic in nature and predicated on what has been required (SWIM), what has been existent (SJRWMD) and what has been available. While any program of research should be inclusive, there is a need to establish priorities for an overall program. The research and education staff should coordinate to ensure an integrated program plan.

Due to the DEP reorganization, the Reserve Manager is responsible for managing the staff at three Florida Aquatic Preserves. Additionally, the Reserve management plan should

agree with other program plans that meet similar missions or are related in some way, such as the Marineland Management Plan.

PROGRAM SUGGESTION

- 2) **A time line and strategy for revising the GTM NERR Management Plan should be produced within 6 months of receipt of final findings. This strategy should establish realistic deadlines for product development which would include time frames for the development of education, stewardship and research strategies in concert with the overall management of the Reserve. Activities and progress in meeting this suggestion should be documented in future progress reports.**

C) Management Agencies Coordination and Support.

One of the hallmarks of the GTM NERR program is the degree to which actions are coordinated with the various resource management agencies, local governments and associated interest groups. Building on that success, GTM NERR should review existing memoranda of agreement (MOA) with its partners on a regular basis to assure that the intent of the agreement continues to be met. Likewise, new MOA should be developed in those instances where none exist. The Division of Forestry recently acquired 4,600 acres of land for the Matanzas State Forest lying within the Reserve boundaries. However, the Division of Forestry does not currently participate in the GTM NERR Management Agency meetings and there is no agreement regarding the management of the new lands between GTM NERR and the Division. Given the significance of the tract, and that there is also a small portion of Forestry land that has been in the boundary but not under management agreement, a memorandum of agreement needs to be developed with the Division.

In addition, the DEP has decided to replicate the NERR System-wide Monitoring Program across the state of Florida at all of their Aquatic Preserves. They have purchased data sondes with CZMA funds and are currently collecting data at most locations. The Reserve research staff members have been integral in guiding this effort. It is imperative that DEP support Aquatic Preserve staff to conduct the deployment, maintenance, and data acquisition, quality assurance and control so as to not put additional pressure on Research Reserve staff.

PROGRAM SUGGESTION

- 3) **GTM NERR should develop a memorandum of agreement with the Division of Forestry for properties within the Reserve as well as review the existing MOA to ensure their effectiveness.**

D) Addressing Development Pressures.

A number of resource use challenges were brought to the attention of the review team through discussions during the site visit. Beach access and parking in the Guana area is an issue where the locality has allowed development to the point that historic access points have been lost. The locality is also not averse to vacating existing public right-of-way to adjacent owners

upon their request. With such loss of access, stress has been placed on State and Federal owned lands. There was even an instance when a local agency posted beach access signs on state lands as though the sites were county owned access points. The signs were subsequently removed when the discrepancy was reported. While this is a coastal management issue, it points out the problem of ongoing development in the coastal area and the stress it is putting on the GTM NERR.

Development pressures and threats to the Reserve are not limited to the beach front. In the Ponte Vedra area there has been an ongoing desire on the part of some to use land within the GTM NERR for a new high school. Likewise there are a number of illegal docks in the watershed, some of which were given a Corps permit “subject to obtaining the appropriate State permit.” The permit applicant went ahead with construction with only the Corps permit. While the State remains averse to such development, use pressures remain.

Coupled with the development pressure is the desire on the part of some to have the Reserve become more actively engaged in advocating against the development and what one individual at the public meeting called “bad growth” occurring in the area. From those espousing this view “existing, and certainly adjacent, land development activities needs to have GTM NERR input into the process.” While the Reserve provides input during the permitting processes when approached, there are procedural issues regarding posting and notice that need to be resolved. Local notices of permit applications are sent to Tallahassee (the land holder of record) and may not be forwarded to the management unit for action until it is too late to take procedural action. Although one jurisdiction does maintain a secondary list of who to directly contact in situations where land management is detached from land ownership. It is the responsibility of management agency to contact the local agency to make sure they are on the list for existing properties and to update the list when new properties are acquired. Likewise, on the part of the Reserve, there is no manpower to monitor local actions for impact.

PROGRAM SUGGESTION

4) GTM NERR should continue to use its resources and its education and coordination mechanisms to stress appropriate land stewardship within and adjacent to its boundaries.

E) Site Profile Development.

Development of a site profile for the GTM NERR is in its initial phase as the Research Coordinator evaluates what other reserves have done in carrying out their site profiles. It is clear that the desire exists to develop a profile which will support the development of a research program that not only provides guidance to research needs, is inclusive, and encouraging research at all levels, but which can be translated to education and decisionmaking processes.

PROGRAM SUGGESTION

5) A time line and strategy for developing the GTM NERR site profile should be produced within 6 months of receipt of final findings. Progress in meeting this suggestion should be documented in future progress reports.

F) Participation in the National System.

GTM NERR staff participation in national meetings, particularly the annual Program Manager's Meetings in the spring and the Reserve System Meeting in the fall has been limited at best. Upon discussion, it was learned that the State has a limitation on the number of participants going to any one meeting from the same office. In this instance the three Reserves of Florida would have only one participant cleared to travel to such meetings, despite the fact that the funding for the travel is wholly Federal and does not come from State budgets. However, each reserve is viewed in the context of a single unique entity, rather than part of a conjoined whole. With each reserve representing different bio-geographic regions, with varied resource management, education and research issues, they should be viewed as distinct for purposes of participation in national meetings. Furthermore grant conditions stipulate that funds are to be set aside to support such travel. This is because the meetings are central to the ongoing development of the national program of Reserves, are educational in nature, provide for ongoing support of the local programs, and are in the best interest of each local program. It has been NOAA's experience that those programs which do not actively participate in the national meetings find themselves isolated from the larger system and begin, over time, to develop practices inconsistent with the Reserve System's goals and direction. To this end, Florida should reassess the viewpoint that one Reserve can represent all three Florida Reserves at a national meeting. Each Reserve is distinct and should participate fully in these meetings.

PROGRAM SUGGESTION

6) GTM NERR participation at national meetings should be encouraged by the Florida Department of Environmental Protection.

VI. Conclusion

Based on the recent evaluation of the GTM NERR, I find that the State of Florida is adhering to its federally approved management plan and the terms of the NOAA financial assistance awards. A number of significant accomplishments are occurring in Reserve research and education.

These evaluation findings contain 6 recommendations. One (1) is a necessary action that must be accomplished by the State within the specified time frame. The remainder are program suggestions that the State should address before the next regularly scheduled program evaluation, but which are not mandatory at this time. Program suggestions that OCRM must repeat in subsequent evaluations, however, may be elevated to necessary actions (which must be acted upon within specific time frames or financial assistance may be jeopardized).

This is a programmatic evaluation of the GTM NERR that may have implications regarding the State's financial assistance award(s). However, it does not make any judgements on, or replace any financial audit(s) related to, the allocability of any costs incurred.

Date

Eldon Hout, Director

APPENDIX A
Guana Tolomato Matanzas National Estuarine Research Reserve
312 Evaluation

PERSONS CONTACTED DURING THE EVALUATION

Department of Environmental Protection (DEP), Office of Coastal and Aquatic Managed Areas (CAMA), Guana - Tolomata - Matanzas National Estuarine Research Reserve (GTM NERR)

Danny Riley	DEP, CAMA
Ken Berk	GTM NERR Manager, DEP, CAMA
Carroll Kissam	Administrative Assistant, GTM NERR
Janet Zimmerman	GTM NERR Education Coordinator
Ann Weaver	GTM NERR Coastal Training Program Coordinator
Rick Gleeson	GTM NERR Research Coordinator

GTM NERR Management Advisory Group

Pierre Pierce
Mike Cullum
Susan van Hoek
Frank Usina
Jim Netherton
Anne Wilson
Jim Darby

Friends of GTM NERR

Anita Pierce
Kramer Upchurch
Daryl LaBella
Steve Harrison
Judy Sulser
Bill Dudley
Joe Hutnan
Carl Hampp
Pat Shoumlin

Others

Justin Ellenberger	Florida Fish and Wildlife Conservation Commission
J.B. Miller	State Parks
Paul Haydt	St. John's River Water Management District (SJRWMD)
Joy Hampp	Marineland
Carl Hampp	Marineland
John Hackinson	Marineland
Peter Anderson	Whitney Marine Lab

Diedra Irwin	SJRWMD
Dick Baldouzi	St Johns County Watershed Action Volunteers
Cheryl McCrory	St Johns County Watershed Action Volunteers Coordinator
Maia McGuire	Florida Sea Grant
Vicki Renna	St. Johns County Planning Department
Jan Brewer	St. Johns County Planning Department
Georgia Katz	St. Johns County Planning Department
Dave Lambert	St. Johns County Planning Department
George Getsinger	NOAA's Marine Fisheries Service
Pat Wewlsh	NOAA's Weather Service
Dave Lambert	University of North Florida
Ed Philips	University of Florida Department of Fisheries and Aquatic Sciences
Gordie Wilson	National Park Service

APPENDIX B

**Guana Tolomato Matanzas National Estuarine Research Reserve
312 Evaluation**

PERSONS ATTENDING THE PUBLIC MEETING

A Public Meeting was held on Wednesday, November 7 at 7:00 PM at the GTM NERR
Marineland Office.

Attendees:	Jack Pittman *	13 Wendy Lane, ??? Coast, Florida 32164
	Patrick Hamilton *	6989 Charles Street, St. Augustine, Florida 32030
	David Wiles *	8220 A1A South, St. Augustine, Florida 32080
	Dennis Frazel *	P.O. 70, Grandan, Florida 32138
	Jane G Jette	1108 Ocean Marina Drive, Flagler Beach, Florida 32136
	John Jette	1108 Ocean Marina Drive, Flagler Beach, Florida
	Linda Chandler	C/O Ft. Matanzas, 8635 A1A South, St. Augustine, Florida 32080

* Offered comments at the meeting.

APPENDIX C

Guana Tolomato Matanzas National Estuarine Research Reserve 312 Evaluation

WRITTEN COMMENTS RECEIVED AND RESPONSE

No written comments were received subsequent to the evaluation site visit.

APPENDIX D

**Guana Tolomato Matanzas National Estuarine Research Reserve
312 EVALUATION**

TABLE OF RECOMMENDATIONS

Evaluation Recommendations For: Florida
Evaluation Findings Issued: (Date)

Number/Type of Recommendation		Recommendation Text	Required Date
Number	1	Immediately upon receipt of the Final Findings, the Florida Department of Environmental Protection must submit grant applications for NOAA funding that specifically identify the source of match funds and allocates those funds to the appropriate object class category (Standard Form 424A).	
Necessary Action	X		
Program Suggestion			
Number	2	A time line and strategy for revising the GTM NERR Management Plan should be produced within 6 months of receipt of final findings. This strategy should establish realistic deadlines for product development which would include time frames for the development of education, stewardship and research strategies in concert with the overall management of the Reserve. Activities and progress in meeting this suggestion should be documented in future progress reports.	
Necessary Action			
Program Suggestion	X		
Number	3	GTM NERR should develop a memorandum of agreement with the Division of Forestry for properties within the Reserve as well as review the existing MOA to ensure their effectiveness.	
Necessary Action			
Program Suggestion	X		
Number	4	GTM NERR should continue to use its resources and its education and coordination mechanisms to stress appropriate land stewardship within and adjacent to its boundaries.	
Necessary Action			
Program Suggestion	X		
Number	5	A time line and strategy for developing the GTM NERR site profile should be produced within 6 months of receipt of final findings. Progress in meeting this suggestion should be documented in future progress reports.	
Necessary Action			
Program Suggestion	X		
Number	6	GTM NERR participation at national meetings should be encouraged by the Florida Department of Environmental Protection..	
Necessary Action			
Program Suggestion	X		