



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT  
Silver Spring, Maryland 20910

FEB 28 2009

Noel Holcomb, Commissioner  
Georgia Department of Natural Resources  
2 Martin Luther King, Jr. Drive SE  
Suite 1252 East  
Atlanta, Georgia 30334

Dear Commissioner Holcomb:

Enclosed are the final evaluation findings for the Sapelo Island National Estuarine Research Reserve (SINERR) for the period from December 2004 through February 2008.

The fundamental conclusion of this evaluation is that the Georgia Department of Natural Resources is adhering to the programmatic requirements of the NERR System in its operation of the federally approved SINERR. This document contains a number of program accomplishments and nine recommendations, one of which is mandatory. We are pleased to note progress made toward addressing some of these recommendations since the site visit, as you outlined in your response to the draft findings.

We appreciate your cooperation and assistance, and that of your staff, throughout the evaluation process.

Sincerely,

David M. Kennedy  
Director

Enclosure

cc: Dan Forster, Wildlife Resources Division, GA DNR  
Buddy Sullivan, Manager, Sapelo Island NERR  
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Kate Barba, National Policy and Evaluation Division, OCRM  
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**FINAL** Evaluation Findings  
**Sapelo Island National Estuarine Research Reserve**

*December 2004 – February 2008*

February 2009



Office of Ocean and Coastal Resource Management  
National Ocean Service  
National Oceanic and Atmospheric Administration



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## I. EXECUTIVE SUMMARY

The Coastal Zone Management Act (CZMA) of 1972, as amended, established the National Estuarine Research Reserve System (NERRS). Sections 312 and 315 of the CZMA require the National Oceanic and Atmospheric Administration (NOAA) to conduct periodic performance reviews or evaluations of all federally approved National Estuarine Research Reserves (NERRs). The review described in this document examined the operation and management of the Sapelo Island National Estuarine Research Reserve (SINERR) during the period of December 2004 through February 2008. The Sapelo Island National Estuarine Research Reserve is administered by the Georgia Department of Natural Resources (DNR).

This document describes the evaluation findings of the Director of NOAA's Office of Ocean and Coastal Resource Management (OCRM) with respect to SINERR during the review period. These evaluation findings include discussions of major accomplishments as well as recommendations for program improvement. The fundamental conclusion of the findings is that DNR is successfully implementing and enforcing its federally approved NERR.

The evaluation team documented a number of SINERR accomplishments during this review period. Reserve staff have enhanced research, education and stewardship programming, the products of which support not only DNR's resource management mission, but also those of public, private and nonprofit organizations throughout coastal Georgia. SINERR continues to excel at engaging the coastal management community to help guide and support research and management initiatives both on and off the Reserve. The Reserve celebrated its 30<sup>th</sup> anniversary through a suite of successful public outreach and education programs, and has expanded the reach and impact of its Coastal Training Program. SINERR also significantly enhanced its GIS capacity, which benefits not only the Reserve but also its partners in coastal management. In addition, SINERR completed the revision of its Management Plan, which will guide reserve operations for 2008-2013.

The evaluation team also identified areas where the Reserve and its programming could be enhanced. All but one of the recommendations for SINERR are in the form of Program Suggestions, and describe actions that OCRM believes DNR should take to improve the program but that are not currently mandatory. Flowing from the revision of the Reserve's Management Plan, OCRM recommends that SINERR leadership bring staff together on a regular basis to discuss plan execution, and to prioritize Reserve activities and develop working action plans. Program areas specifically noted by OCRM for more strategic consideration include new stewardship initiatives and Reserve communications efforts. As mentioned above, SINERR programming has continued to mature during this review period, recommendations that build on this growth include strengthening Reserve evaluations of educational programming and expanding public outreach opportunities. OCRM also encourages DNR and SINERR to work with the University of Georgia Marine Institute to implement their MOU that addresses the sharing of research and management project information. In addition, the findings include one Necessary Action requiring DNR and the Reserve to work together to consider how to best monitor visitor use and impacts on Sapelo Island.

## II. PROGRAM REVIEW PROCEDURES

### A. OVERVIEW

NOAA began its review of SINERR in December 2007. The §312 evaluation process involves four distinct components:

1. An initial document review and identification of specific issues of particular concern;
2. A site visit to Georgia including interviews and a public meeting;
3. Development of draft evaluation findings; and
4. Preparation of the final evaluation findings, partly based on comments from the state regarding the content and timetables of recommendations specified in the draft document.

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

**Necessary Actions** address programmatic requirements of the CZMA's implementing regulations and of the SINERR approved by NOAA. These must be carried out by the date(s) specified;

**Program Suggestions** denote actions that NOAA's Office of Ocean and Coastal Resource Management (OCRM) believes would improve 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 §312 evaluation.

A complete summary of accomplishments and recommendations is outlined in Appendix A.

Failure to address Necessary Actions may result in a future finding of non-adherence and the invoking of interim sanctions, as specified in CZMA §312(c). Program Suggestions that are reiterated in consecutive evaluations to address continuing problems may be elevated to Necessary Actions. The findings in this evaluation document will be considered by NOAA in making future financial award decisions relative to SINERR.

### B. DOCUMENT REVIEW AND ISSUE DEVELOPMENT

The evaluation team reviewed a wide variety of documents prior to the site visit, including: (1) federally approved Environmental Impact Statement and Reserve Management Plan; (2) financial assistance awards and work products; (3) semi-annual performance reports; (4) official correspondence; (5) previous evaluation findings; and (6) relevant publications on natural resource management issues in Georgia.

Based on this review and on discussions with OCRM's Estuarine Reserves Division, the evaluation team identified the following priority issues:

- the Reserve's general administration, including grants and fiscal management;
- status of the Management Plan revision;
- facilities development and operations planning;
- land acquisition efforts;
- implementation of the Reserve's research, monitoring, and education programs;
- Reserve staffing and needs;
- the manner in which the Reserve coordinates with other governmental and non-governmental organizations and programs in the state and region; and
- major accomplishments during the review period.
- the manner in which SINERR has addressed the recommendations contained in the §312 evaluation findings released in 2005.

### **C. SITE VISIT TO GEORGIA**

Notification of the scheduled evaluation was sent to the Georgia Department of Natural Resources (DNR), SINERR, relevant federal environmental agencies, Georgia's congressional delegation and regional newspapers. In addition, a notice of NOAA's "Intent to Evaluate" was published in the *Federal Register* on December 28, 2007.

The site visit to Georgia was conducted February 11-14, 2008. Kimberly Penn, Evaluation Team Leader, and Carrie Hall, Evaluator, OCRM National Policy and Evaluation Division, Amy Clark, SINERR Program Specialist, OCRM Estuarine Reserves Division, and David Ruple, Reserve Manager, Grand Bay National Estuarine Research Reserve in Mississippi, formed the evaluation team.

During the site visit, the evaluation team interviewed SINERR staff, DNR management and staff and other state officials, federal agency representatives, coastal researchers, educators, nongovernmental representatives, local elected officials, and private citizens. Appendix B lists persons and institutions contacted during this review.

As required by the CZMA, NOAA held an advertised public meeting during the evaluation at 6:00 p.m., Wednesday, February 13, 2008, at the Sapelo Island Visitor Center, Dock Landing Road, Meridian, Georgia. The public meeting was provided to give members of the general public the opportunity to express their opinions about the overall operation and management of SINERR. A list of persons who attended the public meeting can be found in Appendix C.

The support of SINERR staff with the site visit's planning and logistics is gratefully acknowledged.

### III. RESERVE PROGRAM DESCRIPTION

NOAA's Office of Ocean and Coastal Resource Management approved the Sapelo Island National Estuarine Research Reserve in Georgia in December 1976. The lead state partner is the Georgia Department of Natural Resources (GADNR). Specifically, the Game Management Section of the Wildlife Resources Division of GADNR is responsible for managing the Reserve. See Figure 1 for Sapelo Island NERR boundary and other island stakeholder boundaries.

Sapelo Island, located about 7.5 miles northeast of Darien in McIntosh County, is the fourth largest of the 13 barrier islands fringing the Georgia coast. The 6,110-acre Reserve encompasses the western and southern portions of the island, or roughly one-third of the island's total acreage.

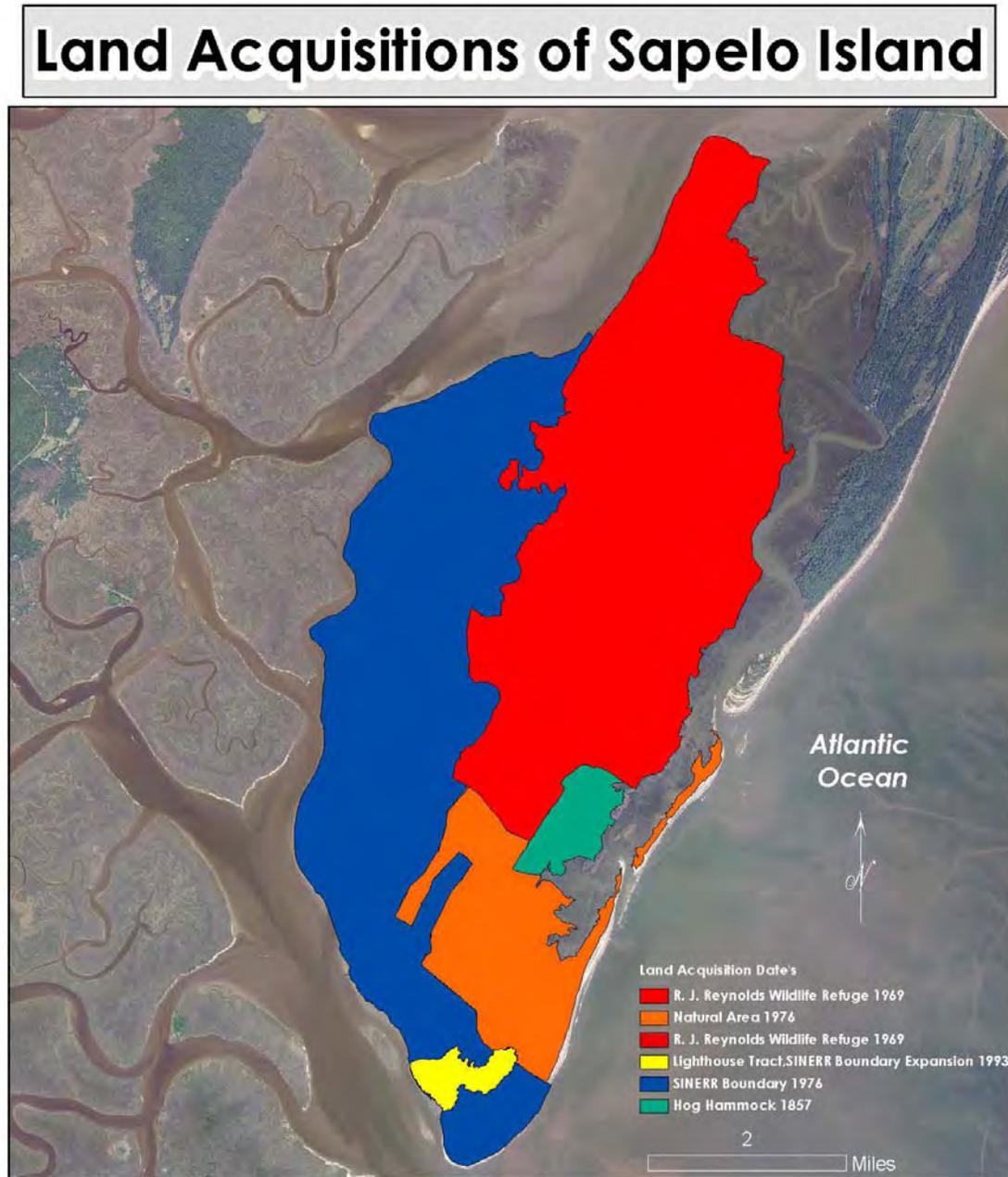
The Reserve is bounded to the southwest by Doboy Sound and includes the Duplin River estuary and most of the associated watershed. The estuarine system is representative of the Carolinian biogeographical classification, which extends from North Carolina to Florida. The Reserve contains a beach and dune system fronting on the Atlantic Ocean and isolated fresh water ponds. The Reserve also contains 2,100 acres of upland maritime forest, dominated by a mix of native hardwoods such as live oak and timber stands of slash and loblolly pine, and 4,000 acres of relatively undisturbed salt marsh habitat.

Major Sapelo Island stakeholders include the University of Georgia Marine Institute (UGAMI) and the Hog Hammock Community.

The University of Georgia Marine Institute, established in 1953 and located within the Reserve on 1,500 acres leased from the State, continues to support a strong tradition of research on the importance and functioning of salt marsh-dominated estuaries. The existence of the field laboratory was a dominant factor in the Reserve's designation. The Institute administers programs for visiting scientists and graduate students. In 1994, UGAMI was placed administratively under the University of Georgia's School of Marine Programs, at which time the Institute assumed a broader role in education and outreach.

The Hog Hammock community is home to about 70 permanent residents, many of whom are descendants of the plantation slaves brought to the island in the early 1800s. Hog Hammock represents one of the few remaining sites on the south Atlantic coast where the integrity of this African-American culture is maintained. To this end, strategies are being pursued by community leaders to promote appropriate economic opportunities for residents and to establish a land trust to maintain ownership levels, ensuring the protection of the culture and character of the community. The community is unique in its form of self-governance, and its interests are voiced through several organizations, including the Hog Hammock Community Foundation and the Sapelo Island Cultural and Revitalization Society.

**Figure 1.** Sapelo Island NERR boundary and other island stakeholder boundaries.



## IV. REVIEW FINDINGS, ACCOMPLISHMENTS AND RECOMMENDATIONS

### A. OPERATIONS AND MANAGEMENT

#### 1. Reserve Administration

Throughout the site visit, the evaluation team observed different ways in which Georgia's Department of Natural Resources (DNR) and SINERR support and complement each other's operations and missions. The evaluation team was encouraged to see the level of support provided to SINERR, particularly by DNR's Wildlife Resources Division (WRD). WRD leadership, specifically the Region Supervisor and the Island Manager, are actively engaged not only in Reserve operations but also in many Reserve activities. For example, WRD put forth significant effort to secure a state position for the Reserve's Stewardship Coordinator. While the position was not ultimately secured, for reasons not in control of the Reserve or WRD leadership, the effort represents strong support of SINERR within DNR. The Region Supervisor also emphasized his reliance on Reserve staff for their expertise, data, and GIS products to inform Division management decisions, and regularly attends Coastal Training Program events. OCRM encourages SINERR and WRD to continue to work together to secure a state position for the Reserve's Stewardship Coordinator, particularly given the support that this position provides to all DNR staff on Sapelo Island.

The relationship among DNR entities (WRD and the Parks, Recreation, and Historic Sites Division specifically) working on the Island and in the region continues to be strengthened through joint initiatives. Most notably, the level of interaction between the Reserve and regional WRD staff has increased. It was evident that the Reserve is valued by WRD, and that staff are considered "go to" people for their expertise. For example, SINERR coordinates with staff from the R.J. Reynolds Wildlife Management Area (WMA) with regards to hunting and prescribed burns, and often provides them with GIS maps to inform these efforts. The evaluation team noted similar use of Reserve capabilities by the Game Management Section (GMS), particularly the expertise of the Research Coordinator whose skill set within WRD is unique. SINERR's research capacity/coastal science expertise has also been sought after for input into WMA planning efforts (specifically the Clayhole Swamp WMA along the Altamaha River) and forest management practices (i.e. palmetto management).

In addition, SINERR has further developed a partnership with the Nongame Conservation Section (NCS) of WRD. The Reserve works with NCS's turtle conservation program on both education and data collection. The Education Program incorporates turtle conservation issues (and often NCS staff) in education programs, and the Stewardship Program provides elevation data that is used in turtle hatching research. WRD and Coastal Resources Division staff are also regularly engaged in Coastal Training Program workshops as both experts and participants. (SINERR's partnership with the Coastal Resources Division's Georgia Coastal Management Program will be discussed further later in this document.)

**Accomplishment: SINERR is successfully providing support, through expertise and products, to enhance coastal management activities conducted by Georgia's Department of Natural Resources.**

Though it was evident to the evaluation team that WRD, on the Island and within the region in particular, acknowledges the value of the Reserve and its initiatives, it was noted that Reserve staff expertise, information, and products are not recognized and used to their full potential by the Department as a whole. Reserve staff and the evaluation team noted that more focused outreach to DNR by the Reserve, and/or a more proactive approach by DNR to identify and employ SINERR capabilities, where appropriate, could increase the Reserve's visibility in the Department. OCRM therefore encourages DNR and SINERR to promote and better integrate the Reserve's capabilities and capacity across the Department.

Discussions during the site visit identified one possible way that SINERR could improve inter-Departmental communication. While the Reserve currently produces press releases that are provided to DNR for use in its newsletter, the evaluation team noted that such outreach could be tailored for the Department to specifically identify how Reserve products, such as monitoring data or GIS applications, can directly contribute to DNR's resource management portfolio.

**Program Suggestion: OCRM encourages DNR and SINERR to continue to work together to advertise and integrate Reserve capabilities and products across the Department.**

## 2. Staffing

The widespread success of SINERR programs is directly attributable to the Reserve's knowledgeable and energetic staff. The evaluation team found staff to be highly regarded in their fields, and frequently described as trusted partners in the research, education, and resource stewardship communities. Staff are well informed about issues affecting coastal Georgia and dedicated to addressing them. The evaluation team heard repeatedly from program partners how significant efforts would not have come to fruition without the support and involvement of Reserve staff. OCRM finds that Reserve staff are successfully implementing the programmatic initiatives pursued by SINERR, as will be described throughout this document. All core positions are currently filled along with support staff primarily for research and education/outreach.

As discussed in previous SINERR evaluations, core Reserve positions, specifically the Research Coordinator and Education Coordinator, continue to be supported via funds from the NOAA cooperative agreement. OCRM finds that this situation generally limits Reserve operations, as it results in fewer federal resources being available for programmatic and project development and enhancement. Though DNR has expressed its commitment to work towards state support of the Research Coordinator's position in the past, this has not come to fruition. Therefore, OCRM continues to strongly encourage DNR in its efforts to gain state financial support for both of these core positions.

### 3. Grants Management

OCRM awards the State of Georgia federal funds, via cooperative agreements, for the operations and management of SINERR. Per the award conditions, the Reserve is required to submit semi-annual performance reports that provide information on progress toward each task of the financial assistance award. During the evaluation period, there were some communication issues between SINERR and OCRM concerning grants management.

For example, in 2007, DNR identified the Reserve Manager as the Authorized Representative for SINERR awards. However, in the NOAA GrantsOnline system, this resulted in the Reserve Manager becoming the Authorized Representative of all Wildlife Resources Division awards. While this role allowed the Manager more control over the submission of SINERR performance reports, it also meant that he was responsible for approving reports (both performance and financial) that were not under his direct purview, thus making him accountable and increasing his workload. This arrangement also circumvents a level of award oversight at the Division level that can act as a helpful check for allowable uses of federal funds. In order to correct this issue, OCRM's Estuarine Reserves Division recommended that someone at the Division or Section level, besides the Reserve Manager, be assigned as the Authorized Representative. Since the site visit, Division and SINERR staff have taken steps to correct this matter. Discussions (included several emails and conference calls) between the state and OCRM have been completed so that the DNR staff accountable for SINERR awards now understand their roles and responsibilities in the GrantsOnline grants management system. DNR staff roles are now appropriately assigned concerning oversight of reports on federal awards, and purchases made with federal funds, allowing WRD management to take part in monitoring Reserve awards. OCRM is pleased to note that DNR and the Reserve have taken steps to correct these grants management issues.

In addition, the Reserve's Office Administrator and DNR Game Management Division's Administrative Operations Manager expressed interest in grants training, and the evaluation team believes this would be highly beneficial to the Reserve. OCRM encourages DNR to support this as a professional development opportunity, which will further strengthen SINERR's grants management capabilities.

**Program Suggestion: OCRM encourages DNR to support federal grants training, specifically on the NOAA Grants Online System, as a professional development opportunity for staff who work regularly with NOAA awards regarding the Reserve.**

### 4. Management Plan and Strategic Planning

Reserves are required by Federal regulation to have a current NOAA-approved management plan (15 C.F.R. Part 921.13). The plan should describe the reserve's goals, objectives and management issues, as well as strategies for research, education and interpretation, public access, construction, acquisition and resource preservation, and, if applicable, restoration and habitat manipulation. A management plan so written has four valuable functions: (1) to provide a vision and framework to guide reserve activities during a five year period; (2) to enable the reserve and NOAA to track progress and realize opportunities for growth; (3) to present reserve goals,

objectives, and strategies for meeting the goals to constituents; and (4) to guide program evaluations. Regulations require that a reserve's plan must be updated every five years.

SINERR submitted a series of drafts of its revised Management Plan for 2008-2013 to OCRM's ERD between 2005 and 2006. ERD reviewed the drafts and provided iterative comments. In response, the Reserve contracted with its part-time Communications Specialist (whose primary responsibilities have included outreach and communication pieces during this evaluation period) to help edit and incorporate ERD comments. SINERR provided ERD with a final draft of the Plan in September 2007. The Plan went out for official public comment in early June 2008, and no comments were received by the Reserve or NOAA. SINERR has finalized the document and is now printing hard copies and creating CDs of the plan.

**Accomplishment: SINERR completed the revision of its Management Plan, which will cover the period from 2008-2013.**

SINERR's recent management plan revision process provided Reserve staff with an opportunity to look forward and envision where they would like to see the Reserve in the next five years. The result is a document with many broad goals identified to achieve the Reserve's mission. The Reserve has also outlined a number of objectives and strategies to support the goals. The evaluation team noted, however, that it would be valuable for staff to take this planning a step further and more clearly articulate how to execute the Plan by prioritizing strategies for implementation. OCRM thus encourages Reserve leadership to bring staff together on a more regular basis to identify, as a team, specific actions that need to be accomplished to realize some of the articulated goals. An action plan could serve as a powerful tool that prioritizes Reserve activities and initiatives and identifies how staff as a team will work together to address them. Areas where this kind of strategic planning would be particularly useful include identifying and addressing visitor use impacts and developing a communication strategy, both of which will be discussed in greater detail later in this document.

**Program Suggestion: OCRM strongly encourages SINERR leadership to bring staff together on a regular basis to strategize how to best execute the Reserve's Management Plan by prioritizing actions that need to be accomplished to realize the articulated goals.**

## 5. Partnerships

SINERR maintains productive partnerships to further Reserve goals, including those with universities, state and federal agencies, and nonprofits. The evaluation team noted a good rapport between Reserve staff and program partners, which has resulted in initiatives including applied research projects, educational opportunities, and coastal training workshops. Partners include: the University of Georgia, The Nature Conservancy, Gray's Reef National Marine Sanctuary, the U.S. Fish and Wildlife Service, and the Georgia Coastal Management Program. Partnerships such as these help SINERR to identify and better address coastal resource issues affecting Georgia, to enhance program initiatives, and to expand its reach throughout the coastal zone; specific examples will be elaborated on throughout this document. OCRM commends Reserve staff on fostering such productive relationships.

One partnership in particular that OCRM encourages and monitors is that with the State's coastal program. The evaluation team found that SINERR continues to work closely and successfully with the Georgia Coastal Management Program (GCMP), which is also housed within DNR. Coastal Program staff count on Reserve staff members for reliable scientific information to apply to coastal management decisions such as permitting and planning. The Coastal Program feels SINERR understands the resource management issues that coastal counties are facing, and values the Reserve's partnership in addressing them through both research and education/training opportunities. Recent examples of this collaboration include the Reserve's technical review/assistance with the GCMP's Coastal Incentive Grant Program and the Coastal Community Needs Assessment and Market Inventory for coastal training. OCRM commends Reserve staff for maintaining this strong relationship.

The evaluation team, Coastal Program staff, and Reserve staff also discussed a number of opportunities for future collaborative work. One specific example is with regards to the impending implementation of the Governor's Coastal Conservation Plan. This Plan outlines a vision for Georgia's coastal area that is supposed to promote sustainable future development without compromising the region's valuable and vulnerable natural environment. Some local governments will likely need education regarding smart development and SINERR's Coastal Training Program is well positioned to help provide such training. There is also a potential niche for the Reserve's Research and Monitoring Program to inform the overall Plan, as well as local governments' implementation of it, with regards to investigating/developing coastal resource management best practices.

## **6. Facilities**

SINERR has made progress with regards to facilities enhancement both on and off Sapelo Island during this evaluation period. Most notably, SINERR and University of Georgia's Marine Institute (UGAMI) completed construction of their joint-use research dormitory and dining facility, the Barrier Island Research and Learning Center (BIRL), in late 2006. Funding for the project came from NERRS' construction funds, congressionally directed funds, and funds from the University of Georgia's Board of Regents. NERR construction funds supported the construction of dedicated dormitory space to house scientific researchers and education groups working with the Reserve. The conditions of the Memorandum of Understanding (MOU) between UGAMI and SINERR regarding facility use (included in the Reserve's revised Management Plan), state that the Reserve has permanent control and use of a two-bedroom, four-bed apartment with a fully-equipped kitchen, bath, and a furnished living area. The Reserve also can and does work with UGAMI to obtain use of the entire facility when needed to host meetings and workshops. Per the MOU, UGAMI is responsible for the overall management and maintenance of the building. The BIRL has greatly enhanced the Reserve's capacity for extended stays for visiting researchers and educators taking part in Reserve-sponsored trainings.

The Reserve also improved the Sapelo Island Visitor Center, which is the Reserve's primary public outreach facility located in Meridian, Georgia, adjacent to the ferry dock. With limited ferry capacity to the Island, the Visitor Center is critical to providing the public with coastal and

estuarine education opportunities—approximately 18,000 people visit the Center annually. At the time of the last evaluation, there were discussions regarding renovations of the entire building. Due to funding constraints, these plans have been postponed. However during this evaluation period, SINERR’s Visitor Center Manager, working in partnership with DNR’s Parks, Recreation and Historic Sites Division maintenance crew, made numerous upgrades to the Center in order to increase its energy and water-use efficiency. Improvements included energy efficient light fixtures, low-flow toilets, and individual hot water heaters. OCRM commends Visitor Center management on making these important changes, and encourages staff to develop outreach materials that explain the benefits of such upgrades to the general public.

## **7. Public Access and Visitor Use**

Understanding and appreciating estuarine ecosystems is often reinforced through the interpreted or recreational use of the natural resources. Accordingly, providing opportunities for public enjoyment of estuarine resources is often a key component of a reserve’s education and outreach mission. That said, a careful balance must be achieved in order to also protect reserve resources and preserve the site for long-term scientific research, other important aspects of reserves’ missions. Due to the nature of Sapelo Island’s unique cultural history and diverse management objectives, maintaining this balance is particularly challenging for DNR and SINERR.

For example, the primary point of access for residents of, and visitors to, the Island is at Marsh Landing dock, which is located within the SINERR boundary. Other docks providing more limited access to the Island, such as the Community Dock and Lumber Landing, are also located within the Reserve, and there continue to be concerns that derelict vehicles at the latter are leaking oil into the marsh. These docks must be maintained in order for DNR to continue to provide access to the Island, which means that SINERR continues to devote resources to minimizing the impacts this use has on Reserve resources. The installation of the new pervious surface parking lot for resident and visitor use is one example of this.

There also is increasing development pressure in the Hog Hammock community. During this evaluation period, a number of lots have been sold to, and built on, by non-traditional residents for seasonal use. This type of development will not only affect the community, but also public use of Island—specifically SINERR—resources, such as Nannygoat Beach.

While controlling public access to the Island in general is not directly under the purview of the Reserve, monitoring visitor use of, and impacts to, Reserve resources is. Particularly since these activities can significantly affect the integrity of SINERR and its resources. The significance of this issue has been identified and discussed by OCRM in the past three evaluation findings. There is however continued concern that increased visitation to the Island will adversely impact resources and minimize the value of the Reserve for long-term research. The evaluation team was encouraged by regional and Island DNR staff’s interest and concern regarding visitor use and new development on the Island. For example, the primary mode of transport to Sapelo Island remains a State-run passenger ferry out of Meridian, Georgia. During this evaluation period, the State replaced the old ferry with a new catamaran-style vessel, the Katie Underwood, which is more fuel efficient, quicker, and produces less disruptive wake. DNR deliberately kept

ferry capacity the same, however, ensuring that visitation rates to the Island via that mode of transportation would not increase.

Though acknowledged by the State, visitor use of the Island—and the resulting pressures on Reserve resources—remain understudied by DNR and SINERR. SINERR’s revised Management Plan contains a goal and a number of objectives related to managing public access within the Reserve and assessing the impacts of visitation on Island resources. OCRM therefore strongly encourages the Reserve and DNR to work together to continue to consider visitor use and impacts as outlined in the Reserve’s Management Plan. In accordance with one of SINERR’s public access objectives, OCRM encourages the Reserve to “achieve better knowledge and understanding of” the impacts of increased visitation on Island habitats, potentially through more thorough analysis of existing visitor use data and study of visitor use impacts. SINERR should consider using NOAA resources such as the Coastal Services Center’s Managing Visitor Use training and/or ERD social science Graduate Research Fellowship positions to study visitor use issues, impacts, and management. Reserve staff may also provide leadership in coordinating the development of a broader Sapelo Island visitor impact study and potentially a longer term visitor use plan.

**Necessary Action: SINERR and DNR must work together to consider how to best monitor and plan for visitor use of Sapelo Island—particularly Reserve resources—and how to assess and address visitor impacts to these resources. The Reserve must submit a plan of action to OCRM for review and approval by February 2010, describing how the State will monitor visitor use and assess impacts.**

## **B. RESEARCH AND MONITORING PROGRAM**

As stated in its Management Plan, SINERR’s research and monitoring goals are to enhance and develop research and monitoring to promote, foster, and expand scientific knowledge and field investigations of estuarine processes as related to the Reserve and the South Atlantic Bight, and to supply the scientific and management communities at local, state and federal levels with high quality environmental databases for assessment of both short-term variability and long-term trends occurring within Georgia coastal estuaries. SINERR’s research priorities include: anthropogenic influences on estuaries; habitat protection, influences on and conservation of coastal processes; exotic and endemic species management; mechanisms for sustaining resources within estuarine ecosystems; and economic and sociological research applicable to estuarine ecosystem management.

Overall, the evaluation team found SINERR’s research and monitoring efforts to be excellent. Current Research and Monitoring Program activities reflect both the desire to promote basic and applied research, as well as to effectively incorporate research results in management decision-making processes within the Reserve and throughout Georgia’s coastal region. It is evident that SINERR’s research expertise is highly valued by the coastal management community, including state and federal agencies, nonprofit conservation organizations such as The Nature Conservancy (TNC), and private entities such as Little St. Simons Island.

The Research Coordinator is particularly effective in collaborating with partners to make science to management links, through initiatives such as the restoration of Dean Creek and the upcoming demonstration project on living shorelines, as well as through his professional relationships. He continues to be actively involved with the research and resource management communities in coastal Georgia, and is currently a member of several partners' advisory committees and workgroups, including the Grays Reef Research Area Workgroup, the Little Saint Simon's Island Research and Conservation Advisory Committee, and the Scientific Advisory Council of the Ossabaw Island Coastal Observatories. SINERR has also worked with partners during this evaluation period to establish the Coastal Restoration Initiative through TNC's conservation area planning process in Georgia. The result of this sustained engagement in the management community is that the Reserve is viewed as a collaborative and strong partner, as well as a primary resource for scientific information in the region. Relationships like these also allow SINERR an avenue to promote Reserve and NERRS-wide priorities, such as its applied research agenda and the System-wide Monitoring Program, and leverage resources with other entities. OCRM sees this as one of the major strengths of SINERR's Research and Monitoring Program.

**Accomplishment: SINERR's Research and Monitoring Program actively pursues opportunities to inform coastal management in Georgia, and to advance the Reserve's research mission.**

Another group in which SINERR is involved is the Georgia Coastal Research Council (GCRC), funded via a Coastal Incentive Grant from the Georgia Coastal Management Program, Georgia Sea Grant, and the National Science Foundation (through the Georgia Coastal Ecosystems – Long-term Ecological Research Project). The GCRC was originally established to provide a mechanism for scientific exchange between coastal scientists and decision makers, and to promote the incorporation of best-available scientific information into State and local resource management. Membership includes a variety of federal and state government and academic scientists and resource managers. There is, however, currently no representation from non-profit or private conservation organizations. Though the group seems to be a valuable venue for the exchange of information, the link to other on-the-ground scientists and coastal management practitioners is lacking. Given the strong collaborations that SINERR has with these non-governmental management entities in coastal Georgia, OCRM supports the Reserve in encouraging the GCRC to consider their inclusion in the group.

### **1. Reserve Research**

As noted above, the majority of SINERR's research is applicable to current coastal management issues, and the Research and Monitoring Program does an excellent job of disseminating information gained to appropriate audiences through other Reserve sectors and partners. The evaluation team noted that SINERR is a catalyst for applied research throughout the region, often providing guidance and/or funding to partners to further research in the Reserve and along the coast. While a comprehensive review of research products is beyond the scope of this evaluation, examples of recent and current research initiatives include:

- SINERR is collaborating with UGAMI faculty to study the effects of the recently discovered fungal disease, ‘laurel wilt’ on Sapelo Island’s forest composition, specifically the early colonizer red bay (*Persea borbonia*). The research will help scientists and managers understand the invasive biology and controlling factors of this fungal disease, and its vector, the Asian ambrosia beetle *Xyleborus glabratus*, which is currently decimating red bay trees found throughout Georgia’s coastal forests with no known control. The Reserve and UGAMI will also work with DNR and the Georgia Forestry Commission to develop methods based on their findings to help control the spread of the disease. This work also includes a component to study the effects of herbivory (by feral cattle and swine) on red bays trees, and the combined ecological ramifications that these destructive factors may have in coastal upland ecosystems. Information gained from this research will not only inform Sapelo Island forestry and wildlife management, but also provide a predictive model for use in different barrier island habitats.
- SINERR continues to research the control and eradication of the invasive species Chinese tallow (*Sapium serbiferum*) in the interdune meadows of the Reserve. Since the last evaluation staff have begun to employ a different herbicidal control, Tordon, via a hole drilled near the base of the trunk, which has provided the best results thus far. The Research Coordinator has presented the results of this study at The Nature Conservancy/Exotic Pest Plant Council workshop that was hosted by the Reserve’s Coastal Training Program (CTP). Having learned about SINERR’s success with this technique at the CTP workshop, the U.S. Fish and Wildlife Service has used the Reserve’s findings to inform the implementation of tallow control projects in the National Wildlife Refuges on both Wassaw and Blackbeard Islands.
- SINERR continues to guide the Dean Creek restoration project (discussed in detail in the last evaluation findings), which represents a partnership with entities including U.S. Fish and Wildlife Service, the U.S. Army Corp of Engineers, Georgia Department of Transportation, and various university researchers. The objectives of this project are to develop an understanding of the impacts of the culvert pipe and causeway on tidal marsh hydrodynamics, sediment transport, plant communities and marsh fauna, and to monitor changes to these parameters following replacement of the culvert pipe/ causeway with a spanning bridge. Maintaining funding and logistical support for this project has proved somewhat challenging, even with the diversity of partners. However, during this evaluation period, SINERR worked to promote the Dean Creek as a mitigation offset to the Savannah River Ports Authority, which provided a direct infusion of funding to address the hydrological restoration component of the project. The Reserve also partnered with the GCE – LTER and the University of Indiana to employ sediment elevation tables at Dean Creek in order to evaluate the hydrological restoration by monitoring changes in sediment deposition and erosion within the system.
- SINERR has initiated a demonstration project (set to begin this year) to study the use and effect of various types of “living shorelines”. Living shorelines employ natural elements to protect shorelines from erosion while also providing water quality benefits and critical habitat for wildlife. Reserve partners in this project include The Nature Conservancy

(TNC), the NOAA Restoration Center, and the GCMP. (Project funding began at \$70K and has grown to approximately \$500K because of the increase in number of partners.) This project also will be an example of SINERR's successful cross-sector work, as the study and dissemination of results will involve not only the Research Program, but also the Stewardship and Coastal Training Programs.

OCRM commends SINERR on conducting research that provides relevant information to Georgia's coastal resource management community.

## **2. Monitoring Programs**

The goal of the NERR System-wide Monitoring Program (SWMP) is to identify and track short-term variability and long-term changes in estuarine water quality, habitat and land use in each reserve. The data gathered through SWMP provides standardized information about how estuaries function and change over time, enabling scientists to predict how these systems will respond to anthropogenic changes. SINERR continues to operate in full compliance with NERRS SWMP requirements, monitoring four water quality stations and a weather station for submission to the Centralized Data Management Office (CDMO). Water quality stations are currently maintained at Hunt Camp, the Lower Duplin River, Cabretta Creek, and Dean Creek. The Reserve's meteorological station is located at Marsh Landing. Nutrient data is collected at these sites, and analysis is still conducted through a contract with the University of Georgia's Marine Extension Service (MAREX). SINERR also currently maintains two real time satellite telemetry (RASSL) units (Marsh Landing's weather station and Dean Creek) and one real-time atmospheric monitoring station (Marsh Landing).

During this evaluation period, SINERR initiated a SWMP Tier 2 biological monitoring effort within the Dean Creek research site. The Reserve is monitoring the extent of marsh vegetation inundation at high tide during spring and neap cycles, as well as species composition and vegetation density. Information from this monitoring will help SINERR to assess the long-term changes within this marsh system resulting from the replacement of Dean Creek's culvert pipe system with a spanning bridge. The Research and Monitoring Program is coordinating with the Stewardship Program to incorporate this data into a spatial database and habitat inventory for the Dean Creek research site.

SINERR has also worked this evaluation period with the U.S. Geological Survey's (USGS) regional Water Resources Division to plan for the establishment of a tidal datum survey system for the Reserve. These benchmarks (4 markers total), which will be referenced to an official USGS tide gauge, will help provide context for SINERR's SWMP stations as well as for future research related to climate change and sea level rise. OCRM commends SINERR on their initiative to establish this system which will enhance information gained from research and monitoring conducted at the Reserve.

The Research and Monitoring Program continues to coordinate with the Stewardship Program on SINERR's atmospheric deposition monitoring, which is discussed further in the Stewardship section of the findings.

## C. EDUCATION PROGRAM

National Estuarine Research Reserves are federally designated to enhance public awareness and understanding of estuarine areas, and provide suitable opportunities for public education and interpretation. The reserve system provides a range of educational programming to key audiences depending on watershed and community needs and the specific capacity of each reserve. As stated in the revised Management Plan, SINERR's education goal is to increase the awareness, understanding, and appreciation of estuarine systems and estuarine stewardship by facilitating access to information about estuarine systems. In order to attain this goal, SINERR's Education Program serves a variety of audiences including students, teachers, and the general public.

SINERR has thoughtfully expanded the reach of education and outreach this evaluation period. It should be noted that it is not a goal of the program to increase program participation and Island visitor numbers, and thus the Education Program continues to focus on "multiplier audiences," those who will be able to communicate their knowledge gained to many others, such as teachers, and public outreach via the Sapelo Island Visitors' Center in Meridian. During the evaluation period, the Reserve maintained its K-12 education and teacher training programs, public tours, and while expanding off-island public outreach and public education opportunities through events such as the 30<sup>th</sup> anniversary celebration. The Reserve has also significantly increased its emphasis on communications, hiring a part-time Communications Specialist.

In addition to enhancing SINERR-specific educational programming, the Education Coordinator is involved in a variety of state- and nation-wide marine education efforts. She serves on both the Georgia Association of Marine Education board and Georgia Conservancy Education Committee, and helped coordinate the 2008 National Marine Educators Association annual conference held in Savannah, Georgia. The Reserve's involvement in organizations such as these allows for unique opportunities to promote estuarine science and education, and the NERRS in particular, to a larger audience. The Education Coordinator is also active in NERRS-wide education initiatives including participation in the Estuaries 101, Teachers on the Estuary (TOTE), and Estuaries.gov workgroups. OCRM commends SINERR for encouraging and supporting the Education Coordinators involvement in these state, regional and national efforts.

OCRM finds that SINERR is particularly effective in collaborating with other education entities in the region, of which there are many. For example, the Education Coordinator has continued to be actively involved in growing the Georgia Coastal Education Group (GCEG). The GCEG is a partnership of federal and state government agencies that works to educate the general public about the importance and value of Georgia's coastal resources and promote responsible stewardship. Members include the Grays Reef National Marine Sanctuary, Georgia Sea Grant, the Georgia Coastal Management Program, and the Cumberland Island National Seashore. In addition to the support that partners provide each other, this collaboration enhances the individual entities' educational programming by identifying complimentary, and avoiding duplicative, efforts. During this evaluation period, the Reserve has worked with the GCEG to develop educational brochures, posters, and a website featuring education resources and opportunities along the Georgia Coast. The GCEG has also considered developing a

collaborative educational product, but has not reached consensus on the purpose or audience. The evaluation team did talk with some GCEG members about the potential for a product that focuses on the linkages from the watershed level to coasts and estuaries to the ocean, which would also highlight the unique programs in the Group. Members of the GCEG have also been involved in a number of education initiatives that will be discussed throughout this section.

## 1. Education

SINERR continues to focus education and interpretive resources on “multiplier audiences.” To this end, SINERR provides professional teacher development opportunities as well as preparatory curricula and materials for field trips to the Island. For example, the Education Program collaborates with partners to produce eight to ten teacher trainings each year, which engage approximately 125-150 participants. Routine offerings include those on Shorebird Conservation, Coastal Ecology, Sea Turtle Conservation, and Marine Mammals. Most of the programs also provide participants with continuing credits (PLU credits) for teaching certification. Trainings are complimented with a list of online resources.

These trainings have been a successful aspect of SINERR’s Education Program for a number of years. The Education Coordinator is currently working to get the Coastal Ecology training recognized as a NERRS’ Teacher on the Estuary (TOTE) professional development workshop. OCRM commends the Education Program on maintaining the high caliber of these trainings, which lead to a continued interest in them. The Reserve routinely evaluates these programs through a simple post-program questionnaire. While this method does provide valuable information to the Education Program and partners, there would be benefit to employing a more rigorous evaluation procedure given the current maturity of the programming. The Reserve could, for example, use its long-term relationship with McIntosh County’s public schools to implement a pre-testing component to its programs. In addition, the Reserve is encouraged to engage in upcoming NERR system-wide discussions to identify common evaluation methods for reserve education programs.

**Program Suggestion: OCRM encourages SINERR to consider how to strengthen evaluations of its professional teacher development workshops and student programs, potentially including the addition of pre- and post- tests to its programs.**

SINERR continues to successfully engage students in coastal and estuarine related activities both in the classroom and, to a lesser extent, on Sapelo Island. For example, the Education Program continues to work with every 5<sup>th</sup> grade in McIntosh County’s public school system to introduce them to Georgia’s cultural, historic, and natural coastal resources on the Island. Teachers use Reserve-developed classroom curriculum to prepare students for two visits to the Island during the school year. During this evaluation period, SINERR also developed a new 5<sup>th</sup> and 6<sup>th</sup> grade program called “Ocean Floor and Coastal Mapping” as an optional preliminary activity for classes scheduled to visit the Island. This activity introduces students to ocean exploration technologies, ocean floor topography, and mapping. Students learn to use nautical charts and bathymetric maps to locate coastal and ocean floor features. The Reserve also has continued its collaboration with the Southeast Center for Ocean Sciences Education Excellence (SECOSEE)

and Savannah State University to host the Sapelo SeaStar Science Camp for children who live on, or are from, the Island.

## 2. Public Outreach

In addition to the formal K-12 programs offered by SINERR during this evaluation period, the Education Program also increased outreach to, and educational programming for, the general public. In order to engage general public audiences, SINERR maintains and updates interpretive exhibits at the Sapelo Island Visitors Center, nature trails, and Sapelo Island Lighthouse. The Reserve also has developed new exhibits and fact sheets on current projects and initiatives.

Most notably, the Education Program coordinated and hosted a series of events in celebration of SINERR's 30<sup>th</sup> anniversary that successfully engaged the general public in learning about Sapelo Island and its ecological resources and cultural heritage. The Reserve worked with diverse partners, such as the McIntosh Art Association, Gray's Reef National Marine Sanctuary (which was celebrating its 25<sup>th</sup> year), and local musicians, to launch these events which occurred along the Georgia coast (e.g., Darien, Sapelo Island, Brunswick, Savannah). Public outreach opportunities associated with the anniversary included history presentations, ecology education programs, art projects, and a film festival, and engaged more than 2,000 people (with an additional 25,000-30,000 viewing associated exhibits). OCRM was extremely impressed with this initiative, and commends the Reserve on the number and diversity of events coordinated to celebrate its anniversary. These events not only engaged new audiences, but also increased public interest in, and understanding of, Georgia's coastal resources and the Reserve without increasing visitation to the Sapelo Island.

**Accomplishment: SINERR coordinated and hosted a series of successful events to celebrate its 30<sup>th</sup> anniversary in 2007. These events served to engage new audiences and increase the general public's understanding of Georgia's coastal resources without increasing visitation to Sapelo Island.**

Given the success of these events, and what appears to be a strong and sustained public interest in Sapelo Island and Georgia's coastal resources, the evaluation team noted that SINERR could consider increasing the number and frequency of its public programs. For example, the Education Program and Coastal Training Program could partner to provide a speakers' series at the Visitors' Center with topics that would appeal to the general public. Staff and Friends of Sapelo volunteers seemed interested in this opportunity, which would not only engage a broader audience, but also increase usage of the Visitors' Center for public programming. OCRM also encourages SINERR to consider the skills and experience of staff at the Center who express interest in being more involved in education and outreach programming.

**Program Suggestion: OCRM encourages SINERR to consider expanding public education and outreach opportunities on the mainland, and to identify ways to better use the Visitors' Center facility and engage Center staff in these activities.**

SINERR also designed and produced a number of new interpretive signs and exhibits during this evaluation period, including those at the Long Tabby offices and the Sapelo Island Lighthouse. These provide a wealth of information on the Island's cultural and historic resources. Most of the Visitors' Centers exhibits, however, are approximately 10 years old. While new displays have been added and some exhibits have been updated, OCRM encourages SINERR to consider further updates in the future.

### **3. Communications**

SINERR continues to rely on a variety of communication products to reach and educate the public, including the Sapelo Soundings newsletter, press releases, and the Reserve's enhanced website. Previous to this evaluation period, core staff members were fully responsible for these forms of communication and outreach, and did so in addition to their programmatic activities. During the last evaluation, OCRM and the Reserve identified the need for a more coordinated and strategic approach to Reserve communications. SINERR addressed this recommendation by hiring a part-time (contractual) Communications Specialist to assist with the Reserve's public outreach. In addition to creating press releases and marketing products, the Specialist supported staff on the 30<sup>th</sup> anniversary events and editing the revised management plan. Having a point person for Reserve communications like this has allowed SINERR to develop a stronger rapport with local media outlets. By all accounts, the focused communication products resulting from this arrangement have been effective in marketing SINERR initiatives, and the Reserve has seen an increase in media coverage of events since. OCRM commends SINERR for addressing this communications need.

**Accomplishment: SINERR hired a part-time Communications Specialist whose products have helped the Reserve increase its visibility in the community.**

Contractual communication products for SINERR are currently identified and developed on an 'as needed' basis. Throughout the site visit, however, Reserve staff identified a number of efforts (e.g. marking CTP and education opportunities, as well as internal marketing of Reserve services within DNR) that would benefit from a more comprehensive communications strategy. The evaluation team noted that regular brainstorming between Reserve staff and the communication specialist would not only enhance SINERR's overall public outreach, but also help the specialist in planning her efforts for marketing specific events, initiatives, and products. OCRM therefore continues to encourage SINERR to develop a communications strategy that incorporates all aspects of Reserve programming. This strategy might also include the development of key messages for the Reserve, which could come from vision and mission statements from the revised Management Plan or the strategic planning process encouraged earlier in this document.

**Program Suggestion: OCRM encourages the Reserve to develop a more coordinated and strategic public relations and communications plan.**

#### 4. Friends of Sapelo

SINERR's volunteer arm, the Friends of Sapelo (FOS), continues to be an integral part of the Reserve's research, education, stewardship, and outreach. Activities conducted by FOS benefit not only the Reserve's programs, but also the Island and Coastal Georgia as a whole.

During this evaluation period, Volunteer Coordinators, who are under contract with SINERR, have worked to formalize FOS' organization and structure. The group appointed an advisory board from its membership, defined their duties, and established term limits. The Friends also revised and clarified their bylaws and registered as corporation with the State. In addition, the Volunteer Coordinators have been regularly attending the NERRS/NERRA annual meetings. OCRM commends FOS for taking these important steps in the development of the organization, which will certainly strengthen the group for the years to come. During the site visit, the Volunteer Coordinators expressed to the evaluation team their need for information on insurance to cover board members and volunteers during group events and activities. Since the site visit, OCRM staff has forwarded information on insurance options for volunteers to SINERR for FOS.

**Accomplishment: The Friends of Sapelo, led by its Volunteer Coordinators, greatly enhanced their organization through the appointment of an advisory board, revision of bylaws, and by registering as a corporation with the State.**

Currently made up of over 100 members, 30-40 of them active, FOS are most engaged in monitoring, education and outreach, and stewardship. During this evaluation period they have worked on projects including: biweekly shorebird monitoring, phytoplankton monitoring, installation of the new parking lot and native plants, and volunteering for numerous public outreach events. The evaluation team also heard a great deal of excitement from volunteers about the opportunity to help with the Stewardship Program's new Marsh Bird Monitoring initiative. OCRM commends SINERR staff and FOS leadership for working together to engage volunteers in so many aspects of Reserve programming.

As mentioned in the last evaluation findings, and noted again during the site visit by current FOS membership, the group would benefit from more young volunteers. Some strategies that might engage and encourage a wider demographic include holding weekend and evening volunteer and public outreach events, possibly in coordination with the Education and Coastal Training Programs.

#### D. COASTAL TRAINING PROGRAM

An important element of a reserve's education portfolio is the Coastal Training Program (CTP). The CTP, a NERR system-wide program, is designed to inform coastal decision-making, improve coastal stewardship at local and regional levels through the application of science-based knowledge, and increase dialogue and collaboration among decision-makers. Eligibility for NERRS funding for this program includes establishing a training advisory committee, conducting a market survey of training providers and an audience needs assessment, developing

a program strategy that outlines priority coastal issues to be addressed, prioritizing target audiences, and creating a marketing plan.

SINERR's Coastal Training Program was fully implemented in 2003 upon OCRM approval of the Reserve's planning documents. The primary goal of SINERR's CTP is to provide a coordinated and strategic approach for training coastal decision makers in order to enhance their decision-making competence and increase their knowledge of coastal issues using current, science-based resources. The Reserve targets the entire coastline of Georgia for training, and partners with a variety of agencies and organizations to produce workshops including the GCMP, the University of Georgia's Marine Extension, and The Nature Conservancy.

At the time of the last evaluation, SINERR had built a strong foundation for the CTP in the form of engaged partners and growing participant numbers, but identified challenges in marketing to its target audience of elected and municipal officials. The evaluation team noted that the CTP has matured significantly during this evaluation period, collaborating with a more diverse suite of partners, and most notably reaching its target audience of county and city officials. Recent training events have addressed quality growth, land use planning, green infrastructure, and the GIS capacity of local officials. CTP workshops have been well received and attended. In response to this programmatic growth, SINERR has recently hired a part-time assistant to help support the program.

A good example of the maturity and overall impact of SINERR's CTP is the successful Quality Growth Training, developed in collaboration with the GCMP and presented by the Southeast Watershed Forum and the University of Georgia Center for Quality Growth. The goal of the workshop was to help coastal communities plan for growth while protecting their natural resources. The workshop thus provided local elected officials, and zoning and planning staff, with information critical to balanced zoning, coding, and planning in the coastal environment. Attendance at this workshop was actually made mandatory for McIntosh County and city officials, as the Regional Development Center (RDC) was there to provide information regarding the Comprehensive Plan they are developing for the county. A 90-day moratorium on any zoning variances ensued as a result of the workshop in order to allow time to strengthen the local ordinances and to provide training to the Zoning and Planning Boards. Consequently, the City of Darien (in McIntosh County) has strengthened and implemented multiple ordinances and received outside grants for work related to planning. Workshop participants continue to work closely with the Reserve and partners to plan for growth with minimal impacts on the natural resources. For example, the RDC requested assistance from SINERR regarding the development of the natural resources section of the county's Comprehensive Plan.

The evaluation team noted that attendance at, and response to, this workshop and others demonstrate that SINERR is acknowledged in the local community to be a reliable source of non-biased and current scientific information. OCRM commends the Reserve on the continued and thoughtful growth of its CTP.

Reserves tend to conduct ongoing informal audience needs assessments via CTP workshop evaluations and Steering Committee discussions. In addition to these, SINERR partnered with

the GCMP during this evaluation period to fund a comprehensive Coastal Community Needs Assessment and Marketing Inventory in order to get a more structured assessment of the evolving needs of Georgia's coastal management community and decision-makers. The assessment was specifically designed to identify: 1) overlaps among various coastal training efforts; 2) coastal issues that may need to be addressed through training and information but are not currently being adequately addressed; 3) professional decision-making groups that should be targeted for coastal training, including those not currently being adequately served; and 4) the best strategies, technologies, and formats to educate and inform the decision-making groups, including a prioritization of the groups that most need specific additional information. The study employed a combination of Web-based, e-mail, mail, and telephone surveys of coastal training decision-makers, and organizations and institutions that participate in or offer coastal training. Data were collected from December 2006 to July 2007. According to the new Needs Assessment Report, the top three environmental issues facing the coast are economic development, aquifer/groundwater management, and land use planning. Also per the assessment, SINERR's CTP efforts will continue to be geared toward meeting the needs of elected and municipal officials in Georgia's coastal counties. OCRM commends the CTP for taking the initiative to reevaluate the coastal training opportunities and needs in Georgia in this way.

**Accomplishment: SINERR's Coastal Training Program works successfully with a variety of partners to provide its target audience with quality opportunities for training on coastal management issues. In order to continue to address current coastal management needs, SINERR, in partnership with the GCMP, completed a new Coastal Community Needs Assessment and Marketing Inventory for coastal decision-maker training that will help to guide future implementation of the CTP.**

The evaluation team, SINERR staff, and partners also discussed a number of exciting opportunities for the CTP program throughout the site visit. For example, and as mentioned previously, the CTP is poised to provide support to local governments with regards to the implementation of the Governor's Coastal Conservation Plan. Coastal county and city officials will likely need information and training on smart development, which SINERR and partners can offer. In addition, the living shorelines demonstration project (also discussed previously) will provide a wealth of information for the CTP to use to educate coastal professionals and decision-makers regarding management best practices developed through research conducted at the Reserve.

Opportunities to further enhance the CTP, discussed throughout the site visit, include training and/or support for staff with regards to identifying external funding sources, grant writing, and interacting with elected county council members. The CTP might also consider engaging the Communications Specialist in identifying and developing new marketing strategies for the program. This marketing plan could be included in the Reserve-wide coordinated public outreach/communications plan suggested previously.

## E. STEWARDSHIP PROGRAM

Many Reserves in the NERRS have developed a stewardship component to complement their existing research and education programs. Stewardship staff participate in activities that might include research, monitoring, education, and implementation of resource management actions. Stewardship at SINERR is focused on natural resource protection and management, an integral part of the Reserve's mission. According to the revised Management Plan, SINERR's stewardship goal is to maintain and continue to restore the integrity of the natural dynamic processes of the Reserve's estuarine ecosystem. Current elements of the SINERR Stewardship Program include Geographic Information Systems (GIS) mapping and database management, atmospheric deposition monitoring, habitat classification, habitat management, and public education. Stewardship staff also support other Reserve programs, for example by providing GIS mapping capacity for research projects.

SINERR has greatly enhanced its Stewardship Program during this evaluation period. The most notable growth has been with regards to the Reserve's GIS capacity. The Stewardship Coordinator re-opened and enhanced the GIS laboratory at UGAMI and developed a partnership that will allow for the online dissemination of the Reserve's GIS data and products. Other new activities coordinated by the Stewardship Program have directly enhanced resource protection on the Island, such as the installation of a pervious surface parking lot for the ferry dock. The Stewardship Coordinator also has begun a Marsh Bird Monitoring program at the Reserve. OCRM commends SINERR on this more focused development of the Stewardship Program.

Currently, the Stewardship Coordinator spends at least half of her time on GIS data and map requests and support, and the rest on stewardship activities such as atmospheric deposition monitoring and discrete habitat protection efforts (such as the parking lot installation). The maturity of the Reserve's GIS capacity, and the expected availability of SINERR data online, will significantly change the Stewardship Coordinator's core activities, allowing more time for continued program enhancement. The recently revised Management Plan also provided the Reserve with the opportunity to develop an overarching direction for the Stewardship Program, and the evaluation team heard a number of exciting stewardship initiatives that are underway or planned for the future. That said, a clear and strategic plan prioritizing Program activities, and strategies as listed in the Management Plan, to achieve Reserve stewardship objectives is not apparent. OCRM thus strongly encourages the Reserve to identify and develop the Stewardship Program's niche in resource management on the Island using the goals and objectives outlined in the revised Management Plan as a guide, and to prioritize stewardship activities and strategies.

**Program Suggestion: OCRM strongly encourages SINERR to identify the Stewardship Program's niche, and to develop a strategic plan for the Program that prioritizes and clearly aligns activities with the goals and objectives outlined in the revised Management Plan.**

## 1. Geographic Information Systems

SINERR has significantly increased its GIS capacity during this evaluation period, and thus also that of their partners on the Island. Most notably, the Reserve re-opened and greatly enhanced the GIS Laboratory at UGAMI, and created a new partnership with the Georgia Coastal Ecosystems Long-term Ecological Research Project (GCE – LTER) to support the hardware, software, and basic infrastructure necessary to operate the laboratory. The GIS Library, maintained by the Stewardship Coordinator at the lab, includes Global Positioning System data for research and management projects as well as historic documents and images of Sapelo Island. The Reserve also updated all pre-existing GIS layers for Sapelo Island to be compatible with current GIS software. The GIS laboratory and services provided by Reserve’s staff have proven to be great assets to both the State and University. Investment in the laboratory has also strengthened SINERR’s relationship with the UGAMI, as the Stewardship Coordinator is now often on the UGAMI campus.

SINERR has also identified and supported numerous GIS training opportunities for the Stewardship Coordinator during this evaluation period, which was a need that OCRM identified in the last evaluation findings. The Stewardship Coordinator has in turn collaborated with the Reserve’s CTP to host a GIS training workshop for local and state government employees. The Stewardship Program also coordinated with the Education Program to provide a GPS training activity for the Georgia Sea Turtle Conservation teacher training workshop. Teachers were taught to uses a GPS unit, introduced to the software for analysis, and directed to websites with free software for them to use in the classroom to display the data collected. OCRM commends SINERR on their commitment to enhancing GIS capacity, at the Reserve and for its partners, by supporting such training opportunities.

In addition to the Laboratory and Library development, the wealth of GIS resources collected by SINERR will soon be available via an online portal housed on the GCE – LTER. The public availability of the Reserve’s GIS products should greatly reduce the amount of time that the Stewardship Coordinator spends responding to data requests, allowing her to focus on emerging stewardship initiatives, as was discussed previously.

**Accomplishment: SINERR has greatly enhanced its GIS capacity through the development of an onsite laboratory and virtual library, which has benefited not only the Reserve but also its partners in coastal research and management.**

The Stewardship Coordinator also maintains information about on-going research projects within the publically held lands of Sapelo Island. This research tracking program was developed in order to establish a long-term record related to research, monitoring and resource management on the Island, and to be able to use the record as a proactive tool for anticipating and reducing user conflicts related to resource use. The Reserve thus developed a research request and GIS tracking form for researchers and land managers to fill out prior to establishing a study site within the Reserve or elsewhere on the Island. Current/previously established sites are to be

documented as well. Information collected includes: names of Principle Investigators or DNR managers, contact information, sponsoring agency, GPS coordinates of site location, objectives of research/project, spatial extent of work, habitat(s) type(s), and expected project duration. The Stewardship Program made GPS units readily available from the GIS Laboratory in order to obtain the GIS coordinates to fulfill this request, and all programs (SINERR, UGAMI, DNR) will receive periodically updated spatial maps of project locations. OCRM commends SINERR in taking this step to document and protect research and monitoring sites within the Reserve.

**Accomplishment: SINERR has developed and maintains a database to track research and management activities that will benefit not only the Reserve's programs, but also is critical to protecting and coordinating such activities on the Island's publically held lands.**

Clearly, maintaining this information in a database is extremely important not only to the Reserve, but also to researchers and DNR land managers. Researchers can use the information to determine what other investigations have been conducted on the Island and where, and DNR can use the information to plan land management activities. The latter is absolutely critical to the collective use and management of public lands on the Island. If DNR does not know where active research studies are located, there is the potential for routine management activities (e.g. prescribed burns, forest management) to compromise study sites. The foundation for this information sharing and tracking is outlined in an MOU signed by both the UGAMI and SINERR. The MOU states that SINERR, UGAMI and DNR agree to share the specifics of studies and work related to resource use on the Island. At the time of the site visit, however, UGAMI was not consistently providing the Reserve with this information. There was not an identified point of contact for the University who was responsible for collecting the required information from researchers (particularly those not associated with the GCE – LTER, who generally know to provide their information). OCRM strongly encourages DNR to facilitate the execution of the Reserve's MOU with UGAMI. This information is important not only to the Reserve's research and stewardship programs, but also critical to the coordination of resource management on the Island.

**Program Suggestion: OCRM strongly encourages DNR to work with UGAMI to facilitate implementation of the MOU that addresses the sharing of research project information. Specifically, OCRM recommends that UGAMI identify a point of contact on the Island to be responsible for ensuring that this information is provided to the Reserve.**

## **2. Habitat Restoration and Protection**

The Stewardship Program has also taken on a number of activities this evaluation period that address critical habitat management issues on the Island. One project that will help to guide habitat restoration and protection on the Island is the re-classification of the Reserve's current habitat map to align with the NERRS' Habitat and Land Use Classification System. Implementation of this specific classification system across the reserves will also allow for system-wide habitat analysis, serving as a baseline for temporal studies that examine trends in land use and habitat change. The SINERR map will also be able to be used to examine habitat distribution on the Island.

SINERR also coordinated the planning and installation of an alternative surface parking area near the Marsh Landing dock. Parking at Marsh Landing has been an issue for a number of years (and discussed in previous findings) as the lot directly at the ferry dock has been at capacity, forcing residents on the Island to park vehicles up the access road along the marsh edge. This situation clearly poses a continuing threat from vehicle fluids leaking into and affecting the marsh. The installation of a pervious paved parking lot near the ferry dock was anticipated to be beneficial in moving cars from the marsh edge; it is primarily used by Island residents and guest. The Stewardship Coordinator identified the product Gravelpave for use at the new lot. Gravelpave is trademarked pervious surface that helps to prevent erosion and reduces stormwater runoff volume by capturing and filtering water, unlike traditional impervious concrete, which eliminates the need for gutters or retention ponds. The Reserve coordinated with the Friends of Sapelo to install the new parking area, which not only cut down on costs but also provided a unique learning experience for the volunteers. SINERR intends to add interpretive signage at the site describing the benefits of pervious surfaces like Gravelpave in sustainable building. OCRM commends DNR and SINERR for identifying a solution to the parking issue at Marsh Landing, and for implementing an environmentally-friendly choice of product. OCRM encourages SINERR to use the lot to educate the public with regard to sustainable building alternatives.

It should be noted that the new lot is located almost a quarter mile from the dock, and further from the marsh, to be used primarily by residents who are leaving vehicles for longer periods. The evaluation team did still see a number of vehicles parked directly along the marsh edge, however. OCRM thus encourages DNR to more strongly promote the use of the new lot in order to protect the marsh habitat at Marsh Landing.

### **3. Monitoring**

#### *Atmospheric Deposition*

The Stewardship Program continues to be responsible for the monitoring associated with the National Atmospheric Deposition Program (NADP) station established on Sapelo Island in 2002 in partnership with the GCE-LTER. Parameters monitored include: total weekly rainfall, pH, Ca, MG, K, Na, NH<sub>4</sub>, NO<sub>3</sub>, CL, SO<sub>4</sub>, and PO<sub>4</sub>. Reserve staff are responsible for the operational duties necessary to maintain the station including instrument calibration, preliminary sample analysis, data entry and validation.

SINERR also expanded its atmospheric deposition monitoring by adding a mercury monitoring component to the station. Data on methyl and total mercury is collected for inclusion in the NADP/National Trends Network. The Reserve has solicited partners from the GCE – LTER, EPA, US Fish and Wildlife Service and GA EPD to help defray costs associated with the sample analyses. There is already interest in using this data from other State agencies. OCRM commends the Reserve for proactively expanding its engagement in the national atmospheric deposition monitoring effort through the inclusion of a mercury monitoring component.

### *Marsh Bird*

The Stewardship Program also began a Marsh Bird Monitoring program for SINERR 2008. In preparation, the Stewardship Coordinator attended a three-day workshop at the North Inlet – Winyah Bay NERR in order to learn to identify common calls of marsh birds, and how to use the National Marsh Bird Monitoring Protocol. This standardized protocol is currently being, or will be used soon, at a number of reserves in the southeast. The evaluation team heard much enthusiasm from Friends of Sapelo members who are eager to help with the monitoring. OCRM commends SINERR for initiating this monitoring project, and for engaging volunteers in the effort.

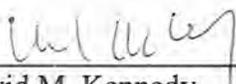
## V. CONCLUSIONS

For the reasons stated herein, I find that the State of Georgia is adhering to the programmatic requirements of the National Estuarine Research Reserve System in the operation of its approved Sapelo Island National Estuarine Research Reserve (SINERR).

SINERR has made notable progress in the following areas: providing technical support to DNR programs; engaging with the coastal management community to guide Reserve research; developing new education and outreach initiatives in celebration of the Reserve's 30<sup>th</sup> anniversary; increasing communications efforts; expanding the reach of the Reserve's Coastal Training Program; and enhancing GIS capacity.

These evaluation findings contain one Necessary Action which must be addressed according to the timeline provided. The findings also contain eight recommendations in the form of Program Suggestions. The Program Suggestions should be addressed before the next regularly scheduled program evaluation, but they are not mandatory at this time. Summary tables of program accomplishments and recommendations are provided in the Appendix E.

This is a programmatic evaluation of SINERR that may have implications regarding the State's financial assistance awards. However, it does not make any judgment on or replace any financial audits.

  
David M. Kennedy  
Director, Office of Ocean and Coastal  
Resource Management

2-28-09  
Date

## VII. APPENDICES

### APPENDIX A: SUMMARY OF ACCOMPLISHMENTS AND RECOMMENDATIONS

#### Accomplishments

Issue Area	Accomplishment
Reserve Administration	SINERR is successfully providing support, through expertise and products, to enhance coastal management activities conducted by Georgia's Department of Natural Resources.
Management Plan	SINERR completed the revision of its Management Plan, which will cover the period from 2008-2013
Research and Monitoring	SINERR's Research and Monitoring Program actively pursues opportunities to inform coastal management in Georgia, and to advance the Reserve's research mission.
Public Outreach	SINERR coordinated and hosted a series of successful events to celebrate its 30 <sup>th</sup> anniversary in 2007. These events served to engage new audiences and increase the general public's understanding of Georgia's coastal resources without increasing visitation to Sapelo Island.
Communications	SINERR hired a part-time Communications Specialist whose products have helped the Reserve increase its visibility in the community.
Friends of Sapelo	The Friends of Sapelo, led by its Volunteer Coordinators, greatly enhanced their organization through the appointment of an advisory board, revision of bylaws, and by registering as a corporation with the State.
Coastal Training Program	SINERR's Coastal Training Program works successfully with a variety of partners to provide its target audience with quality opportunities for training on coastal management issues. In order to continue to address current coastal management needs, SINERR, in partnership with the GCMP, completed a new Coastal Community Needs Assessment and Marketing Inventory for coastal decision-maker training that will help to guide future implementation of the CTP.
Geographic Information Systems	SINERR has greatly enhanced its GIS capacity through the development of an onsite laboratory and virtual library, which has benefited not only the Reserve but also its partners in coastal research and management
Geographic Information Systems	SINERR has developed and maintains a database to track research and management activities that will benefit not only the Reserve's programs, but also is critical to protecting and coordinating such activities on the Island's publically held lands.

## Recommendations

Recommendations are in the form of Necessary Actions (NA) or Program Suggestions (PS).

Issue Area	Recommendation
Reserve Administration	PS: OCRM encourages DNR and SINERR to continue to work together to advertise and integrate Reserve capabilities and products across the Department.
Grants Management	PS: OCRM encourages DNR to support federal grants training, specifically on the NOAA Grants Online System, as a professional development opportunity for staff who work regularly with NOAA awards regarding the Reserve.
Strategic Planning	PS: OCRM strongly encourages SINERR leadership to bring staff together on a regular basis to strategize how to best execute the Reserve's Management Plan by prioritizing actions that need to be accomplished to realize the articulated goals.
Visitor Use	NA: SINERR and DNR must work together to consider how to best monitor visitor use of Sapelo Island—particularly Reserve resources—and how to assess and address visitor impacts to these resources. The Reserve must submit a plan of action to OCRM for review and approval by February 2010 describing how the State will monitor visitor use and assess impacts.
Education Program	PS: OCRM encourages SINERR to consider how to strengthen evaluations of its professional teacher development workshops and student programs, potentially including the additional of pre- and post- tests to its programs
Public Outreach	PS: OCRM encourages SINERR to consider expanding public education and outreach opportunities on the mainland, and to identify ways to better use the Visitors' Center facility and engage Center staff in these activities.
Communications	PS: OCRM encourages the Reserve to develop a more coordinated and strategic public relations and communications plan.
Stewardship Program	PS: OCRM strongly encourages SINERR to identify the Stewardship Program's niche, and to develop a strategic plan for the Program that prioritizes and clearly aligns activities with the goals and objectives outlined in the revised Management Plan.
Geographic Information Systems	PS: OCRM strongly encourages DNR to work with UGAMI to facilitate implementation of the MOU that addresses the sharing of research project information. Specifically, OCRM recommends that UGAMI identify a point of contact on the Island to be responsible for ensuring that this information is provided to the Reserve

## APPENDIX B. SINERR'S RESPONSE TO 2005 EVALUATION FINDINGS

**Necessary Action: To ensure the long-term stability of the Research Coordinator's position, the SINERR must continue to work within DNR to pursue its original commitment to find a permanent source of state funding.**

*SINERR Response:* DNR will continue to pursue its 2001 commitment to secure permanent sources of State of Georgia funding for the research coordinator position at the Reserve.

**Necessary Action: By October 2006, the SINERR must submit a final draft of its updated Management Plan. As part of the management plan revision process, the SINERR must include appropriate staff from other DNR offices on Sapelo, the UGA System, and the Hog Hammock Community.**

*SINERR Response:* In November 2005, the SINERR Management Plan revision first drafts were forwarded to the Estuarine Reserves Division for review and comment. Subsequent iterations of the Plan were modified, amended and revised based on comments and suggests by ERD. The Plan was completed in its final form in September 2007 and received final review and approval by ERD.

**Program Suggestion: NOAA strongly encourages SINERR to facilitate action by and work with the Island Manager to assess current and potential stressors to the Reserve resulting from visitation and address relevant recommendations from the 2000 island visitation trends study.**

*SINERR Response:* The Reserve Manager and the Island Manager have, since 2005, addressed visitation impacts on the Reserve, particularly in regard to public access programs, including education and outreach activities by the Reserve, visitation and public tour operations by the private sector (Hog Hammock), the R.J. Reynolds Mansion activities and the UGA Marine Institute visitation. These issues and their long-term implications have been addressed in detail in the 2008 SINERR Revised Management Plan. Additionally, DNR Wildlife Resources Division is continuing to evaluate the condition of current policies that govern the access and use of Sapelo Island. These policies are embedded within multiple documents that have been created over a period of time and by different state agency personnel. WRD's assessment is designed to gauge to cohesiveness of Sapelo's operational policies, determine where there is conflict and to identify issues, which are insufficiently treated by existing policies. These initiatives efforts are also addressed in the SINERR Revised Management Plan.

**Program Suggestion: SINERR should continue moving forward with appropriate language to formalize, identify and ensure SINERR's role in future compliance with**

**restrictions on commercial timbering within the Reserve's boundaries in its management plan.**

*SINERR Response:* The SINERR manager is now involved in consultation with the island manager in an annual review of DNR's timber harvest proposals for Sapelo Island, particularly as it impacts the Reserve, either directly or indirectly, policy which is now included in the 2008 management plan. The annual review allows the Reserve manager to identify potential conflicts with SINERR boundaries or research sites prior to the initiation of a timber harvest.

**Necessary Action: As part of the management plan update, the SINERR must work with the Island Manager to develop strategies to reduce, minimize and find ways to avoid, the impacts within the Reserve that result from island-wide users and uses.**

*SINERR Response:* The Reserve manager and the Island Manager have assessed the issues facing both the SINERR and Sapelo as a whole regarding a complex array of impacts, including solid waste removal, timber cutting, pressures associated with increased visitation and development of private property, and infringements consequent upon these and other impacts to research initiatives and the proper resource stewardship of the Reserve and Sapelo. These have been addressed through participation by WRD in the preparation of the 2008 SINERR Revised Management Plan, and by inclusion within the management plan of comments and documentation in the plan by WRD and Game Management staff. WRD has begun the evaluation of the 1997 Sapelo Island Comprehensive Management Plan, with eventual revision and updating the CMP. It is recognized that the 1997 Plan successfully identifies a wide range of management issues. However, it does not adequately present management objectives against which island personnel can make management decisions.

**Program Suggestion: The SINERR should work with the Reserve Advisory Committee to re-evaluate its role in developing strategies and identifying priority areas for input into SINERR issues and provide a description of their enhanced role in the updated management plan. The RAC and SINERR should also reassess membership and remedy any gaps in representation.**

*SINERR Response:* Discussions were held in RAC meetings in 2005 and 2006 regarding ways in which the committee might be more integrated into development of methods by which it might play a greater role in advising the Reserve in development of programmatic strategies and provide counsel in addressing relevant issues affecting the Reserve. The committee, in this regard has played a much greater role in the facilitation and planning of scientific research and education initiatives in the SINERR's programs the last two years, and is appropriately reflected in the updated management plan. In addition, an education community representative was appointed to the Advisory Committee in 2007.

**Program Suggestions:** As part of the revision of the management plan NOAA encourages SINERR to develop strategies to utilize and improve the mainland Visitors Center for use in its education programs, especially in light of anticipated increases in Island visitation requests.

**NOAA encourages SINERR to incorporate information about potential visitor impacts to Sapelo Island, and particularly the Reserve, into the education and interpretive efforts at the Visitors Center and on SINERR where appropriate.**

*SINERR Response:* The SINERR education coordinator, with input from other Reserve core staff, have broadened the use of the Center from a number of perspectives, including provision of mainland-based education programming, use of the facility as a host site for Coastal Training workshops, and the updating and improvement of current and new interpretive exhibits. The SINERR media specialist has worked with local and area news outlets to promote the Visitors Center as an educational destination that will reflect Sapelo and barrier island ecologies and culture as an alternative to actual visitation to the island itself. These efforts are appropriately reflected in the updated management plan.

**Program Suggestion:** SINERR should initiate an agreement, such as a Memorandum of Understanding, with UGAMI on the priority uses, space allocation, and management processes for the new research dormitory, and include the agreement in the updated management plan.

*SINERR Response:* A Memorandum of Understanding is now in place, having been developed to the satisfaction of all parties, regarding the new research dormitory, and is appended to the 2008 Revised Management Plan.

**Program Suggestion:** The SINERR should work proactively with the Island Manager on a form of agreement, such as an MOU, or coordination process with other DNR components on Sapelo and the UGA System, to improve the relationship among the Island partners.

*SINERR Response:* A Memorandum of Understanding is now in place, having been developed to the satisfaction of all concerned parties, between the Reserve and the UGAMI reflecting scientific and monitoring collaboration where appropriate and/or applicable, and is included as an Appendix to the Revised Management Plan.

**Program Suggestion:** NOAA encourages SINERR to develop more educational and outreach materials, such as fact sheets or one-pagers, that translate current research being conducted by Reserve staff and partners on Sapelo Island.

*SINERR Response:* The research and stewardship coordinators of the Reserve, and scientists engaged in research at the SINERR have been featured speakers at several public programs, including various 30<sup>th</sup> anniversary events in 2006, and teacher training workshops. Efforts by the RC and SC have been recognized in the SINERR newsletter, which has public distribution, as well as in local and area newspapers. Additionally, research and stewardship projects have been completed with the assistance of the Friends of Sapelo volunteers.

**Program Suggestion: NOAA strongly encourages SINERR to develop a mechanism to evaluate educator trainings and educational tours to better gauge program effectiveness and future needs.**

*SINERR Response:* In 2005 SINERR developed an evaluation tool for teacher training participants, adaptable to specific workshops as necessary. The SINERR Coastal Training program has a comprehensive evaluation system, a template adaptable to specific workshops and events. Evaluations are in the process of being developed for general (day trip) tours of the Reserve by the public and the K-12 outreach program as part of the KEEP framework.

**Program Suggestion: NOAA encourages SINERR to explore ways to fund, and to work with the ERD communications director on, the development of a communications strategy for all aspects of Reserve programming.**

*SINERR Response:* Funds were identified in the federal award to SINERR from NOAA in November 2005 to provide a budgetary line item for contracting a part-time communications specialist to work with the education, research, stewardship and Coastal Training staff. This individual has since worked effectively with SINERR to develop outreach and media strategies to project greater visibility of all Reserve programs. The Reserve has also interacted with the ERD communications specialist on a number of outreach projects from 2005 to present.

**Program Suggestion: NOAA encourages SINERR to identify the long term goals of the Stewardship Program and the roles and responsibilities of the Stewardship Coordinator as part of the updated management plan.**

*SINERR Response:* The Reserve manager has worked with the Stewardship Coordinator, and other Reserve staff, to develop stewardship goals and methodologies. There are clearly delineated as part of the 2008 Revised Management Plan for the Reserve.

**Program Suggestion: (1) NOAA encourages SINERR to work towards making GIS information available via the web in order to allow the Stewardship Coordinator**

**more time to work on other program efforts and (2) NOAA encourages SINERR to make a priority of securing formal GIS training for the Stewardship Coordinator.**

*SINERR Response:* In partnership with the national Long Term Ecological Research program (LTER), the Stewardship Coordinator is contributing GIS data to be viewed on the LTER website. The Stewardship coordinator has taken possession of the GIS laboratory at the UGA Marine Institute, a facility now re-opened and supervised by the SC. This facility is in addition to the GIS lab at the SINERR's Long Tabby complex. The facilitation of the UGA lab will broaden the SC's resource access and capabilities for GIS. The Stewardship Coordinator has attended several formal training classes and workshops at state and federal facilities since 2005, including extensive training sponsored by NOAA's Coastal Services Center.

**Program Suggestion: NOAA encourages SINERR to work with the Friends of Sapelo Advisory Board, and utilize the National Friends Network and ERD, to develop strategies to ensure the longevity of the organization.**

*SINERR Response:* The FOS has worked to develop organizational bylaws, digitize its records and communications, appoint an advisory board from its membership and register as a non-profit organization with the State of Georgia. The volunteer coordinators under contract to the Reserve have been especially active in the annual NERRS conferences and have also participated in regional volunteer meeting and outreach efforts.

## APPENDIX C. PERSONS AND INSTITUTIONS CONTACTED

### Sapelo Island National Estuarine Research Reserve

Name	Title
Nancy Alford	Office Administrator
Ron and Mary Burns	Volunteer Coordinators, Friends of Sapelo
Pat Carson	Visitors Center Staff
JD and Linda Daniels	Volunteer Coordinators, Friends of Sapelo
Aimee Gaddis	Stewardship Coordinator
Georgia Graves	Teacher Training Coordinator
Yvonne Grovner	Tour Coordinator and Guide
Patrick Hagan	Monitoring Technician
Dorsett Hurley	Research Coordinator
Ann Mason	Communications Specialist
Bill Merriman	Visitors Center Manager
Stacy Rowe	Visitors Center Staff
Buddy Sullivan	Reserve Manager
Brooke Vallaster	Education Coordinator
Suzanne VanParreren	CTP Coordinator

### Georgia Department of Natural Resources

Name	Title, Office
Dan Forster	Director, Wildlife Resources Division
David Mixon	Region 7 Supervisor, Wildlife Resources Division
Fred Hay	Island Manager, Wildlife Resources Division
Rehnee Dyer	Federal Grants Administrator
Sonja Daniels	Administrative Officer, Wildlife Resources Division
Brad Gane	Asst. Director for Ecological Services, Coastal Resources Division
Jill Andrews	Program Director, Georgia Coastal Management Program, Coastal Resources Division
Jennifer Kline	Georgia Coastal Management Program, Coastal Resources Division
Jan Mackinnon	Georgia Coastal Management Program, Coastal Resources Division
Mark Day	RJ Reynolds Wildlife Management Area, Game Management Section, Wildlife Resources Division
Darrell Hartley	RJ Reynolds Wildlife Management Area, Game Management Section, Wildlife Resources Division
Mark Dodd	Non-game Conservation Section, Wildlife Resources Division
James Maund	RJ Reynolds Mansion, Parks, Recreation and Historic Sites Division

### Program Partners

Name	Title, Affiliation
Cornelia Bailey	Hog Hammock Community
Kathy Chapman	US Fish and Wildlife Service
Christi Lambert	The Nature Conservancy

Jeff Spratt	The Nature Conservancy
Scott Coleman	Little St. Simons Island
Gail Krueger	Outreach Coordinator, Grays Reef National Marine Sanctuary
Melanie Biersmith	Program Director, Jekyll Island 4-H
Keren Giovengo	University of Georgia, Marine Extension
Rebecca Effler	University of Georgia Marine Institute

## APPENDIX D: PERSONS ATTENDING THE PUBLIC MEETING

<b>Name</b>	<b>Affiliation</b>
Kelly Bennett	Congressman Jack Kingston's Office
Don and Jeanette Benz	Friends of Sapelo
Sara Blocker	Friends of Sapelo
Ron and Mary Burns	Friends of Sapelo
Jan Casey	Friends of Sapelo
Linda and JD Daniels	Friends of Sapelo
Elizabeth A. Ewing	Friends of Sapelo
John Galvani	Friends of Sapelo
Marge Inness	Friends of Sapelo
Bill Landel	Friends of Sapelo
Miles and Ann Majure	Friends of Sapelo
Barbara Poetzman	Friends of Sapelo
Lorraine Snyder	Friends of Sapelo
Kaye Traer	Friends of Sapelo

## **APPENDIX E: NOAA'S RESPONSE TO WRITTEN COMMENTS**

OCRM received 1 set of written comments regarding the Sapelo Island NERR. Comments are summarized below and followed by OCRM's response.

**R. T. Kneib, PhD**  
**Sapelo Island, Georgia**

### **Comments:**

Dr. Kneib shares his perspective of SINERR as a long-term resident of Sapelo Island (27 years) and a professional research scientist concentrating on barrier island and estuarine ecosystems (30 years).

Dr. Kneib's comments address three areas: improving communication with residents of the SINERR property; halting land management practices by DNR within the SINERR that are inconsistent with the primary objective of the Reserve; and improving effective protection/responses to inappropriate uses of the SINERR property by groups and individuals who are not connected to the functioning of the Reserve and its mission.

Dr. Kneib described ongoing communication issues between DNR and Island residents, specifically noting the lack of notification of the evaluation site visit via the Island e-mail list and the lack of communication regarding, and knowledge of, research and land management activities within SINERR. He recommends that SINERR staff use the e-mail list to improve communication with Island residents, including all research scientists.

Dr. Kneib believes that the SINERR's mission has shifted over the years to a point that there may now exist an inversion of emphasis between the primary and secondary objectives of the Reserve. He states that DNR's management is inconsistent with SINERR goals and provides examples of this including: DNR timber harvesting cycles that do not allow for scientific research to investigate the natural processes involved in the recovery of maritime forest communities given the current management regime and prescribed burn practices that negatively effect live oak forest structure. He also notes that many of these management activities occur on the UGAMI lease property and that the University administration appears to not have stewardship responsibility for this land.

Dr. Kneib believes that DNR is allowing a variety of inappropriate uses of SINERR property in response to political pressure (specifically that support public access for recreation and private property development) and in opposition to SINERR's mission. In addition to those examples he has mentioned in the past, he describes in detail more recent examples including: the proliferation of docks and their environmental impacts within SINERR; the damage to the Reserve's interpretive nature trail resulting from its placement in an erosion-prone area; the road repair and culvert/spanning bridge project at Dean Creek (including his suggested alternative to the project and DNR's response); illegal activities at Nannygoat Beach; the site selection and construction of the Barrier Island Research and Learning Center, including the lack of DNR

oversight with regards to Best Management Practice implementation; and the construction of the overflow parking area at Marsh Landing.

Dr. Kneib ends his letter describing what he believes the current management structure is on the Island with regards to SINERR, and states in conclusion that the responsibility for managing the Reserve is not fully accepted by any entity in authority. A situation which he believes is inconsistent with supporting a National Estuarine Research Reserve.

Dr. Kneib offers numerous communication examples, photographs, and maps to support his comments, including: written communications between Kneib and DNR/SINERR; pictures illustrating the effects of prescribed burns within SINERR on the UGAMI leased area; a map of docks on the Island that are within SINERR; pictures illustrating bank erosion resulting from different docks in tidal creeks; pictures illustrating the access road to Nannygoat Beach before/during/after bridge repair, and sediment deposition and erosion at Dean Creek; pictures illustrating the litter and vehicle damage at Nannygoat Beach post-4<sup>th</sup> of July partying; pictures illustrating the BIRL construction in progress, poorly employed Best Management Practices, and resulting impacts to the site; and pictures illustrating parking at Marsh Landing.

*OCRM Response:*

OCRM regrets that Dr. Kneib was not made aware of SINERR's evaluation and the site visit in advance. The issue of holding the public meeting on the mainland in the evening and the logistical constraints this places on Island residents is noted, and will be discussed with SINERR in planning for future site visits. The team appreciates that Dr. Kneib took the time to provide written comments for consideration and inclusion in the findings.

OCRM agrees that ongoing open communication amongst residents and research and management entities on the Island is important, and encourages DNR, as the primary management entity, to continue to use the e-mail list as a means to facilitate information exchange among Island stakeholders. Regarding communication about research and management activities on the Island, these findings describe and discuss a GIS database that SINERR developed and is actively trying to populate (as per an MOU between DNR and UGAMI) with this information. The section titled **Geographic Information Systems** in this document describes this database and its potential in more detail.

As OCRM notes in the findings, there are a number of stressors, including increases in visitation to Sapelo Island and demands for private property on the Island, that have resulted in a more complex management situation since SINERR's designation. There are also—and will continue to be—multiple management objectives for Sapelo Island's different state managed areas. The Reserve's federally approved Management Plan outlines (and the revision still does) a suite of public uses that are deemed allowable on Reserve lands. These include research, recreation (e.g. public tours, boating and swimming, hunting and camping), timber harvesting to address infestation/disease, prescribed burns for forest management, and commercial fishing. OCRM acknowledges that maintaining a balance between these public uses and the long-term protection of SINERR's resources—in order to address both Reserve-specific and System-wide goals regarding resource stewardship, research, and education—is increasingly more challenging for

DNR. OCRM believes that these findings describe the State's responsibilities and commitment to ensure that the ecological integrity of the Reserve to provide a stable environment for research and education is balanced with the reality of visitor access and use of these resources. In addition, OCRM notes that SINERR has taken steps in its Management Plan revision to outline its goals and objectives for addressing public access and monitoring visitor use with respect to Reserve resources, progress towards which will continue to be monitored. The section titled **Public Access and Visitor Use** in this document describes OCRM's position on this issue in greater detail.

OCRM thanks Dr. Kneib for his comments and continued interest in the operations and management of SINERR.