

Written Description of the Project

1. Basic Project Details

General Description

Project Scope

The proposed permit will encompass all lands within Shore Protection Act (SPA) jurisdiction from the mouth of Beach Creek on the southern end of Jekyll Island to the mouth of Clam Creek on the northern end of Jekyll Island. This proposal is submitted by the Jekyll Island Authority (JIA) with the intent of creating a management tool to facilitate more efficient and effective management of the very dynamic, sensitive, and valuable beachfront-shoreline system on Jekyll Island. If this permit is approved, the JIA will be better positioned to efficiently and proactively serve our stakeholders, to protect, manage, and enhance shoreline natural resources in support of our mission, as stewards of Jekyll Island, to maintain a delicate but crucial balance between nature and humankind. All activities carried out under the scope of the proposed permit will be in accordance with the Jekyll Island Conservation Plan and Jekyll Island Master Plan and carried out in communication with, and as guided by, the Jekyll Island Authority Conservation Department and Georgia Department of Natural Resources (GADNR), Coastal Resources Division (CRD) staff, with the latter maintaining overriding authority.

Introduction

Under the current SPA regulatory environment, small scale projects, which often arise in response to an unanticipated environmental development, struggle to be competitive for the allocation of resources to navigate the SPA permitting regulatory process. These smaller-scale projects by nature tend to arise opportunistically, have light footprints, and the motivational drivers tend to be protection or enhancement of natural resources values and management of human interaction within the jurisdictional area. The resources to accomplish such projects tend to be very limited and sometimes transient in nature. Under this current situation, Jekyll's managers who routinely engage with the natural environment, including our Conservation, Landscape and Planning, and Roads and Grounds staff, are discouraged from making adaptive, light footprint, improvements within SPA Jurisdiction that are explicitly intended to more responsibly manage the resource and the way people are interacting with it. Shoreline systems are highly dynamic and require constant adaptation by managers to allow for safe, controlled, low-impact interaction between humans and the natural environment.

A manager that cannot efficiently act to manage, protect, or enhance, a dynamic resource, cannot be an effective manager of that resource. The permit proposed will provide Jekyll Island Authority managers with a toolkit of approaches to act quickly and efficiently within a scope that is explicitly defined to facilitate actions designed accrue net benefits for ecosystem and shore-protection values associated with the SPA

jurisdictional area. Likewise, the types of activities included in this scope are specifically chosen to exclude actions that could pose conflicts with these values. BMPs will be used for every decision made along with this permit. All actions will be coordinated with CRD staff and will weigh the alternatives and pick the best option based on the management goal. The overall quality of habitat and the functionality of the sand-sharing system will not be degraded. Rather, it may be better protected, or enhanced under this permit.

Vetting process

The Jekyll Island Authority proposes that the conditions of this proposed permit would require that any project to be carried out under the permit would meet the following conditions.

- The permit would only apply to actions to be carried out by the JIA on non-leased land.
- The proposed activities would be verified by the JIA Conservation staff as being in accordance with the scope of the permit and the Jekyll Island Conservation plan.
- CRD staff would verify that the proposed activity is consistent with the scope of the permit.

Public Engagement

Projects that may be advanced under the scope of this proposed permit may warrant additional public engagement on a case by case basis. The Jekyll Island Authority regularly engages the public through a wide variety of methods and venues including, but not necessarily limited to, the following.

- Open door to Executive Director and senior staff for requested discussions and site visits
- Annual "Town Hall" sessions
- Quarterly meetings with General Managers and Sales Managers of hotels
- Bi-annual meetings with representatives of Jekyll business community
- Annual presentation before Jekyll Island Citizens Association
- Public Hearings/Input Sessions as part of process for all JIA revitalization projects
- Environmental Assessment Procedure (EAP) for ALL development projects on Jekyll Island that have the potential to affect natural systems (includes public representatives)
- Stakeholders briefing sessions pertaining to projects of special interest/concern
- Public comments welcome at monthly JIA Committee meetings
- Extensive public input for JIA professional studies
- Widespread public distribution of Board materials and documents before and after JIA Board meetings
- Regular speaking engagements with community groups on Jekyll and throughout the Golden Isles by Senior Staff

Organization

The project details described herein are broadly categorized as either “Natural Resource Management” or “Public Access”, with more specific spatial subdivisions outlined within these categories. These spatially defined zones are:

- Seaward of the Sand Dunes
 - Within the Sand Dunes
 - Shoreward of the Sand Dunes
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Natural Resource Management

Vegetation Management

Vegetation management is an important component of this permit request and may include the removal of invasive plant species and the planting or promotion of beneficial native vegetation to promote dune growth and/or stability as well as enhanced habitat value for wildlife. Periodic maintenance activities including using hand tools, temporary irrigation, or any other targeted and controlled means, such as trimming vegetation to manage the growth and successional dynamics of plant communities. Habitat management goals may call for maintaining a particular successional state, e.g. the maritime grassland habitat type. We propose that the permit would also cover the non-destructive harvest of seeds from various native plants (*Uniola paniculata*, *Muhlenbergia sp.*, *Andropogon sp.*, *Panicum amarum*, etc.). These harvested seeds will be used only for restoration projects and other native plantings which to help ensure plant success and vitality with locally adapted genetic stock.

Within the Sand Dunes

Dune growth and stability is the primary driver and ecological goal of vegetation management within the sand dunes. The protection of the sand dunes, which can be accomplished through effectively managing vegetation, is necessary for nesting habitat of Loggerhead Sea Turtles and migratory shorebirds such as the Wilson’s Plover. This is where we will harvest native seed stock, plant and promote native vegetation communities, and may also maintain certain areas in a particular successive state for the ecological benefit of certain migratory and resident animals. For example, we may seek to restore and enhance interdunal areas with *Muhlenbergia sp.* and other native, locally sourced plants to promote the sustainability and expansion of the rare maritime grassland habitat type on Jekyll Island (Case Study 4).

Shoreward of the Sand Dunes

Vegetation management shoreward of the sand dunes will be focused on the promotion of native vegetation for ecological function with the added benefit of providing an aesthetically pleasing native greenspace for the public's enjoyment. Again, native maritime grasslands are a rapidly diminishing habitat across the eastern seaboard which is resulting in a decline in wildlife species that depend on this particular type of early successional habitat and the characteristics that define it. Our conservation goals are to provide and restore critical habitats where possible to benefit the ecosystem as a whole.

Localized Sand Management

Sand management through methods like sand fencing and dune-vegetation biomimicry (Case Study 1) is a useful tool for managing sand around beach access routes and structures. These methods may also be targeted to promote dune growth and thereby enhance natural shoreline protection. Public assets which may call for enhanced dune protection include beach access routes, public park amenities, and natural landscape features, such as freshwater wetlands impounded behind dunes. Collection and banking of "nuisance sand" is proposed to support targeted, small-scale, beneficial dune protection/restoration projects. Sand would be collected only where it intrudes upon existing permitted hardscape or mowed turf grass and would explicitly not be intended to be used for beach nourishment, an application that is vastly beyond the scope of what is being proposed here.

Within the Sand Dunes

Sand Management within the sand dunes will be to promote dune growth and stability and in select cases to prepare for the promotion or enhancement of native vegetation. Multiple techniques including sand fencing and biomimicry may be employed and will be determined on a case by case basis. When sand fencing is used, it will be installed following the guidelines set forth by the GADNR Non-game Conservation Section (Appendix C).

Shoreward of the Sand Dunes

Sand that migrates into this zone, sometimes referred to as "nuisance sand", where it encroaches upon existing hardscape or mowed turf grass, will be collected and stored at a designated location outside of SPA jurisdiction as a local source of beach-quality sand for beneficial-use projects, such as dune restoration/enhancement. This "sand bank" and its effective use is discussed further in Case Study 2.

Public Access

Access Maintenance

The maintenance of existing permitted sand dune-crossover structures shall be covered under this permit. Maintenance activities may include the use of mechanized equipment to stabilize or otherwise repair structures where reasonable and justified in coordination with CRD staff. These structures require frequent repair and upkeep to ensure safety and functionality and the regular, preventative maintenance that would be facilitated under this permit can help avoid the necessity of more disruptive major repairs later. Activities proposed to be covered under this permit may include extending a current access to the seaward toe of the dune using nonstructural components such as Mobi-mats or may include trimming vegetation, such as wax myrtle, that can grow to obstruct established, designated pedestrian and vehicular beach access routes. As an example from this category, Case Study 2 describes proposed work to be accomplished adjacent to Great Dunes Park to manage the movement of sand around the existing crossover structure. Also included under this section is the maintenance and addition or relocation of trash and recycling structures and containers along access routes where/when necessary to make them easily accessible to the public and limit the impacts of servicing them.

Seaward of the Sand Dunes

Where reasonable and justified in accordance with CRD staff, equipment may be used in this area to maintain and/or repair public dune crossovers. This work will be restricted to the minimum extent necessary to maintain public safety and to balance reasonable access requirements with our core desire to avoid negative ecological impacts. Ecological goals include the prevention and clean-up of debris that may otherwise cause damage to nesting habitat for sea turtles and shorebirds.

Within the Sand Dunes

The goal of public access within the sand dunes is to get people to and from the beach with as little impact to the surrounding sand dunes as possible. In this zone, we will maintain crossover structures for public safety and access as well as ecological functionality and will only use equipment when necessary and justified in accordance with guidance from CRD staff. We also perform periodic limb and tree trimming to keep crossover structures, trails, and vehicle access routes clear as necessary to maintain the safety and functionality of these routes.

Landward of the Sand Dunes

The goal landward of the sand dunes is to keep hardscapes like bike paths and crossovers free of loose sand and safely passable. This may include vegetation trimming, collecting sand to be relocated to the sand bank, or using fences to control pedestrian traffic that may otherwise disturb the sand-dune ecosystem by establishing and/or utilizing unapproved beach-access routes.

Marine Debris and Unauthorized Structure Removal

The following applies only seaward of the sand dunes. Occasionally, anthropogenic marine debris is deposited, abandoned, or placed in this zone and can be very large and/or heavy. Such debris may pose hazards for both human beach-users and for wildlife, or may otherwise be incompatible with our stewardship goals. Mechanized equipment may be required to address these problems, but will only be used when considered reasonable and justified in coordination with CRD staff. This may also include the removal of abandoned or derelict vessels and associated debris, as well as the removal of unapproved additions, including unauthorized beach-accesses structures, such as those that have been created within the exposed rock revetment.

Case Study Summaries

(For complete details including maps and photos, see Appendix A)

The first three of the following case studies describe projects that have occurred on Jekyll Island. Case Study 4 describes a conceptual project that could be advanced under the proposed general permit. These case studies serve as specific examples of the type of work which could be accomplished more efficiently and/or effectively if covered under the permit proposed here.

Case Study 1 – King Avenue Dune Biomimicry

A landward migrating dune encroaching upon a residential lease line created an opportunity to test an innovative method of managing dune growth and stability. [The Biomimicry Coastal Restoration System](#) was developed and demonstrated successfully in Cape Cod Massachusetts by Safe Harbor Environmental and has since been shared publicly through NOAAs Restoration Webinar Series. “Biomimicry” refers to a minimal profile, random matrix, coastal restoration system. The method mimics the ‘performance’ of native coastal vegetation to stabilize and collect wind-blown sand. This technique employs 14-inch long, narrow Cedar shims which are inserted several inches into the sand, spaced from 10-14 inches apart, in a 4-6 foot wide random matrix. This matrix stabilizes existing sand while collecting new sand from ocean storms. As sand levels rise, the shims are pulled up higher, to continue collecting. Additional shims can be added to widen the profile. How the shims are adjusted controls the profile of the sand collection platform. As elevations increase, native grasses can be planted to augment the stabilizing effects of the Biomimicry technique.

In April, 2016, the JIA requested and received a letter of acknowledgement allowing us to implement a pilot study deploying a Biomimicry Coastal Restoration System to capture windblown sand with the goal of establishing stable dunes closer to the beach, thereby reducing dune encroachment on a residential property. If this project proves to

be successful, we aim to deploy this system, potentially in combination with sand sourced from the sand bank, to manage the growth and stability of sand dunes in a more sensitive and effective manner than previously possible, in a variety of suitable locations. Locations where the Biomimicry system may be suitable and beneficial could include any areas where migrating dune encroachment, or dune failure due to erosion, may otherwise compromise existing public park spaces (As in Case Study 2 and 3) or cause the loss of high-value natural habitats, such as freshwater wetlands or maritime grasslands. This process is very minimally invasive to the landscape, proposes no hindrance or hazard to any wildlife, and provides the JIA with the flexibility to alter or remove the system if circumstances changes or when goals are achieved. See Appendix A for drawings and photos of this Case Study 1.

Case Study 2 – Great Dunes Park Dune Stabilization and Sand Bank

Great Dunes Park is situated adjacent to the dune field, and immediately north of the Jekyll Island Convention Center. Portions of the park fall within the SPA jurisdictional area. Part of the park is subject to ongoing dune encroachment and resulting drainage issues that have become significant operational and safety concerns. The site is continuously inundated with sand which significantly reduces the usable width of the existing multi-use paved trail surface. The adjacent dune crossover is believed to have exacerbated the issue by altering the flow of air and wind-blown sand in the vicinity, resulting in the rapid growth of large, unstable, un-vegetated dunes immediately adjacent to the park. To accommodate the safety of park users, we are proposing, in addition to the sand fencing that was added under a previous Letter of Permission, vegetating the encroaching dune face, and collection of “nuisance sand” for sand-banking and subsequent beneficial use. The next phase would be to revegetate and stabilize the eroding face of the dune with native dune vegetation. Going forward, any sand that encroaches directly upon the paved path would be collected and banked at an alternative location to support later beneficial-use in dune restoration or enhancement projects. This sand bank will allow us to improve areas like St. Andrews Beach / Picnic Area, which is discussed further in Case Study 3. See Appendix A for Drawings and photos of this Case Study 2.

Case Study 3 – St. Andrews Park Dune Restoration

In recent years, St. Andrews Park has been impacted by pedestrians unwittingly trampling the dunes and creating a multitude of unplanned, unimproved paths to the beach. This activity had severely degraded the ecological and shore-protection values of the dune system. Recently, we mitigated that impact through a small-scale dune restoration project that was restricted to the shoreward side of the SPA Jurisdiction line. The project included using localized sand from within the park to rebuild/restore a trampled dune. Although the entire project was completed landward of SPA jurisdiction, we would have preferred to extended the rebuilt dune line closer to the seaward toe of

the existing dune field and would have added native vegetation to promote dune stability. Unfortunately, timing challenges and regulatory process hurdles resulted in a smaller scale project at this location than might have been most effective. This case study is an excellent example of a project that improves and protects dune systems with a scope that presents itself on both the shoreward and seaward sides of the SPA jurisdiction line. Our ability to implement projects on either side of the SPA line is crucial for the effective management of this dynamic area. See Appendix A for Drawings and photos of Case Study 3.

Case Study 4 – Interdune Enhancement and Restoration

For this project we would propose to enhance interdune areas shoreward of the primary dunes using native vegetation plantings. A specific location, on either side of the dune crossover associated with Camp Jekyll, is conceptually envisioned for this project. The interdunal area at this location is largely devoid of vegetation and could benefit from the establishment of natural vegetation sourced from seed found locally on the island. Further, Southern Atlantic Coastal Plain Dune and Maritime Grassland (referred to as maritime grassland from here on out), is considered a G2 globally imperiled habitat dominated by Muhly grass (*Muhlenbergia sericea*), various graminoids, and flowering plants. It is among the first early successional habitats that establish in dunes, and are known to stabilize the dynamic dune field. Maritime grasslands generally occur where accretional dune growth takes place, but the reduction of accretion rates can result in shrub-land habitats taking over through succession. This process, along with habitat loss due to development, has contributed to the decline of the habitat type along much of Georgia's coast. On Jekyll Island only two small pockets of naturally occurring *Muhlenbergia* grasslands exist, and one of these is immediately threatened by sea-level rise. This project would serve multiple functions: 1) conservation of a rare and declining habitat, 2) enhancement of ecological value and habitat diversity for wildlife, providing refuge and forage, 4) public education, to promote awareness of threats facing dune habitats and the wildlife and flora that inhabit dunes. The educational opportunity is particularly compelling on the Camp Jekyll crossover site because more than 14,000 students are anticipated to pass through the site on an annual basis.

2. Description of Alternatives Considered

The only alternative to this permit is easily demonstrated by the status quo. That is, in the current SPA regulatory environment, medium and large scale, planned, budgeted, high-priority projects, that interact with the SPA jurisdictional area on Jekyll Island, are much more likely to have the resources to go forward, meeting the necessary regulatory hurdles. These projects also tend to have more substantial environmental footprints and are generally primarily designed to accommodate the needs of development. Unfortunately, smaller-scale projects, that often may arise in response to an unanticipated environmental development, therefore being unplanned and unbudgeted,

often struggle to meet the bar for allocation of resources to navigate the regulatory process. These smaller-scale projects by nature tend to arise opportunistically, have light footprints, and the motivational drivers tend to be protection or enhancement of natural resources values and management of human interaction with the jurisdictional area.

In short, without the permit proposed here, Jekyll's managers who routinely engage with the natural environment, including our Conservation, Landscape and Planning, and Roads and Grounds staff, are discouraged from making opportunistic, light footprint, improvements within SPA Jurisdiction that are explicitly intended to more responsibly manage the resource and the way people are interacting with it.

A manager that cannot efficiently act to manage, protect, or enhance, a dynamic resource, cannot be an effective manager of that resource. The permit proposed and the scope described herein is the preferred alternative over the status quo because it will allow managers to act quickly and inexpensively within a scope that is explicitly designed to facilitate actions that will accrue net benefits for ecosystem and shore-protection values associated with the SPA jurisdictional area.

BMPs will be used for every decision made along with this permit. Each decision will weigh the alternatives and pick the best option based on the management goal. The overall quality of habitat and the functionality of the sand-sharing system will not be degraded. Rather, it may be better protected, or enhanced under this permit.

3. Landfill/Hazardous Waste Statement

According to the Hazardous Site Index for Georgia, the subject property is not located over a landfill or hazardous waste site and is otherwise suitable for the proposed project.

4. Public Interest Statement

Whether or not unreasonably harmful, increased alteration of the dynamic dune field or submerged lands, or function of the sand-sharing system will be created. The proposed project will not unreasonably alter the function of the sand-sharing system. The proposal includes some minor alterations to the existing dune fields, BMPs will be followed and all decisions will be made with the goal of keeping the function of the system intact while still providing public access and promoting habitat enhancement and restoration. These minor disturbances will be temporary as part of the permit will allow the JIA to restore with native plantings of dune vegetation, and these restored areas will only enhance the dynamic dune field.

Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of marine life, wildlife, or other resources. The proposed project will enhance rather than interfere any conservation goals of marine life, wildlife, and other natural resources. Our goal for this project is to provide us with a management tool to protect and manage our natural resources on Jekyll Island through habitat enhancement and restoration and the management of public access.

Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with reasonable access by and recreational use and enjoyment of public properties impacted by the project. The proposed project will not unreasonably interfere with access or use and enjoyment of public properties. The proposed project is to be constructed entirely on public property. The project will maintain or improve current access to and for the use and enjoyment of public land. The applicant's proposal will enhance access and safety while also keeping the goal of protecting and managing the natural resources of Jekyll Island.

Drawings of the Proposed Project

Case Study Drawings and Samples have been attached. See **Appendix A**.

Deed or Other Instrument of Title or Permission and Property Plat

Jekyll Island Authority manages all lands within Jekyll Island, Georgia. See attached deed: **Appendix B**

Adjoining Property Owners

There are none. The Jekyll Island Authority manages all lands within Jekyll Island, Georgia. See attached deed: **Appendix B**

Zoning Letters and Signed Drawings from Local Government

See attached deed which includes zoning letter from Daniel Strowe, Legal Associate: **Appendix B**

Certification that Project Meets Hurricane Design Standards

See attached letter from Johnathan Roberts, Civil Engineer: **Appendix B**

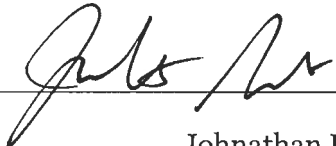
Application Fee

The application fee has been waived for this project as the Jekyll Island Authority is a State Agency.

Hurricane Design Standards Statement

The project that has been proposed does not have a structural component and therefore does not violate any hurricane design standards.





Johnathan Roberts

Key

- Public Parking
- Access #
- Boardwalk #
- Kilometer Marker
- Public Restroom
- Vehicle Access
- Shrimp Boat Wreck
- Handicap Accessible

*General Public Access
 **Picnic Area
 ***Hotel Access
 ****Private Access Only



Map created by: Breanna Ondich