Habitat Management Plan for Dataw Island

Dataw Island Conservancy

November 2020

1.0 Introduction

1.1 Background

Alcoa, the developers of Dataw Island, recognized the vegetation and wildlife on the island as valuable resources when they started development in the early 1980s. They retained a consulting naturalist, John Reid Clonts, to conduct a study entitled "The Vegetation and Wildlife Resources of Datha Island, Beaufort County, SC." Alcoa planned and designed the development to conserve natural areas and built roughly 24 freshwater ponds, which not only detain stormwater runoff to protect water quality, but also provide habitat for a diversity of wildlife.

The Dataw Island Owners Association (DIOA) and the Dataw Island Club (DIC) approved forming the Dataw Island Conservancy, Inc. as a 501(c)3 corporation in 2012. "The mission of the Dataw Island Conservancy is to assist in the preservation of Dataw Island's environmental character by attempting to permanently conserve, maintain and manage the natural areas and habitats of the island and its surrounds; and encouraging an appreciation of, and interest in, the island's natural resources by the residents of Dataw Island." DIOA and DIC initially funded the Conservancy, for three years, as a growing number of property owners contributed through annual supporter drives and fund raisers. Currently, the Dataw Island Conservancy is self-sufficient.

The Conservancy conducts several programs that focus on appreciating and protecting wildlife and habitat on Dataw Island. Key relevant programs include:

- Bird Counts – one-day Christmas bird count and four-day Great Backyard bird count conducted annually
- Tree Fertilization, Lightning Protection and Planting – mostly live oak trees fertilized and/or lightning protected; assortment of trees planted in areas affected by storms/hurricanes
- Osprey Nest Platforms – five installed around island
- Purple Martin House Nesting Surveys and Assessments – maintained and annually monitored houses for nests, eggs and fledglings; annual report
- Bluebird Box Nesting Surveys and Assessments – in conjunction with Golf, maintained and annually monitored bluebird boxes for nests, eggs and fledglings; annual report
- Tallow Tree Removal Program – surveyed and located invasive Chinese tallow trees; "hack and spray" and/or removed trees; notified property owners regarding prohibition of tallow trees and assisted owners in removal
- Oyster Reef Substrate Replenishment – in conjunction with SC Department of Natural Resources restored oyster habitat by laying bagged oyster shells along the 14th hole of the Morgan River golf course
- Marsh Memorial Dinner/Presentation, Nature Talks and Iconic Tree Tour – sponsored various environmental education events fostering residents' appreciation of wildlife and habitat

1.2 Impetus for Habitat Management Plan

According to the membership survey conducted in late 2019 by Kopplin, Kuebler & Wallace and Club Benchmarking, the number one "top buyer's interest" of Dataw Island property owners is the natural beauty of the island.

As one looks around Dataw Island, one notices that there are fewer areas left in a natural state now compared to a few years ago. This loss of natural areas is attributable to development of Club facilities such as the pickle ball courts, bocce courts and the History & Learning Center, and the construction of hundreds of houses. Well-planned development is definitely a sign of a successful, residential community. However, the trend means that the remaining natural areas are even more important than ever as habitat for the wildlife (e.g., birds, butterflies, frogs and bats) that reflect a southern Low Country community. The value of native plants and wildlife is that they make up the natural beauty and historical charm that attracted residents to buy property on Dataw Island and enjoy living here.

During informal discussions regarding proposed amenities such as bocce and pickle ball courts, pleas to leave green space were common reactions. Rather than continuing to take a reactive position, the Dataw Island Conservancy is being proactive by identifying natural areas on the island that should remain in a natural state. This Habitat Management Plan (HMP) advocates for conserving natural areas for the foreseeable future.

In addition to planned development, significant storms such as Hurricane Matthew in 2016 destroyed hundreds of trees. The loss of mature trees due to Matthew is still noticeable and it is still being mitigated by planting young trees in their place.

As an outgrowth of our mission, the above recent and ongoing programs and the realized loss of natural areas, the Dataw Island Conservancy embarked on developing a Habitat Management Plan for Dataw Island.

1.3 Overview of the HMP Development Process and Key Components

The Board of the Dataw Island Conservancy sought the advice of Dr. Christopher Marsh, who has served as the Director of the Spring Island Trust and Lowcountry Institute since 1998. He graciously accepted the Board's request to be the advisor for developing the Habitat Management Plan. For the past 22 years he has served as the director of the environmental non-profit responsible for environmental stewardship of Spring Island, a 3,000 acre sea island that serves both as a nature preserve and a community of 350 residents. Dr. Marsh's expertise is evaluating the habitat quality of southeastern natural communities and working with designers of human communities to minimize the impact of the human footprint.

The first meeting with Dr. Marsh occurred on February 6, 2019, when he discussed his ideas on how to proceed and encouraged the attendees (see Section 2.1 below for details) to discuss their

perspectives regarding the natural areas on the island. In laying out a road map for the HMP, Dr. Marsh recommended that we draft a Vision Statement to express the foundation of the HMP. While Dr. Marsh spearheaded the ecological assessment at the outset, he also explained that there were certain technical tasks, such as Geographical Information Systems (GIS), which were beyond his scope of services. Dr. Marsh recommended Folk Land Management Inc. (FLM), woodland and wildlife consultants of Green Pond, SC, for GIS mapping and land management services.

Thus, the process of developing the HPM entailed four key components, which are described later in this document:

1. Vision Statement
2. Ecology Guide
3. Land Use Mapping
4. Management of Natural Areas

The Dataw Island Conservancy is integrating these four components into its HMP by providing the quilting that unites the results of each step which was built on the previous one.

This document, Habitat Management Plan for Dataw Island, presents the work accomplished during 2019 and 2020 to delineate and describe the habitat value of natural areas on the island, as well as potential areas that may enhance wildlife habitat. The Dataw Island Conservancy presents recommendations for habitat management in the last chapter of this report. The final report is being released to the entire Dataw Island community. The Dataw Island Conservancy's hope is to establish the HMP as a living document, which will be reviewed and revised as needed.

2.0 Early Stages of HPM Development

2.1 Consultation with Dr. Christopher Marsh

Dr. Marsh's first meeting was held on Feb. 6, 2019 with: DIOA Board member (Rebecca Sprecher), Dataw Historical Foundation (DHF) Board member (John Colgan), and Conservancy Board members (Guy Apicella, Herb Stackhouse and David Dolan). Dr. Marsh advised the group to look at the entire island and not limit the plan to designated natural areas. Opportunities for habitat exist on common ground, golf course out-of-play areas, as well as undeveloped and developed private properties.

He also advised the attendees to include other clubs like Garden Club and the DHF. He recommended that the managers of the Landscaping, Golf Course Maintenance and Marketing departments be involved in the HMP development.

The board of the Dataw Island Conservancy formed an ad hoc committee with representatives of the DIOA Board (Rebecca Sprecher), DHF (John Colgan), Garden Club (Holly O'Shea), Landscaping Manager (Christi Henry) and the Dataw Island Conservancy Board (Guy Apicella, Herb Stackhouse, George Cartledge, David Dolan and Charles Holbrook).

Dr. Marsh stated that he wanted our Boards (DIOA, DIC) to agree to a vision statement that stresses the Lowcountry feel with nature as part of this experience. He also recommended open communication with the Dataw Island community at all stages of the development process. It should be noted that articles concerning the HMP are featured in our bi-annual newsletter, Green Wood, Spring and Fall 2019 issues and Spring and Fall 2020 issues.

2.2 Field Assessment and Outdoor Meeting and Walk with Ad-hoc Committee

During the early morning of April 17, 2019, Dr. Marsh and another biologist of the Lowcountry Institute conducted a survey of green spaces on the island to identify birds and other wildlife present. They focused primarily on the Marina area and the area around the History and Learning Center, Ruins, Cannery Library and Community Gardens. (These areas were the subject of a land use planning study at this time.)

Afterwards, he met with the ad-hoc committee to summarize his observations. He noted there are patches of habitat (e.g., woods, ponds, wetlands and thickets) native to the Lowcountry, forming a mosaic of green spaces attractive to wildlife interspersed with residential properties, non-residential buildings, golf courses and other recreational facilities. He observed that certain desirable birds, such as the painted bunting, are limited to a single natural area rather than being present in most of the green spaces.

He provided a list of “Desirable Species for a Sea Island Residential Community” (Table 1 on following page). As the group walked around the Marina area, Dr. Marsh pointed out the shrubs and thickets that are inhabited by birds (e.g., painted bunting), butterflies and dragonflies. Dr. Marsh noted that little natural area remains on the island and that certain plant species (e.g., hackberry trees), which attract birds, are sparse. He said the remaining natural areas barely work as wildlife habitat and there is no “extra” green space to give up before seeing ecological consequences.

Table 1

DESIRABLE SPECIES FOR A SEA ISLAND RESIDENTIAL COMMUNITY

Butterflies & Moths

- Palamedes swallowtail
- giant swallowtail
- snout (butterfly)
- salt marsh skipper
- skippers-at least 3 "grass species"
- silk moths (luna, cecropia or Polyphemus)

Dragonflies

- green darner
- pondhawk
- seaside dragonlet
- damselflies

Herps

- southern toad
- green tree frog
- green anole
- Eastern glass lizard
- yellow rat snake

Birds-breeding season

- osprey — nesting
- red-tailed hawk (open habitat)
- red-shouldered hawk (wooded habitat)
- great-horned owl (open habitat)
- barred owl (forested habitat)
- green heron - nesting
- eastern screech-owl
- pileated woodpecker
- red-bellied woodpecker
- red-headed woodpecker
- white-breasted nuthatch
- great crested flycatcher (wooded habitat)
- eastern wood-pewee (open habitat)
- northern parula
- yellow-throated warbler
- eastern bluebird
- painted bunting
- summer tanager
- orchard oriole

Mammals

- Seminole bat
- free-tailed bat
- bobcat

2.3 Vision Statement

The Vision Statement for the HMP was written by Dr. Marsh and the ad-hoc committee. It was published in the Spring 2019 issue of Green Wood, the Dataw Island Conservancy's newsletter, and is reprinted here:

> *The Dataw Island community is committed to maintaining the beauty and mystique of this special place for generations to come by creating and maintaining a habitat management plan (HMP) that identifies where native vegetation is to be protected, how these areas should be managed on an ongoing basis, and how native plants can be used throughout the community to attract birds, butterflies and other desirable species of wildlife.*
>
> *One of the values of this vision statement is that it shows potential buyers that the community has a program that helps protect a person's long term investment once they purchase a home at Dataw. Furthermore, the HMP assures existing residents, who bought property when there was a lower housing density than presently, that Dataw's lowcountry character will be conserved.*
>
> *The ultimate goal is to protect the birds, mammals, reptiles and other kinds of wildlife that share the island with us, so the community can continue to thrive in harmony with nature.*
>
> *Once the HMP is developed by an ad hoc committee comprised of representatives from relevant organizations (e.g., Conservancy, DIOA, Garden Club, Common Ground Committee) and approved by the board of the DIOA, it provides guidance and direction for designating the use of land on the island.*

The Vision Statement was sent by email to the Boards of the DIOA and DIC as well as the General Manager, Ted Bartlett. While the Conservancy Board intended the Vision Statement to be for the island in general, it specifically wanted it to apply to the Marina District and the Community Gardens, which were subjects of a land use study during 2019.

General Manager, Ted Bartlett, responded with this email:

> *Mr. Apicella,*
>
> *Thank you for a copy of the HMP. You can be sure that we will have it in mind as we develop our DIOA land planning options. - Ted*

Mr. Bartlett was referring to the aforementioned land use study of the Marina and Community Garden areas, which did not culminate in producing definitive plans for either area. The President of DIOA, Sue Zankowski, and President of DIC, Ted Barber, were copied on Mr. Bartlett's email. Further, no negative responses to the Vision Statement were received.

The Vision Statement set the foundation for building the remainder of the HMP.

3.0 Ecology Guide of Dataw Island

3.1 Island-Specific Ecology and Related Information

The Dataw Island Conservancy wrote the Ecology Guide to inform residents about the plants and animals that inhabit the island so that all can coexist in harmony. The Ecology Guide states, "The wildlife on Dataw is truly WILD and the goal is to keep it that way." It reminds people to respect the wildlife's place on the island and protect their natural nesting and breeding habitat for our enjoyment without endangering their survival or taking any unnecessary risks ourselves. It provides information about outdoor recreation such as where to crab and fish on Dataw as well as the proper protocols.

It is a colorful compendium of information with photographs of many different species of wildlife and vegetation living on Dataw Island. It can be used to help identify critters and plants that are seen in the yards and green spaces. It emphasizes the importance of the salt marsh surrounding the built environment as the link between the marine and terrestrial environs. Warnings concerning environmental hazards and pests, such as fire ants, mosquitos, no-see-ums, moles, ticks, chiggers, poison ivy/oak/sumac and tallow trees, are issued and potential remedies are offered. The booklet also summarizes ecological projects and programs conducted primarily on Dataw. Finally, the guide lists resources, online websites and printed pamphlets, which are available for additional information.

3.2 Companion Document to HMP

The Ecology Guide complements the HMP by describing the island's wildlife in terms of each animal's preferred habitat. The vegetation where the animal forages, nests and breeds is identified and described in the Ecology Guide. An understanding of the relationship between the wildlife and its habitat is key to identifying the importance of that habitat on the island and managing those spaces in the future. Thus, the Ecology Guide sets the stage for the HMP.

All members of Dataw Island have access to the digital version of the Ecology Guide which is on the Conservancy pages of the Dataw website. Here is a link to the pdf version. The Conservancy is giving a printed copy of the Ecology Guide to each supporter who makes a donation to the Conservancy in 2020 and requests the booklet.

4.0 Land Use Mapping

4.1 Folk Land Management

The Conservancy Board recognized that the accuracy and precision needed to delineate and map natural areas, as well as other types of land use, warranted the use of Geographical Information Systems (GIS). As stated previously, the Conservancy retained Folk Land Management (FLM), a firm

with Certified Wildlife Biologists and GIS capabilities, to provide technical services in developing the HMP. The first task for FLM was to apply GIS and produce a digitized map showing the existing land uses throughout Dataw Island.

4.2 Methodology

FLM accessed existing mapping data primarily from Beaufort County property parcel records and satellite imagery. The Conservancy Board met twice with FLM to point out natural areas that provide wildlife habitat. The Board also provided existing real estate and utility maps of Dataw Island to FLM. The Architectural Review Board (ARB) provided lists of developed (resident) lots, and unoccupied lots held privately or by DIOA/DIC. Lots under construction in January-April 2020 were mapped as resident parcels. FLM biologists also drove and walked through certain parts of the island to survey and "ground truth" land use.

FLM provided a draft land use map for the Conservancy Board's review and comment. The board requested an expansion of the map to include the area off Polawanna Road where the Landscaping Department stores mulch (known as "Bunker Hill") as well as the entry way and causeway. We also defined the final land use categories of the island in terms of these major land use classifications (and sub-classifications): residential parcel (resident, unoccupied, DIOA), road, common ground, club house complex, golf course, recreational facilities, landscaping/sales facilities, historical features, freshwater ponds and natural areas. FLM then revised the map in a second draft for another review. The Conservancy Board made minor changes to the second draft land use map in the recreational facility area encompassing the pool, tennis, croquet and bocce courts. FLM delivered the final Land Use Map in May 2020.

4.3 Mapping Results

The Land Use Map of Dataw Island is presented in Appendix I on page 17. The GIS analysis of the mapping data yielded this breakdown of areas that fall into the land use classifications:

Classification	Acres	Percent
Resident Parcel	299.5	34.7%
Golf Course	275.0	31.9%
Road	111.7	13.0%
Natural Area	48.3	5.6%
Unoccupied Resident Parcel	45.8	5.3%
Freshwater Pond	41.1	4.8%
Recreational Facility	12.9	1.5%
Common Ground (landscaped)	8.9	1.0%
Facility	8.5	1.0%
Club House Complex	5.7	0.7%
DIOA Parcel	2.5	0.3%
Historical Feature	2.3	0.3%
Total	862.2	100.0%

Areas classified as "Natural Area" are wild or nature preserve areas which are left "as is", including: Common Ground (Category 1 in DIOA Level of Care and Maintenance document) areas, forested

areas (Category 2), buffers around ponds, and utility right-of-ways. Natural Area virtually always provides habitat for wildlife.

By differentiating the unoccupied privately-owned and DIOA-owned properties from the developed private properties, one can see the advanced state of residential development on the island. Resident (developed) parcel area (299.5 acres) accounts for 86% of the total residential parcel area (347.8 acres, which includes unoccupied and DIOA parcels). In addition, the future "build-out" condition will result in a loss of 45.8 acres of unoccupied private parcels and 2.5 acres of DIOA parcels that are presently undeveloped. The total undeveloped parcel area (45.8 + 2.5 = 48.3 acres) coincidentally equals the Natural Area at the present time. Hence, the "build-out" of all remaining parcels will effectively reduce the natural undeveloped area presently on the island by 50%. The existing and build-out resident parcel conditions are reference points for future land use management decisions.

Freshwater ponds, which also provide habitat to aquatic and amphibian wildlife, comprise 41.1 acres, 4.8% of the island. The "green" areas surrounding many of these ponds are roosting, breeding and/or nesting areas for the many different birds found on Dataw.

On May 28, 2020, the President of the Dataw Island Conservancy (Guy Apicella) emailed the land use map to the boards of the DIOA and DIC, General Manager (Ted Bartlett), Director of Landscape (Christi Henry), Director of Golf Maintenance (Brian Hollingsworth), DHF President (Marilyn Peck) and the Garden Club President (Patty Van Sant) for their review and comment. The President of the DIC (Bill Weber) and DIOA Board member (Jack Sovern) replied that the map will be useful and thanked the Dataw Island Conservancy. There was no other response.

5.0 Natural Areas Management Plan

5.1 Site Assessment of Natural Areas

The second task for FLM was to assess the natural areas as wildlife habitat and recommend how the areas should be managed in the future. FLM completed this task and documented their findings in a written report, "Management Plan for Dataw Island Natural Areas", Dean Harrigal, Certified Wildlife Biologist, FLM, October 2020. The full report is provided as Attachment A by this link.

The 20 Natural Areas which are shown on the map included as Appendix I of this report, are:

- Audubon Marsh Preserve/Big Dataw Pond
- Chicora Point Upland Forest
- Clubhouse Bluff
- Curisha Pond Site
- Doe Point Circle
- Hill Field Lake
- Long Field Lake

- Main Entrance and Bobb Island
- Malilly Pond Marsh Cove
- Marina Drive Rookery Pond
- Marina Upland Forest
- North Boone Road Upland Forest
- Osprey Point (Sparrows Nest Point)
- Palmetto Point (North and South) Areas
- Pee Dee Bluff Forest
- Pee Dee Point Circle Wetland
- Pee Dee Point Natural Area
- Reeve Court Pond
- Sparrow Nest Ponds
- Spring Well Pond

The assessment of each of the 20 Natural Areas is documented by FLM under these headings: General Description, Current Conditions, Wildlife Values, Desired Future Conditions and Management Actions. The write-ups identify the vegetation on the site and the species of birds, mammals and amphibians commonly observed there. Certain areas where habitat may be improved are noted in terms of missing trees or shrubs in the Desired Future Conditions section. Management Actions for each natural area varies from routine maintenance to planting certain shrubs and/or trees.

FLM's report provides the biological basis for placing value on these Natural Areas that serve as habitat for the wildlife on Dataw Island. The inter-relationships of the plants and animals, described in the Ecology Guide, are explained to help one understand the basic needs of wildlife, such as food, shelter and freshwater for osmoregulation (maintenance of constant osmotic pressure in the fluids of an organism [e.g., alligator] by control of salt concentration).

The Natural Areas of Dataw Island generally have one of these landforms: a remnant maritime forest, a marsh/wetland or a freshwater pond. Some areas such as Hill Field Lake have two of these features; some have more.

The Conservancy urges everyone to read the FLM report for a detailed assessment of the 20 Natural Areas and a deeper understanding of the island's wildlife habitat.

5.2 Natural and Supplemental Habitat Features

Man-made features are installed at various locations on the island to attract certain types of wildlife. In addition, bald eagles have been nesting and eaglets fledgling in a tree on Longfield Drive for the last two years. Key avian nests and iconic trees are shown on the map in the FLM report (Attachment A), which is also included as Appendix II of this HMP report. These features include:

- Bluebird Nest Boxes
- Purple Martin Nest Houses

- Osprey Nest Platforms
- Bald Eagle Nest
- Green Ash Tree
- Wedding Live Oak
- Sams Cemetery Live Oak

Although the first three nesting structures cannot substitute for natural areas as habitat, they supplement the areas in providing nests for birds to reproduce on and around Dataw Island. In addition, the three listed trees are majestic and signature specimens of the landscape. They are fertilized and lightning-protected to insure that they continue in a healthy state

5.3 Undeveloped Residential Parcels

FLM also took into account the undeveloped residential parcels that make up approximately half of the undeveloped area of Dataw Island. “The vegetation of these parcels is maintained in various levels of intensity. Some parcels are mowed on a routine basis while others are maintained on a much less frequent basis. This results in a wide range of habitat types and values across the island, from the grassy and small shrub conditions of the more frequently mowed areas to the denser scrub-shrub type habitats of the less frequently maintained areas, contributing to the overall upland habitat diversity. Where these undeveloped parcels are adjacent to (or near) established natural areas, they can greatly increase the overall natural values of the vicinity.”

FLM’s report generally identifies residential parcels that are situated adjacent to certain Natural Areas and would extend wildlife habitat if they remain undeveloped rather than developed. According to FLM, protecting any of these parcels would add to the long-term habitat value of the adjacent and nearby natural areas.

5.4 Red Flag

FLM observed that the rookery on Marina Drive, opposite to the Community Center facility, is at risk of physically collapsing. The western edge of the pond has a dead shrub layer (most likely wax myrtles) which are being supported by a tangle of vines keeping them up right and making them available for nesting. The shrubs were mostly likely killed by the high acidity of bird guano.

This pond serves as an important rookery area for wading birds such as great and snowy egrets which utilize the shrub layer vegetation bordering the pond for nesting platforms. This pond is arguably the top bird viewing location on the island. There were 450 birds simultaneously in this Natural Area during the Great Backyard Bird Count in February 2020.

FLM states “Eventually the dead shrubs will collapse rendering them unavailable for nesting. The birds will abandon this site and relocate to another suitable site.” Conserving additional pond-side natural areas that have shrubs to function as a rookery in the near future is prudent action to take.

5.5 Recommended Management Actions

FLM states that, in general, the Natural Areas on Dataw will require very little active management. Overall, this is consistent with the DIOA Level of Care and Maintenance for Category 1 and Category 2 areas; that is, “preserve areas, which will be left as is.”

Nevertheless, FLM did recommend certain actions to protect and enhance a number of Natural Areas; they are:

- Supplemental tree planting
- Reduce frequency of pond border mowing
- Consider securing adjoining undeveloped lots from DIOA and private owners

In addition, FLM cautioned us to prepare for the collapse of Marina Drive Rookery by having other similar areas to function as breeding and roosting spaces.

FLM also stated that development of the remaining unoccupied residential parcels would have a noticeable effect by limiting the presence of desirable wildlife such as herons, egrets, bluebirds and painted buntings. Although limiting development of these undeveloped parcels poses management issues, select lots adjacent to natural areas could be considered for protecting habitat and thereby mitigating impact.

The Dataw Island Conservancy Board considered FLM’s recommendations in forming its own recommendations that are presented in Chapter 6.

6.0 Dataw Island Conservancy Recommendations

6.1 Conservation of All Existing Natural Areas Shown on Land Use Map

In light of the assessments by Dr. Christopher Marsh and FLM, the native wildlife on Dataw Island needs the remaining available habitat to survive. Therefore, the 20 Natural Areas, which are shown on the existing land use map and described thoroughly in the FLM report, should be held permanently in conservation. These predominantly common ground areas should be listed in the DIOA Level of Care and Maintenance document as Category 1, defined as wild or nature preserve areas to be left as is, or Category 2, defined as open forested area that will be treated as Category 1. The listing of the 20 Natural Areas in DIOA’s Level of Care and Maintenance document should, in effect, memorialize conservation of these areas in the future.

6.2 Enhance Natural Areas as recommended by FLM

FLM noted that certain Natural Areas have gaps in the tall tree canopy where sunlight penetrates to the ground. The Dataw Island Conservancy recommends planting habitat-friendly trees to fill in the sunlight gaps on these Natural Areas: Chicora Point, Curisha Point, Doe Point and North Boone. Details concerning the number and species of trees as well as the watering of new plantings would be discussed with the Director of Landscaping, Christi Henry.

FLM also noted that the grass around many Dataw ponds is mowed low to the ground. The Dataw Island Conservancy echoes FLM's recommendation to reduce frequency of pond border mowing. As the slope along the banks of several ponds necessitates use of a weed wacker, the cutting height can be several inches off the ground to provide habitat for turtles, frogs and others pond dwellers. In addition to benefitting habitat, the high-grass fringe would filter pollutants (particulates, bacteria, nutrients) from stormwater flowing into the ponds. Again, details would have to be discussed with Christi Henry (Landscaping Department) and Brian Hollingsworth (Golf Course Maintenance Supervisor).

6.3 Secure Undeveloped Lots for Conservation

There are currently approximately 130 undeveloped lots on the island, excluding lots that were under construction in June 2020 or owned by Logan or held by the DIC. FLM generally highlighted undeveloped residential parcels that are situated in, or adjacent to, certain Natural Areas, such as Hill Field Lake, Long Field Lake, Curisha Pond, Palmetto Point, Reeve Court Pond, Pee Dee Point and North Boone. FLM recommended protection of any or all of these parcels to complement the Natural Areas' habitat.

The Dataw Island Conservancy recognizes the outstanding habitat value of many undeveloped lots. In particular, several unoccupied lots along Hill Field Lake have shrubs that extend over the water and serve as relatively small roosting and nesting sites; these lots can become prime roosting and nesting sites for the many birds that presently use the Marina Rookery, but will have to find another site when that site's shrubs collapse (see Section 5.4).

The Dataw Island Conservancy recommends that the DIOA Board consider the advantages and disadvantages of acquiring a number of undeveloped lots from private owners and/or the DIOA for conservation. We have a priority list of undeveloped residential parcels based on wildlife habitat value. The Dataw Island Conservancy wants to collaborate with the DIOA Board to analyze cost-benefits of the undeveloped lots on our priority list. The results of this analysis would then be presented to the DIC Board for review and comment. The Conservancy Board hopes this effort would culminate in conservation of select undeveloped parcels.

6.4 Collaborate with Garden Club

The Dataw Island Garden Club is well positioned to support habitat protection and enhancement. We propose two initiatives for their consideration.

- Plant a wildflower meadow between Butterfly Garden and Hill View Lake, as recommended by FLM. Pollinators, such as butterflies would be attracted to the meadow adding to the aesthetic appeal of this area.
- Encourage property owners to provide habitat by planting native species in their own yards. We suggest the club consider the National Wildlife Community Certification Program.

6.5 Extend Habitat on Golf Course Out-of-Play Areas

As the two golf courses account for 31.9% of Dataw Island's area, they can provide ample, suitable habitat without compromising the golfing experience. The Audubon Cooperative Sanctuary Program installation on Big Dataw Point near Morgan River #13 is a good example of existing habitat. The Dataw Island Conservancy recommends that the Golf Course Maintenance Supervisor explore other opportunities to collaborate in creating suitable habitat in areas mapped as golf course.

6.6 Prohibit Invasive Plants

The Dataw Island Conservancy continues working with Dataw Island management to remove and eliminate the invasive Chinese Tallow Tree. Over the last seven years, the Conservancy has made great strides to improve awareness of the importance of eliminating Tallow Trees. This is reflected in the 2019 DIOA rule that prohibits tallow trees on any (developed or undeveloped) residential parcels.

As stated by Clemson University: "The management of invasive species is challenging and complicated. Preventing potentially invasive species from entering an area is the most effective strategy. Careful monitoring can detect a pest before it becomes established and provide a rapid response to eradicate or control the pest and help to reduce environmental and economic impacts. This requires the awareness, participation and support of everyone in South Carolina."

The Dataw Island Conservancy recommends that Dataw expand its efforts to limit and control invasive plant species by enacting a rule/regulation that prohibits the planting of any invasive species as delineated by the State of South Carolina. The current listing "South Carolina Exotic Pest Plant Council Terrestrial Exotic Invasive Species List of 2014" is maintained by the South Carolina Exotic Pest Plant Council and can be found at se-eppc.org. It is recommended that none of the "Severe Threat" or "Significant Threat" species be allowed for planting on Dataw.

The Habitat Review Board of Spring Island and the Spring Island Trust prohibit planting the trees, shrubs, vines, grasses, aquatic plants and other plants that are listed as "Severe Threat" or "Significant Threat" anywhere on Spring Island. Spring Island's invasive plants list is included as Appendix III on pages 19-20 of this HMP report. The Conservancy Board recommends that DIOA issue a similar list and implement compliance through ARB.

6.7 Re-visit and Update Habitat Management Plan

This HMP is based on site-specific field observations and GIS analysis conducted in 2019 and 2020. Conditions are bound to change in the ensuing years depending on natural events such as major storms or man-made alterations like replacement of the causeway bridge. The HMP has to be considered a "living" document that needs to be reviewed periodically.

As the authors of this HMP, the Dataw Island Conservancy takes responsibility to review the HMP and report on its review to the DIOA Board every three years.

References

Clemson University Cooperative Extension and Clemson University Forestry and Environmental Conservation 2014. “Exotic Invasive Plant Species of South Carolina”

John Reid Clonts. “The Vegetation and Wildlife Resources of Datha Island, Beaufort County, SC.” Performed for Alcoa (no date provided)

Dataw Island Owners Association. “DIOA Level of Care and Maintenance.” Provided by Common Grounds Committee (no date provided)

Appendices

I Dataw Island Properties Landuse Map (July 21,2020) with Locations of Key Natural Areas Covered in this Plan (by Folk Land Management)

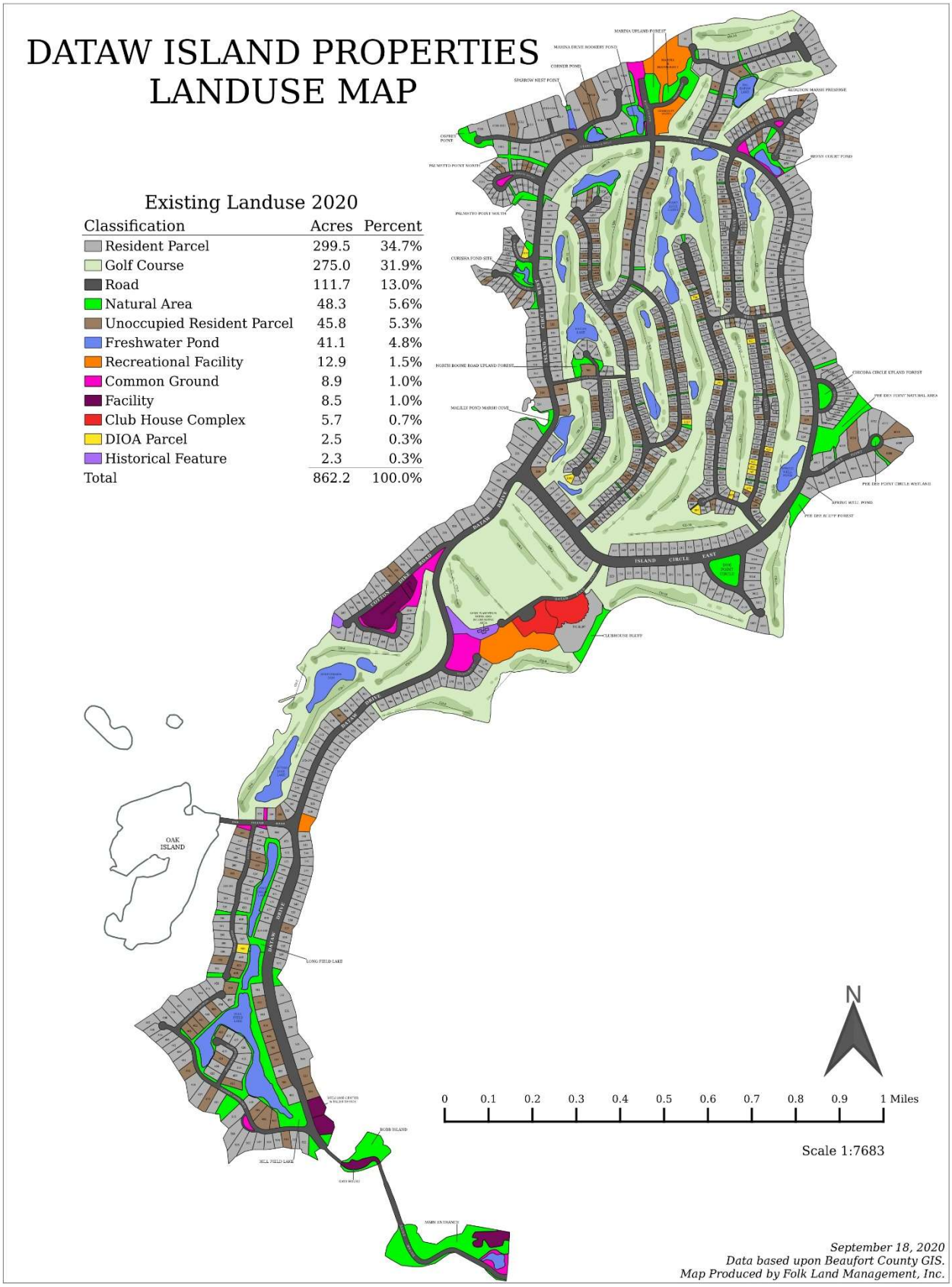
II Dataw Island Properties Natural and Supplemental Habitat Features

III Invasive Plants listed as Severe or Significant Threat by South Carolina Pest Plant Council and Adopted by the Habitat Review Board and Spring Island Trust

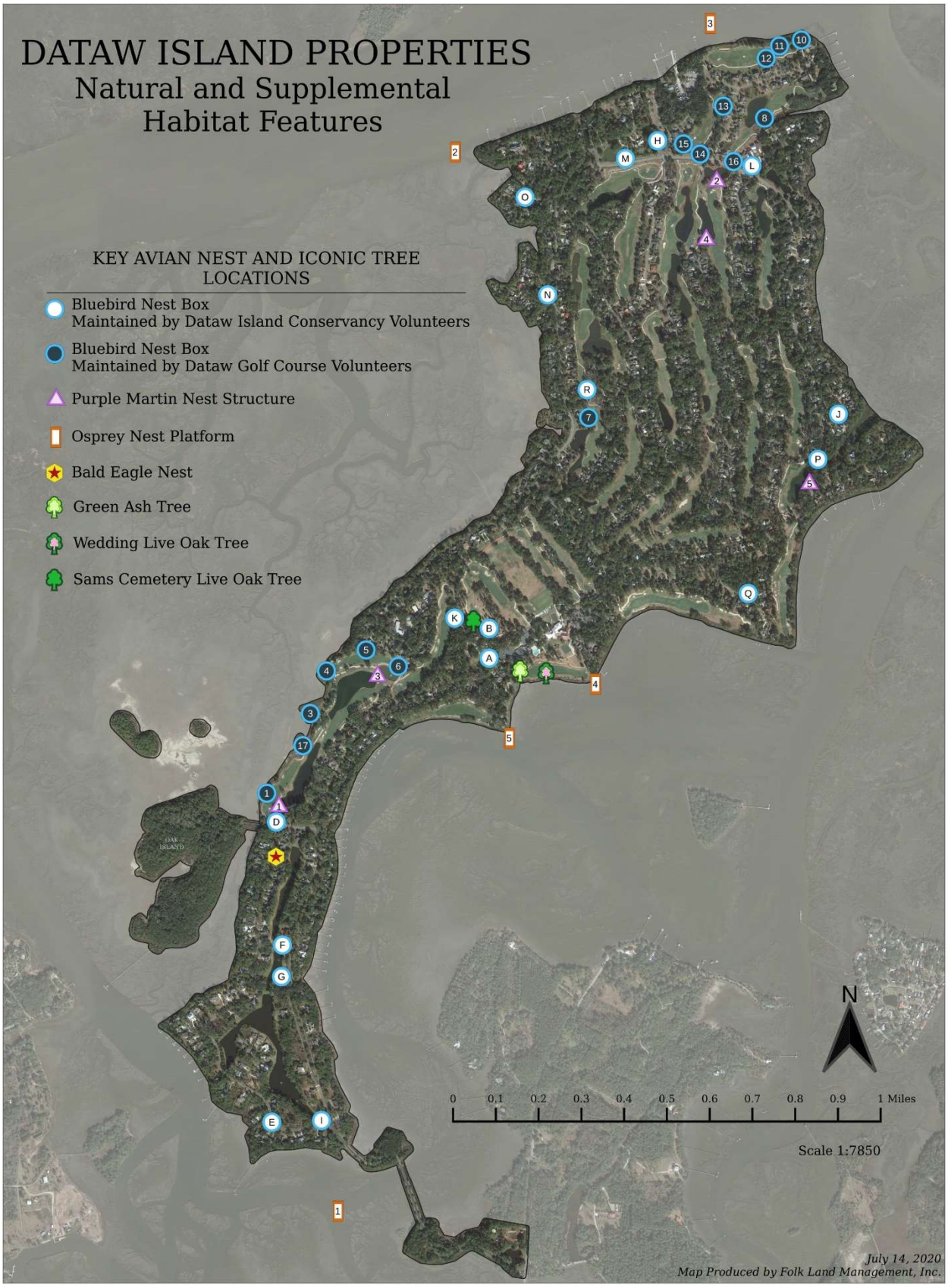
Attachment

I Management Plan for Dataw Island Natural Areas (October 2020) by Dean Harrigal, Certified Wildlife Biologist, Folk Land Management

Appendix I


DATAW ISLAND PROPERTIES
LANDUSE MAP
Existing Landuse 2020
Classification | Acres | Percent
Resident Parcel | 299.5 | 34.7%
Golf Course | 275.0 | 31.9%
Road | 111.7 | 13.0%
Natural Area | 48.3 | 5.6%
Unoccupied Resident Parcel | 45.8 | 5.3%
Freshwater Pond | 41.1 | 4.8%
Recreational Facility | 12.9 | 1.5%
Common Ground | 8.9 | 1.0%
Facility | 8.5 | 1.0%
Club House Complex | 5.7 | 0.7%
DIOA Parcel | 2.5 | 0.3%
Historical Feature | 2.3 | 0.3%
Total | 862.2 | 100.0%
OAK ISLAND
N
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 Miles
Scale 1:7683
September 18, 2020
Data based upon Beaufort County GIS.
Map Produced by Folk Land Management, Inc.

Appendix II


DATAW ISLAND PROPERTIES
Natural and Supplemental
Habitat Features
KEY AVIAN NEST AND ICONIC TREE LOCATIONS
Bluebird Nest Box
Maintained by Dataw Island Conservancy Volunteers
Bluebird Nest Box
Maintained by Dataw Golf Course Volunteers
Purple Martin Nest Structure
Osprey Nest Platform
Bald Eagle Nest
Green Ash Tree
Wedding Live Oak Tree
Sams Cemetery Live Oak Tree
N
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 Miles
Scale 1:7850
July 14, 2020
Map Produced by Folk Land Management, Inc.

Appendix III

PLANT BLACK LIST for SPRING ISLAND

Compiled by the Habitat Review Board/Spring Island Trust
with input from the South Carolina Pest Plant Council

These plants cannot be planted anywhere on Spring Island due to their invasive nature.

Trees

Chinaberry, Melia azedarach (L.)
Chinese Tallowtree, Triadica sebifera (L.)
Princesstree, Paulownia tomentosa (Thunb.) Siebold& Zucc. ex Steud.
Tree of Heaven, Ailanthus altissima (P. Mill)
Callery Pear, Pyrus calleryana Decne.
Chinese Parasol Tree, Firmiana simplex (L.) W. Wight
Mimosa, Albizia julibrissin Durazz.
Paper Mulberry, Broussonetia papyrifera (L.) L'Hér. ex Vent.
White Mulberry, Morus alba L.
White Poplar, Populus alba L.

Shrubs

Autumn-Olive, Elaeagnus umbellata Thunb.
Chinese Privet, Ligustrum sinense Lour.
Japanese Knotweed, Polygonum cuspidatum Siebold & Zucc.
Scotch Broom, Cytisus scoparius (L.) Link
Shrub Lespedeza, Lespedeza bicolor Turcz.
Thorny-Olive, Elaeagnus pungens Thunb.
Trifoliate Orange, Poncirus trifoliata (L.) Raf
Japanese Privet, Ligustrum japonicum Thunb.
Multiflora Rose, Rosa multiflora Thunb.
Nandina, Nandina domestica Thunb.
Tamarisk,Salt Cedar, Tamarix spp.
Winged Burning Bush, Euonymus alata

Vines

Bigleaf Periwinkle, Vinca major L.
Cherokee Rose, Rosa laevigata Michx.
Chinese Wisteria, Wisteria sinensis (Sims) DC.
English Ivy, Hedera helix L.
Japanese Climbing Fern, Lygodium japonicum (Thunb.) Sw.
Japanese Honeysuckle, Lonicera japonica L.
Kudzu, Pueraria montana (Lour.) Merr.
Chinese Yam, Dioscorea polystachya Turcz.
Common Periwinkle, Vinca minor L.
Oriental Bittersweet, Celastrus orbiculatus Thunb.
Sweet Autumn Virginsbower, Clematis terniflora DC
Asiatic Jasmine, Trachelospermum jasminoides (In controlled spaces only)

Grasses

Chinese Silvergrass, Miscanthus sinensis Andersson
Cogongrass, Imperata cylindrica (L.) P. Beauv.
Bahiagrass, Paspalum notatum Flueggé
Dallisgrass, Paspalum dilatatum Poir.
Giant Reed, Arundo donax L.
Golden Bamboo, Phyllostachys aurea Carr. ex A.& C. Rivière
Bamboos Species, Phyllostachys spp. and Bambusa spp.
Tall Fescue, Festuca arundinacea Schreb.
Torpedograss, Panicum repens L.
Vaseygrass, Paspalum urvillei Steud.
Weeping Lovegrass, Eragrostis curvula (Schrad.) Nees
Itchgrass, Rottboellia cochinchinensis (Lour.) W.D. Clayton
Japanese Stilt Grass, Microstegium vimineum (Trin.) A. Camus
Johnsongrass, Sorghum halepense (L.) Pers.
Phragmites, Phragmites australis (Cavanilles) Trinius ex Steudel

Aquatic Plants

Crested Floating Heart, Nymphoides cristata (Roxb.) O. Ktze.
Alligatorweed, Alternanthera philoxeroides
Water Hyacinth, Eichhornia crassipes
Water Lettuce, Pistia stratiotes
Purple Loosestrife, Lythrum salicaria
American Lotus, Nelumbo lutea
Water Chestnut, Trapa natans
Water Primrose, Ludwigia hexapetula
Hydrilla, Anacharis, Hydrilla verticillata
Giant Salvinia, Salvinia molesta
Green Hygro, Hygrophila, Hygrophila polysperm
Common Reed, Phragmites australis

Other Plants

Bull Thistle, Cirsium vulgare (Savi) Ten.
Nodding Thistle, Carduus nutans spp. leiophyllus (Petro - vic) Stojanov & Stef
Queen Anne's Lace, Daucus carota L.
Rattlebox, Sesbania punicea (Cav.) Benth.
Showy Rattlebox, Crotalaria spectabilis Roth
Sericea, Lespedeza cuneata (Dum.-Cours.) G. Don
Tropical Soda Apple, Solanum viarum Dunal
Wart-Removing Herb, Murdannia keisak (Hassk.) Hand.- Maz.
White-flowered Wandering Jew Tradescantia fluminensis
Mexican Petunia Ruellia brittoniana
Sword Fern Nephrolepis cordifolia
Coral Ardisia , Ardisia crenata
Winged Yam , Dioscorea alata
Air-potato, Dioscorea bublifera
Wild Taro, Colocasia esculenta

Attachment A

Link to:

Management Plan for Dataw Island Natural Areas

Folk Land Management, Inc.