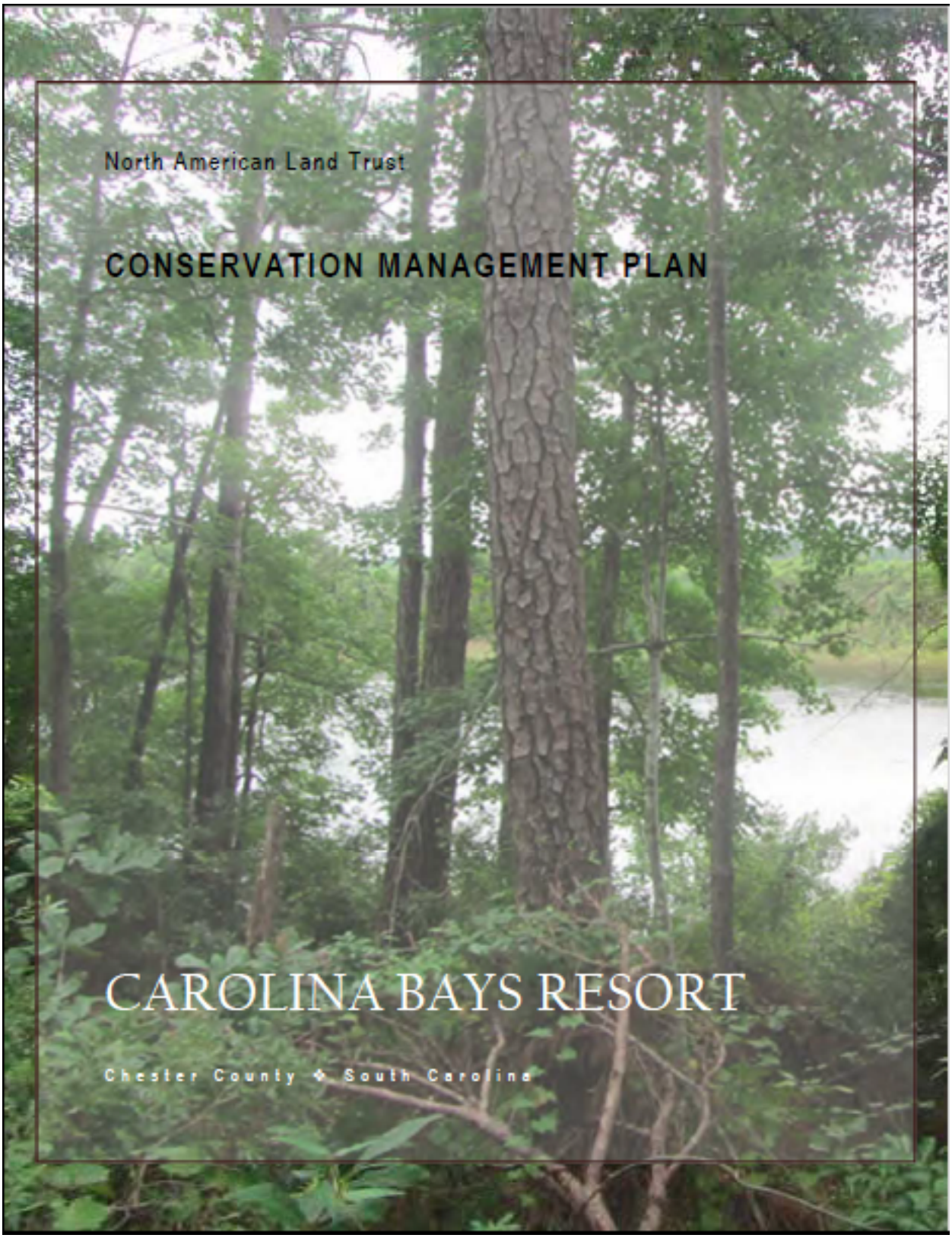

North American Land Trust

CONSERVATION MANAGEMENT PLAN

CAROLINA BAYS RESORT

Chester County ✦ South Carolina

Carolina Bay Marina Conservation Area
Conservation Management Plan

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Date: January 15, 2016

Carolina Bay Resort
Conservation Management Plan

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I. Property Overview and Characteristics:

The Carolina Bay Conservation Area property is located in Horry County, SC and consists of approximately 116 acres and is completely wooded. The property is located on a high bluff along the Atlantic Intracoastal Waterway, with approximately 1,255 linear feet bordering the Atlantic Intracoastal Waterway. The property is highly visible from the AIW, SC Highway 31 (Carolina Bays Parkway), and Bourne Trail. Although rural at one time, this area is slated for intensive development as the highway has made the area easily accessible. Some tracts along this road have already converted to single family residential development.

The property borders a large tract that contains a borrow pit and stockpile of fill dirt and sand, known as the Mountain. The borrow pit has evolved into a lagoon, and drainage is shared with this tract. Additionally, this property owner does have an access agreement with the owner. In 2014, the property was protected by a conservation easement.

Regional context: The property lies within the Coastal Plain Ecoregion, and historically boasted upland maritime forests, sandhill ecosystems and other depressional wetlands. The property lies in an area referred to by SCDNR as the "outer belt" or "flatwoods" landscape of this ecoregion, referencing the primarily pine-dominated forest with close proximity to both the Waccamaw and Little Rivers.

This property is located in North Myrtle Beach, an area that has remained one of the fastest growing regions on the East Coast for many years. From a natural resource perspective, residential and commercial development is the single largest threat to the region, leading to the loss of habitat and flora and faunal species, as well as water quality degredation.

General Property characteristics of ecologically significance:

The Carolina Bay Marina Conservation Area contains several productive habitats indicative of the region, or allowed to naturally occur on the property. Present on the property are:

Mesic Mixed Hardwood Forest

Watershed context: Carolina Bay Marina is located in the Coastal Sampit watershed in SC. This watershed includes properties from Myrtle Beach as well as Georgetown County.

II. Goals and Objectives

The Carolina Bay Marina property is located in North Myrtle Beach, Horry County SC and consists of approximately 60 acres that is protected by a perpetual conservation easement.

NALT believes the most likely usage for this property is passive recreation. The size and forested nature of the tract is suitable for limited deer hunting, walking, and horseback riding. Given these potential uses, the ecological land management plan should create a diversity of habitats for ecological and aesthetic benefit and seek to control fuel loads for mitigation against wildfires.

There are some management limitations that should be noted, and that are further explored in the Land Management Plan in Appendix 2.

a. Prescribed fire cannot be used on site due to proximity to the airport.
b. For any recreational hunting, white tailed deer will likely be the only game species.

The long term goals and objectives for Carolina Bay Marina Preserve are as follows:

- Maintain with a goal of creating an old-growth forests (Mesic Hardwood Forest)
- Using strategic thinning and chipping to create new trails/firebreaks for the property and wildlife openings
- Protect water quality
- Protect scenic views
- Maximize recreational value for future landowners
- To maintain and document the biological integrity of the property

The short term goals and objectives would be:

- Treatment of invasive species
- Creation of river buffer and riparian protection zones
- Creation of firebreaks/trails
- Creation of wildlife openings to maximize biodiversity
- Strategic understory control for portions of the property

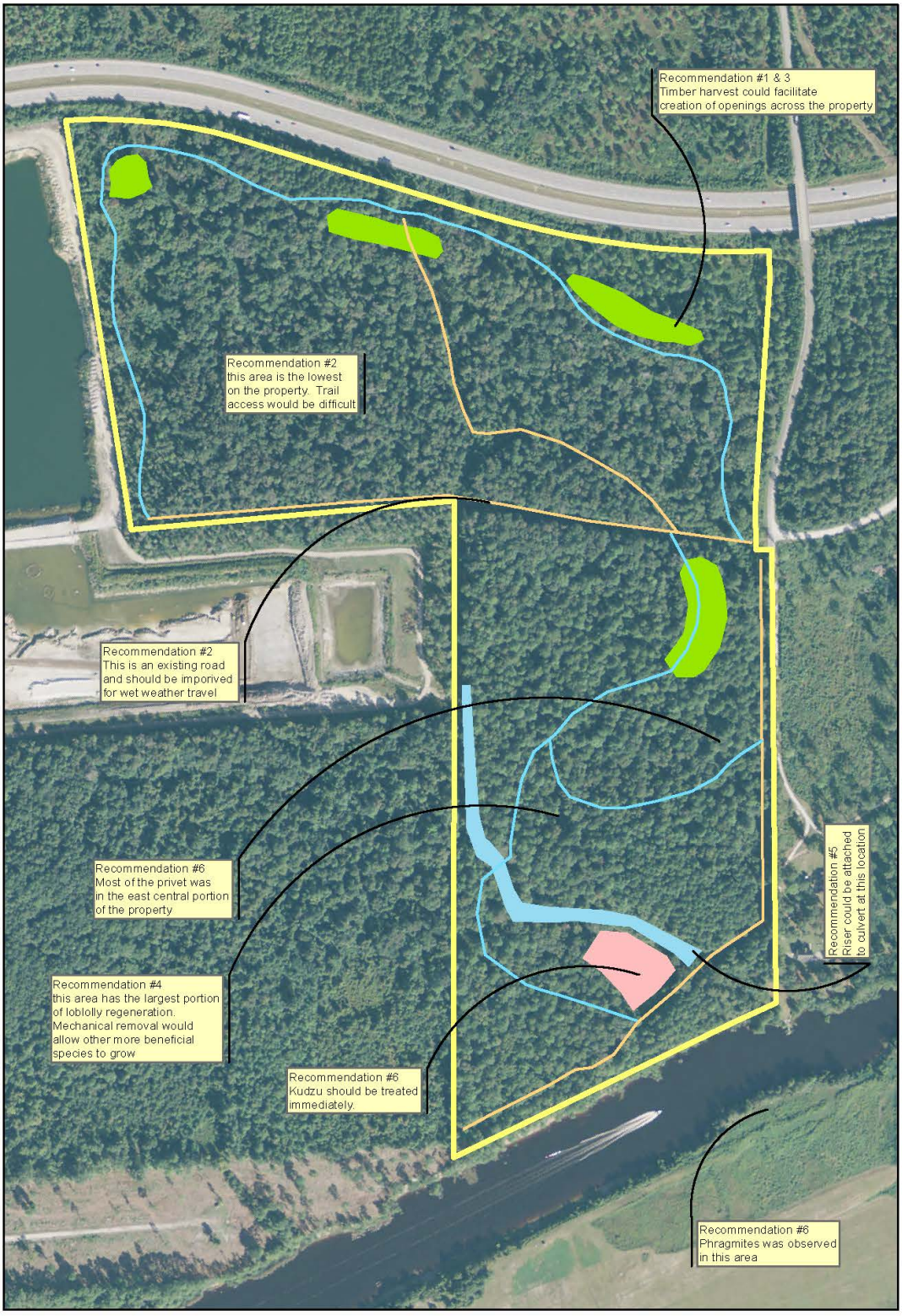
Listed below are practices that are recommendations by the North American Land Trust to achieve the long term and short term goals of an integrated conservation management plan.

By protecting the Carolina Bay Marina Property, the owners have ensured that ecologically valuable lands will forever remain intact.

III. Management Recommendations and Land Use Descriptions

Sandridge - Carolina Bay parcel *Land Management Recommendations*

0 600 1,200 Feet



Management Recommendation #1: Water Quality Protection/River Buffers

Carolina Bay Marina property sits along the bank of the Atlantic Intracoastal Waterway. The portion of this waterway is manmade; however it is an important natural and recreational resource. The waterway boasts a variety of aquatic and terrestrial wildlife.

Intracoastal Waterway
(taken from the Horry County Comprehensive Plan)

The Intracoastal Waterway (ICW) is a 3,000 mile inland waterway that runs parallel to the Atlantic and Gulf coasts. Some sections of the waterway consist of natural inlets, saltwater rivers, bays and sounds, while others are artificial canals. While the Waccamaw River and Little River are natural portions of the ICW, the majority of the ICW in Horry County was constructed by the US Army Corps of Engineers (ACOE) in 1936. Over time, the waterway has become a part of the natural scenery. While the ICW in Horry County is tidally influenced, salt water only influences its northern reach in Little River. The remaining portion of the ICW in the Grand Strand is freshwater until it reaches Winyah Bay in Georgetown County. Along the freshwater portions of the ICW in Horry County, the artificial portion of the waterway mimics the blackwater rivers in the area.

Originally established to provide a safe transportation route and to protect commerce, the ICW now mainly serves as a route for transient boaters and other recreational users. Because the ICW is no longer primarily used for the transportation of goods, it is no longer regularly dredged to sustain its channel, potentially affecting its use for recreational boaters.

Management recommendations:

1. Reduce impervious surfaces. The conservation easement largely addresses this by removing development from the tract.
2. River buffers. One of the single most important tools for protection of waterways is a naturally vegetated buffer.
    a) Maintain at least 100' natural vegetation.
    b) For waterway views consider view "windows" trimming shrub level vegetation to 1' from ground, and/or "limbing up" removing view obstruction but leaving tree canopies. This leaves root structures for erosion and filtration.
    c) If access is desired to waters/bank edge, consider clearing a "view corridor" only, leaving specimen trees, but removing shrub understory only for the 50-75' strip. Leave the remaining area wooded and natural. If sod is part of the corridor use a drought tolerant species, such as carpet grass that is ideal for coastal climates and does not require fertilization or irrigation.
    d) Ensure shrub level materials such as wax myrtles are plentiful for native, seasonal and migrating songbirds such as Painted Buntings.
    e) Protect or promote mature specimen trees for nesting sites for Bald Eagles and Osprey, as well as other species that will utilize the waterway.

Management recommendation #2: Scenic view protection

Overview: Contrary to what many landowners might consider to be true, this management recommendation is to protect the scenic qualities currently existing on the Carolina Bay Marina property from people viewing the property from waterways and roadways. This is particularly needed in the Myrtle Beach region, one of the most rapidly developing areas in South Carolina and the East Coast. This pressure is acute on beaches, creeks and waterways. With each high rise condominium, multi-family housing complex, commercial venture or even golf course, natural habitats are lost. First and foremost this impacts the flora and fauna of the area, but there is also a negative impact to residents and visitors to the area with the loss of natural landscapes to visually enjoy.

This property, conserved in a natural state without intense development, will benefit the larger public, residents and visitors alike.

Management recommendations:

1. The protection of this property with a conservation easement will largely protect this property as a scenic view from the waterway and adjacent upland.
2. Careful consideration should be given to any structures and their placement, orientation and size to minimize visual impact to the surrounding area.
3. Wherever possible create or maintain "nature curtains" or natural buffers of 30-100' from roadways and/or waterways.
4. Consider natural solutions for erosion control or streambank stabilization in lieu of riprap or bulkheads. If these are necessary, native landscaping should be used to naturalize the site.
5. Avoid large scale clearings of forests in viewshed areas.
6. If exercising the reserved right for homesites, remove only vegetation required for the homesite, gradually increasing any further clearing to minimize disruption.

Management Recommendation #3: Create Trail/firebreak Network

Wildfires area a serious threat in the North Myrtle Beach area. Given that, the fuel load for Carolina Bay Marina is not problematic. Although NALT generally encourages the reintroduction of prescribed burning to any property to mimic natural conditions, and to reduce the threat of wildfire, that is unlikely on this property.

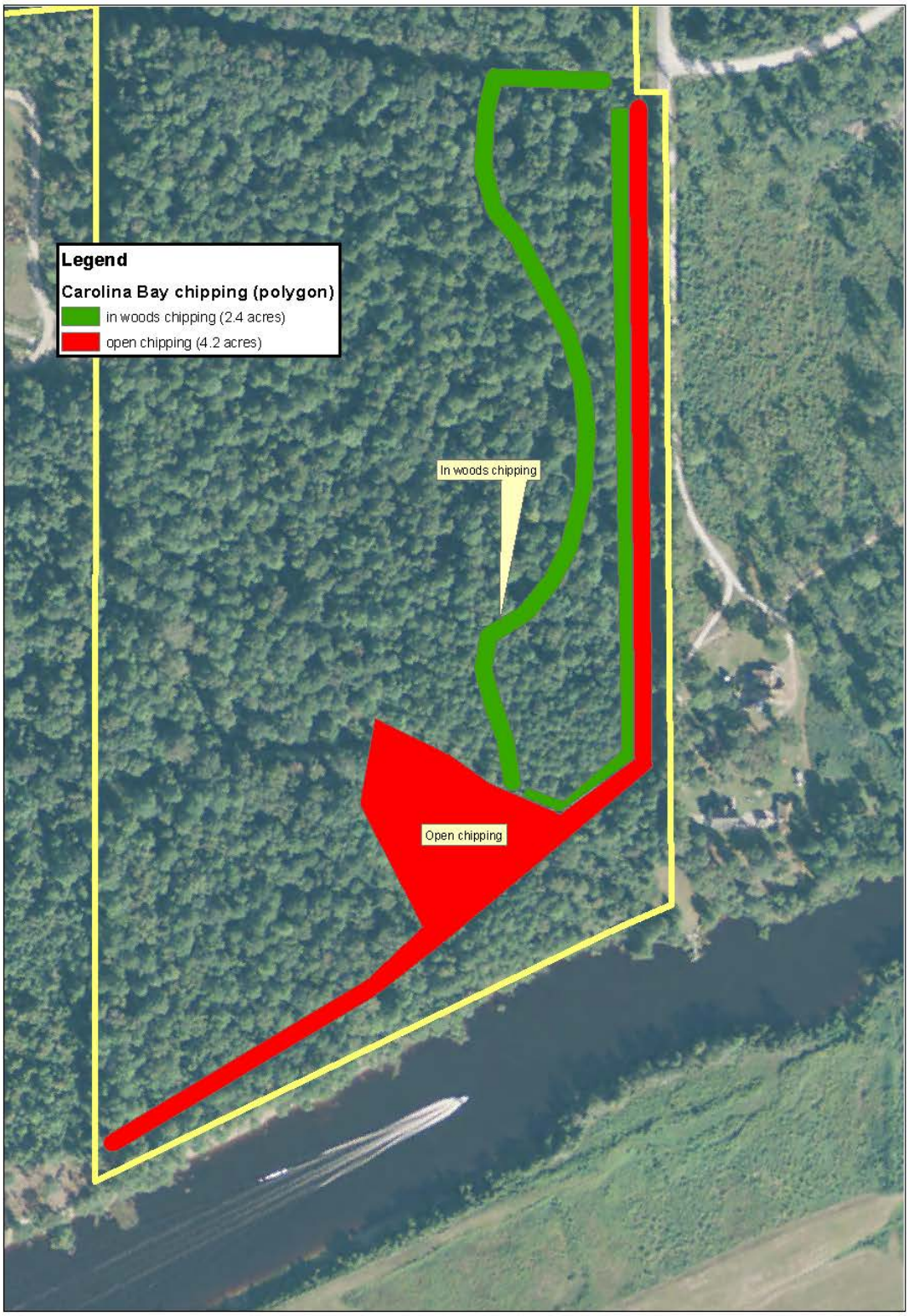
NALT does recommend that a naturalized trail network be established to serve multiple purposes: access for management activities, potential access for future homesites, passive recreational use for the property, and to act as a firebreak in the unlikely event that a wildfire were to occur.

Management recommendations:

1. Establish logical trail network as identified.
2. Roads should be cleared, stumped and graded, and average 8’ widths.
3. Roads should be placed on a long-term maintenance rotation.

Carolina Bays - proposed chipping areas

0 100 200 400 600 800 Feet



Management Recommendation #4: Wildlife openings/food plots

The majority of Carolina Bay Marina is a closed canopy mesic forest. Numerous species benefit from this habitat; however, wildlife diversity and recreational value can easily be enhanced by the introduction of several small wildlife openings to create "edge" habitat. In ecology, edge effects refer to the changes in populations or community structures that occur at the boundary of two habitats. Though the relationship can have both positive and negative outcomes, in this situation a small native grass meadow will provide opportunities for foraging and bugging for certain species of wildlife.

Ideally, NALT would prefer recommending native warm season grasses be planted. If planted and managed as wildlife habitat using native grasses, even without a natural fire regime, numerous species will benefit. NALT suggests consideration of native grass mixes and species that include: switchgrass (*Panicum virgatum*), indiangrass (*Sorghastrum nutans*), eastern gamagrass (*Tripsacum dactyloides*), big bluestem (*Andropogon gerardii*), and little bluestem (*Schizachyrium scoparium*) for this site.

However, traditional game plot seeds such as sorghum, millet, peas, wheat or clover may also be mixed with the seed to enhance crops to attract game animals, especially if the pine forests are managed towards a "Savanna" habitat with native grass understory.

The large Kudzu/privet infestation will require numerous treatments to control these invasive species. Once complete, this area should be managed as a wildlife opening. Future building areas can also be created and maintained for this.

Management recommendations:

1. Openings should be 2-4 acres, curved or elongated openings with widths ranging from 30-150 yards are best.
2. Place openings at the juncture of different stands.
3. Use Native Certified Seeds/Mixes whenever possible
4. Plant seeds in March or early April at the latest.
5. Irrigate if possible to help seed establishment.
6. Use tilling or herbicide on undesired weed species.
7. Use a no-till drill to plant seeds.
8. Ideally, native grasses meadows would be managed with prescribed burning to mimic natural processes
9. The best time of year to mow is during the fall through late winter.
10. Do not mow during the spring or summer months because of the nesting season.
11. When mowing, cut grass no lower than 6 inches and allow stubble to remain until spring to help insulate plant roots and provide cover for wildlife.
12. Periodically disking (once every 2 years) should maintain open structure at ground level.

Management Recommendation #5: Eradicate Invasive Species

Invasive species are non-native plant, insect or animal species that have been introduced into an area outside of their original range and compete with native species for resources. Invasive species reproduce and spread rampantly because they have no natural enemies in their new homes. Invasive species are recognized as one of the leading threats to biodiversity and impose enormous costs to agriculture, forestry, fisheries, and other human enterprises, as well as to human health.

There are several notable invasive species occupying the tract. There is a large infestation of kudzu (*Pueria lobata*), and Privet (*Ligustrum Sinense*) that should be eradicated. Japanese Honeysuckle (*Lonicera japonica*), Chinese Lespedeza (*Lespedeza Cuneata*) and English ivy (*Hedera helix*). All of these species should be eradicated.

Kudzu is by far the most aggressive and destructive of the invasives, and there is a large infestation on multiple acres located in the southwest corner of the property along the access road. This issue must be addressed, as the Horry County Comprehensive Plan and SC Department of Natural Resources have identified treatment of invasive species as a top priority. Moreover, if left untreated the Kudzu may take over the entire site, removing all conservation values.

Management recommendations:

1. Due to the size of the plants, all plants should be chipped to expose stems.
2. Apply herbicides as needed. Utilize a herbicide called Veteran for treatments. It is rated to apply in proximity to wetlands and is effective at kudzu control.
3. Treatment are 3 gallons per acre with Veteran 720, 1% surfactant.
4. Plan for at least two treatments per year in the first three years.
5. English Ivy and Japanese honeysuckle could be treated with 3% glyphosate and 1% surfactant applied to leaf surface area in late spring

Chinese Privet
(*Ligustrum sinense*)

Overview: Chinese privet is a woody shrub with dark blue berries that was introduced to the U.S. in the mid-1800's from China for ornamental planting. This shrub can grow up to 30 feet tall, though it typically ranges from 5 to 12 feet. Chinese privet leaves are evergreen and oppositely arranged along the stem. Its flowers are aromatic, small, and white. Since its introduction to the U.S., Chinese privet has since spread throughout the southeastern portion of the country, competing with and displacing native vegetation.

Habitat: This invasive plant grows in a variety of habitats and is able to tolerate a range of soils and light conditions. In addition, it is also directly harmful to humans, as its fruit is toxic and its flowers can cause respiratory irritation. Chinese privet spreads quickly thanks to its ability to mature quickly, reproduce vegetatively by its root suckers, and produce a great number of seeds which are then spread by birds. Once it is established, it is difficult to control due to its prolific seedbank and the need to eradicate all parts, including its root system.

Management: In order to prevent Chinese privet from displacing native species and disrupting terrestrial ecosystems, it must be controlled by a variety of means. No single treatment is 100% effective, and therefore multiple treatments should be used. Chinese privet areas should be regularly monitored for spot treatment.

- ***Hand pulling:*** Pull out the plant to remove seedlings and small saplings when soil is moist. Be sure to remove the entire root system.
- ***Brush Mulching:*** This method can be used to quickly remove dense stands of Chinese privet and is recommended for privet taller than 6-8 feet. However, it should not be used during the fall, and it does not remove the root system. Therefore, combine this method with spraying when uniform regrowth inevitably occurs.
- ***Herbicide Treatment:*** Herbicides with the active ingredient glyphosate are most effective; use a concentrate product with at least 41% glyphosate. Mix the herbicide with water, preparing a 3-5% solution. During the late fall or early winter, use a single nozzle backpack sprayer to spray foliage, avoiding runoff and drift on windy days. If spraying near water sources, use a glyphosate product and nonionic surfactant labeled for aquatic environments.
- ***Cut Stump Herbicide Treatment:*** Cut privet stems close to the ground and remove sawdust from stump. Within a few minutes, spray or paint the cut surface with an herbicide concentrate product with the above concentrate or with 44% active ingredient triclopyr amine, mixing it with water to prepare a 25% solution.

Japanese Honeysuckle
(Lonicera japonica)

Photo credit: Wikimedia Commons 2016

Overview: Japanese honeysuckle (***Lonicera japonica***) was introduced from Japan in the early 1800's. Although it is valued as forage for white-tailed deer, it can become a noxious weed in many wildland settings. It is a woody, evergreen to semievergeen climbing or trailing vine with brownish stems. Leaves are opposite, entire but may exhibit lobing in early spring. Axillary flowers are white and occur in pairs.

Control methodology: Apply Escort XP with a surfactact to foliage June to August-either by broadcast spraying 2 ounces per acre in water (0.6 dry ounces per 3-gallon mix) or by spot spraying 2 to 4 ounces per acre in water (0.6 to 1.2 dry ounces per 3-gallon mix). Or, treat foliage with one of the following herbicides in water with a surfactant (July to October or during warm days in early winter) keeping spray away from desirable plants: a glyphosate herbicide as a 2-percent solution (8 ounces per 3-gallon mix) or Garlon 3A or Garlon 4 as a 3- to 5-percent solution (12 to 20 ounces per 3-gallon mix). Or cut large vines just above the soil surface and immediately treat the freshly cut stem with a glyphosate herbicide or Garlon 3A as a 20-percent solution (2.5 quarts per 3-gallon sprayer) in water with a surfactant July to October (safe to surrounding plants). Prescribed burning in spring will reduce dense ground mats and sever climbing vines for more effective herbicide treatments to resprouting vines.

Property-specific recommendations: Although this species is widespread within Roslin Road conservation area, NALT staff did not observe areas completely overtaken by Japanese Honeysuckle. It is recommended to spot treat using glyphosate, Garlon 3A or Garlon 4 as recommended above to minimize damage to any surrounding desirable natives. Large vines may be cut just above the soil surface as recommended above as well. Since this plant species stays biologically active later into the year than most, taking advantage of early warm winter days for treatment may help minimize mortality of surrounding desirable native species.

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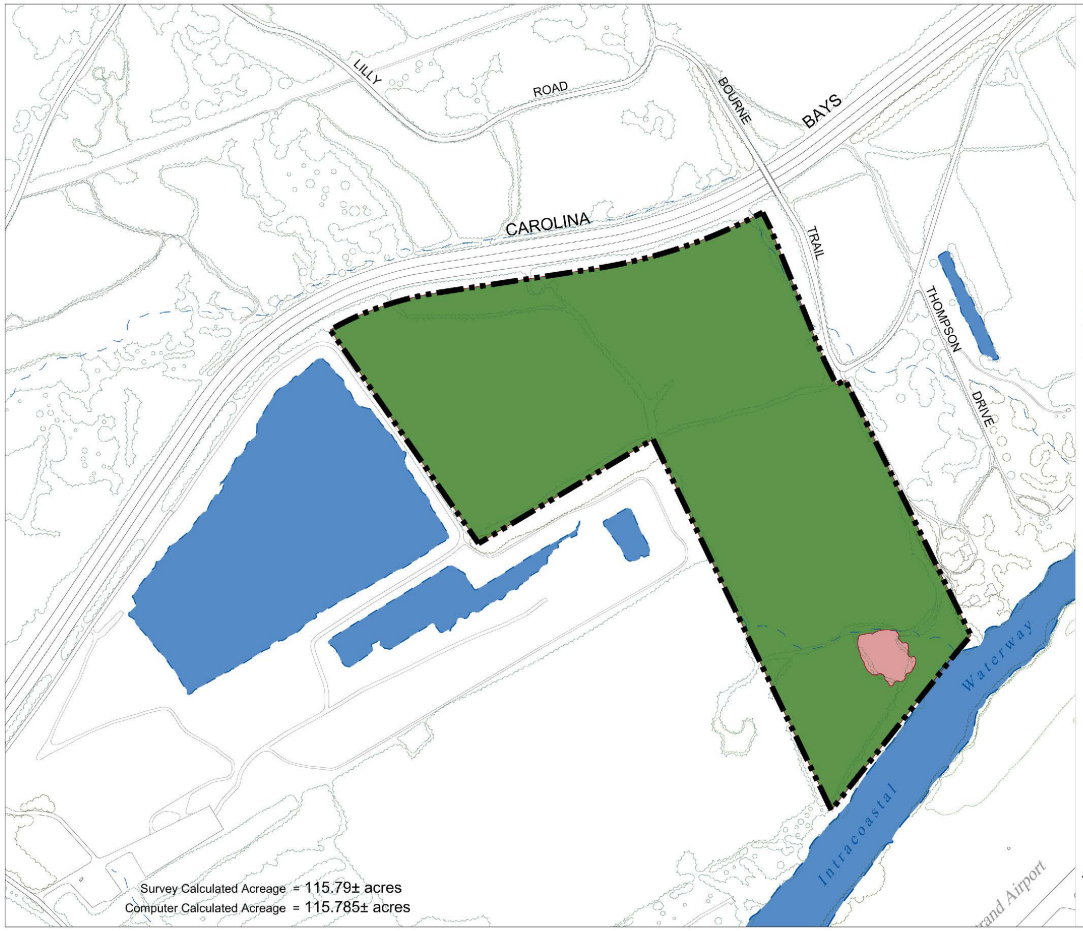
Management Recommendation #6: Continue Biological Surveys/Manage for Species of Concern (current/future)

NALT recommends that biological inventories and botanical surveys be continued each season, and management strategies refined accordingly. Whether hiring experts in a particular biological discipline, engaging with natural resource agencies, or partnering with universities and coalitions, NALT recommends continued documentation of this property. The priority species listed in the next section should be a starting point for inventories.

Any species identified should be input into a Priority Species Map when discovered. Overall management techniques should be adapted and refined as new priority species are discovered.

IV. Existing Habitats and Species of Concern



LEGEND:

Subject Property - 115.79± acres

VEGETATION LEGEND:

Mixed Mesic Hardwood

Kudzu - invasive

NOTES:

1. Property boundaries from Thomas & Hutton; dated 2005.
2. Aerial Photography from Maptech; dated 2013.
3. Topography from Wampee, USGS Quadrangle sheet.
4. Soils information from WebSoil Survey, USDA - NRCS.
5. Floodplain data to be delineated by Surveyor. *

NORTH

0 200 400 800 1600 2400 3200 4000 4800 Feet

SCALE: 1 inch = 800 feet

LAND USE MAP

CAROLINA BAYS RESORT

HORRY COUNTY, SOUTH CAROLINA

LAND USE MAP

North American LAND TRUST

Mesic Mixed Hardwood Forest

A mature Mesic Mixed Hardwood Forest (Coastal Plain Subtype) best describes the vegetation composition of the property. Canopy dominants include sweetgum (*Liquidambar styraciflua*), tulip poplar (*Liriodendron tulipifera*), and loblolly pine (*Pinus taeda*). Other canopy species supported include, but are not limited to, swamp chestnut oak (*Quercus michauxii*), water oak (*Q. nigra*), sugarberry (*Celtis laevigata*), and elm (Ulmus sp.). Drier sites were noted to support limited amounts of longleaf pine (*P. palustris*) and Darlington oak (*Q. hemisphaerica*). Typical subcanopy and shrub taxa include ironwood (*Carpinus caroliniana*), American holly (*Ilex opaca*), swamp bay (*Persea palustris*), dwarf palmetto (Sabal minor), giant cane grass (*Arundinaria gigantea*), and others. The nonnative/invasive Chinese privet (*Ligustrum sinense*) forms nearly impenetrable thickets in certain areas of the forest. Typical herbaceous taxa observed include netted chain fern (*Woodwardia areolata*), yellow jessamine (*Gelsemium sempervirens*), ebony spleenwort (*Asplenium platyneuron*), and others. Semi-open to open areas support a much more diverse herb layer. These areas are largely restricted to overgrown trails and old roadbeds. The large amounts of loblolly pine, sweetgum, and tulip poplar are likely the result of past disturbance. Historically, this woodland would support a more diverse canopy.

Management recommendation:

1. The long-term management objective for this stand is to re-establish Mesic Mixed Hardwood Forest. The pines should be selectively thinned to allow for natural hardwood regeneration. Additionally, removing or treating undesirable hardwood or softwood species may be considered to achieve an ideal forest composition of 25% oaks, 25% other hardwoods/softwoods and 50% pine.
2. Species to protect and/or promote include: oaks, hickories, tulip poplar, pines, sugarberry and elm with dogwood, southern sugar maple, ironwood, American holly, swamp bay, dwarf palmetto, cane grass indicative of the understory.
3. This forest is critical to the scenic conservation purpose for Carolina Bay Marina.
4. Avoid large-scale clearing or converting this area.
5. Prescribed burning is always ideal, but in this situation unlikely. Consideration should be given to mechanical understory control or selective thinning of undesirable species as necessary.
6. Eradicate invasive as identified.
7. Due to the proximity to the AIW, chemical application should be considered cautiously, and carefully applied to minimize harm to water quality.
8. Leave specimen pines in/near the waterway buffer to act as nest trees for Bald Eagles and Osprey.

Additionally, implement all of the management recommendations listed in Section 3.

Habitat Importance: Species of Concern associated with Coastal Plain Pine Woodland Forest:

SCIENTIFIC NAME	COMMON NAME	G-RANK	S-RANK	LEGAL STATUS	PRIORITY	SPECIFIC HABITAT REQUIREMENTS	
MAMMALS							
Condylura cristata	Star-nosed Mole	G5	S3?	Of concern, State	High	X	swamps, marshes, bogs, streamsides; dense leaf litter
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3/G4	S2?	State Endangered	Highest	X	T-beam and I-beam bridges, abandoned buildings, old bunkers and tunnels, cavity trees, rock outcrops, mines, caves
Eptesicus fuscus	Big Brown Bat	G5	SNR		Highest	X	buildings, cavity trees, under bridges and in bat boxes; forage in open fields or forest gaps
Lasionycteris noctivagans	Silver-haired Bat	G5	SNR		Highest	X	roosts include tree cavities, under loose bark, rock crevices, under tree foliage, and occasionally in buildings, stacks of firewood, and bird boxes; forage over water
Lasiurus borealis	Red Bat	G5	SNR		Highest	X	thinned stands; roost on smaller branches or twigs, often in the hardwood tree canopy; may roost in leaf litter
Lasiurus cinereus	Hoary Bat	G5	S?		Highest	X	tree cavities, trunks, tree foliage, squirrel nests, and Spanish moss
Lasiurus intermedius	Northern Yellow Bat	G4/G5	S?	Of concern, State	Highest	X	forage over open areas such as fields, pastures, golf courses, marshes, and along lake and forest edges; roost in clumps of Spanish moss or under old palm fronds
Lasiurus seminolus	Seminole Bat	G5	SNR		Highest	X	roost in large pines located near forested corridors; may roost in leaf litter
Microtus pennsylvanicus	Meadow Vole	G5	SNR	Of concern, State	High	X	tall grass prairie habitats
Neotoma floridana	Eastern Woodrat	G5	S3/S4	Of concern, State	Moderate	X	wide variety of habitats
Perimyotis subflavus	Tri-colored Bat	G5	SNR		Highest	X	abandoned mines and caves, bridges, buildings
Ursus americanus	Black Bear	G5	S3?	Of concern, State	Moderate	X	early successional habitat and forest interior; den sites
REPTILES & AMPHIBIANS	-	-	-	-	-	-	-
Ambystoma cingulatum	Flatwoods Salamander (Frosted)	G2/G3	S1	Federal Threatened; State Endangered	Highest	X	isolated, temporary wetlands with no fish that have open canopy above and abundant grasses and sedges
Ambystoma tigrinum	Tiger Salamander	G5	S2/S3	Of Concern, State	Highest	X	isolated, temporary wetlands with no fish that have open canopy above and abundant grasses and sedges
Crotalus adamanteus	Eastern Diamondback Rattlesnake	G4	S3	Of Concern, State	High	X	underground refugia such as stump holes and rodent burrows
Crotalus horridus	Timber Rattlesnake	G4	SNR	Of Concern, State	High	X	dry, south-facing slopes at high elevations; rock outcrops or logs for den sites with south face exposed to sun
Eurycea chamberlainii	Chamberlain's Dwarf Salamander	G4	SNR		Highest	X	wetland types like seepages near small streams; leaf litter and small debris
Heterodon simus	Southern Hognose Snake	G2	SNR	Of Concern, State	Highest	X	friable soils; underground refugia such as stump holes and rodent burrows; abundance of toads

Micrurus fulvius	Coral Snake (Harlequin)	G5	S2	Of Concern, State	Highest	X	underground refugia such as stump holes and rodent burrows; loose soil for burrowing
Ophisaurus attenuatus	Slender Glass Lizard	G5	S4		Moderate	X	underground refugia such as stump holes and rodent burrows; open canopied forests or fields
Pituophis melanoleucus	Pine Snake (Northern)	G4	S2/S3	Of Concern, State	Highest	X	pine sites with dry soils; underground refugia such as stump holes and rodent burrows
Pituophis melanoleucus mugitus	Pine Snake (Florida)	G4	S2	Of Concern, State	Highest	X	pine sites with well-drained soils; underground refugia such as stump holes and rodent burrows
Rhadinea flavilata	Pine Woods Snake	G4	SNR	Of Concern, State	High	X	moist pine flatwoods with many rotten logs; underground refugia such as stump holes and rodent burrows
Terrapene carolina	Eastern Box Turtle	G5	SNR		Moderate	X	moist woodlands; sandy or loamy soils in open for egg laying; loose soils and leaf litter for burrowing
BIRDS							
Caprimulgus carolinensis	Chuck-will's-widow	G5	S4		High	X	openings for nocturnal feeding; mixed forests with light to moderate understory
Chaetura pelagica	Chimney Swift	G5	SNRB		High	X	open areas for foraging; cavity for nesting (often chimneys)
Columbina passerine	Common Ground-Dove	G5	SNR	State Threatened	Highest	X	shrubs near openings for nesting; sandy bare ground or short grass for foraging
Contopus virens	Eastern Wood-Pewee	G5	S5		High	X	open forests with sparse midstory
Dendroica pinus	Pine Warbler	G5	SNR		Moderate	X	typically middle to mature pine forests
Dryocopus pileatus	Pileated Woodpecker	G5	SNR		Moderate	X	extensive mature forests with dead snags for nest cavities; probably prefer riverbottom hardwoods
Icteria virens	Yellow-breasted Chat	G5	S4B		High	X	old fields, briar thickets, dry woodland margins;
Junco hyemalis	Dark-eyed Junco	G5	SNRB,SNRN		Moderate	X	short grass openings near conifer woodlands
Melanerpes carolinus	Red-bellied Woodpecker	G5	SNR		Moderate	X	open, mature woods with dead snags for nest cavities; man-made poles with cavities
Melanerpes erythrocephalus	Red-headed Woodpecker	G5	SNR		Moderate	X	open, mature woods with dead snags for nest cavities; man-made poles with cavities
Passerina ciris	Painted Bunting	G5	SNRB		Highest	X	woodland margins; dense thickets in openings
Passerina cyanea	Indigo Bunting	G5	SNRB		Moderate	X	woodland margins; shrubby thickets in openings
Picoides pubescens	Downy Woodpecker	G5	SNR		Moderate	X	middle-aged to mature woodlands; prefer hardwoods; dead snags for nest cavities
Pipilo erythrophthalmus	Eastern Towhee	G5	SNR		High	X	brushy areas; woodland margins and understory
Piranga rubra	Summer Tanager	G5	S?		Moderate	X	dry, mixed woodlands
Poecile carolinensis	Carolina Chickadee	G5	SNR		Moderate	X	mature woodlands with dead snags for nest cavities; will use bird boxes
Regulus satrapa	Golden-crowned Kinglet	G5	S4		Moderate	X	winter in coniferous or mixed woodlands
Scolopax minor	American Woodcock	G5	S4		Moderate	X	moist soils and leaf litter for probe foraging; woodlands for nesting; openings for mating displays
Setophaga dominica	Yellow-throated Warbler	G5	S3?		Moderate	X	moderately open, mature, moist forests; pines, mixed forests; Spanish moss

Sitta pusilla	Brown-headed Nuthatch	G5	S4		Moderate	X	mature, open pines for foraging; nest cavities in snags
Spizella pusilla	Field Sparrow	G5	S5?		High	X	saplings and shrubs in weedy thickets and woodland margins
Thryothorus ludovicianus	Carolina Wren	G5	SNR		Moderate	X	woodland thickets; leaf litter; cavities or ledges for nesting; will use bird boxes and many other human material
Toxostoma rufum	Brown Thrasher	G5	SNR		High	X	moderate to dense brush and saplings
Tyto alba	Barn Owl	G5	S4	Of Concern, State	Moderate	X	grasslands or marshes for foraging; nest cavities; dense roosting cover

V. Mapping

A. Aerial
B. Soils
C. Additional Management Features
D. Concept Plan

LEGEND:

Subject Property - 115.737± acres

NOTES:

1. Property boundaries from Thomas & Hutton; dated 2005.
2. Aerial Photography from Mapfinch; dated 2013.
3. Topography from Wampee, USGS Quadrangle sheet.
4. Soils information from WebSoil Survey, USDA - NRCS.
5. Floodplain data to be delineated by Surveyor. *

NORTH

SCALE: 1 inch = 800 feet

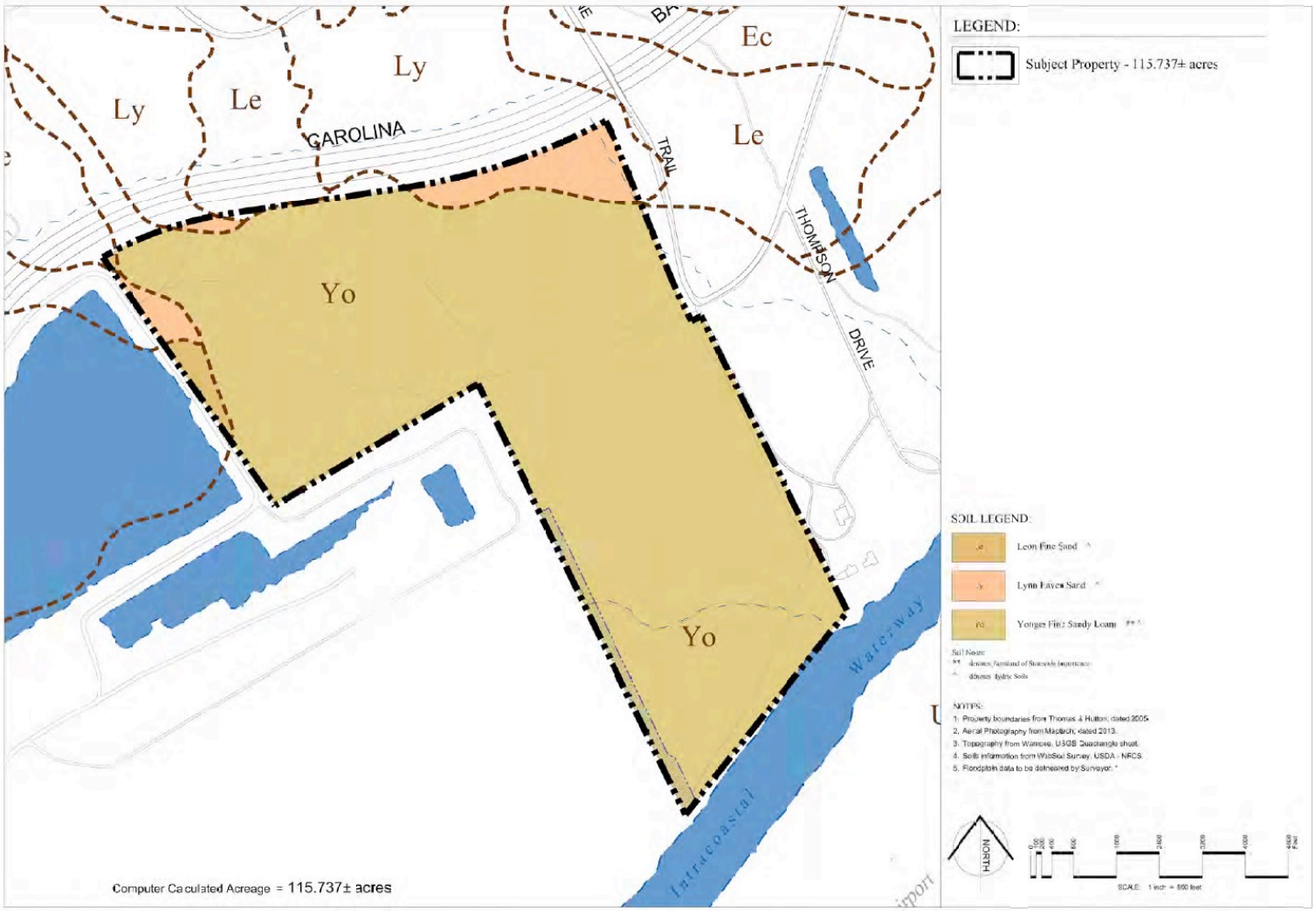
AERIAL PHOTOGRAPH

CAROLINA BAYS RESORT

HORRY COUNTY, SOUTH CAROLINA

AERIAL PHOTOGRAPH

North American LAND TRUST



SOILS MAP

CAROLINA BAYS RESORT

HORRY COUNTY, SOUTH CAROLINA

SOILS MAP

North American LAND TRUST

CAROLINA BAYS RESORT

HORRY COUNTY, SOUTH CAROLINA

ADDITIONAL MANAGEMENT FEATURES MAP

North American LAND TRUST

ADDITIONAL MANAGEMENT FEATURES MAP

CONCEPT PLAN

CAROLINA BAYS RESORT

HORRY COUNTY, SOUTH CAROLINA

CONCEPT PLAN

North American LAND TRUST

VI. Next Steps & Activity Timeline

NALT recommends the following tasks during the first year of operation:

1. Identify Conservation Management Team to include:
    a. Forestry Management Contractor
    b. Road maintenance contractor (general)
    c. Site improvement/repair contractor (construction)
    d. Biological expertise (as necessary)
    e. Site security contractors (as necessary)
    f. Natural resource agencies and partners

2. Develop a list of local partners/players to open dialogue as necessary:
    a. Utility companies
    b. Local government and planning departments
    c. Academics or natural resource partners
    d. State parks or nearby Preserves
    e. Local NGO partners

3. Meet with contractors on CMP Plan components to obtain bids, determine timetable for implementation

4. Draft annual Management Budget for the property (begin 3-5 year projection)

5. Implement Conservation Management Plan to include

6. Modify budget and timetables for the next five-year period.

VII. Budget

Carolina Bay Resort Proposed 2015-2016 Budget

	Proposed Cost	Committed	Discretionary	Notes
Site Maintenance	**$26,260.89**			
Security gate/installation			$2,500.00	2 gates
Routine mowing		$2,145.00		$450 per visit
Repair road over culvert		$21,615.89		
Land Management	**$55,331.00**			
New entry road/trails		$6,210.00		see bid
Grade/improve trails		$6,650.00		see bid
Rock for all roads		$13,721.00		see bid
Wildlife openings			$13,000.00	2 acres total
Kudzu/privet treatment		$15,750.00		
Understory control				
Biological surveys	**$3,500.00**			
Biodiversity study		$3,500.00		C. Wilson
Site improvement				
Building envelope/view shed ex.				
Docks				
Permits				

Total Committed	$69,591.89
Total Discretionary	$15,500.00
Total	**$85,091.89**

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Weakley, A.S. 2012. Guide to the Flora of the Carolinas, Virginia, and Georgia (working draft). University of North Carolina, Chapel Hill, NC.

Appendices

Appendix 1: Conservation Easement and Baseline

Appendix 2: Forestry Management Plan