

THE TOWN OF SULLIVAN'S ISLAND

THE TOWN OF SULLIVAN'S ISLAND ACCRETED LAND RECOMMENDATIONS

March 27, 2020



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Our Charge



Our Charge

Biohabitats Inc., in conjunction with Coastal Science & Engineering, Sabine & Waters, Permar, Inc. and Design Works, (Biohabitats Team) were retained by the Town of Sullivan's Island to prepare general recommendations for updating the town's Accreted Land Management Plan prepared in 2010.



Purpose

Developing these recommendations involved reviewing previous work, going on guided and unguided tours of the accreted land, attending a Town Council Meeting, soliciting on-line feedback, talking to Town staff, and participating in a two-day design charrette with members from each of the firms listed above. The outcome of this effort is to provide a brief report summarizing our expert recommendations for managing the accreted lands for the enjoyment and benefit of the entire Sullivan's Island community.

It is important to note that our charge was not to reinvent the comprehensive work that has already been done, nor was it to perform detailed on-the-ground studies of the accreted land. Rather it was to develop a set of general recommendations that if largely acceptable, can be refined and augmented as the Town moves to complete the Accreted Land Management Plan.

What We Know



What We Know

Context

Resilience

Perhaps the most striking change to the social context of the Sullivan's Island Protected Land planning since its designation in 1991 is our deepening understanding of Sea Level Rise and its future effects on barrier islands.

According to the 4th National Climate Assessment, thermal expansion of ocean waters and the melting of small mountain glaciers will result in one foot of sea level rise by 2100. The tidal gage in Charleston Harbor has already documented a foot of sea level rise over the past century. Nuisance flooding on Sullivan's island has undergone a concomitant increase, with "sunny day" flooding increasingly common. Barrier islands are among the sites most vulnerable to sea level rise (1) and increasingly frequent and intense of storms. But unlike most, Sullivan's Island has the advantage of an accreting beach. Natural features (2) such as vegetated dunes reduce coastal storm hazards by lowering wave energy and storm surge and possibly stabilizing sediment.

In the case of Sullivan's Island, the accreting land also offers a second luxury unavailable to many coastal islands: enough undeveloped land to spur a thoughtful conversation about how it might be best managed to protect the nearby infrastructure.

Secession

Dunes and forests alike undergo a natural evolution through time. Dune development typically creates a high ridge at the back of the dune field. On Sullivan's Island, the beach accretion has been so fast that the rearmost dune is much shorter than in other dune systems, offering less protection to residents in the face of storms.

The plants growing on dunes also follow a typical progression. Kept low and sparse where the soil is sandy and sea spray and salt effects are strongest, the farther more protected areas grow dense shrubs. On accreting land, larger trees usually begin to grow among the shrubs where they are protected from salt spray and soil begins to accumulate. Typical beachside shrubs will grow vigorously until maturing trees begin to shade them out. Topping shrubs halts this development and encourages dense thickets of shrubs to persist.

Habitat

Maritime forest is a habitat type that is rare and disappearing. Coastal areas have intense development pressure, and maritime forest on coastal barrier islands is a globally endangered ecosystem. Almost 40% of the already reduced range of the forest in North Carolina has disappeared since 1988. Therefore, patches of maritime forest are regionally important, especially to migratory birds if nearby areas are developed. However, because it is inherently a dynamic system and found in narrow patches where salt spray influences the vegetation, it is also able to offer its characteristic habitat benefits even in small patches. Its unique habitat value is therefore resistant to fragmentation as compared to most upland forest types. Painted buntings, for example, thrive in smaller home ranges and travel less far to eat in maritime forest.



¹ Cazenave, A., and G. Le Cozannet (2013), Sea level rise and its coastal impacts, *Earth's Future*, 2, 15-34.

² National Research Council. 2014. *Reducing Coastal Risk on the East and Gulf Coasts*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18811>.

We've Been Here Before



We've Been Here Before

Background and Planning Context

Town of Sullivan's Island Protected Land Planning

In 1991, the Town of Sullivan's Island took steps to protect the accreted beachfront via deed restrictions with the Lowcountry Open Land Trust. The accreted land is protected for its aesthetic, scientific, educational, and ecological and safety value for all residents, as noted in the deed restrictions placed on this land with the Lowcountry Open Land Trust and within the Town of Sullivan's Island Codes and Ordinances. In 1995, the Town authorized cutting some vegetation down to 5' in height through an ordinance amendment.

In 2010, the Town of Sullivan's Island commissioned a report (Accreted Land Management Plan, Sullivan's Island, South Carolina; Coastal Science and Engineering, Sabine & Waters, Inc, & Dewberry) to make science-based recommendations for managing the accreted land. The report details the setting and history of the accreted land, existing conditions (as of 2010), historical and anticipated future changes. It then presents management alternatives and management recommendations.

In November 2011, council adopted a Proposed Management Plan for the Town of Sullivan's Island Protected Land that was intended to provide background, intents, objectives, and goals in managing, directing and preserving the land for purposes of conservation, protection and environmental education.

This plan has been partially implemented by acts of council that authorized annual beach monitoring beginning in 2016 and the management of the Transition Zone, a term applied to the first 100 feet of public land that borders private property. In the first 40 feet, the Town removes non-native species and vegetation except for trees greater than 6" DBH. The Town also removes understory, shrubs, myrtles, and trees less than 3" DBH in the remainder of the Transition Zone.

The Sullivan's Island 2018 Comprehensive Plan includes objectives to complete the Accreted Land Management Plan as an integral part of the Town's comprehensive SLR and resiliency strategy, incorporating the broadest possible community participation and input. It also calls for a resilience framework for Sullivan's Island that should be coordinated, planned and integrated as a multifaceted strategy that addresses rising waters through water management in the form of stormwater infrastructure improvements and drainage outfall improvements.



Community Input



Community Input

The feedback on previous planning efforts, the open meeting on January 8, 2020, and responses to the survey posted on the Town's website yield a concise list of the benefits the community derives from the accreted lands. These benefits guided the work of the team to develop a balanced management approach that addresses each one of them.

Benefits

- » Enriching community identity
- » Enhancing human engagement
- » Increasing climate resilience
- » Protecting critical wildlife habitat
- » Establishing views and breezeways
- » Protecting property values for the entire community



Where To Start



Where To Start

Observations & Goals

Team Observations

Based on the community input, conversations with Town staff, our site visits and our professional expertise, we identified observations:

- » Decisions about the accreted lands are an expression of the values held by the people of Sullivan's Island, and they need to benefit the entire community. The current management of vegetation has drawbacks for habitat values and community benefits.
- » Barrier islands are inherently dynamic. Changing conditions require adaptive thinking and active management in order to maintain desirable community amenities.
- » Context Matters. The relevant context, on multiple scales, of the accreted land needs to be considered in developing balanced management objectives. . At the regional scale, unlike the maritime forests on Bull's or Caper's Islands, the maritime forest on Sullivan's Island is enveloped by a thriving community including roads, houses and infrastructure. At the site specific scale, the maritime forest on Sullivan's consists of multiple stages of growth; harbors patches of invasive species; and is crisscrossed with public and private beach paths.
- » The challenges of sea level rise, storm intensity and flooding will worsen on a relatively short time scale of 30-40 years. The Town of Sullivan's Island has a unique opportunity to manage the land so that it can help the community withstand these challenges.
- » The natural system is on a known trajectory. Upland forest and pines will tend to develop away from the beach. Interrupting this natural development requires sustained management.
- » Short and long-term plans must be financially and socially sustainable. The potential project outcomes and benefits should be broadly understood and embraced by the public to ensure support for the acquisition of financial resources.

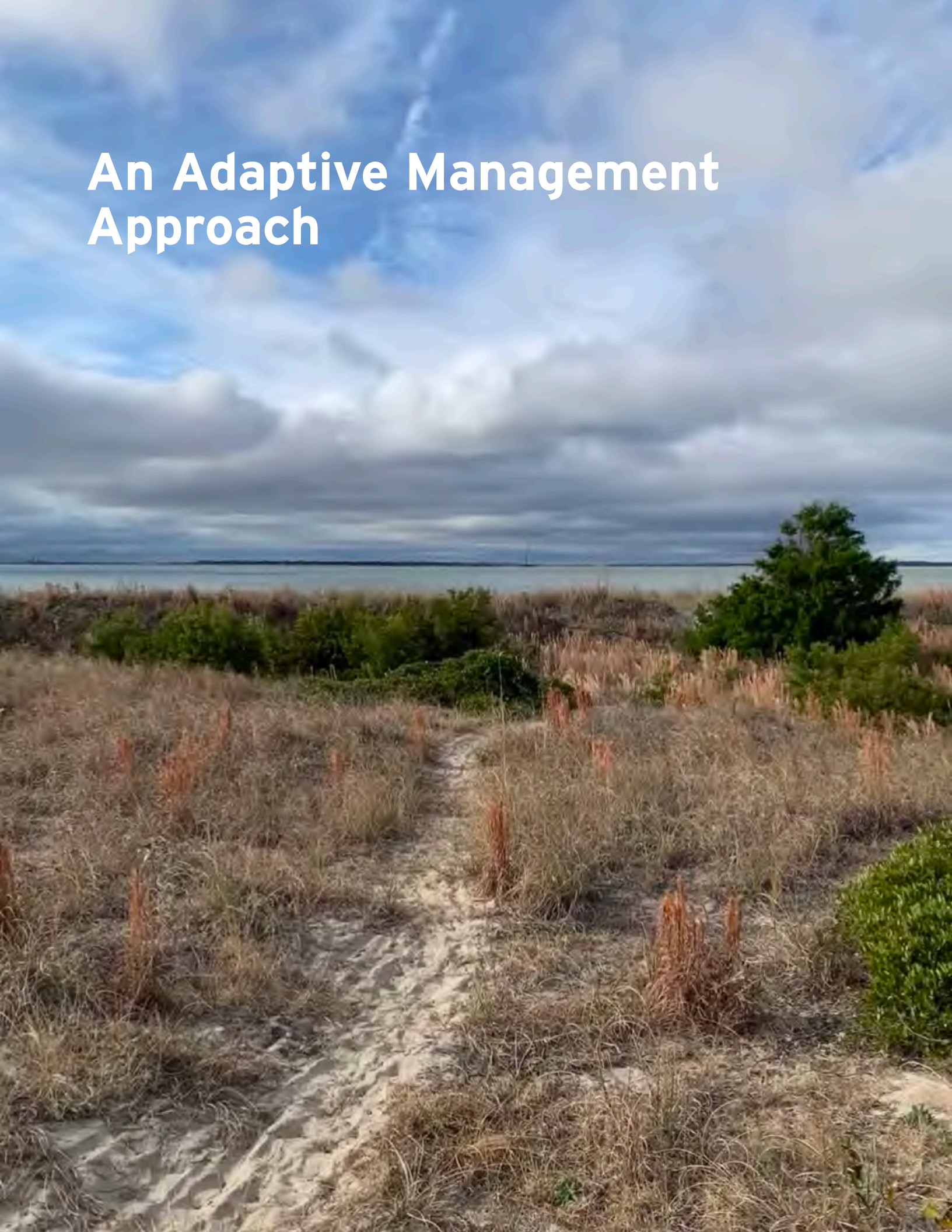
Goals

The Goals that were passed by Sullivan's Island Town Council in 2009 still offer robust guidance, but we added nuisance flooding and accessway considerations (*in italics*).

- » Achieve balance among ecological values, aesthetic concerns, and recreational and quality of life factors to benefit all Sullivan's Island residents.
- » Maintain healthy, sustainable dune land and developing forests through active management.
- » Apply habitat-appropriate management techniques ***and beach access***.
- » Maximize native plant and animal diversity.
- » Limit the spread and establishment of invasive species.
- » Facilitate breezes and vistas where appropriate.
- » Manage the land for future generations by providing protection from storm and tidal impacts.
- » ***Harness the land's potential to address community challenges such as nuisance flooding.***
- » Monitor management actions and modify strategies as needed.



An Adaptive Management Approach



An Adaptive Management Approach



An adaptive management framework anticipates the uncertainty that is inevitable with natural ecosystems

What is Adaptive Management?

Adaptive management is a structured, flexible decision-making process that outlines a transparent framework for acquiring knowledge, setting goals, monitoring conditions, evaluating results and deciding changes to future management actions.

The Accreted Land is highly dynamic, subjected to storm events, sea level rise, accretion & erosion, invasive species and other unforeseen influences. An Adaptive Management plan would provide a mechanism for Sullivan's Island to make informed, transparent decisions on how to respond to unforeseen events, and how best to modify management actions to achieve desired long-term results.

Successfully implementing the management recommendations for the Accreted Land would greatly benefit from an adaptive management approach.

An aerial photograph of a coastal region. A large, dark blue body of water occupies the right and bottom portions of the frame. A river or estuary system, with a dark, winding channel, flows from the top left towards the center. The riverbanks are lined with green marshland and some urban development. A city or town is visible in the center-left, with a grid of streets and various buildings. The coastline is irregular, with several small islands and peninsulas. The overall scene depicts a complex interplay of natural and human-made environments.

Management Recommendations

Management Recommendations

The following management recommendations are divided into six management zones. Each management zone includes a 30-year vision with a list of general management recommendations to support the Vision. These recommendations are a result of thoroughly evaluating the Accreted Land Management Plan prepared in 2010, compiling recent and emerging science, reviewing management actions and their consequences over the last nine years, visiting the accreted land, listening to residents and key stakeholders, and participating in a two-day design charrette.

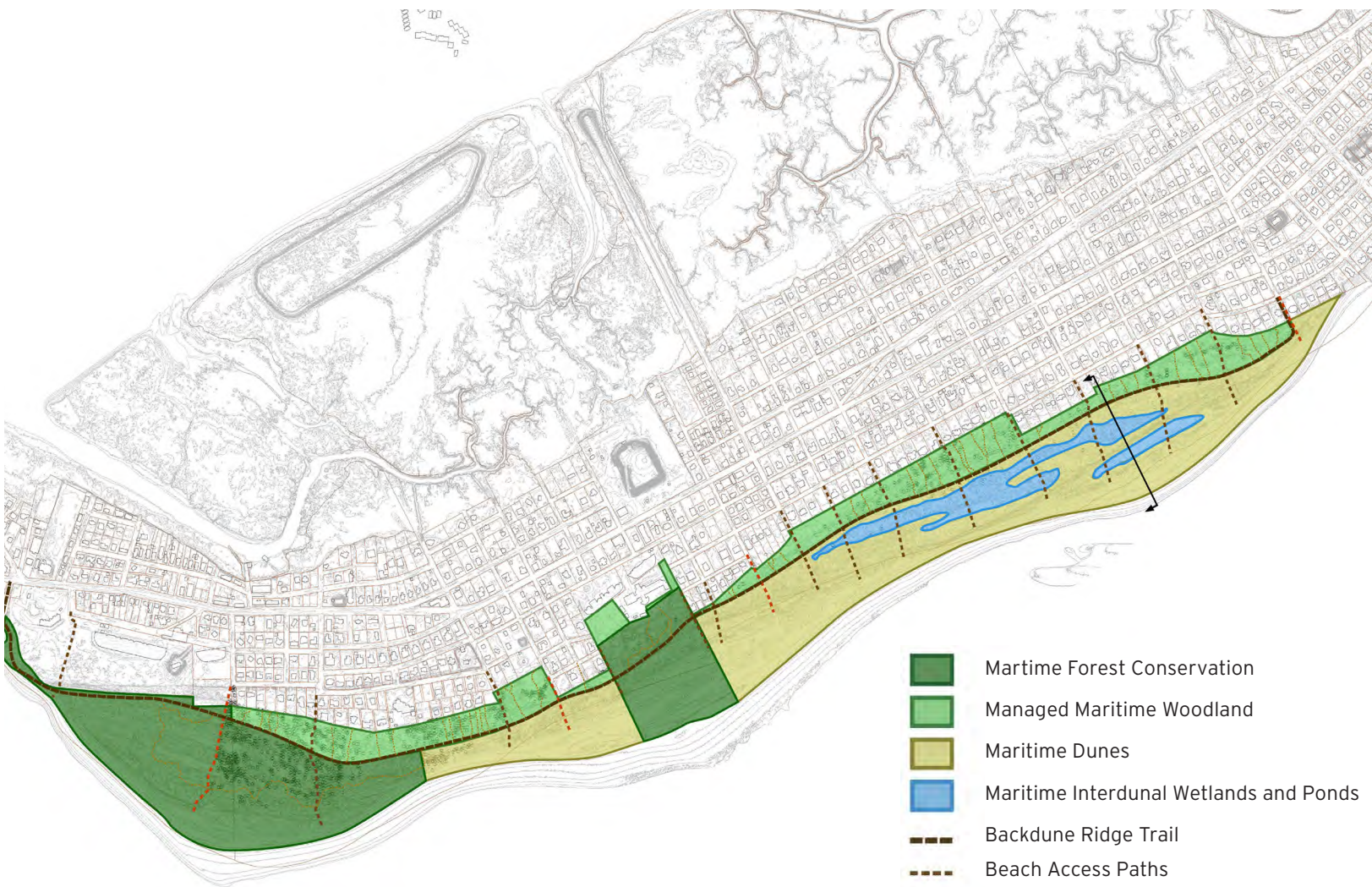


Figure 1 is a map illustrating the general location of the proposed management zones. Refinement of the boundaries and accompanying recommendations should occur as a next step in producing a final management plan.

The six proposed management zones each have specific recommendations that speak to the project goals, but they could be taken independently or in part, with an associated reduction in the plan's ability to speak to all community values and planning goals. As presented below, the management zone boundaries are conceptual, and their exact delineations will require field verification. Finally, to be successful, this plan requires administration by a professional focused on the management of the accreted land, described below as the "Town Naturalist."

Management Recommendations

Management Zone A - Maritime Forest Conservation

GENERAL LOCATION

Fort Moultrie to east end of Dunes Club property and in front of Sullivan's Island Elementary School. Width varies from beachfront public/private property line to foredune

30 YEAR VISION

A fully developed maritime forest community with a canopy of native trees and vertical complexity supported by understory trees, shrubs and groundcover that provide habitat for an array of wildlife, especially amphibian and avian species.

General Management Recommendation

- » Protect and conserve maritime forest
- » Manage for natural maritime forest succession to a mature maritime forest, with a full diversity of vegetation communities including foredune and backdune grasslands, maritime shrublands, maritime hardwood depressions, maritime interdunal wetlands and maritime forest.
- » At the discretion of the Town Naturalist, management actions could be taken to suppress pines, which are indicators of an upland transition. Less tolerant to wind and salt spray, they tend to come in as the transition to upland in accreting land succession.
- » Vigorously remove, suppress and manage invasive flora and fauna species.
- » Promote active stewardship and community engagement. Future trails should be strategically aligned and placed to minimize disturbance and to avoid fragmenting habitat.



Photo 1. Maritime forest on Sullivan's Island.

Management Recommendation

Management Zone B - Backridge Dune Trail

IMPORTANCE

The Sullivan's Island community has rebuilt itself from devastating storms in the past, but sea level rise and the increasingly severe and frequent storms that will affect it in the coming decades present a challenge that should be addressed through mitigation and planning. Both community exposure and resilience threats are ranked very high in studies and tools such as the Coastal Resilience Evaluation and Siting Tool and the National Oceanic and Atmospheric Administration's Coastal Flood Exposure Map. Similar barrier island communities are actively preparing for the changing conditions without the benefit of accreting lands. The opportunity to increase resilience by inter-connecting, raising and forming one continuous backdune along the entire length of the accreted land is strongly supported by even a cursory cost/benefit analysis.

GENERAL LOCATION

Station 12 to Station 28 ½ Alignment varies depending on integration with naturally occurring ridge lines.

30-YEAR VISION

A continuous backdune ridge that serves to protect the island community from storm surge flooding while serving as a community walking or running trail that weaves through the public land.

General Management Recommendation

- » Following highest existing backdune ridge(s), augment the height of the dune to an elevation of at least 14 feet with seaward slope that blends in with the natural topographic variation exhibited in the natural dunes.
- » Salvage existing sand from the front beach to supplement the height and width of the backdune ridge. This will minimize disturbance to the native plant communities and importation of weed seed from off-site sand.
- » Use carefully selected ingress and egress paths to minimize disturbance of existing vegetation to construct and maintain the backdune ridge.
- » At emergency beach access paths, lower the height of the backdune ridge to allow easy access of emergency and maintenance vehicles. Plan to adjust the top elevation with stockpiled sand in the case of anticipated against storm surge.
- » Establish a community walking trail (elevated and at-grade) that hugs the backdune ridge for its entire length. The Backdune Ridge Trail would also serve to collect and redirect homeowner beach access paths to the nearest public beach access paths. For additional guidance on access and paths, see Beach Access Paths (F).
- » Stabilize the ridge with native grasses and forbs.
- » Revegetate with native grasses/herbaceous plants upon completion and continue to maintain low-growing vegetation by suppressing trees and shrubs.
- » Vigorously remove, suppress and manage invasive and exotic flora and fauna species.



Photo 2. The highest existing dune ridge in the accreted lands would be modified by the addition of 2-4 feet of elevation and replanted with beach grass..

Management Recommendations

Management Zone C - Managed Maritime Woodland

GENERAL LOCATION

East end of Dunes Club property to Station 28. Width varies from beachfront public/private property line to the proposed Backdune Ridge Trail. Includes the entirety of the Transition Zone as currently designated and supersedes current management practices where they are inconsistent with the recommendations below.

30 YEAR VISION

A dispersed maritime forest community with a scattering of mature native trees, clusters of thinned shrubs to frame viewsheds and create breezeways, and a natural understory of herbaceous plants and vines providing habitat for an array of terrestrial and avian species.

General Management Recommendation

- » Manage for select maritime forest tree species and suppressed maritime shrublands to encourage habitat structure and vegetation diversity while maintaining breezeways and viewsheds for beachfront and community residents.
- » Protect and manage the growth of overstory and understory native trees. Allow beachfront owners the opportunity to work with the Town Naturalist (at their own expense) to selectively remove and prune trees to maintain framed viewsheds and breezeways within their extended property line viewshed (see pg 22, Minimum Coverage).
- » Manage the growth and density of wax myrtle and encourage the recruitment and diversity of shrub species (yaupon holly, groundsel bush, etc.). Allow beachfront owners the opportunity to work with the Town Naturalist (at their own expense) to selectively remove (see pg 22, Minimum Coverage), thin and prune wax myrtle and to selectively thin and prune other shrub species to maintain framed viewsheds and breezeways within their extended property line viewshed.
- » Beachfront owner directed management of tree or shrub species within Management Zone C may only occur if accompanied by the removal and management of all invasive species within the area being affected, at the beachfront owner's expense.



Precedent images of beach views framed by managed vegetation

Management Recommendations

Management Zone D - Maritime Dunes

GENERAL LOCATION

East end of Dunes Club property to Station 28. Width varies from proposed Backdune Ridge Trail or maritime interdunal wetland to foredune.

30-YEAR VISION

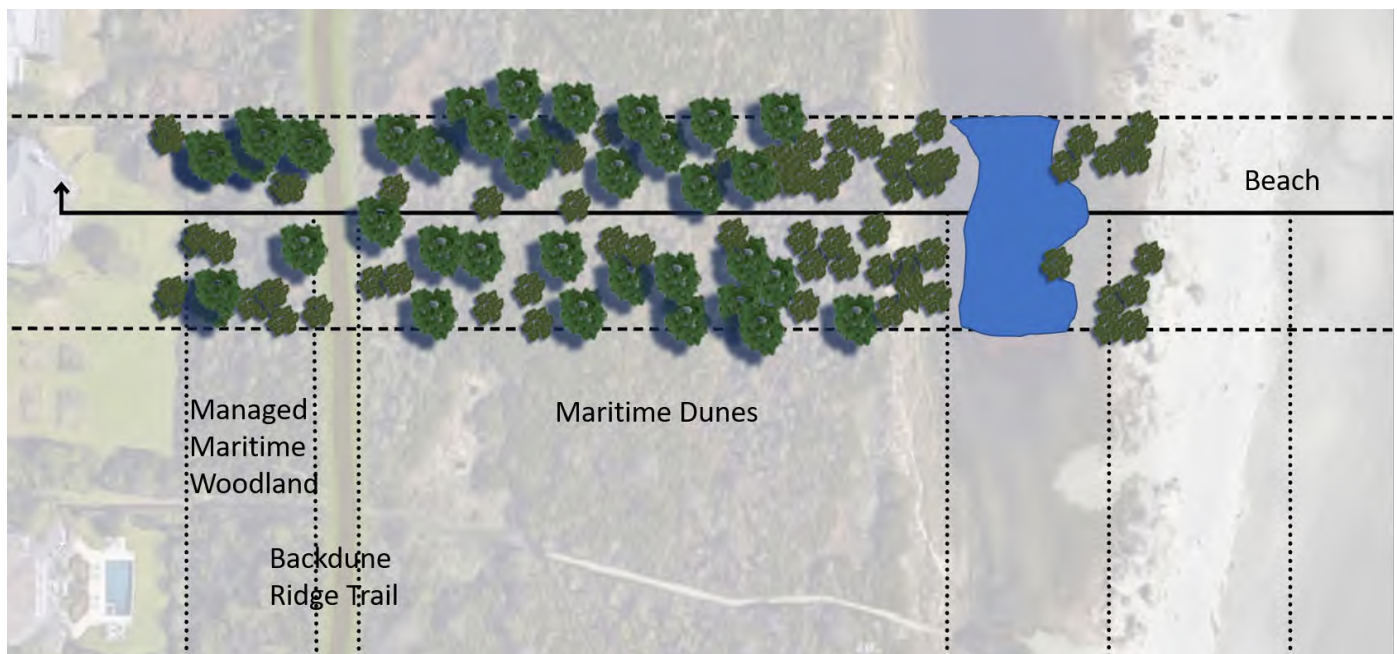
A mosaic of shifting natural foredune and backdune grasslands occasionally interspersed with clusters of maritime shrubs and trees that provide habitat for an array of terrestrial and avian species while also respecting the viewsheds and breeze ways established in Management Zone C.

General Management Recommendation

- » Manage for natural foredune and backdune grassland communities and interdunal wetlands.
- » Manage for suppressed maritime shrublands and select maritime trees to provide habitat for an array of

terrestrial and avian species while also respecting the viewsheds and breeze ways established in Management Zone C.

- » Protect and manage the growth of understory and overstory trees. At the sole discretion of the Town Naturalist, selectively remove, thin and prune trees to align with viewsheds and breezeways established in Management Zone C.
- » Manage the growth and density of wax myrtle and encourage the recruitment and diversity of shrub species (yaupon holly, groundsel bush, etc.). At the sole discretion of the Town Naturalist, selectively remove, thin and prune wax myrtle and other shrub species to align with viewsheds and breezeways established in Management Zone C.
- » Vigorously remove, suppress and manage invasive and exotic flora and fauna species.



Vegetation management in the Maritime Dunes can align with the viewsheds and breezeways established in Management Zone C's Managed Maritime Woodland.

Management Recommendation

Management Zone E - Maritime Interdunal Wetlands and Ponds

IMPORTANCE

The Town of Sullivan's Island is currently evaluating a significant investment in stormwater infrastructure to relieve chronic flooding and water management issues. Flooding has always been an issue along parts of Atlantic Ave, Bayonne Street and Pettigrew Street, (among others) even in the most causal of storm events. Projections indicate that the Lowcountry will experience more frequent and more intense storms in the next 25 to 80 years. The current stormwater drainage strategy directs all water through storm drains, owned by SCDOT, to the northwest side of the island, where untreated storm water is released into the marsh. The accreted land offers a unique, cost effective opportunity to store, filter and infiltrate stormwater, alleviating local flooding, reducing pollutants from entering the marsh and improving quality of life for the entire community.

GENERAL LOCATION

West end of Sullivan's Island Elementary School to Station 28. Width varies between Backdune Ridge Trail and backdunes to correspond with natural topographic features.

30-YEAR VISION

An interconnected series of deep open pools and shallow emergent/shrub-scrub wetlands providing stormwater quality and quantity management for the community and a diversity of aquatic and amphibian habitat.

General Management Recommendation

- » Accentuating the existing topography, (re)connect isolated maritime hardwood depressions, interdunal wetlands and open water ponds to enhance circulation, stormwater storage and habitat diversity.
- » Reconnect interdunal wetlands by raising beach access paths (or providing pipes under the path).
- » Strategically deepen interdunal wetlands to provide additional stormwater storage and manage the resulting open water habitat to support aquatic and amphibian communities.
- » Where feasible, redirect stormwater from nearby streets into the interconnected interdunal wetlands to provide stormwater quality and quantity management for the community.
- » Manage wetland areas for natural vegetative communities of aquatic, emergent and shrub-scrub wetland plants.
- » Protect and manage the growth of understory and overstory trees. At the sole discretion of the Town Naturalist, selectively remove (see Table 1), thin and prune trees to align with viewsheds and breezeways established in Management Zone C.
- » Manage the growth and density of wax myrtle and encourage the recruitment and diversity of shrub species (yaupon holly, groundsel bush, etc.). At the sole discretion of the Town Naturalist, selectively remove (see Table 1), thin and prune wax myrtle and other

shrub species to align with viewsheds and breezeways established in Management Zone C.

- » Vigorously remove, suppress and manage invasive and exotic flora and fauna species.
- » Revegetate with native grasses/herbaceous plants upon completion and continue to maintain low-growing vegetation by suppressing trees and shrubs.
- » Vigorously remove, suppress and manage invasive and exotic flora and fauna species.



Photo 3. Nuisance flooding is increasingly common on Sullivan's Island as stormwater management needs intensify and King Tides become more common.

Management Recommendations

Management Zone F - Beach Access Paths

OVERVIEW

This document recognizes four types of paths or trails.

Public Beach Access Paths consist of **emergency beach access paths** with a compacted substrate able to accommodate vehicular access and **pedestrian beach access paths**.

The **Backdune Ridge Trail** is a pedestrian path that hugs the backdune ridge along its entire extent.

Informal paths in Management Zone C allow beachfront homeowners to access the Backdune Ridge Trail and then the beach via a Public Beach Access Path.

30-YEAR VISION

Each Public Beach Access Path is managed to accentuate its unique character and feel, providing safe public access to the beach, while maintaining a balance of viewsheds, breezeways and habitat.

Public Beach Access Paths

- » Manage the character of the vegetation within a 30' wide corridor of Public Beach Access Paths to maintain safety, reinforce viewsheds and breezeways, soften the line between the path and the maritime forest, and encourage a diversity of wildlife habitat.
- » Manage vegetation by selectively shaping, removing, thinning, pruning, and suppressing trees, shrubs, groundcover and vines to achieve desirable conditions unique to each path.

- » Raise the beach access paths to safely cross over the backdune ridge. (At emergency beach access paths, lower the height of the backdune ridge to allow easy access of emergency and maintenance vehicles. Plan to adjust the ridge elevation with stockpiled sand in the case of anticipated against storm surge.)
- » Raise beach access paths to facilitate connections between isolated maritime hardwood depressions, interdunal wetlands and open water ponds.
- » Reconfigure public beach access paths to ramp up and over the backdune ridge (ADA compliant).

Backdune Ridge Trail

- » Establish a community walking trail (elevated and at-grade) that hugs the backdune ridge for its entire length. The Backdune Ridge Trail would also serve to collect and redirect informal paths to the nearest Public Beach Access Path.

Informal Paths

- » Within Management Zone C, informal paths may convey beachfront property owners to the Backdune Ridge Trail. Informal paths are not permitted in Management Zone D.



Managed Beach Access Path

Minimum Coverage



Vegetation Management

Management Zones C and D each require conversations with property-owners to direct vegetation management decisions by the Town Naturalist, and Management Zone C also has specific guidance. This guidance takes the form of minimum cover requirements, which are designed to steer the vegetation community towards a mature state that balances property and habitat values as well as other community benefits. The Managed Maritime Woodlands of Zone C replace the existing Transition Zone management with guidance that will address the key concerns that influence current management while enhancing the medium to long-term sustainability and habitat values associated with a maritime plant community.

The recommended density and cover requirements are based on historical records, the current trajectory of the existing vegetation, and the ecology of mature maritime forests unburdened by invasive shrubs and vines with a shaded forest floor. Ideally, these should be refined further in a more detailed Vegetation Management Plan. Natural maritime forests are characterized by having a tree canopy, or tallest layer, a shrub layer, and a groundcover layer of grasses and forbs. The recommended minimum cover requirements strive to balance habitat value while allowing for selective thinning and pruning to achieve viewsheds and breezeways. In these recommendations, it is important to remember that we are managing towards a forest of the future—trees will grow and the corresponding shrub and groundcover communities will shift in species composition and density.

In accordance with the adaptive management strategy, it is also important to note that these requirements may shift over time due to impacts from hurricanes and storm surges, pest infestations, changes in community values, and other unforeseen events.

Meeting these requirements in Management Zone C requires 1) calculating the area; 2) allowing the minimum number of trees per acre to grow; and 3) allowing shrubs to occupy the required minimum percentage of the area, while employing the management recommendations presented above. The required minimum cover will be met by a combination of trees and shrubs.

Trees are readily measured in terms of the number of trees per acre, so their minimum density requires calculating the acres of Management Zone C corresponding to each beachfront property owner. To define its extent, the Town will maintain a map that projects the private property lines out to the Backdune Ridge Trail and calculates the area associated with each beachfront house. The required number of trees in that area is then calculated according to the Minimum Trees per Acre defined in Table 1. This required number must be met by allowing native trees to grow in place. The property owner may work with the Town Naturalist to select any trees above that threshold for removal (see Management Zone C for additional management options).

Due to their dense growth habit, shrubs are difficult to measure with a comparable stems per acre metric. Therefore, the management of wax myrtle and other shrubs is based on the land area they cover, which will be measured by the Town Naturalist or designated professional arborist, who will map the extent of the shrub cover by taking GPS points and calculating the area covered by shrub species. Such techniques are commonly used by biologists.

Depending on the site, the way trees and shrubs are combined to meet the Required Minimum Cover may vary in Management Zone C. Where trees provide a large part of the cover, their critical root zones can be added to the area covered by shrubs to meet the Required Minimum Cover. Critical root zones are a standard arborists’ tool that can be defined as an imaginary circle on the ground surrounding a tree trunk. The critical root zones of the trees are allowed to count towards a part of the Required Minimum Cover. This allows the Town Naturalist to exercise more discretion in working with beachfront property owners, e.g. to permit removal of shrubs in breezeways and view corridors.

In Management Zones D & E, the vegetation is managed at the discretion of the Town Naturalist and with the intent to align with viewsheds and breezeways established in Management Zone C.

Zone	Minimum Cover	Minimum # Trees/acre	Minimum Shrub Cover
A. Maritime Forest Conservation	Managed for natural secession		
B. Backdune Ridge Trail	Trees and shrubs are suppressed		
C. Managed Maritime Woodland	65%	25	40%
D. Maritime Dunes	65%	Town Naturalist can work with homeowners if desired to selectively prune or thin vegetation to align with viewsheds and breezeways established in Management Zone C	
E. Maritime Interdunal Wetlands and Ponds	65% of upland (non-wetland)		

Table 1. Minimum Requirements by Management Zone.

Where Do We Go From Here



Where Do We Go From Here?

Ultimately, the next steps of this plan will be decided by the Town Council, but below are some of the steps that are necessary to advance this plan once it is approved as a framework to guide future decisions.



- » Meet with the regulatory agencies (SCDHEC-OCRM, USACE, USF&WS, EPA) to identify federal or state regulations that may prohibit implementing the management recommendations.
- » Prepare a detailed Management Plan that includes the following:
 - › Refined boundaries and management recommendations for each management zone, including best practices
 - › Schedule and timeline of activities
 - › Adaptive Management framework (monitoring, feedback, decision making structure)
 - › Recompense measures for violating the intent of the management recommendations
 - › Permitting
 - › Annual operating budget including manpower and equipment estimates
 - › Funding opportunities
- » Form a standing committee representing key stakeholders, charged with administering the management recommendations within the adaptive management framework, on behalf of the entire island community
- » Retain a single Town Naturalist (or equivalent) with the responsibility to carry-out the Accreted Land management recommendations in addition to managing other community public spaces.
- » Develop a single Vegetation Management Plan that offers further thinning, pruning, removal, and preservation regulations according to approved management goals.
- » For all residential lots, develop a list of preferred native plants to optimize passerine bird habitat, vegetation species diversity and climate change adaptation.
- » Prepare a Sullivan's Island resilience and climate adaptation plan
- » Continue dune and avifauna monitoring

TAKING A STANCE FOR THE FUTURE

Biohabitats' mission to *restore the earth and inspire ecological stewardship* permeates the work we do and the way we operate our business. We support initiatives and advocate for causes that work toward a more biodiverse, sustainable, and equitable world.



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To see Biohabitats' overall B Impact Score go to <https://bcorporation.net/directory/biohabitats-inc>.



The JUST program provides a transparent platform for organizations to voluntarily disclose initiatives in the categories of Diversity, Equity, Safety, Worker Benefit, Local Benefit, and Stewardship.

To see Biohabitats' social justice label go to <http://justorganizations.com/just-profile/biohabitats-inc>.



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