



# TOWN OF *Kiawah Island*®

## TOWN COUNCIL MEETING

Kiawah Island Municipal Center

Council Chambers

August 6, 2019; 2:00 PM

### AGENDA

#### Mayor

Craig E. Weaver

#### Council Members

Maryanne Connelly

Daniel Prickett

Klaus Said

Chris Widuch

#### Town Administrator

Stephanie Monroe Tillerson

- I. **Call to Order:**
- II. **Pledge of Allegiance**
- III. **Approval of Minutes:**
  - A. Minutes of the Town Council Meeting of June 4, 2019 [Tab 1]
- IV. **Mayor's Update:**
- V. **Citizens' Comments (Agenda Items Only):**
- VI. **Presentation:**
  - A. Charleston County Transportation Development report on Main Road Corridor Alternatives
  - B. Wildlife Population Trends
- VII. **Public Hearing**
  - A. To Consider Approval of **Ordinance 2019-06** – An Ordinance to Amend the Comprehensive Plan of the Town of Kiawah Island to Adopt Changes Resulting from the Flood Mitigation and Sea Level Rise Adaptation Report – **Public Hearing and First Reading** [Tab 2]
- VIII. **Old Business:**
  - A. Communication and Implementation Plan for the Plastics Ordinance [Tab 3]
  - B. Discussion of the Kiawah Island Parkway Project – Road Elevation and Landscape Architect Services
- IX. **New Business:**
  - A. To Consider Approval of the Amended and Restated Development Agreement by and Between Kiawah Resort Associates and Town of Kiawah Island affecting Parcel 13A [Tab 4]
  - B. To Consider Approval of **Ordinance 2019-05** – An Ordinance to Amend the Town of Kiawah Island Municipal Code of Ordinances Article 7, Public Safety; by adding Chapter 3, Section 7-301 - Drones and Model Aircraft – **First Reading** [Tab 5]
  - C. To Consider Approval of the CARTA (Charleston Area Regional Transportation Authority) Proposed 2020 Fiscal Year Budget [Tab 6]
  - D. Discussion of Beachwalker Drive Speed Tables Request from Inlet Cove HOA
  - E. Discussion of the Beach Franchise Agreements
- X. **Town Administrator's Report:**
- XI. **Council Member:**
  - a. Committee Updates
  - b. General Comments
- XII. **Citizens' Comments:**
- XIII. **Executive Session:**
  - A. Executive Session Pursuant to Section 30-4-70 (a) (5) of the South Carolina Code to Discuss Matters Relating to an Economic Development Project Adjacent to the Municipal Center on Johns Island.
- XIV. **Adjournment:**



Tab | **1**

**TOWN COUNCIL**

**Agenda Item**

# TOWN COUNCIL MEETING

Kiawah Island Municipal Center

Council Chambers

June 4, 2019; 2:00 PM

## Minutes

I. **Call to Order:** *Mayor Weaver called the meeting to order at 2:00 pm.*

II. **Pledge of Allegiance**

**Present at the meeting:**

Craig Weaver, Mayor  
Chris Widuch, Mayor Pro Tem  
Maryanne Connelly, Councilmember  
Dan Prickett, Councilmember

**Absent:**

Klaus Said, Councilmember

**Also Present:**

Stephanie Monroe Tillerson, Town Administrator  
Dwayne Green, Town Attorney  
Petra Reynolds, Town Clerk

III. **Approval of Minutes:**

A. Minutes of the Town Council Meeting of May 7, 2019

*Mayor Pro Tem Widuch made a motion to approve the minutes of May 7, 2019, Town Council Meeting. The motion was seconded by Councilmember Prickett and the minutes were unanimously approved.*

B. Minutes of the Town Council Special Call Meeting of May 28, 2019

*Mayor Pro Tem Widuch made a motion to approve the minutes of May 28, 2019, Special Call Town Council Meeting. The motion was seconded by Councilmember Connelly and the minutes were unanimously approved.*

IV. **Mayor's Update:**

Mayor Weaver stated that sadly for him, this would be Mr. Rusty Lameo's last Town Council meeting. After 22 years and two months of service to the Town of Kiawah Island, he would be retiring on the last day of June. He remarked that Mr. Lameo was one of the first employees of the Town, thanked him for all the contributions made and noted that all other comments would be saved for the event that will be held on his behalf later in the month.

V. **Citizens' Comments (Agenda Items Only):**

**Wendy Kulick – 38 Marsh Edge Lane**

Ms. Kulick questioned if there had been feedback on the single-use plastics ordinance from any of the entities on the island with concerns on enforcement or suggestions on how to make the ordinance more user-friendly.

Ms. Kulick questioned why the Development Agreement is being amended when it is not set to expire until 2023.

**Mayor Weaver said he would address both questions during the discussion of those agenda items.**

#### **Kelly Thorvalson – South Carolina Aquarium**

Ms. Thorvalson stated she attended the first reading of the Town's Plastics Ordinance, where she spoke to the negative interactions between wildlife and plastics. She remarked how honored and thrilled to be part of the plastics initiative committee. She noted the three items being considered; single-use plastic bags, Styrofoam, and plastic straws are not recyclable or very difficult to recycle and are considered the easiest to delete from our lives and business.

#### **VI. Old Business:**

- A. To Consider Approval of Ordinance 2019-02 – An Ordinance to Adopt the Fiscal Year 2019-2020 Budget for the Town of Kiawah Island, SC (7/1/19 Through 6/30/20) – Second Reading**

Mayor Weaver stated Town Council approved the first reading of Ordinance 2019-02 at its May 7<sup>th</sup> meeting and the required Public Hearing was held prior to the May 28<sup>th</sup> Ways and Means Committee meeting.

***Mayor Pro Tem Widuch made a motion to approve the second reading of Ordinance 2019-02 to Adopt the Fiscal Year 2019-2020 Budget for the Town of Kiawah Island. The motion was seconded by Councilmember Prickett and was unanimously approved.***

- B. To Consider Approval of Ordinance 2019-03 – An Ordinance to Prohibit the Distribution and Use of Certain Single-Use Plastics – Second Reading**

Mayor Weaver stated Town Council also approved the first reading of Ordinance 2019-03 at its May 7<sup>th</sup> meeting.

***Councilmember Prickett made a motion to approve the second reading of Ordinance 2019-03 to Prohibit the Distribution and Use of Certain Single-Use Plastics. The motion was seconded by Councilmember Connolly.***

In response to Ms. Kulick's question, Mayor Weaver stated that the Town received very few, if any, comments on the ordinance. He noted the primary modifications are additional language to more clearly clarify what is or is not included or covered by the ordinance.

***The motion unanimously passed.***

#### **VII. New Business:**

- A. To Consider Approval of an Amendment to the Environmental Committee Charter**

Mayor Weaver stated Ordinance 2019-03 includes language moving the initial authority for considering business exception requests to the Environmental Committee. The added responsibility will require an amendment to the Charter for the Environmental Committee with the addition for Item V-(H);

- H. A subcommittee of the Environmental Committee of not more than five (5) members should be created to hear and decide Request for Exemptions to the Plastics Ordinance as defined in the Town of Kiawah Island's Plastics Ordinance. The Chair of the Environmental Committee should select the five (5) Committee Members.***

***Mayor Pro Tem Widuch made a motion to approve the Environmental Committee Charter with the addition of the language in item V-(H). The motion was seconded by Councilmember Connolly.***



***Following further discussion, the motion was unanimously approved.***

- B.** To Consider Approval to the First Amendment to the Amended and Restated Development Agreement by and Between Kiawah Resort Associates, L.P., et al. and the Town of Kiawah Island.

Mayor Weaver stated in the existing Development Agreement (DA) it states that the agreement should expire on January 1<sup>st</sup> of 2023. It also states that if on January 1<sup>st</sup> of 2016 Kiawah Partners demonstrates they have 250 acres or greater of high ground that the Town and the property owner shall enter into an agreement to extend the term by three years to January 1<sup>st</sup> of 2026.

Mayor Weaver stated that sometime after 2016, the developers had indicated to the Town that at some point in the future they intended to ask to have the DA extended three years. The request, at this time, is putting in place what by the DA, the developer has the right to do.

Mayor Weaver indicated the amendment would not change the terms of the agreement but provide more clarity that in 2023, the DA will still regulate the agreement between the Town and the developers.

***Mayor Pro Tem Widuch made a motion to approve the First Amendment to the Amended and Restated Development Agreement by and Between Kiawah Resort Associates, L.P., ET AL and the Town of Kiawah Island. The motion was seconded by Mr. Prickett and was unanimously approved.***

**VIII. Town Administrator's Report:**

Ms. Tillerson reported that the Beachwalker Drive road improvement project to add a right turn lane into the County Park is completed. The Town engaged the services of Truluck Construction, who did a fabulous job and finished the project within the contract schedule time. She indicated that along with the park improvements and their queuing technology, the addition of the turning lane appears to be working reasonably well.

Ms. Tillerson reported that the Town is participating in the Disaster Awareness event hosted by Seabrook this year on June 14<sup>th</sup> from 10:00 am to 2:00 pm and encouraged everyone to attend.

**IX. Council Member:**

- a. Committee Updates
- b. General Comments

Councilmember Connelly reported on the report received for Explorer Charleston, which is a quarterly summary of the activities. She noted some items of interest in the report, such as the significant increase in the number of passengers at the Charleston Airport over the first quarter of this year.

Councilmember Connelly stated that she attended the Main Road corridor meeting that was held on May 20<sup>th</sup>. She reported there was a lot of information presented by the County, which included seven options for addressing Main Road and Route 17 and asked for feedback either in person or online. Mayor Weaver noted if citizens would like to submit a comment, the deadline was June 19<sup>th</sup>.

Councilmember Connelly stated that Mr. Scott Nelson is heading up the Kiawah CERT Team replacing Ms. Fran Wermuth, who led the organization for three years.

Ms. Tillerson gave Council an update regarding the employee merit performance increase. She noted that the budget just adopted included an aggregate total of five percent placeholder for staff merit increases following performance evaluations. After calculating the merit recommendation, the

cumulative average will be a four to four and a half percent increase. She noted that merit increases would be effective July 1.

Mr. Green reported on the ongoing action against the Town's former auditors. He stated that the end of the written discovery period is nearing and is now beginning the process of setting dispositions.

**X. Citizens' Comments:**

**Wendy Kulick – 38 Marsh Edge Lane**

Ms. Kulick stated she attended the "Hands Across the Sand" event held on May 18<sup>th</sup> for its 10<sup>th</sup> year on the importance of preventing offshore drilling and seismic testing and was surprised that she did not see any representation from the Town. Especially since the Town is participating in the lawsuit trying to prevent it and representatives of other local beach communities and Congressman Cunningham were in attendance. She thought that if there is an event in the future, it would be very positive for the Town to send representation.

**Mark Permar – Kiawah Partners**

Mr. Permar thanked Council for extending the term of the Development Agreement and addressed Ms. Kulick earlier question on why asking for the extension at this time. He explained that the development of an idea takes time and if you do not have enough time to evolve ideas and designs it puts pressure on doing them too quickly as opposed to a slow, steady pace.

**XI. Executive Session:**

**None**

**XII. Adjournment:**

*Councilmember Connelly motioned to adjourn the meeting at 2:37 pm. The motion was seconded by Councilmember Prickett and carried unanimously.*

Submitted by,

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**Petra S. Reynolds, Town Clerk**

Approved by,

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**Craig E. Weaver, Mayor**

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**Date**



Tab | 2

**TOWN COUNCIL**

**Agenda Item**

## THE TOWN OF KIAWAH ISLAND

### ORDINANCE 2019-06

#### AN ORDINANCE TO AMEND THE TOWN OF KIAWAH ISLAND'S COMPREHENSIVE PLAN

**WHEREAS**, pursuant to the authority conferred by Sections 6-29-310 through 6-29-1200 of the South Carolina Code of Laws, as amended, The Town of Kiawah Island's Comprehensive Plan was most recently updated pursuant to Ordinance 2015-08; and,

**WHEREAS**, the purpose of adopting the Comprehensive Plan was to guide the development of the Town in accordance with existing and future needs; and

**WHEREAS**, the findings and recommendations contained in the 2018 Flood Mitigation and Sea Level Rise Adaptation Report provide an important blueprint for future public policy and actions by the Town;

**WHEREAS**, the Town of Kiawah Island recognizes this long-term issue and seeks to protect and preserve Kiawah's quality of life by initiating pathways forward to administer flood mitigation and sea-level rise adaptation;

**WHEREAS**, the Planning Commission performed a review of the Comprehensive Plan and recommended substantial revisions; and

**WHEREAS**, the Town of Kiawah Island held a public hearing on August 6, 2019, as required by statute and the Municipal Code of the Town of Kiawah Island for the purpose of amending the Comprehensive Plan.

**NOW, THEREFORE, BE IT ORDERED AND ORDAINED BY THE COUNCIL OF THE TOWN OF KIAWAH ISLAND, SOUTH CAROLINA, AND IT IS ORDAINED BY THE AUTHORITY OF SAID COUNCIL.**

#### **Section 1      Purpose**

This Ordinance is to amend the Town of Kiawah Island's Comprehensive Plan to focus on preserving Kiawah Island's quality of life by recognizing flooding and sea-level rise associated risks.

#### **Section 2      Ordinance**

The Town of Kiawah Island's Comprehensive Plan is hereby amended as follows:

See attached Exhibit “A” incorporated herein by reference which shall replace and hereafter be known as the Town of Kiawah Island’s Comprehensive Plan.

**Section 3      Severability.**

If any part of this Ordinance is held to be unconstitutional, it shall be construed to have been the legislative intent to pass said Ordinance without such unconstitutional provision, and the remainder of said Ordinance shall be deemed to be valid as if such portion had not been included. If said Ordinance, or any provisions thereof, is held to be inapplicable to any person, group of persons, property, kind property, circumstances or set of circumstances, such holding shall not affect the circumstances or set of circumstances, such holding shall not affect the applicability thereof to any other persons, property or circumstances

**Section 4      Effective Date and Duration**

This Ordinance shall be effective upon its enactment by Town Council for the Town of Kiawah Island.

**PASSED, APPROVED, AND ADOPTED BY THE COUNCIL FOR THE TOWN OF KIAWAH ISLAND  
ON THIS      DAY OF      , 2019.**

\_\_\_\_\_  
Craig Weaver, Mayor

\_\_\_\_\_  
Petra S. Reynolds, Town Clerk

First Reading Approval \_\_\_\_\_

Second Reading Approval \_\_\_\_\_

**Town of Kiawah Island Comprehensive Plan Amendment Request**  
**Case ACP19-000001 History**  
**Town Ordinance 2019-06**

**Planning Commission Meeting: July 3, 2019**  
**Public Hearing and First Reading: August 6, 2019**  
**Second Reading:**

**CASE INFORMATION**

Applicant: Town of Kiawah Island

Representative: John Taylor, Jr. Planning Director

Application: The application proposes text amendments to the Town of Kiawah Island's Comprehensive Plan to address implications of Flood Mitigation and Sea Level Rise (FMSLR) based upon the 2018 Town of Kiawah Island Flood Mitigation and Sea Level Rise Adaptation Report produced by the FMSLR Adaptation Subcommittee of the Town's Environmental Committee.

Town Council reviewed and discussed the report of the Subcommittee on FMSLR and agreed that the findings and recommendations contained in the report provide an important blueprint for future public policy and actions by the Town. Town Council further agreed that, as a matter of Town policy, flood mitigation and sea level rise is a concern which, if not addressed, could have a long-term detrimental public safety, environmental, and livability effects on our community. The report asserts that this is a long-term issue and recommends an adaptive management pathways approach for evaluating acting. In line with this approach, and as an initial step, Town Council requested amendments prepared to the Comprehensive Plan to address the implications of FMSLR.

A work group was developed to administer the proposed changes embedding FMSLR considerations into existing Comprehensive Plan elements. The proposed amendments focus on broad themes addressing FMSLR implications including impact to key resources as the salt marsh, the beach and dune system, roads and infrastructure, natural habitats, the freshwater aquifer, and consideration of sustainable development practices and regulations.

The specific Comprehensive Plan elements addressed through this proposal include Natural Resources, Community Facilities, Transportation and Land Use. The proposed amended language is attached. Staff has prepared a secondary strategy plan that provides council implementation steps.

**RECOMMENDATION BY THE PLANNING COMMISSION**

Section 12-157(4) of the *Zoning Ordinance* states "The Planning Commission shall review the proposed amendment and adopt a resolution recommending that the Town Council approve, approve with conditions the proposed amendment, based on the approval criteria of subsection (7) of this section. The Planning Commission may hold a public hearing in accordance with the procedures in section 12-156. A simple majority vote of Planning Commission members present and voting shall be required to approve the amendment. Following an unfavorable finding on the application, the Planning Commission shall notify the applicant and report the reasons for the finding."

**DECISION ON AMENDMENT BY THE TOWN COUNCIL**

Section 12-157(6) states "Following receipt of a copy of the proposed comprehensive plan text or land use diagram amendment from the Planning Commission, along with the Planning Commission's report and recommendation, the Town Council shall schedule one or more public hearings in accordance with State Law to decide whether to adopt the amendment. For amendments to the land use diagram, personal and posted notice also shall be given in the manner provided in section 12-156. Any time after the close of the

public hearing, Town Council shall act to approve, approve with conditions, or deny the proposed comprehensive plan amendment, based on the approval criteria of subsection (7) of this section. A simple majority vote of Town Council members present and voting shall be required to approve the amendment.”

**APPROVAL CRITERIA AND APPLICANT’S RESPONSE**

Pursuant to §12-157(7) of the *Land Use Planning and Zoning of the Town of Kiawah Island South Carolina (Zoning Ordinance)*, “Comprehensive Plan amendments may be approved by the Town Council only if they determine that the proposed amendment is consistent with the overall purpose and intent of the comprehensive plan. Any amendment to the land use diagram and/or other maps shall be consistent with the vision and goals in the text of the comprehensive plan.”

*“FMSLR integration into comprehensive planning, promotes appropriate response to both local and regional trends of increased flooding risks for the community. This action provides opportunities to address these concerns and risks that if not addressed, will present significant long-term challenges to the both the environment and public safety for residents and guests of Kiawah Island. The recent experiences of storm related flooding events and rising seas make this amendment important to ensure essential resources and services are sustained and appropriately maintained and to actively become a more resilient community.”*

**JUNE 10, 2019 PLANNING COMMISSION MEETING**

PC Recommendation: Recommendation of approval 6-0. (1 commissioner absent)



TOWN OF KIAWAH ISLAND

***DRAFT***

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FLOOD MITIGATION & SEA LEVEL RISE ADAPTATION  
STRATEGY PLAN  
2019-2020

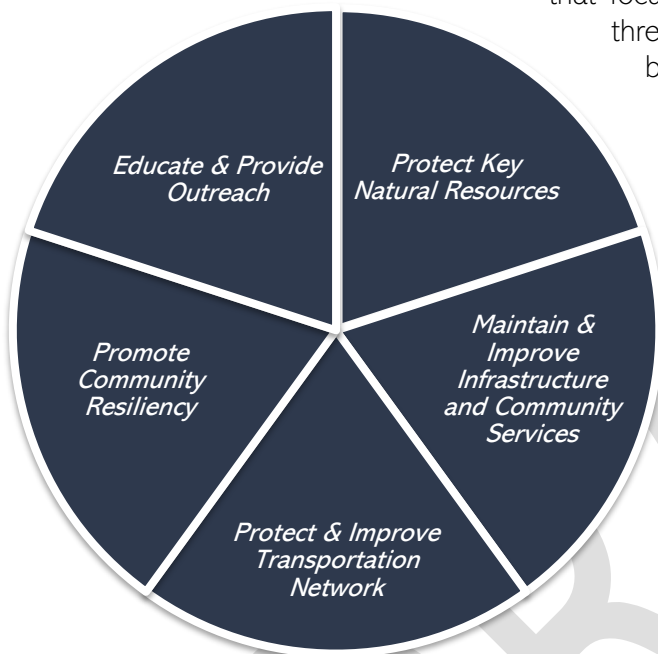
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| Vision                           | 2 |
| Implementation Strategies        | 2 |
| Strategy Action Steps            | 4 |
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| Community Facilities             | 5 |
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## Vision

In November of 2018, Town Council approved to adopt actions in response to the Flood Mitigation and Sea Level Rise Adaptation Report. Town Council reviewed and discussed the report and agreed that the findings and recommendations contained in the report provide an important blueprint for future public policy and actions by the Town. Town Council further agreed that, as a matter of Town policy, flood mitigation and sea level rise is a concern which, if not addressed, could have a long-term detrimental public safety, environmental, and livability effects on our community.

The outlined action steps are derived in combination from the 2018 Flood Mitigation and Sea Level Rise (FMSLR) Adaptation Report and the amended Comprehensive Plan goals and implementation strategies

that focus on preserving Kiawah's quality of life by recognizing the threats of flooding and rising seas. Five strategy themes have been outlined to help organize these actions and shall provide clear goal as the Town considers measures forward for the Kiawah community in addressing flooding and rising sea levels. It is important to recognize the assertion of that this is a long-term issue and an adaptive management pathways approach for evaluating and acting is recommended. The Town shall monitor its progress periodically to provide the most appropriate response to FMSLR risks.



## Implementation Strategies

### I. Protect Key Natural Resources

The beach, dune system, and salt marsh are the core of Kiawah's natural environment. The value of these resources must be protected as they provide endless benefits to Kiawah residents and guests. Kiawah's healthy beach and dune system, the beach still faces erosion challenges as a result of both short term and long-term causes. It is essential for the Town to take appropriate measures to expand its tools of regulatory management of these natural resources.

- Beach and Dune System
- Salt Marsh Management
- Freshwater Aquifer
- Wildlife Habitat

### II. Maintain & Improve Infrastructure and Community Services

Kiawah is unique in that most of its community services and facilities are provided and maintained by private entities. Coordination with various island entities is key in ensuring adequate services are provided to residents to sustain a high quality of life. The safety of residents and property are meaningfully important. Flooding risks become a priority for the Town's emergency preparedness plans and personnel to include tools and mechanisms that address recovery of compromised

infrastructure and essential community services especially during flooding and significant storm events.

- Coordination
- Infrastructure Plans

### III. **Protect & Improve Transportation Network**

The transportation network must be maintained to support safe and efficient mobility of residents, businesses and visitors. Traffic flow, an essential public safety and quality of life factor considered during infrastructure improvements. Long term planning for road improvements are specifically important to the list of considerations and actions taken by the Town to address flood mitigation. Drainage patterns will also be included as roadway projects are studied and improvements are made.

- Coordination
- Road Design and Improvements

### IV. **Promote Community Resiliency**

Resiliency is the capacity of individuals, communities, and systems to survive, adapt, and grow no matter what kinds of lingering stresses and acute shocks they may experience. Effective planning can maximize value and minimize those risk, stresses and impacts from threatening external influences as flooding and rising sea levels strengthening the Islands resiliency. Improved development patterns, building strategies and open space protection efforts offer the opportunity to be better prepared as a community for long term projections of rising seas and increased flooding risks.

- Development Strategies
- Zoning Ordinances
- Building Codes
- Coordination
- Stormwater Runoff

### V. **Educate & Provide Community Outreach**

There is tremendous value in educating and bringing awareness to residents, property owners and all governing entities of obtaining and distributing timely and accurate information on flood mitigation and sea level rise adaptation. This allows all entities to invest in planning and mitigation efforts to increase resiliency as a community. Active community engagement raises the attention of flooding issues and promotes a proactive approach to respond as collectively. The Town needs to highlight flood mitigation and sea level rise adaptation programs and initiatives to emphasize potential threats affecting property owners. Consistent communication efforts prepare the Town and community to make informed and appropriate decisions around minimizing associated risks and recovery from significant flood events.

## Strategy Action Steps

### Natural Resources

- A. August 2019 | Create an RFP for services to draft a marsh management plan.
- Secure accurate inventory data on health and status of Kiawah salt marshes
  - Identify most appropriate shoreline erosion mitigation strategies
  - Identify and develop study area to evaluate shoreline erosion strategies.
  - Highlight and compare existing local and regional shoreline development regulations
- B. November 2019 (*in progress, pending confirmation of official DHEC-OCRM jurisdictional lines*) | Execute update to Town's 2012 Beach Management Plan according to state guidelines
- Explore dune protection
- C. January 2020 | Adopt a marsh management plan modeling the Town's existing beach management plan.
- D. Ongoing | Encourage other public and private entities to implement and or adopt recommended marsh protection and or marsh management practices identified within adopted marsh management plan.

### Natural Resources

- August 2019
  - Marsh Management Plan RFQ/RFP
- November 2019
  - Beach Management Plan Update
- January 2020
  - Adopt Marsh Management Plan

## Community Facilities

- A. January 2020 | Coordinate with Island entities to assess flood inundation models created with KICA Resiliency Officer, Lucas Hernandez to determine roadway, stormwater, utilities and other infrastructure improvement projects threatened by significant flooding and develop prioritized project list based upon provided assessment
1. Coordinate with KIU/BEC to identify feasibility of relocating electrical equipment from identified flood prone areas and or other strategies to prevent significant damage to equipment as a result of flooding.
- B. October 2019 – February 2020 (*ahead of next active storm season*) | Update the Town's Emergency Management Plan to incorporate flooding inundation models for emergency planning and identify specific available resource options for funding significant damage made to infrastructure as a result of flooding.
1. Clearly outline federal aid guidelines for assistance/reimbursement



### January 2020

- Prioritize infrastructure improvements based upon potential damage from assessed flood inundation models

### October 2019

- Update Emergency Management Plan

## Protect & Improve Transportation

- A. August 2019 | Facilitate Kiawah Island Parkway improvement study to determine feasibility of flood mitigation strategies including but not limited to raising the parkway, realignment of bike path.
- B. October 2019 | Coordinate with Island entities to assess flood inundation models created with KICA resiliency officer, Lucas Hernandez to determine roadway improvement projects threatened by significant flooding. Develop roadway improvement priority list based upon assessment.

## Promote Community Resiliency

- A. February 2020 | Collaborate with Island entities to assess flood inundation models created with KICA Resiliency Officer Lucas Hernandez to determine vulnerability of structures threatened by flooding and develop prioritized project list based upon provided assessment.
1. Collaborate with KIARB to determine retrofitting standards to assist property owners in resilient solutions for structures damaged or threatened by flooding.
- B. March 2020 | Increase freeboard 1-2 feet above base flood elevation for new and substantially improved structures considering location within high prone flood areas.
- C. April 2020 | Establish guidelines for appropriate living shorelines as recommended by adopted marsh management plan.
- D. August 2020 | Prepare for approval amendments to the zoning ordinance to include a tree planting and protection ordinance considering KIARB landscape standards.
1. Enhance vegetative buffer requirements for properties adjacent to marsh front to increase structure protection and salt marsh pollution.
- E. October 2020 | Initiate green infrastructure task force comprised of planning staff, environmental committee to study preparing recommendations to establish

### February 2020

- Structure Vulnerability Assessment

### March 2020

- Increase Freeboard
- Establish Living Shorelines Guidelines

### August 2020

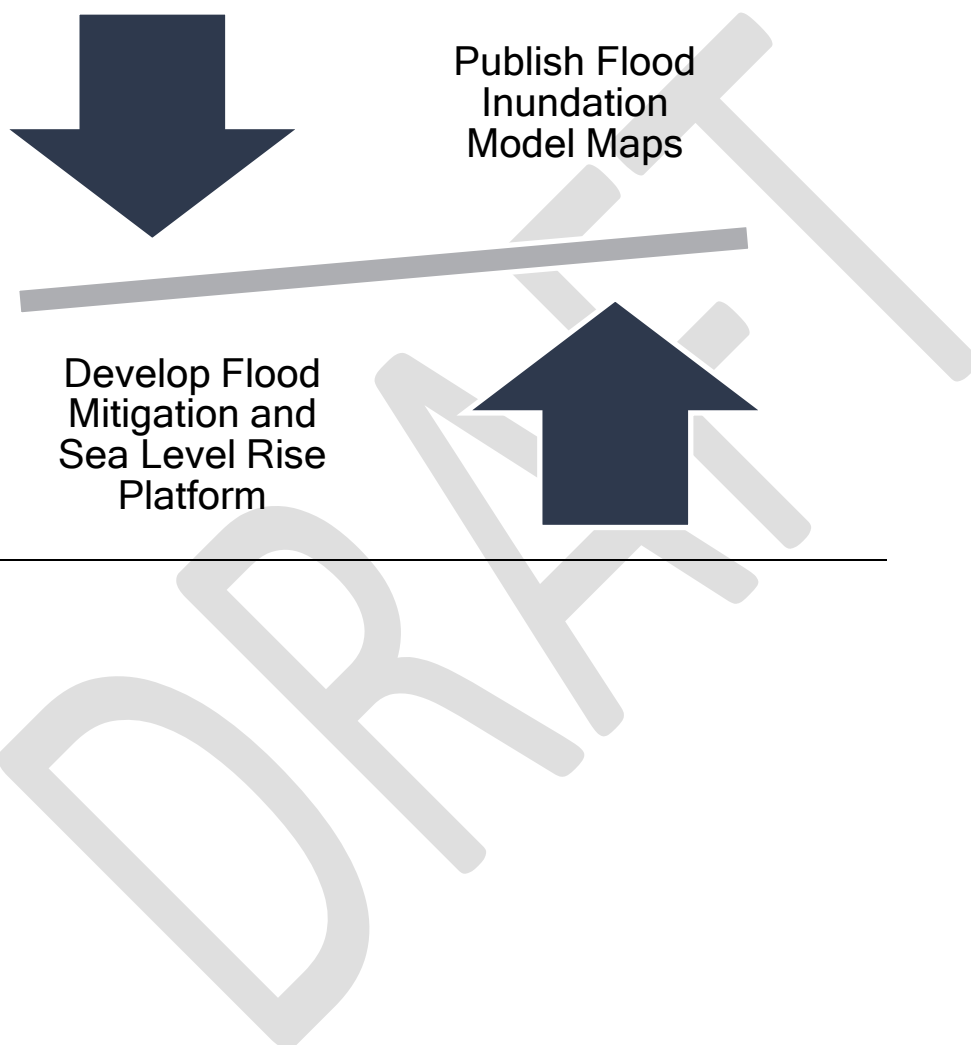
- Develop Enhanced Landscape Ordinance

### October 2020

- Initiate Green Infrastructure Task Force

## Educate & Provide Outreach

- A. September 2019 | Publish flood inundation models to Kiawah community utilizing partnership created with KICA Resiliency Officer, Lucas Hernandez.
- B. December 2020 | Develop comprehensive flooding venue for Kiawah residents and guest to learn implications of flooding and sea level rise.





## Comprehensive Plan Goals

### I. Natural Resources

1. Natural Resources - Goal 2 | Develop and maintain an environmentally sustainable system of parks and open spaces which provide access to the beach and river; preserves, protects and enhances natural resources; and meets the diverse recreational needs of the Town's population.
  - a. Maintain existing programs to monitor and protect natural resources, wildlife species and habitat and expand these programs to include all groups of species on the island.
  - b. Support and encourage research on wildlife and natural resources by outside entities, such as colleges and universities, to expand our knowledge and understanding of the natural systems on the island.
  - c. Conduct aerial orthophotography of the island every 3 years to monitor changes to the beach and dunes, salt marsh, interior habitat areas, and ongoing development.
  - d. Improve access to the beach, Kiawah River and other open space areas by allowing for parking near key access points.
2. Natural Resources – Goal 5 | Formalize a marsh management plan that explores various methods of protection for the Island's marsh and manages the interface between highlands and critical area that is vital to a healthy salt marsh.
  - a. Conduct aerial orthophotography of the island every 3 years to monitor and record changes to the beach, dunes, and salt marsh.
  - b. Monitor local and regional marsh front and or shoreline development regulations changes.
  - c. Research shoreline erosion mitigation strategies (living shorelines, restoration).
3. Natural Resources – Goal 6 | Coordinate with public and private organizations on the impacts to or preservation of marsh front properties.
  - a. Coordinate with local state and federal agencies including the Conservancy, KIARB, KICA, DHEC OCRM to assess the health of the salt marsh and explore long-term protection of the salt marsh.
  - b. Review land use regulations and building codes impacting development along marsh front properties.

## II. Community Facilities

1. Community Facilities – Goal 1 | Coordinate with all public and private organizations for the provision of essential community services.
  - a. Evaluate the provision of public safety services to ensure the safety and security of the Town's resident, non-resident property owner, and visitor populations, including security, fire protection, and emergency medical care, among others; provide Town Council with an annual report of status.
  - b. Evaluate the provision of utility services to meet the quality, volume and emergency needs of existing and proposed development. Such services include electricity, water, wastewater management, solid waste management, cable, telephone and other services; provide Town Council with an annual report of status.
  - c. Evaluate the merits of developing the Town's borrowing capacity as a source of funding to address critical community services that may be needed on an emergency basis.
2. Community Facilities – Goal 2 | Monitor and sustain the continued adequacy of emergency preparedness plans and communicate regularly such plans to resident, non-resident property owner, and visitor populations.
  - a. Coordinate reviews of the Town's Emergency Preparedness Plan, and related processes and infrastructure, with all relevant local, state, and national authorities. Update the Plan accordingly.
  - b. Communicate regularly the essential elements of the Town's Emergency Preparedness Plan to residents, non-resident property owners, and visitors.

### III. Transportation

1. Transportation – Goal 1 | Promote compatibility among roadway improvements, land use patterns, community character and natural environment.
  - a. Provide roadways designed to provide for safe and efficient traffic flow, minimizing impact on the environment, while enabling travelers to experience the natural beauty of the Island.
  - b. Base the size and capacity of roads, parking areas, driveways and other impervious surfaces on the land uses they will serve.
  - c. Ensure safe traffic flow on and protection of the Town's only evacuation route – the Kiawah Island Parkway.
  - d. Encourage adequate off-street parking for all residential, commercial and recreational development activities in the Town.
2. Transportation – Goal 2 | Ensure that the Island's roadway system is properly maintained to meet the safe and efficient mobility of residents, businesses, and visitors.
  - a. Develop and implement a strategic maintenance and replacement plan to ensure long-term maintenance of Town-owned transportation infrastructure (see Priority Investment Goals #3c. and #4b.). Coordinate with KICA and 3rd parties regarding maintenance and replacement plans for their infrastructure within Town boundaries.
  - b. Collect and review roadway traffic count data and other information to assist in ensuring that the Highway Capacity Manual's Level of Service (LOS) "C" or better is maintained on collector and arterial streets and to serve development.
  - c. Encourage safe, non-motorized (e.g. walking, biking, etc) mobility on the Island. Ensure the efficacy and consistency of signage and pavement markings to improve safety of auto-non-auto interfaces (e.g., crosswalks, yield signs, etc.).

### IV. Land Use

1. Land Use – Goal 1 | Provide for high quality, orderly, and controlled development and redevelopment.
  - a. Ensure development criteria and standards are determined to be consistent with the Vision Statement of the Island and this Plan.
  - b. Develop standards that are flexible enough to allow property owners and developers to respond to changing conditions and ensure compliance with such standards.
  - c. Maintain compatibility of commercial, residential, and resort areas with adjacent and nearby properties such that redevelopment will not create demands for recreational facilities, roads or utilities in advance of their availability.

2. Land Use – Goal 3 | Encourage expansion of the Kiawah Island Conservation Areas.
  - a. Zone environmentally sensitive areas such as marshes and any future accreted land in the Conservation District.
3. Land Use – Goal 5 | Continue to improve monitoring and evaluating spatial relationships of physical properties and land use (such as zoning, lot size, natural resources, transportation, and community services) with updated, accurate GIS data.
  - a. Broaden use of the Town's GIS System and upgrade as appropriate.
  - b. Analyze the Town's zoning ordinances, building codes and related development strategies to recognize flood mitigation and rising sea level impacts.



## NATURAL RESOURCES ELEMENT

### Background

Kiawah Island, the largest barrier island in the state of South Carolina, is located just south of Charleston. The Island has a rich variety of maritime habitats and scenic natural resources that include over 10 miles of beach, a broad salt marsh with tidal creeks, freshwater wetlands, and extensive maritime forest and shrub thickets.

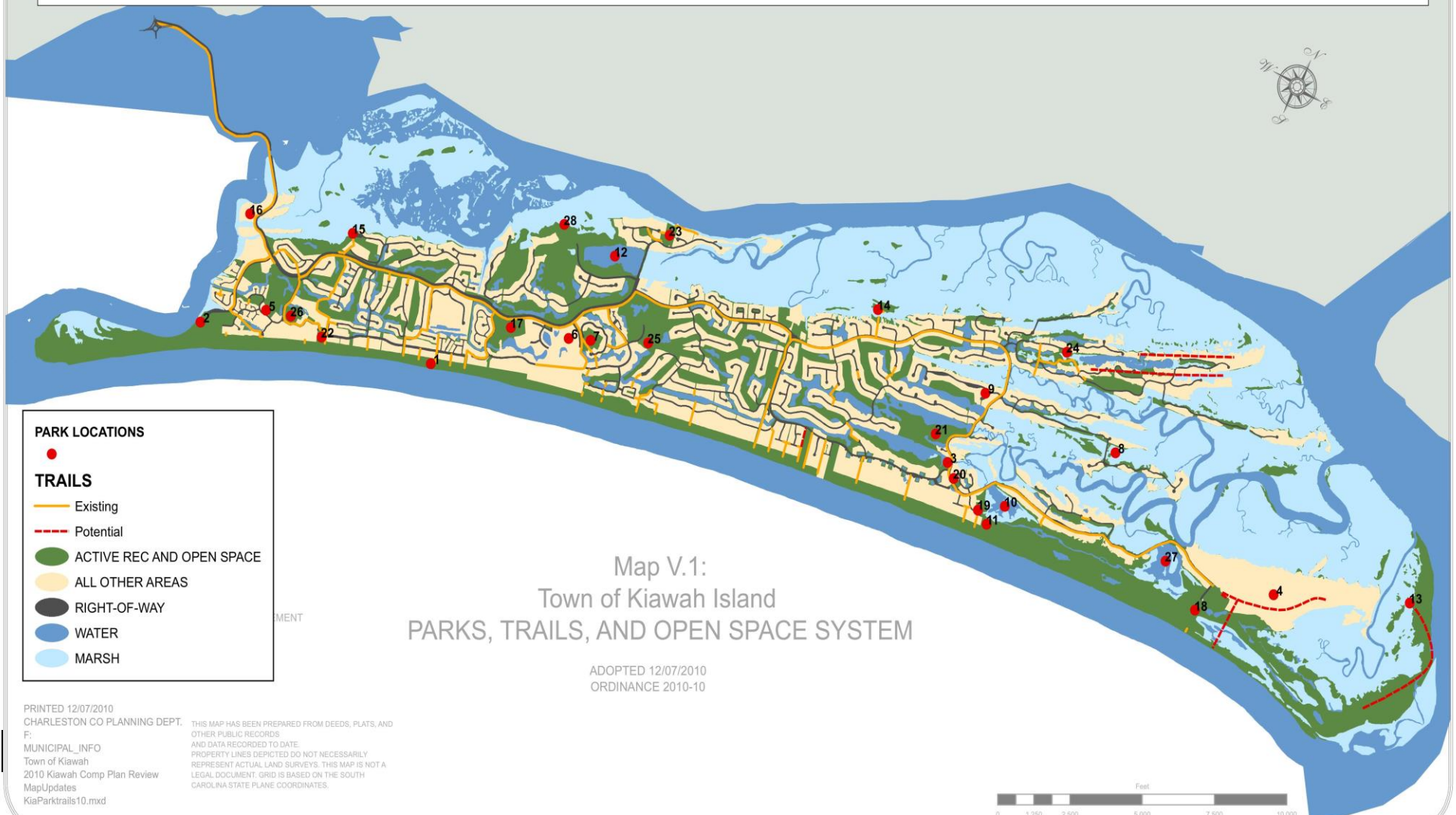


In 1975, the Kiawah Island Company introduced plans to develop Kiawah Island as a scenic residential and Resort community, which capitalized on its natural beauty. Residential areas are interlaced with recreational open space, a system of lagoons and ponds, wildlife corridors and nature trails that are functional and aesthetically pleasing. The intra-Island brackish and fresh water ponds serve multiple purposes including storm water retention and removal. Roadway and other pavement runoff are naturally filtered through the marshes, protecting river and ocean water quality.

As a result of environmentally sensitive planning, Kiawah Island has been recognized nationally for its creative balance between natural and developed areas by the Urban Land Institute and the American Planning Association. Map V.1 below shows the parks, trails and open spaces that exist in the Town as of November 2



- |                                  |                               |                              |                                   |                           |
|----------------------------------|-------------------------------|------------------------------|-----------------------------------|---------------------------|
| 1 BEACH                          | 7 EAST BEACH TENNIS           | 13 LITTLE BEAR ISLAND        | 19 OCEAN MARSH ROAD BEACH PARKING | 25 TURTLE POINT GOLF      |
| 2 BEACHWALKER PARK               | 8 FALCON POINT/SUMMER ISLANDS | 14 MARSH ISLAND PARK         | 20 OCEAN OAKS                     | 26 WEST BEACH TENNIS      |
| 3 CANVASBACK MINIPARK            | 9 GLOSSY IBIS MINI PARK       | 15 MARSH VIEW TOWER OVERLOOK | 21 OSPREY POINT GOLF              | 27 WILLET POND            |
| 4 COUGAR ISLAND                  | 10 IBIS POND                  | 16 MINGO POINT               | 22 PROPERTY OWNERS REC CENTER     | 28 RIVER COURSE CLUBHOUSE |
| 5 COUGAR POINT GOLF              | 11 KIAWAH BEACH CLUB          | 17 NIGHT HERON PARK          | 23 RHETT'S BLUFF                  |                           |
| 6 EAST BEACH CONFERENCE/TOWN CTR | 12 BASS POND                  | 18 OCEAN COURSE GOLF         | 24 THE PRESERVE                   |                           |







## Existing Conditions

### Beach and Dune Preservation

Oceanfront beach and dunes serve several important functions. These include storm protection for upland areas, habitat for a variety of plant and animal species (very important for daytime resting cover for bobcats), nesting habitat for sea turtles and recreation for Town residents, property owners and guests.

The beach and dune system is currently in very good shape and is monitored annually by Dr. Tim Kana of Coastal Science and Engineering (CSE). The beach is currently divided into 6 reaches or zones (Figure V.2) and annual erosion and accretion rates are calculated each year. This is done by conducting beach profile monitoring at 61 locations along the beachfront. Between 2012 and 2013, all reaches accreted sand with the exception of the Lagoon and Stono Inlet reaches. These 2 reaches are located on the eastern end of Kiawah and are very dynamic due to their location near the Stono River Inlet. Neither of these reaches is adjacent to any homes or structures.



Figure V.2. Map of Kiawah Island showing the location of the 6 beach reaches used for monitoring and reporting erosion and accretion rates.





### **Changing Beachfront**

Even with Kiawah's healthy beach and dune system, the beach still faces erosion challenges as a result of both short term and long-term causes. In the future, short term erosion from tropical storms and hurricanes may occur more frequently. Kiawah has experienced several storm or flood events since 2015 which have impacted the physical character of the beach, including the 2015 1,000-year flood event, Hurricane Matthew (2016) and Hurricane Irma (2017). Although Kiawah's beach currently accretes, more frequent storm events may slow down or even override this trend. Rising sea levels will impact the beach character as dune systems potentially move landward toward buildings along the beach front. To mitigate these erosion impacts, the Town has conducted several beach renourishment and restoration projects and continues to monitor the beach front development through the Town's Beach Management Plan.

### **2006 East End Beach Restoration Project**

In 2006, the Town conducted a large scale Beach Restoration Project on the eastern end of Kiawah Island. This project successfully stopped intensive erosion on the eastern end of the island adjacent to the Ocean Course clubhouse. A total of 550,000 cubic yards of sand was moved onto the beach by land-based equipment. The total project cost was \$3.6 million, the majority of which was paid by the Town of Kiawah Island. Financial contributions to the project also came from the Kiawah Island Golf Resort, Kiawah Island Community Association, as well as the Kiawah Resort Association. The mitigation plan for the project required monitoring of habitat changes (including ground elevation surveys and aerial orthophotography) and periodic piping plover surveys of the project area through 2012.

### **2015 East End Beach Restoration Project**

The eastern end of Kiawah Island experienced severe erosion during 2014-2015, mainly due the presence of a tidal inlet located parallel to the beach adjacent to the Ocean Course driving range. The Town applied for federal and state permits to close the tidal inlet, excavate a new inlet a half-mile to the east, and renourished portions of the eroded areas in May of 2014. The restoration took place in May of 2015 and moved 100,000 cubic yards of sand. Mitigation requirements for this project are similar to the 2006 project and involve macroinvertebrate monitoring, piping plover surveys, sea turtle nest monitoring, and aerial photography. The total cost of the project including follow up monitoring was \$1 million.

### **2017 Beach Restoration Project**

This project was conducted in 2017-18 to restore the primary dune after the effects of Hurricane Irma. Sand was scraped from the adjacent low-tide beach and used to rebuild the primary dune. The project was conducted in two phases and work



was performed by RE Goodson Construction. Phase 1 (October 10-November 1, 2017) was completed under an emergency permit and rebuilt the primary dune along 7,010 feet of beach, primarily along the Turtle Point and Ocean Course golf courses. Phase 2 (December 11, 2017-January 11, 2018) was completed under an individual OCRM permit following the same guidelines as Phase 1. The second phase restored the primary dune along 8,700 feet of beach shoreline. The total cost of this project was \$176,552.50 (Phase 1 - \$112,119, Phase 2 - \$64,433.50).

### **Baseline and Setback Lines**

The South Carolina Office of Coastal Resource Management as required in the 1990 Beach Management Act establishes baseline and setback lines. No new development is allowed seaward of the setback line and existing structures located in these areas typically cannot be rebuilt if destroyed. The baseline is set at the "crest of the primary dune" for most areas. Setback lines are drawn 20 feet landward of the baseline for stable and accreting beaches. In erosional areas, the setback line is located landward of the baseline a distance equal to 40 times the annual long term erosion rate.

The baseline and setback lines for Kiawah Island were created in July 1991 and must be revised every 8-10 years. Kiawah's lines were revised in September 1999 and again in October 2009. At this time, there are no homes or structures seaward of the setback line.

### **Salt Marsh Preservation**

One of Kiawah's largest natural resources is its salt marsh. Approximately 34 percent of Kiawah consists of marshland. Just like the beach, the salt marsh serves several important functions. Not only does the salt marsh furnish wildlife habitat, natural beauty and recreation opportunities but it also provides critical protection from erosion by reducing wave action. Kiawah's has a significant amount of residential development along the salt marsh, primarily on the eastern and northern parts of the Island. Rising sea levels will likely have a negative impact on the salt marsh, which may reduce its effectiveness at protecting Kiawah's highlands. The loss of critical salt marsh would have significant impacts on undeveloped portions of the island.

### **Critical Habitat Areas**

In October 2009, Town Council designated both ends of Kiawah's beach as critical habitat. The critical habitat designation prohibits pets from entering these areas at any time. Both areas provide vital habitat for a variety of shorebirds, including: piping plovers, Wilson's plovers, American oystercatchers, least terns, Black skimmers, and red knots. An interactive map



of these areas, including all beach pet restrictions, can be found on the following web page: <http://www.wildlifeatkiawah.com/dogleash.html>.

### **Maritime Forest Preservation**

The extensive maritime forest and understory serve to enhance Kiawah's natural beauty and shelter a diversity of wildlife. As Island development progresses, careful attention and planning must be given to preserving and maintaining maritime forest, understory, and the quality of the Island's lakes and ponds. Data obtained from wildlife research and monitoring efforts should be used to help plan future developments to minimize impacts to native wildlife species.

### **Groundwater & Saltwater Intrusion**

The health and viability of Kiawah's maritime forest and other ecosystems depends on the Island's groundwater. The freshwater lens of groundwater floats above the denser saltwater and could be impacted by rising sea levels and more frequent storm surge events. This would increase the opportunity for salt water intrusion that would destroy trees and shrubs and other plant life, resulting in habitat loss. Examples of this can be found in the Preserve, where the fresh water lens extends to the edge of the island.

### **Invasive Plant Control**

Invasive exotic plants species can cause considerable damage to native ecosystems. On Kiawah Island, the Chinese Tallow Tree has emerged as a significant threat to freshwater wetland areas as well as other habitat types. The Town of Kiawah Island began a Tallow Tree Control Program in 2013. A contractor was hired to kill Tallow Trees in specific areas using herbicides. During 2013, 130 acres as well as all leisure trail and road right-of-ways were treated and an additional 240 acres were treated in 2014. Follow up treatments will be necessary in the future to prevent Tallow Trees from recolonizing these areas.



### **Wildlife Management on Kiawah Island**

An extensive environmental inventory of Kiawah Island was conducted in 1975. This study examined all portions of Kiawah, "pre-development," and provides good baseline documentation for use in tracking changes as a result of development. Since 1990, there has been a committee of citizens and experts that has been at the forefront of managing and surveying



the island's wildlife species. From 1990-1994, the Wildlife and Fisheries Committee had responsibility. In 1994, this responsibility was taken over by the Town's Wildlife Committee, renamed in 2003 to the Environmental Committee.

In September 2000, the Town hired a full-time wildlife biologist to oversee all wildlife management and research activities on the island. In addition, an assistant wildlife biologist position was created and filled in August 2008 to help with and expand existing wildlife research and monitoring efforts.

Surveys of wildlife abundance have been conducted since 1990, although most surveys were initiated in 1996. The Town, with support from the Kiawah Conservancy, has conducted five (5) major wildlife research projects to better understand the island's native wildlife species.

## Wildlife Research on Kiawah

### Deer Ecology Study (1996-1998)

This study was conducted as part of a Master of Science (MS) project at the University of Georgia (UGA). James D. Jordan working under Dr. Robert J. Warren at UGA conducted the project. The project was designed mainly to provide a baseline ecological assessment of deer and bobcat populations on the island.



### Results and recommendations

- Deer are very abundant on Kiawah Island (100 deer per square mile)
- Deer-vehicle collision rates are high on Kiawah Island (50 or more per year)
- Bobcats serve as the primary natural predator on deer
- Bobcats are more abundant in undeveloped areas of Kiawah

### Fertility Control Study (1999-2002)

This study was conducted by James D. Jordan working as a consultant for the Town of Kiawah Island, with support from Dr. Robert J. Warren at UGA. The project was designed to test the efficacy of a fertility control drug (prostaglandin) in controlling deer numbers within the central portion of Kiawah Island.



### Results and recommendations

- Fertility control was effective initially and reduced fawn numbers by an average of 50% each year compared to the control area
- Fertility control is not feasible long term because deer quickly learn to avoid being treated
- Fertility control was not necessary based on increasing bobcat predation rates on deer fawns which provided a better, more natural control of rising deer numbers
- Future research should focus on bobcats and their role in controlling deer numbers

### Bobcat Ecology Study (2000-2001)

This study was conducted as part of a Master of Science (MS) project at the University of Georgia (UGA). The project was conducted by John C. Griffin working under Dr. Robert J. Warren at UGA and James D. Jordan (Town of Kiawah Island biologist). The project was designed mainly to provide a more in depth look at the bobcat population on the island. Twelve bobcats were captured and fitted with very high frequency collars and tracked for 1 year to determine home range size and general habitat requirements.



### Results and recommendations

- Bobcats in developed areas exhibited greater movements and higher mortality rates than bobcats in less developed areas
- Bobcats in developed areas had home ranges that were almost twice the size of bobcats in less developed areas
- Bobcats feed primarily on rodents but deer are an important component of their diet
- Future research should look at predation rates on deer fawns

### Predator-Prey Ecology Study (2002-2005)

This study was conducted as part of a Doctorate project at the University of Georgia (UGA). The project was conducted by Shane B. Roberts working under Dr. Robert J. Warren at UGA and James D. Jordan (Town of Kiawah Island biologist). The project was designed to determine predation rates on deer fawns (2002-2005) and to replicate the 2000 Bobcat Ecology Study with the addition of gray foxes (2004-2005). A total of 124 fawns were fitted with very high frequency collars and monitored between 2002 and 2005. In addition, 16 bobcats and 5 gray foxes were fitted with very high frequency collars and monitored for 1 year.

### Results and recommendations





- Bobcats are the most important predator of deer fawns on Kiawah, responsible for killing 70 of 124 fawns monitored during the study (56% predation rate)
- Bobcat population has low mortality rate
- Bobcat reproduction rate is high
- Gray fox population has a high mortality rate (40%)
- Future research should focus on maintaining bobcat numbers

### **Bobcat GPS Study (2007-2015)**

Primarily the Town's wildlife staff conducted this study, with support from the Kiawah Conservancy. The project was designed primarily to determine fine-scale habitat use by bobcats on Kiawah using GPS collars. These collars provide much more accurate locations and allow Town biologists to collect many more locations than conventional very high frequency studies. A total of 64 bobcats (5 in 2007, 8 in 2008, 10 in 2009, 6 in 2010, 8 in 2011, 9 in 2012, 6 in 2013, 6 in 2014, and 6 in 2015) have been captured and fitted with GPS collars during this project. More than 75,000 individual locations have been obtained during this study. Data was also used to prepare a detailed Bobcat Management Plan for the island, which includes the designation of Important Bobcat Areas (IBA) and an action plan to protect and enhance these areas. This document was created in 2008 and updated in 2011 and 2014. The current version can be downloaded here:

<http://www.wildlifeatkiawah.com/linked/2014bobcatmanagementplan.pdf>



### **Results and recommendations**

- Bobcats spend the majority of daylight hours in patches of thick cover and do not move very often
- Daytime cover is critical for bobcats and this cover consists primarily of dense scrub-shrub habitat found primarily in the secondary dunes and along marsh edges
- Denning cover is very important for bobcats and bobcats typically seek larger, more secluded patches of undeveloped cover for denning
- Bobcats move throughout developed portions of the island during nighttime hours in search of food and often use road buffers and corridors for travel



## Wildlife Population Monitoring

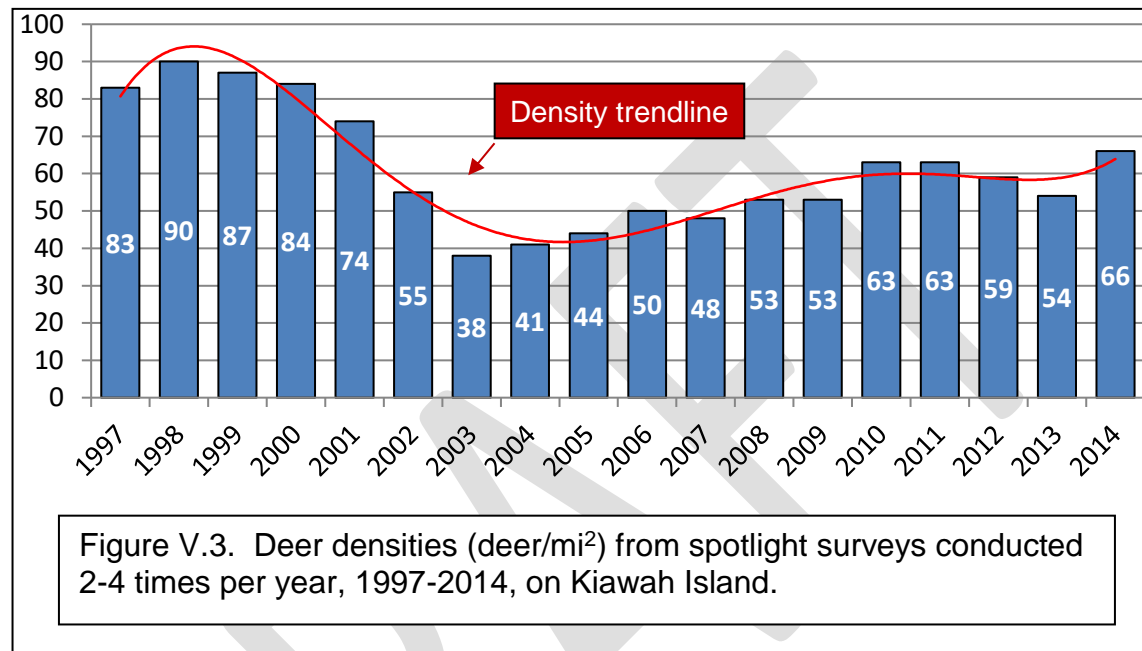
Town biologists conduct a variety of surveys to determine population size and health of many of the wildlife species that live on Kiawah Island. Many of these surveys are conducted in coordination with state and federal agencies as well as other island entities.

### White-tailed Deer

In 1975, deer were common on Kiawah Island although no detailed population estimates were obtained. Likely, deer were not as abundant pre-development since the habitat was not ideal. Activities associated with development, such as removal of trees and the creation of openings in the forest, allowed the growth of vegetation preferred by deer. This boosted the carrying capacity of the Island (i.e., the number of deer) that the Island could support. In addition, fertilization and irrigation further increased the quality of the food sources available to deer. The current deer population estimate on Kiawah is 500.



Spotlight surveys were used beginning in 1990 to track changes in abundance of deer on Kiawah. Initial surveys estimated a deer population of 100/square mile. Island residents and volunteers conducted surveys until 1997, when the Town and UGA initiated their first wildlife project. Deer numbers were still stable at 100/square mile at this time, but research showed that deer-vehicle collisions were at very high levels (50 annually). In 1999, the Town initiated a 4-year study to investigate the efficacy of a fertility control drug in reducing deer numbers on the Island. The study was the first of its kind in the nation. It was discontinued in 2002 when the deer population and deer-vehicle incidents had been reduced to acceptable levels. It was concluded that the reduction in deer abundance (Figure V.3) occurred due to the combined effect of fertility control and natural predation by bobcats and alligators.



### Bobcats

Bobcats were estimated to be “fairly common” in the 1975 study. The onset of development likely had a similar effect on bobcat numbers as it did on deer numbers, although in a delayed fashion. The creation of openings within the existing forest increased the amount of cover and food available for small mammals such as rabbits and rodents. As rabbit, rodent and deer populations increased, bobcat numbers likely increased as well to take advantage of these readily available food sources.

Bobcats play a vital role on Kiawah Island in helping to maintain the current deer population size. A Town/UGA study conducted during 2002-2005 determined that bobcats are capable of killing more than 50% of fawns produced in a given year. This reduces the number of deer that are added to the population each year and allows the island deer herd to remain stable. It is clear that bobcats are the primary reason why deer numbers continue to remain relatively low on Kiawah.





Bobcats typically do not respond well to development and are often pushed out of these types of areas. Kiawah's bobcats are unique in that they have adapted quite well to development and are commonly seen throughout the island. This is due mainly to the large amount of cover that is still presently available on Kiawah, but is typically the limiting factor in other developed communities. Studies have shown that bobcats utilize all parts of Kiawah, but that they are more abundant on the less-developed eastern end of the island. Since bobcats in more developed areas have to travel further in order to find the food and cover that they need to survive, these areas cannot support as many bobcats. Since 2007, the Town, with support from the Kiawah Conservancy, has been conducting a Bobcat GPS study to provide more detailed data to aid in the preservation and protection of the island's bobcat population. Town biologists have also developed a detailed Bobcat Management Plan for the island.

### **Gray Foxes**

The 1975 study described gray foxes as "uncommon." As with bobcats, the onset of development caused an increase in the number of prey species available to gray foxes, which likely led to an increase in fox numbers. Gray foxes play an important role in helping to control rodent populations. In recent years, the gray fox population has fluctuated dramatically. The fluctuation has primarily been caused by periodic outbreaks of canine distemper. Canine distemper is a common wildlife disease that is present in raccoon populations. It is nature's way of controlling overabundant raccoon populations. In most areas, raccoon populations rarely achieve the high numbers required for a distemper outbreak to occur, but outbreaks have taken place on Kiawah. Although distemper is less than 50% fatal to raccoons, it is almost 100% fatal to gray foxes. Gray fox numbers are currently very low on Kiawah.



### **Red Foxes**

The 1975 study did not find any red foxes on Kiawah Island. The only confirmed red fox on Kiawah Island was captured during bobcat trapping efforts in January 2010. It is possible that red fox numbers may increase in the future and since they are not native to South Carolina it will be important to monitor any population increase and any resultant effects on our native wildlife.

### **Coyotes**



The 1975 study did not find any coyotes on Kiawah Island. The first coyote confirmed in the vicinity of Kiawah Island was on January 9, 2008. This coyote was hit and killed by a car on the exterior Kiawah Island Parkway near Cassique. Coyote numbers have increased in recent years, peaking in 2013. Currently, numbers have stabilized and it is estimated there are 6-8 coyotes on the island. GPS collars have been placed on 2 coyotes (an adult female in 2013 and an adult male in 2014). Data from these 2 animals indicates that coyotes spend most their time in undeveloped portions of the island. There have been no negative encounters between coyotes and either humans or pets on Kiawah. It is important to continue to monitor coyote numbers, habitat use, and any effects on endemic wildlife species.



### **Raccoons**

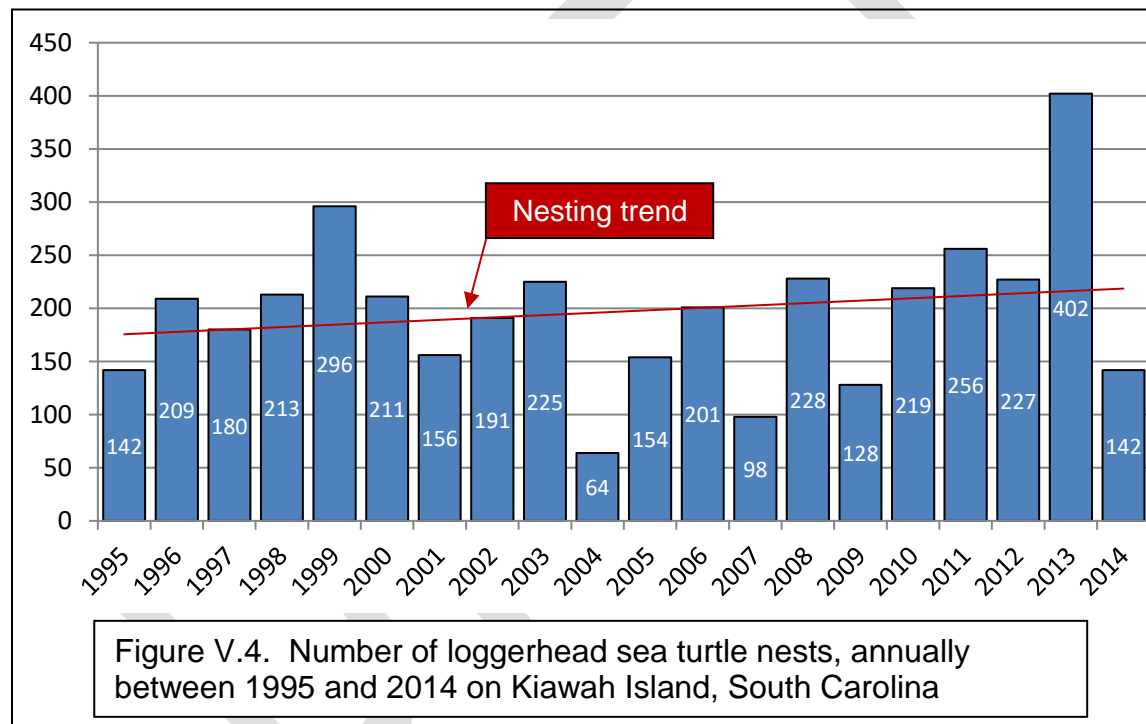
The 1975 study categorized raccoons as “abundant.” Raccoons are very adaptable animals and will live in very close proximity to people. They will readily consume trash, carrion, dog food, birdseed, and almost anything else they can find. Raccoon populations can quickly become overabundant in suburban areas since they do not have any natural predators. Overabundant raccoon populations can be a nuisance as they will readily enter homes, garages and attics in search of food or denning sites and, in doing so, can cause substantial damage to structures. They can also be very detrimental to loggerhead sea turtle nests and beachfront nesting birds. Nature’s way of controlling raccoons is canine distemper. The raccoon population on Kiawah has undergone fluctuations over the last few years, tied to distemper outbreaks, but is currently very high.

### **Loggerhead Sea Turtles**

A program to protect the nests of loggerhead turtles on the beach of Kiawah Island has been in operation since 1973. In the early years, support came from the Kiawah Island Community Association and the Island’s developers, but since 1990 the Town of Kiawah Island has provided funding for the program. The program operates under a permit from the South Carolina Department of Natural Resources (SCDNR); all activities strictly conform to the guidelines set forth by that agency. The program is carried out entirely by volunteers from the community whose numbers have increased each year; approximately 150 property owners and regular visitors participated during 2014. The mission of the Turtle Patrol is fourfold: protection of the rookery, maintenance of records of activity, education of tourists and residents and the conduct of occasional research projects.



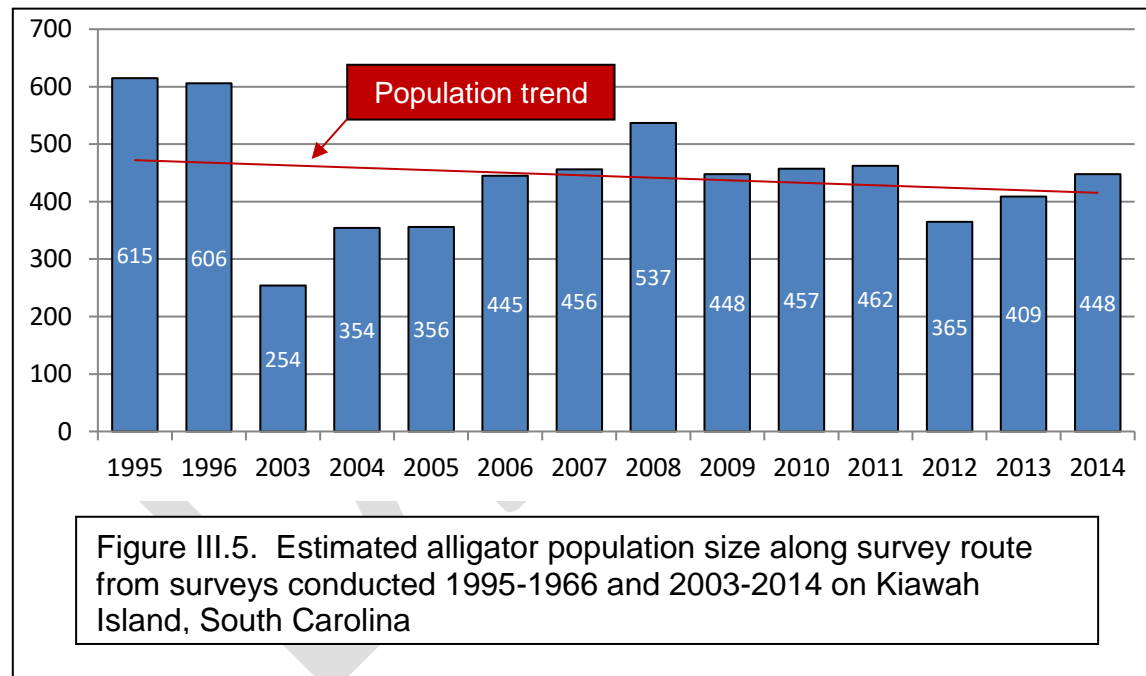
The activities related to protection of the rookery occur during the nesting phase (mid-May to mid-August) when the adult female turtles come ashore to lay nests along the edge of the dunes and the hatching phase when, after an incubation period of 55 to 60 days, the new hatchlings emerge from the nests and make their way to the surf. During both phases, the Patrol's objective is to protect the eggs and the hatchlings from harm by predators and loss due to beach erosion during storms and spring high tides. To this end, nests laid seaward of the expected high tide line are relocated landward on the first morning after being laid. A protective screen is used in some areas to protect nests from predation by raccoons and foxes. Nesting totals for the last 20 years can be found in Figure III.4.





### American alligators

Kiawah Island is home to a very healthy population of American alligators. Alligators can be seen in almost all of the 183 brackish and freshwater ponds which are interspersed throughout the island. Alligator numbers have been monitored annually since 2003 by Town biologists in conjunction with KICA Lakes Department staff. In addition, surveys were conducted in 1995 and 1996 by Lakes Department staff and SCDNR. (Figure V.5) In January of 2015, the Kiawah Conservancy announced the undertaking of an Alligator Study. This study will provide critical information on how these reptiles continue to adapt to rapidly changing environments along the southeastern coastal plain.





Town biologists are also responsible for responding to and removing aggressive alligators from the island under the state's Nuisance Alligator Program. These are alligators that have lost their fear of humans typically as a result of being fed by people. Biologists typically remove 2-4 alligators per year under this program.

### **Piping Plovers**

Piping plovers are a federally endangered shorebird that uses Kiawah Island for feeding and resting during the fall, winter, and spring. Surveys have been conducted seasonally for plovers since 2006. These surveys were required as mitigation for the 2006 East End Beach Restoration Project and are also required as part the 2015 Beach Project. Piping plover numbers on Kiawah Island vary by season, peaking during the months of March and April as they migrate north to their breeding grounds.



### **Wilson's plovers**

The Wilson's plover is listed as threatened in South Carolina and is declining in numbers because of coastal development, habitat destruction, and disturbance from beachgoers and their pets. Kiawah Island beaches are home to Wilson's plovers year-round but it is a particularly important area for nesting. For several years up to 2014, an independent researcher conducted research on Wilson's Plovers on the beaches around Charleston including Kiawah Island. He trapped plovers and placed a green flag (band) with a unique three-letter code on one leg. The coded flag allows the bird to be identified without it being captured again. The combination of banding and resighting data allows greater understanding of the habitat uses and needs, movements, and survivorship of Wilson's Plovers. In 2015, the Town continued this research and began flagging Wilson's Plovers at the west and east end of Kiawah Island. A priority should be placed on continued monitoring and banding efforts for Wilson's plovers in the future.







### Red Knots

Red Knots were listed as a federally threatened species in 2014 based on a long-term population decline. Red knots have one of the longest migrations of any bird, traveling up to 9,300 miles from Tierra del Fuego in southern South America to its Arctic breeding grounds. Kiawah Island is an important stop-over site for large numbers of red knots during the spring so they can rest and refuel as they continue their journey north. Researchers have placed unique alpha-numeric flags on these birds to gather more information on migration patterns and survival. Town Biologists conduct periodic surveys for red knots on the island and report flag combinations to aid in this research. Because of the importance of Kiawah Island to migrating and wintering red knots, SCDNR and USFWS began a capture and banding program in 2010.



### Bird Banding

Capturing birds and banding them with a unique identifier gives biologists insight into the health and demographics of Kiawah's bird population. Important information on the productivity, survivorship, and movements of many species can be attained through a banding program. The Town of Kiawah has initiated 4 major projects that use banding as the primary tool to study populations of different birds. These projects are discussed in detail below and additional banding information is available on the following web page: <http://www.wildlifeatkiawah.com/birdbanding.html>.

#### 1. Fall Migration Banding

Banding is conducted each fall to monitor songbird populations during their migration. Kiawah Island provides important stop-over habitat that migrating birds rely on to rest and refuel before continuing their journey. During our pilot season in 2009, we banded at two sites - one on each end of the island (Captain Sam's Spit and Cougar Island). After evaluating our results, we decided that it would be more effective to concentrate our effort at Captain Sam's Spit, located on the west end of the island. Fall migration banding is currently conducted annually from August 15 to November 30. Between 20-25 mist nets are operated daily (weather permitting) beginning at sunrise and continuing for 5-6 hours. The table below provides detailed results from this effort.

|  | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | TOTAL |
|--|------|------|------|------|------|------|-------|
|--|------|------|------|------|------|------|-------|



|                                    | Cougar | Captain Sam's |        |        |        |        |         |                |
|------------------------------------|--------|---------------|--------|--------|--------|--------|---------|----------------|
| # of Birds Banded                  | 283    | 549           | 910    | 2263   | 4725   | 4529   | 5086    | <b>18345</b>   |
| # of Recaptures                    | 27     | 85            | 157    | 289    | 885    | 1144   | 1312    | <b>3899</b>    |
| # of Species                       | 39     | 41            | 54     | 66     | 89     | 82     | 78      | <b>115</b>     |
| Effort (net-hours)                 | 258.0  | 537.0         | 1000.7 | 2409.8 | 7220.8 | 9566.6 | 11565.6 | <b>32558.5</b> |
| Capture Rate (birds/100 net-hours) | 120.2  | 118.1         | 106.6  | 105.9  | 77.7   | 59.3   | 55.3    | <b>68.3</b>    |
| # of Days                          | 8      | 14            | 27     | 57     | 98     | 98     | 103     | <b>405</b>     |

## 2. Winter Banding

Banding is conducted during the winter months to monitor wintering songbirds. A large population of Yellow-Rumped Warblers spends the winter on Kiawah Island which allows a unique opportunity to study many aspects of their wintering ecology. Winter banding is conducted annually at the west end of the island on Captain Sam's Spit. The nets are operated about twice a month from December to March. Data from this effort is presented in the table below.

|                                    | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | TOTAL         |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| # of Birds Banded                  | 424       | 179       | 212       | 353       | 340       | 263       | <b>1771</b>   |
| # of Recaptures                    | 32        | 68        | 65        | 195       | 141       | 83        | <b>584</b>    |
| # of Species                       | 15        | 11        | 18        | 17        | 16        | 20        | <b>34</b>     |
| Effort (net-hours)                 | 115.3     | 210.1     | 461.5     | 781.8     | 510.8     | 305.6     | <b>2385.1</b> |
| Capture Rate (birds/100 net-hours) | 395.7     | 117.6     | 60.0      | 70.1      | 91.4      | 113.2     | <b>98.7</b>   |
| # of Days                          | 3         | 6         | 9         | 7         | 5         | 5         | <b>35</b>     |

## 3. Marsh Sparrow Banding

Three species of coastal "marsh" sparrows winter in the salt marshes of Kiawah Island: Seaside Sparrow, Nelson's Sparrow, and Saltmarsh Sparrow. This group is considered species of high conservation concern due to their specialization of habitat that is considered spatially restricted. This group may be particularly vulnerable to sea-level rise and loss of



saltmarsh habitat along their wintering grounds along the southeast United States. Sparrows are captured in mist nets at 10-12 sites around the saltmarshes of Kiawah Island. The nets are deployed to coincide with high tide which concentrates the sparrows into smaller patches of habitat. Each sparrow is identified to species, banded, and a series of morphological measurements are taken. The project began during the winter of 2011-2012 with the objectives of determining habitat requirements, site fidelity, relative abundance, and distribution of the species. The table below provides the number of birds banded each year by species (numbers in parenthesis indicate recaptures of previously banded birds).

|                   | 2011-2012      | 2012-2013        | 2013-2014        | 2014-2015        | TOTAL             |
|-------------------|----------------|------------------|------------------|------------------|-------------------|
| Seaside Sparrow   | 106            | 245 (107)        | 109 (118)        | 99 (111)         | 559 (336)         |
| Nelson's Sparrow  | 115            | 39 (13)          | 10 (5)           | 50 (21)          | 214 (39)          |
| Saltmarsh Sparrow | 64 (1)         | 24 (28)          | 28 (10)          | 46 (30)          | 162 (69)          |
| Other Species     | 23             | 15 (1)           | 9 (1)            | 24 (1)           | 71 (3)            |
| <b>TOTAL</b>      | <b>308 (1)</b> | <b>323 (149)</b> | <b>156 (134)</b> | <b>219 (163)</b> | <b>1006 (447)</b> |
| # of Sessions     | 21             | 23               | 16               | 24               | 84                |

#### 4. Painted Bunting Banding

In 2011, we started intensely trapping and banding Painted Buntings for a long-term project studying their movements, distribution, and site fidelity. The eastern population of Painted Buntings has shown steady, long-term declines over the past several decades. Much of these declines can be attributed to the loss of coastal habitat for development. Painted Buntings readily come to feeders offering white millet and the birds are easily captured in a specially designed cage with a feeder placed inside. Banding occurs from May-August at Kiawah Island resident's homes. The table below provides the number of birds banded each year by species (numbers in parenthesis indicate recaptures of previously banded birds).



|                 | 2011            | 2012            | 2013           | 2014            | TOTAL            |
|-----------------|-----------------|-----------------|----------------|-----------------|------------------|
| Painted Bunting | 122 (22)        | 156 (52)        | 20 (23)        | 110 (73)        | 408 (170)        |
| Other Species   | 115 (1)         | 71 (1)          | 24 (1)         | 47 (1)          | 257 (4)          |
| <b>TOTAL</b>    | <b>237 (23)</b> | <b>227 (53)</b> | <b>44 (24)</b> | <b>157 (74)</b> | <b>665 (174)</b> |

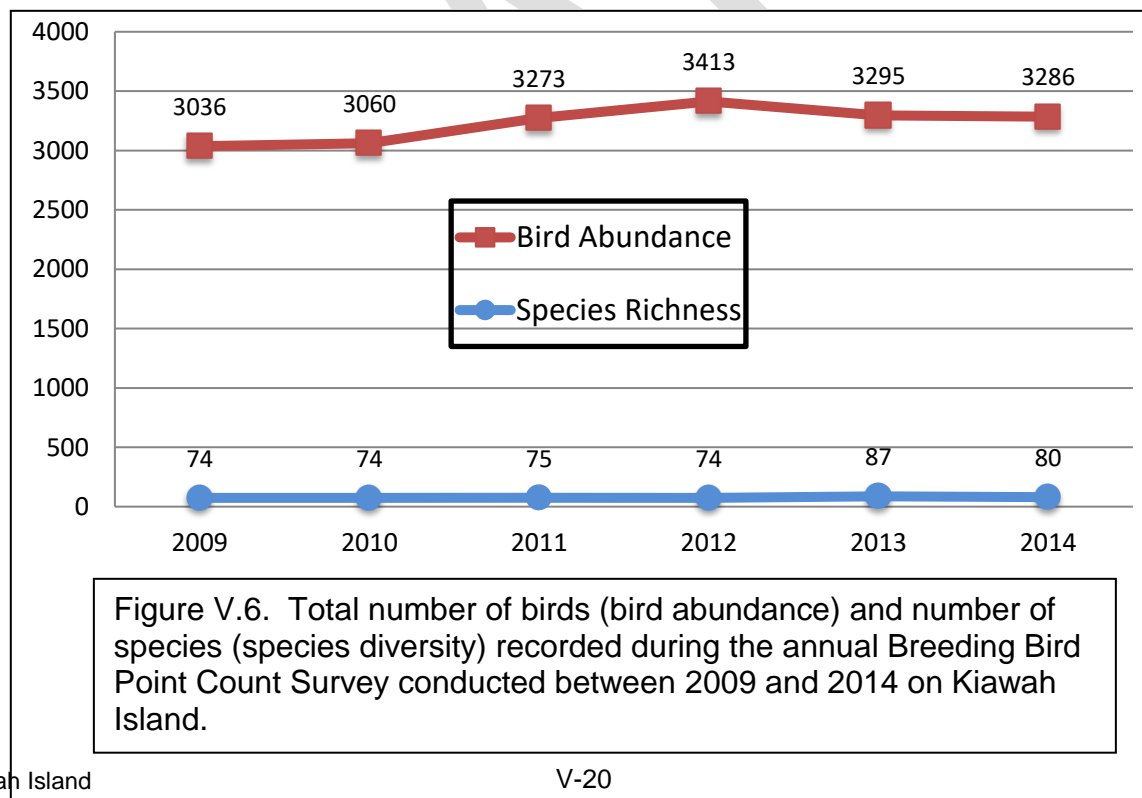




|               |    |    |   |    |    |
|---------------|----|----|---|----|----|
| # of Sessions | 19 | 32 | 8 | 20 | 79 |
|---------------|----|----|---|----|----|

## Breeding Bird Point Counts

Point count surveys are conducted annually during late spring (end of May) to inventory and monitor breeding birds on Kiawah Island. The points are located across the island from Captain Sam's Spit to Little Bear Island in all major upland cover types. For logistical convenience, a majority of the points are located on secondary and tertiary roads and trails; however in areas where roads or trails are not present, points are located off-road. The minimum distance between point-count stations is 250 meters in order to reduce the possibility of recording the same bird twice. All individuals heard or seen within a 5-minute period are recorded. Birds flying over the area are recorded separately from all other birds. The point count survey is divided into 9 separate routes with each route consisting of 15-34 points. One route is conducted per day during the count period with each route beginning at sunrise and ending no later than 11:00am. Each route is conducted in the same order and during the same time period each year. Figure V.6 provides the results of this survey.



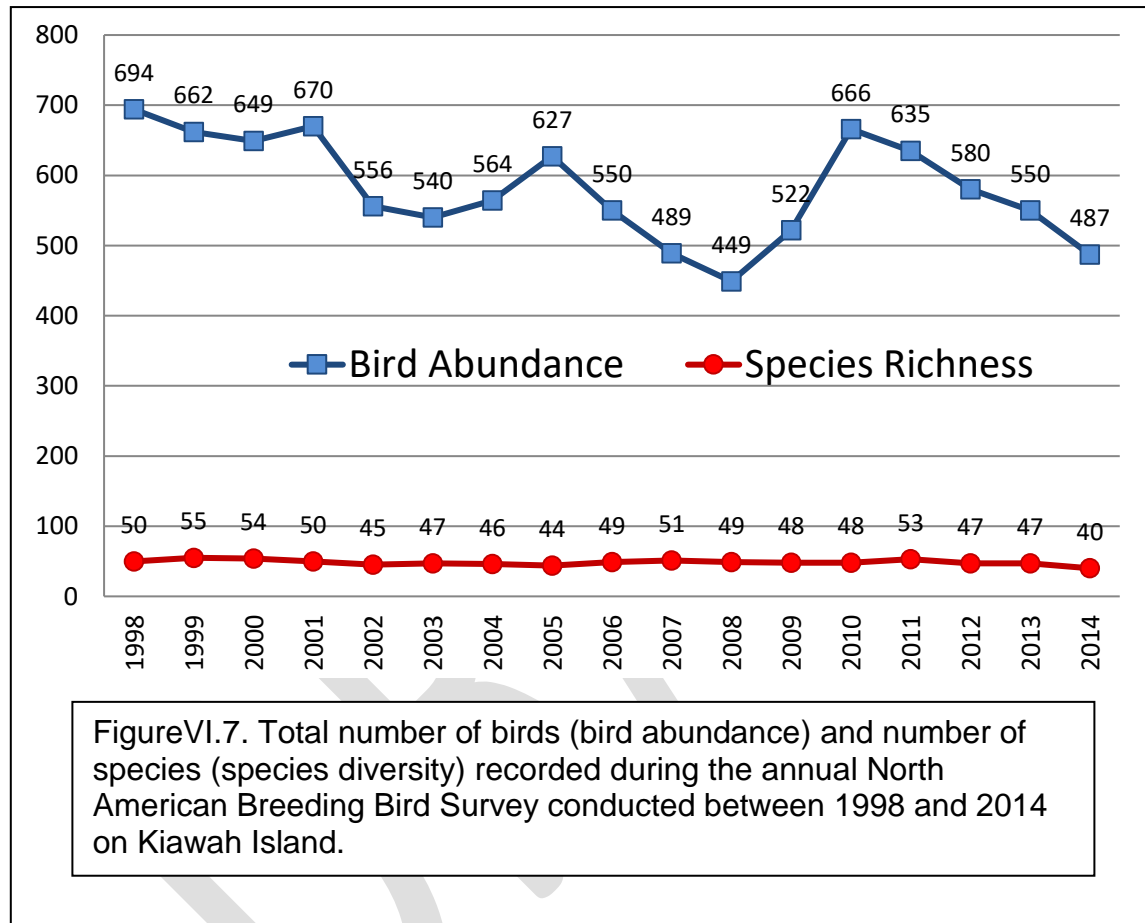


### **North American Breeding Bird Survey**

The annual North American Breeding Bird Survey headed up by the United States Geological Survey (USGS) has been conducted on Kiawah Island since 1998. The survey consists of 50 stops during which all birds seen or heard during a 3-minute period are recorded. Data from this survey is submitted to USGS and is used to monitor trends and changes in bird populations at a landscape level. Results are available in Figure III.7 on the next page.

### **Nest Box Monitoring Program**

In 2011, the Town took over managing the Kiawah Island Nest Box Monitoring Program from the Kiawah Island Naturalist Group who had been managing the program since its inception in 1997. A dedicated group of volunteers monitors a series of nest boxes on the grounds all five golf courses, Night Heron Park, the Sanctuary, and the Preserve. The boxes provide an artificial nesting cavity for bluebirds and other cavity nesting birds. The boxes are primarily occupied by Eastern Bluebirds and Carolina Chickadees, although Tufted Titmice and Carolina Wrens will occasionally use them as well. Approximately 216 boxes are monitored once per week from March through August by the volunteers. Data collected at the nest includes: species, date, number of eggs laid, number of young hatched, and number of young fledged. Data resulting from this program is used to track the status and trends in the reproductive biology of the birds using the nest boxes. During 2013, these nest boxes produced 459 Eastern Bluebird fledglings, 234 Carolina Chickadees, and 8 Carolina Wrens. Figure V.7 below depicts this information.



### Beach bird nest monitoring

Least terns, Wilson's plovers, American oystercatchers, and Black skimmers typically nest along Kiawah's beachfront. Town Biologists monitoring nesting colonies of birds and initiate nest monitoring and protection efforts as necessary.



Least terns, a threatened species in South Carolina, nested regularly on Kiawah Island from the 1970's through the early 1990's but then disappeared. In 2006, least terns returned to Kiawah Island with a small nesting colony on the east end of the island. Unfortunately the colony failed when all nests were overwashed but they have continued to nest with varying degrees of success each year since 2006.

Nesting areas are closed to all traffic (people and dogs) during the nesting season (April-September). It is vitally important that these birds are given the best possible chance to successfully raise young.

### **Bald Eagle Nesting**

An eagle nest was initiated on Kiawah Island in 2000 and successfully produced eaglets during 2002 and 2003. This was the first eagle nest recorded on Kiawah in over 20 years. This nest was destroyed during a hurricane in 2004 and subsequently relocated to a group of hammock islands located in the marsh near the Cassique golf course. The nest is no longer within the municipal limits of the Town of Kiawah Island. During 2014-2015, there were 2 active eagle nests on Kiawah Island. One nest was located adjacent to the Kiawah Island Parkway near the first Fire Station and the second nest was located on a hammock island north of Willet Pond.

### **Education and public outreach**

#### **TOKI Wildlife Website**

A new standalone wildlife website was created by Town biologists in August 2009 ([www.wildlifeatkiawah.com](http://www.wildlifeatkiawah.com)). The website contains a wealth of information on Kiawah's wildlife inhabitants, including videos and slideshows. There are also interactive maps showing all of the GPS locations for bobcats between 2009 and 2015, the best places to view wildlife, beach bird nesting areas, dog-leash restrictions, and much more. Use of the website has remained high since inception and averages approximately 2,500 visits per month. Visits to the site are highest during the summer months.

The table below shows the top 10 pages visited during June and July 2014 and the number of visits during that same time period.



| Rank | Page Name             | Visits |
|------|-----------------------|--------|
| 1    | Home                  | 2,990  |
| 2    | American Alligator    | 1,428  |
| 3    | Where to see wildlife | 1,050  |
| 4    | Fish                  | 767    |
| 5    | Meet our Wildlife     | 717    |
| 6    | Fishing Location Map  | 577    |
| 7    | 2014 Bobcats          | 565    |
| 8    | Loggerhead Turtles    | 561    |
| 9    | Pet Restrictions Map  | 487    |
| 10   | Bobcat GPS Research   | 442    |

### Bird Banding Blog

A blog (<http://kiawahislandbanding.blogspot.com>) was created in 2012 to provide daily updates on bird banding activities on Kiawah Island. This is a popular site and, as of April 2015, has been visited 53,123 times.

## Conservation on Kiawah Island

### Kiawah Conservancy

The Kiawah Conservancy is a chartered non-profit, Section 501(c)(3), grassroots organization that was established by Island residents in 1997, to preserve the natural habitat of Kiawah Island. The Conservancy has the capability to be a holder of land and conservation easements, and as such, it acts as a land trust. In this regard, the Kiawah Conservancy is a member of the Land Trust Alliance and has adopted and subscribes to the Land Trust Standards and Practices as a guide for its organization and operations. Since its inception in 1997, the Kiawah Conservancy has preserved 28 properties that total over 345 acres of pristine barrier island habitat. The Kiawah Conservancy benefits the community by enhancing the quality of life of residents and wildlife alike; fostering a long-term vision for land and habitat protection; providing a credible voice for land conservation on Kiawah Island; encouraging the preservation of natural habitat for native and migrating wildlife species and finally by making a positive impact on the socio-economic aspects of life for everyone in the area.



## **Publications**

### **Brochures**

Up until 2012, The Town of Kiawah Island Environmental Committee produced 12 different wildlife brochures that were made available free of charge to the public at the Nature Center at Night Heron Park and at the Town Hall Visitors Center. The list of brochures is as follows: American alligator, Bird Life, Birds of Prey, Bobcat, Crabs, Lakes and Ponds, Loggerhead turtles, other mammals, Seashore and river, Shorebirds, Snakes, and White-tailed deer. The brochures are no longer printed for distribution but are available for download on the TOKI wildlife website. <http://www.wildlifeatkiawah.com/brochures.html>

### **The Nature of Kiawah Field Guide**

This booklet was created in 2012 to provide a single publication provided all of the information contained in the brochures mentioned above, as well as a variety of additional information and details on island wildlife. This guide is available at Town Hall and at the Nature Center at Night Heron Park. It can also be downloaded from the TOKI wildlife website.

<http://www.wildlifeatkiawah.com/linked/naturekiawah.pdf>

### **Parks and Recreation**

Kiawah Island has more than ten miles of beach, a 20 mile leisure trail system maintained by KICA, two miles maintained by the Town, five championship golf courses, an extensive open space and trail system, and many parks. The beaches, parks, golf courses and open spaces are key attractions for this community. They meet important community needs for recreation and preserve natural areas.

Kiawah has an extensive pond system (owned and maintained by KICA) which is an important component of the Island's ecology. The pond system includes 117 ponds that encompass approximately 365 acres of water surface. These water bodies range from nearly fresh (>0.5 ppt) in the center of the Island to close to sea strength (30 ppt) on the edges of the Island. The system supports at least 30 species of fish, 3 species of bivalves, 6 species of crustaceans, 4 species of reptiles, and a host of smaller invertebrates. It also supports numerous avian species and is an important asset for migratory waterfowl.

Since 1994, there have been significant park and recreation facility additions. A private golf course and clubhouse (the Kiawah Island Club) was built at Bass Pond. In The Preserve at Cinder Creek, a park with trails, community pavilion, boat



and crabbing docks, canoe storage and observation deck were added. In addition, a boat ramp with boat trailer parking was added at Eagle Point on the eastern end of The Preserve. Community piers were added at Egret Pond, Falcon Point Road and Salt Cedar Lane. A park with amenities was recently added at Ocean Park (Cougar Island). Also, most of Little Bear Island (145 acres of the 193 acres) is accessible for passive recreation and is protected by a conservation easement.

The table below lists the existing park sites on Kiawah Island. Park sites are those which provide for a variety of passive recreational activities, from nature observation to field sports. The numbers coincide with the numbers shown on Map V.1 entitled, "Kiawah Island Parks, Trails, and Open Space System."

|   |
|---|
| Beach (1)                               |
| Beachwalker Park (2)                    |
| Canvasback Minipark (3)                 |
| Ocean Park (4)                          |
| Cougar Point Golf (5)                   |
| East Beach Conference Center (6)        |
| East Beach Tennis (7)                   |
| Falcon Point (8)                        |
| Glossy Ibis Minipark (9)                |
| Ibis Pond (10)                          |
| Beach Club (private) (11)               |
| Bass Pond (12)                          |
| Little Bear Island (13)                 |
| Marsh Island Park (14)                  |
| Marsh View Tower Overlook (15)          |
| Mingo Point (16)                        |
| Night Heron Park (17)                   |
| Ocean Course Golf (18)                  |
| Ocean Marsh Road Beach Parking (19)     |
| Ocean Oaks (Beach Parking Lot) (21)     |
| Osprey Point Golf (22)                  |
| Property Owner's Recreation Center (23) |



Rhett's Bluff (24)  
The Preserve (25)  
Turtle Point Golf (26)  
West Beach Tennis (27)  
Willet Pond (28)  
River Course Golf – (Private) (29)

Amenities available at the recreational sites listed above include benches, bike rental, deck areas, boat docks, picnic areas, pools, river access, and fitness and leisure trails.

The management of dock placement is an important issue for the Town. The Town adopted the Dock Key Locations Ordinance 2003-5. The purpose of this ordinance is to control location and installation of all docks, floating and fixed so as to prevent their uncontrolled proliferation along the Island's river and stream frontage. The ordinance includes dock design criteria as well as tables and a map depicting where on the Island docks are permissible, by type.

### Needs Assessments:

- As key natural resources of the Island, the beach, dunes, and salt marsh must be maintained and protected; and
- Saltwater intrusion from rising sea levels and flooding may impact the freshwater aquifer, which is critical to Kiawah's ecosystem; and
- As the Town is developed, an increasing amount of the Island's natural habitat is taken away; and
- Research and monitoring data should be taken into account when planning new developments or other projects in addition to understanding how beachfront development is impacted by changes to the beach and dune system resulting from rising sea levels and storm events; and
- Encourage property owners and island entities to eliminate existing invasive plant species and discourage future use of these plants; and





- Stormwater runoff exacerbates flooding problems and increases the opportunity for pollution in marshes, ponds and other natural environments.
- Development also removes the connectivity between natural habitats, putting stress on the Island's wildlife to find alternate routes to move around the Island; and
- Continued monitoring and research of native wildlife species and their response to development will be vital to protecting these species

## Goals

The following goals related to the Island's natural resources shall be considered when evaluating proposals for change:

1. **Complete the Island's development in a way that maintains the Island's environmental integrity and natural beauty and is consistent with the Vision of the Town.**
2. **Develop and maintain an environmentally sustainable system of parks and open spaces which provide access to the beach and river; preserves, protects and enhances natural resources; and meets the diverse recreational needs of the Town's population.**
3. **Maintain the existing quality of the natural resources on Kiawah Island, as well as the waters and marine environment surrounding the Island.**
4. **Maintain and expand public education and outreach programs.**
5. **Formalize a marsh management plan that explores various methods of protection for the Island's marsh and manages the interface between highlands and critical area that is vital to a healthy salt marshes.**



**6. Coordinate with public and private organizations on the impacts to or preservation of marsh front properties.**

DRAFT



## COMMUNITY FACILITIES ELEMENT

The Community Facilities Element considers water supply, treatment, and distribution; sewage system and wastewater treatment; solid waste collection and disposal; fire protection; public safety; emergency medical services; general government facilities; education facilities; and libraries and other community facilities.

### Background

In most communities, a city or town government is the principal provider of community facilities and services. The Town of Kiawah Island is unique because most community services and facilities are provided and maintained by private entities. The Town of Kiawah Island is responsible for planning and zoning, emergency preparation, disaster recovery, code enforcement, public safety, garbage collection, and preservation of the beach. The Town has chosen to provide these services directly or through private contracts.



The Kiawah Island Community Association (KICA) owns the majority of the Island's infrastructure including roads, bridges, culverts, lagoons, and bike trails behind the main gate. Moreover, KICA owns and maintains approximately 50 miles of roads, 40 miles of drainage pipes, 20 miles of leisure trails, 25 community owned boardwalks, and 7 bridges. The association conducts an annual reserve study that estimates the replacement costs associated with these assets is approximately \$37 million.

### Municipal Center

The Kiawah Island Municipal Center is located on Beachwalker Drive. The building was completed in 1997. It includes offices for the Town, KICA and a satellite office of the Charleston Convention and Visitor's Bureau, Council Chambers and municipal court. Subsequent additions have included a Town garage and completion of additional office and storage space on the second floors of both wings.



#### *Community Facilities Element - VII*

Town Hall occupies one wing of the Kiawah Island Municipal Center, providing workspace for the Town's employees. The Council Chambers are used for Council meetings, municipal court proceedings, public meetings, and hearings and public interest meetings such as Census training. KICA occupies the second wing of the Municipal Center.

Office space is provided for the Administration Department and Commercial Pass Office. Since the Town is faced with a growing community, increased services and limited office space, and parking, the Town's Council has begun investigating municipal center expansion options. After trying to work with the confines of the existing building and parking lot, it was determined that onsite building modifications would be limited and would exacerbate the parking problem. Council then began a search for property both on and off the island and determined resources on the island proved to be too expensive. Council identified a 27.7 acre parcel on Betsy Kerrison Parkway that was purchased for \$2 million.

The Town's goal is to have the new municipal center completed and ready for occupancy in 2017. The Town's vision for the new Municipal Center and site is to create a "Gateway" to the Town of Kiawah Island. The facility will feature a high quality entrance commensurate with The Sanctuary Hotel, and River Course Clubhouse. The facility will house the Town's current departments and allow for future growth. It will include Council Chambers, Municipal Court, Visitors Bureau space, public meeting space and customer service areas for the public.

The Charleston Convention and Visitor's Bureau operates a small, fully functional, satellite office in the lobby area of the Municipal Center. Kiawah Island's Visitor's Center offers information on regional and local area lodging, shopping, dining and special events.

### **Community Facilities and Services**

The Town's objective regarding community facilities is to ensure that adequate facilities and services are provided to the community regardless of the entity providing the service.

The following services are available in the Town of Kiawah Island:

#### **Water and Wastewater Facilities**

Water and wastewater services are provided by the Kiawah Island Utility, Inc. (KIU) a private firm.



*Community Facilities Element - VII*

As of July, 2015, Kiawah Island Utility, Inc. (KIU) has 4,023 water customers. There is currently a total of 4.5 million gallons (mg) above ground storage on the Island; 3.5 at the Sora Rail facility and 1 mg at the Governors Drive facility. KIU operates two Aquifer Storage and Recovery (ASR) systems. The first one, located at the main facility on Sora Rail Road was permitted in 2002. The second one, located on Governors Drive was permitted in 2003.

ASR is used for peak shaving and emergency situations by allowing KIU to store water in an underground aquifer during the non-peak season for use during emergencies and heavy demand periods.

A 100 HP variable speed pump was installed at the Governors Drive pump station in 2012. This upgrade was included as a part of the secondary water line project. Once the secondary line is completed a second 100 HP pump will be installed at this facility as demands dictate.

KIU is aggressively working toward the installation of a water supply line to the Island that will tie in to the Down Island Pump Station on Governors Drive. Easement acquisitions are being finalized and awaiting the issuance of all permits in anticipation of beginning construction by end of 2015 with approval to operate the new line by spring 2016. The line is necessary to ensure a redundant supply of water to the Island and enhance water pressures on the eastern end of the Island. The current water supply is by way of a single sixteen inch pipeline that was installed in 1978.

In 2014, KIU provided service to 7,315 customers (3,972 for water and 3,343 for sewer). KIU maintains 148 miles of transmission lines throughout the Town. KIU is able to treat 1.7 million gallons of wastewater per day. KIU provides its customers with award winning service and water and from 2008 to 2011 KIU won the South Carolina Department of Health & Environmental Control Facility Excellence Award.

Overall, wastewater facilities have been well-maintained but the effects of rising sea levels and more frequent flooding events may cause issues. The Town should be prepared to coordinate mitigation and attenuation of increased surface and sub-surface water volumes as well as mitigation of saltwater intrusion to avoid compromising wastewater treatment processes.



### **Solid Waste Management**

An Island-wide residential solid waste management system was implemented to provide uniform collection for the Island. There are various types of garbage service including:

- Curbside;
- Backdoor (once per week); and
- Saturday backdoor (twice per week during the summer season and once per week during the off-season).

Curbside recycling is available to all single-family homes, homeowner associations, and some villa communities. The Town also provides two public recycling centers located on Sora Rail Road and at the Municipal Center. In 2008 the Town began expanding its recycling program and received a \$40,000 grant from the South Carolina Department of Health and Environmental Control (DHEC). These funds were used to procure 35-gallon roll-out recycling carts and expand recycling to 10 boardwalk locations on the Kiawah Beach. The Town launched an "Island-wide Recycling Initiative" that includes educating residents and visitors about the availability of recycling on the Island. The Town has developed promotional literature including magnets, door hangers, trifold and plastic bags to help expand the recycling program and increase its efficacy. Since 2009 the recycling levels on the Island have increased by 25 tons or 10% in 2010, the Town was named as the winner of DHEC's Recycle Guys Distinguished Municipal Recycling Program.







#### *Community Facilities Element - VII*

Yard debris pickup is available to single-family homes and to all unimproved lots in the residential zoning districts. The Town also has an overflow dumpster for household garbage located on Sora Rail Road. Quarterly white goods collections are offered each year. Two household hazardous waste collections are also offered each year. Collection for villas and condos is handled directly by the regimes' homeowners' associations. Commercial entities are responsible for their own collection service.

In July of 2012, the Town contracted with a private entity, known as Carolina Waste, for collections and disposal of residential solid waste, recycling and collection and disposal of yard debris. In addition the Town has signed a contract with a sister company for dumpster pickup for multifamily developments throughout the Island. The total expenses for 2014 amounted to approximately \$760,000.



#### **Electric and Communication Utilities**

The utilities on the Island are provided by a variety of private firms:

Berkeley Electric Cooperative (BEC) is the electricity supplier to the Island and has a franchise agreement with the Town of Kiawah Island. Beginning in 2008, BEC began replacement of its 20 year old electric lines along the Kiawah Island Parkway with a nine duct line to the front gate. BEC completed the replacement of the electric lines from the main gate to the substation on Kestrel Court in the fall of 2010. BEC has completed a number of major projects on and off the main Island. Some include:

- Kiawah Island regulator station rebuild – Completed;
- Replacement of circuits from the front gate to the regulator station – Completed;
- Ocean Park phases one through five – Completed;
- Ocean Park phases six and seven are currently under construction;
- Riverview at Kiawah line construction – Completed.

AT&T is the largest telephone provider on the Island for residential and commercial customers. There are other telephone providers on the Island as well.



Comcast Cable has a non-exclusive franchise agreement with the Town to provide cable and internet services on the Island. In June 2010, the Town approved a 3% franchise fee for cable and internet services with AT&T and Comcast Cable.

Cellular service is also available on the Island with strict guidelines for cell towers. The current service providers include AT&T, T-Mobile, Verizon and Sprint. Ultimately, cellular service within the Town has improved with the building of a number of disguised cellular antennas.

### **Public Safety and Security**

The Town of Kiawah Island does not operate its own police or security force. The Charleston County Sheriff's Department provides law enforcement and investigative support for the Town of Kiawah Island. Additionally, the Town contracts with the Sheriff's Office for four off-duty deputies to provide supplementary coverage for law enforcement patrols, traffic control, and enforcement. The Town funds 75% of the Sheriff's deputy costs through the State Accommodations Tax Fund and 25% is funded from the Town's General Fund. The Kiawah Island Community Association (KICA) provides limited private security services for the area inside the main gate. The Kiawah Island Golf Resort also manages limited premise security for their properties.

The Town's Public Safety Committee has assessed that the combined coverage provided by these multiple entities is sufficient for the Island's needs. Kiawah Island has a very low crime rate with only minor offenses and traffic violations recorded.

### **Fire and Emergency Medical Service (EMS)**

The Charleston County EMS Department is responsible for the provision of EMS throughout Charleston County, which includes the Town of Kiawah Island. The system responded to approximately 55,000 9-1-1 calls for service in 2014; in which approximately 130 incidents occurred in the Town. Services are provided with a fleet of more than 24 paramedic staffed ambulances and 12 paramedic staffed quick response vehicles – and over the next 12-months, the department will have an assigned operational workforce of over 200 EMS personnel. All response units feature Automatic Vehicle Location (AVL) equipment, a GPS-based system that allows the Charleston County Consolidated Dispatch Center to dispatch the closest available units to any incident. This equipment includes an integrated application for both navigation and routing.





#### *Community Facilities Element - VII*

The Charleston County EMS Department has been acknowledge as a leader in the provision of pre-hospital emergency care – and is a recipient of the South Carolina’s EMS Award of Excellence and was recognized as the 2010 National EMS System of the Year.

The St. Johns Fire District provides fire protection to the Town of Kiawah Island. The Town has three residents serving on the St. Johns Fire District Commission. Two fire stations are located in the Town. The first, Station 4, was built in 1984 in the East Beach area and services all of Kiawah Island and the southern portion of Johns Island. The second fire station, Station 6, was built in 1997 at the East End of the Island. The service area for Station 6 is Kiawah Island. The total staffing of the two stations on Kiawah Island is 4 crewmembers per apparatus for a total of 12 crew members per day. The total number of employees for a shift of operations in the St. Johns Fire District is 38 and one Battalion Chief. Additionally there are eight administrative officers who are qualified to respond.

In 2005, the District added a platform vehicle to Station 4 that reaches the new, multi-level Sanctuary Hotel and existing multi-story structures. Fire apparatus replacement like this one is accomplished through a replacement scheduling system that determines service life for front line equipment in general this equates to fifteen (15) years for pumpers and twenty (20) years for ladders/platforms.

#### **Emergency Preparedness/Disaster Planning**

The Town of Kiawah Island Emergency Preparedness Plan is updated on an annual basis and was updated in June 2015. The purpose of this plan is to keep residents and organizations on Kiawah Island informed of conditions which may present a threat to life and/or property and to ensure that all information, recommendations, and/or orders coming from national, state, or local authorities are passed on to all residents and organizations.

The Town uses several outlets to make sure information, especially concerning evacuation and re-entry, is communicated to property owners, visitors and commercial interests in a timely manner. The Town has a telephone notification system, the “Code Red” system, to contact property owners, guests and commercial interests in times of emergency. “CodeRed” is essentially a high-speed emergency and community notification system used by state and local government organizations to effectively alert their residents of potential threats. The Town also holds an annual meeting to inform property owners about the dangers of being on a barrier island during a hurricane and to suggest appropriate preparations to make in advance of hurricane season. The purpose of this meeting is also to educate property owners on general preparedness procedures in other types of disasters as well, including earthquakes, tsunamis, tornados, fires and floods. The Town’s entire Emergency Preparedness Plan is described on the Town’s website.



To handle recovery from a natural disaster, the Town has a pre-positioned debris removal contract that allows for the removal of vegetative, construction, animal and white goods debris from the right of ways of all streets on the Island. This contract also provides for damage assessment, debris reduction, barge transportation, temporary housing, satellite phone service and meals in a post disaster scenario.

The Town is an active participant in the Charleston County Emergency Operations Center. In 2007 the Town began utilizing a major component of the center- Web Emergency Operations, which allows the Town to communicate status updates, request resources and distribute public information notices with County, fire, law enforcement, medical personnel and news media from a remote location should an evacuation occur.

In 2008 all Town Council members completed the mandatory National Incident Management System (NIMS) for elected officials, and Town staff completed the prescribed Incident Command Structure (ICS) courses to ensure compliance with the required NIMS program. Since 2008, the Town Council members as well as the Town's staff have completed annual Disaster Preparedness training.

### **CERT (The Community Emergency Response Team)**

The Community Emergency Response Team Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Through this training, citizens can manage utilities and put out small fires; treat the three killers by opening airways, controlling bleeding, and treating for shock; provide basic medical aid, search for and rescue victims safely; and organize themselves and spontaneous volunteers to be effective. CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT members are also encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community. CERT is about readiness, people helping people, rescuer safety, and doing the greatest good for the greatest number. Ultimately, CERT is a positive and realistic approach to emergency and disaster situations where citizens will be initially on their own and their actions can make a difference.





## Recreation

There are numerous recreational facilities owned by the Kiawah Island Golf Resort (KIGR) and the private membership club, Kiawah Island Club (KIC). The Resort (KIGR) owns and maintains five golf courses (one just off the Island), two tennis facilities, two pools, and three premium-dining facilities, plus a full complement of 5-star amenities at the Sanctuary Hotel. The Resort also owns and maintains the Night Heron Park. This 21-acre Park is a hub for concerts, special functions, and sporting events. The park is also open year-round and features basketball and volleyball courts, soccer fields, a playground, nature center, pool complex, and fitness trail complete with cardio and strength training stations. The Kiawah Island Club (KIC) owns and maintains two golf courses with clubhouses (one of which is located off-Island), a beach club, a spa and a sports pavilion.

In The Preserve, a park with trails, community pavilion, boat and crabbing docks, canoe storage and observation deck were added. Community piers were also added at Egret Pond, Falcon Point Road and Salt Cedar Lane. These are all owned and maintained by KICA. A major park with amenities is a central feature of Ocean Park, the newest area of residential development by the Kiawah Partners. This 55-acre park is located near the Ocean Course Golf facilities.

Other recent improvements include the following:

- Improvement of the boat launch and floating docks at Rhett's Bluff (KICA).
- A boat launch at Mingo Point (KIGR).
- In 2013, KICA repaired five different boardwalks, which provide access to the beach. These include, Boardwalks 8B, 22, 27, 30, and 25.
- Construction of the KICA facility "The Sandcastle" in 1997, which includes a pool complex that was enlarged in 2000, exercise facilities and meeting and administrative spaces and rooms for special events. In 2005, extensive improvements were made to this facility, along with the addition of three new fitness classes in 2013.
- In June of 2013, KICA's Major Repairs and Replacements Department installed an extension to the current dock at Cinder Creek, which features a gentle ramp into the water for a safe and easy way to access Cinder Creek by canoe or kayak.





#### *Community Facilities Element - VII*

There are approximately 193 acres of park and recreational areas in the Town of Kiawah Island. Map III.1 (See Natural Resource Element), entitled “Kiawah Island Parks, Trails, and Open Space System”, identifies the parks on Island by number.

### **Annexation**

Municipalities in South Carolina can expand their boundaries (corporate limits) through annexation, a legal procedure by which land outside a city or town can become a part of the municipality to receive its benefits and city services. The South Carolina General Assembly has delegated this authority to municipalities. The Legislature sets out responsibilities and authority of municipalities, and annexation of contiguous property is permitted. The process to annex a specific parcel is fairly simple. There are a number of different incentives to annex a piece of property including, municipal services at discounted costs, access to the beach, golf and other recreational activities, Arts Council events, dining and residency in the prestigious Kiawah Island community. Since 1988, the Town of Kiawah Island has annexed a number of different properties previously on or off the Island. These include:

- In 1988 the Town of Kiawah Island annexed the main portion of Kiawah Island. This annexation incorporated approximately 2970 acres, which included the lands from the Kiawah River in the west to approximately Flyway Drive in the east;
- In 1989 the Town of Kiawah Island annexed the rest of the main portion of Kiawah Island. This annexation included the lands north of the Governors Drive as well as the western end of Cougar Island, now known as Ocean Park;
- In 2010 the Town annexed the newly constructed Roundabout;
- In 2013 the Town annexed Freshfields Village;
- And in 2014, the Town annexed approximately 27.7 acres on Johns Island, which will soon be home to the Town’s new Municipal Center.

For more information on the annexation process, please refer to South Carolina Code of Laws Title #5.

### **Need Assessments:**

- Cooperating and coordinating with all private and public organizations on the Island for the provision of services and facilities;
- Identify plans in place and encourage the development of public and private infrastructure plans to address the future impacts of rising sea levels and flooding events;



- Continuing cooperation of public safety service providers;
- Availability and access to facilities for the entire community, including physically handicapped residents and visitors;
- Cooperating with KICA, the Developers (KDP), and the Resort (KIGR) in achieving community goals; and
- Due to the relative affluence and high profile nature of segments of the Island's population, there is a need for higher levels of security for residents, non-resident property owners and visitors.

## **Goals**

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change.

- 1. Coordinate with all public and private organizations for the provision of essential community services.**
- 2. Monitor and sustain the continued adequacy of emergency preparedness plans and communicate regularly such plans to resident, non-resident property owner, and visitor populations.**
- 3. Work to ensure an environmentally sustainable system of parks and open spaces are developed and maintained. This system should provide access to the beach and river; preserve, protect and enhance natural resources while meeting residents' diverse recreational needs.**
- 4. Maintain professional development and training for Town Council, Boards, Committees and Staff.**





## TRANSPORTATION ELEMENT

### Existing Conditions

Kiawah Island is unique in that all roads within the Island's front gate are privately owned, usually by the Kiawah Island Community Association but also, in some cases, by third parties. While the Town is not responsible for their maintenance and replacement, it is responsible for the safety and welfare of its citizens in driving these roads.

The Town is responsible, however, for the maintenance and replacement of the two roads outside the front security gate. The first is the Kiawah Island Parkway extending approximately 3.0 miles from the terminus of the Betsy Kerrison Parkway on the west to the front security gate of Kiawah Island. The Town owns this two-lane access road as well as the roundabout merging traffic to and from the Betsy Kerrison Parkway, the Kiawah Island Parkway, the Seabrook Island Parkway and the entrance/exit from the Freshfields shopping center. The roundabout was completed in 2005 at a cost of \$2.3 million. The Kiawah Island Parkway underwent a major improvement and resurfacing in 2009 and, as part of that project, a bike path and trestle bridge were installed adjacent to the road. Extensive landscaping revisions to the areas adjoining the Parkway were also part of the project. Costs for the Parkway project in total amounted to \$2.8 million. The second road owned by the Town is Beachwalker Drive, running from the Parkway to the County Park.



### Road Design Standards

New roads constructed on the Island are required to be constructed to Town standards. The Town's Road Code establishes minimum standards which promote continued development of curvilinear streets. Such streets are designed to limit speeds and excess pavement. While narrow, curving streets help control speeds, they also have the potential to hinder emergency access if vehicles are parked on the roadway. It is important, therefore, that curbside parking be strictly controlled.

### Road Usage

Figure X.1 below shows the inbound and outbound traffic at both the Main Gate and the Vanderhorst Gate from 2010 to 2014, while Figure X.2 shows the seasonal traffic numbers through the Main Gate. The total traffic count has risen approximately 5 percent during this period. It is important to note that based on the number of commercial passes issued by KICA to contractors and other services providers, every day there are many thousands of people coming to work on Kiawah that aren't captured in the graph below.



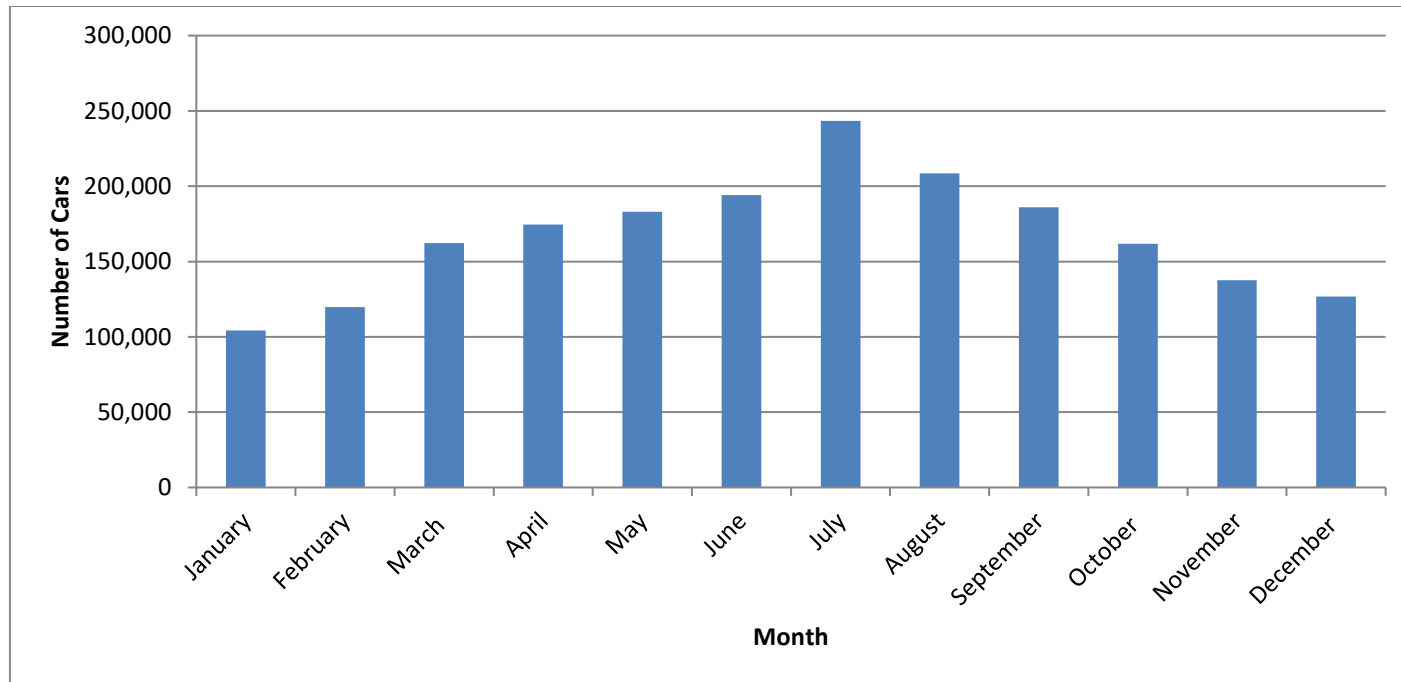
**Figure X.1 Kiawah Island Gate Traffic, 2010-2014**

| Traffic Counts                     | 2010      | 2011      | %<br>Change | 2012      | 2013      | %<br>Change | 2014      |
|------------------------------------|-----------|-----------|-------------|-----------|-----------|-------------|-----------|
| Main Gate                          | 1,902,244 | 1,830,003 | -3.80%      | 1,830,629 | 2,013,574 | 0.10        | 2,002,045 |
| Vanderhorst Gate                   | 977,827   | 980,545   | 0.28%       | 1,057,960 | 1,104,158 | 0.04        | 1,122,996 |
| Vanderhorst Gate % of<br>Main Gate | 49.0%     | 53.6%     |             | 57.8%     | 54.8%     |             | 56.1%     |

Source: Kiawah Island Community Association

**Figure X.2 2014 Seasonal Traffic Count through the Main Gate**

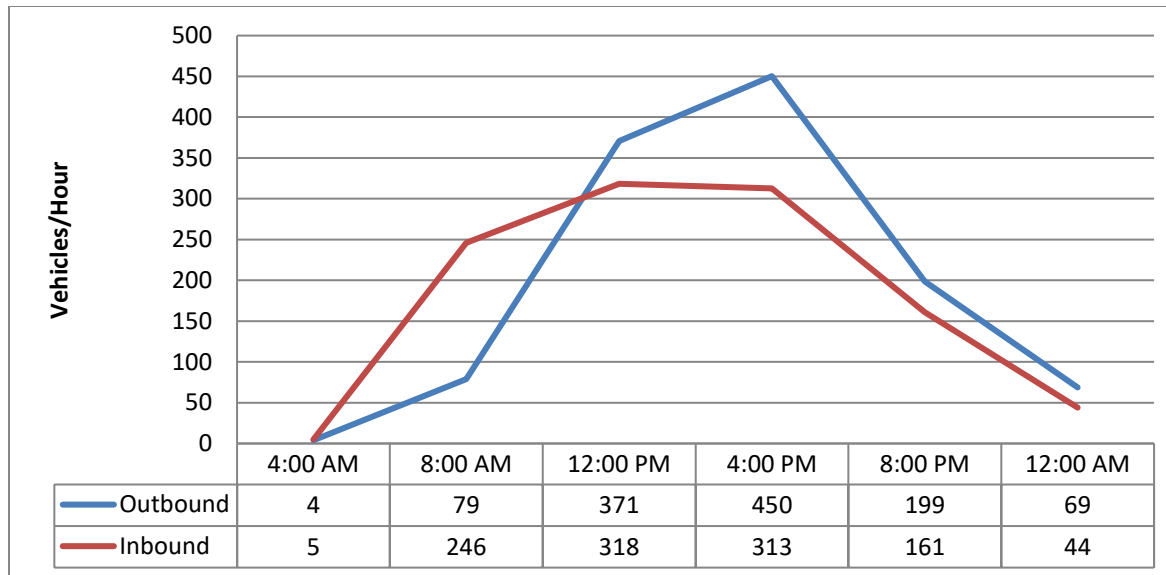




Source: Kiawah Island Community Association

On an hourly basis, inbound traffic peaks at 8:00 a.m. when contractors and service personnel enter the Island. Outbound traffic peaks at 3:00 - 4:00 p.m. when they leave. Because of the relative density of traffic, these are the critical safety hours on the Parkway.

**Figure X.3 2014 January-May Avg. Hourly Traffic on Kiawah Island Parkway**



Source: The Town of Kiawah Island Traffic Data, 2011-2014

### Traffic Accidents

There are very few accidents on Kiawah Island roadways. As reported by Charleston County Sheriff's Deputies and KICA security personnel monitoring our roadways, on average there are roughly two accidents per month. This number includes both multiple car collisions as well as single car accidents (excludes car-deer accidents).

### Johns Island Roads

The condition of Johns Island roads is an important issue to Kiawah for two major reasons: first, these roads are travelled by Kiawah residents in their trips to Charleston and other off-island destinations. And, second, workers heading to and from Kiawah -- contractors, sub-contractors, landscape and maintenance personnel, hospitality workers, etc. -- are on those roads daily. Safety while driving those roads is of utmost concern to all. A key objective has been to secure a route across Johns Island that can absorb the considerable traffic headed to and from Kiawah and Seabrook Islands. As of this update, no agreement within the County has been reached on the location and funding of such a route. The South Carolina Department of Transportation recently resurfaced Bohicket Road and River Road.

### Emergency Evacuation

Kiawah Island is a barrier island and, as such, is particularly susceptible to risks associated with severe weather. Natural disasters like hurricanes, floods, tornadoes and earthquakes are potential hazards that need to be addressed not only by

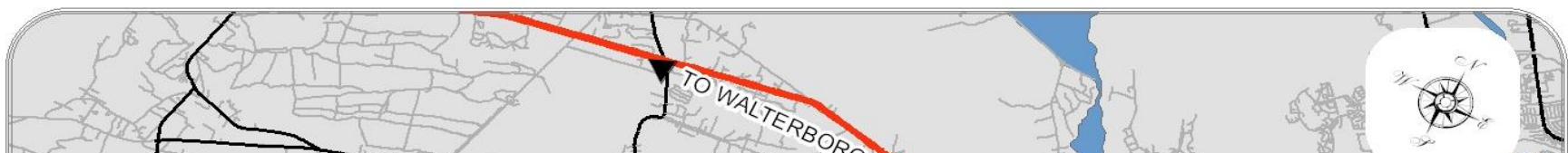


#### *Transportation Element - X*

organizations like the Town and the Community Association, but also by individual residents and property owners. Evacuation of the Island is called for when one of these natural disasters is judged imminent. If a mandatory evacuation order is issued, the prescribed evacuation route calls for leaving the Island via the Kiawah Island Parkway, and then on to Bohicket Road, Main Road and Highway 17. Highway 17 is then taken south to SC64 and then on to Walterboro. For more information regarding the Town's emergency evacuation plan, as well as its entire Emergency Preparedness Plan, please visit the Town's website at [www.KiawahIsland.org](http://www.KiawahIsland.org)



**Figure X.5 Emergency Evacuation Route from Kiawah Island**





#### Transportation Element - X



Evacuees from Kiawah Island will use SC 700 and Secondary Road 20 (Bohicket Road) to US 17. They will then take US 17 south to SC 64. SC 64 will take them to Walterboro and eventually to Augusta, GA.

Source: SCDPS Emergency Traffic Network  
<http://www.sctrffic.org/centralmap.html>

### Public Transportation

Currently, there is no public transportation available on the Island or from the Island to other destinations. The Resort and KICA provides service on and off the Island for its employees and complimentary Island transportation to its guests and off-Island transportation to residents and guests for a fee.

### Air Transportation

It is possible to fly into and out of Charleston at two local sites: the Charleston International Airport located about 20 miles north of the Island, and the Charleston Executive Airport, which is undergoing renovations and expansion, and is located 15 miles northeast of the Island. At present, nine major air carriers operate out of the Charleston International Airport -- Delta, American, USAir, JetBlue, Silver Airways, United, Porter Airlines, Southwest, and Alaska Airlines which was the latest edition to the airport in 2015. Airport volume is 306\* daily flights. Charleston Executive Airport supports mostly private air flights. With two runways in excess of 6,000 ft. in length, the airport can handle planes up to the size of small to mid-sized jets. Volume is 151\* flights a day.

\*for 12-month period ending May 31, 2015



### **Limousine Service**

A number of limousine firms, mostly operating out of Charleston, service demand on Kiawah. Airport shuttle-vans as well as stretched and standard-sized luxury cars are the vehicles of choice. KICA, as well as the Kiawah Island Club, offer a transportation service for its members. This Shuttle Service was first introduced in April of 2014. This service offers a premier and convenient luxury transportation to a myriad of destinations inside and outside the County of Charleston. Since its launch, the shuttle has been booked for over 550 trips and has accrued approximately \$50,000 in revenue for KICA. The most popular destination, accounting for over 74 percent of the bookings to date, has been to the Charleston International Airport; however, the shuttle has been all over Charleston County and the surrounding area.

### **Needs Assessments:**

- Cooperating and coordinating with all private and public organizations in finding a solution improving access to and from the Greater Charleston Metro Area.
- Cooperating with KICA and the developers to ensure safe roads on the Island; and
- Maintaining the structural integrity and beauty of the roundabout and upgraded Kiawah Island Parkway which serves as the gateway to Kiawah; and
- Consider impacts of rising sea levels and flooding during the design and improvement of roads and associated infrastructure.

### **Goals**

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change:

1. **Promote compatibility among roadway improvements, land use patterns, community character and natural environment.**
2. **Ensure that the Town's roadway system is properly maintained to meet the safe and efficient mobility of residents, businesses, and visitors.**
3. **Support regional roadway initiatives to improve traffic flow between Kiawah Island, Seabrook Island, Johns Island, and the Greater Charleston Metro area.**





## APPENDIX A: Goals, Implementation Strategy, Responsibility, and Time Frame

### Population Element

#### Goals

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change:

#### 1. Provide residents, non-resident property owners, and visitors with a safe and secure environment and high quality community facilities.

|    | Implementation Strategy  | Responsibility                                | Time Frame |
|----|--|---|------------|
| a. | Coordinate with law enforcement and private security providers to ensure a safe and secure environment is provided.  | Public Safety Committee                       | Ongoing    |
| b. | Monitor and sustain the continued adequacy of emergency preparedness plans designed to ensure the safety and protection of the Town's population during an emergency event and regularly communicate such plans to resident, non-resident property owner, and visitor populations. (See also Community Facilities Element-Goal #2) | Town Administrator<br>Public Safety Committee | Annually   |

#### 2. Develop more accurate data on property owner and visitor populations in order to assess and project the need for community services and facilities.

|    | Implementation Strategy  | Responsibility     | Time Frame |
|----|--|--------------------|------------|
| a. | Work with KICA, KIGR, KDP, and other groups to collect accurate population data, including those pertaining to residents, non-resident property owners, and visitors.          | Town Administrator | Ongoing    |
| b. | Using these data, assess the current need and project future needs for community services and facilities to accommodate residents, non-resident property owners, and visitors. | Planning Director  | Annually   |

**3. Develop strategies that consider the needs of an older and aging segment of the population.**

|    | <b>Implementation Strategy</b>  | <b>Responsibility</b> | <b>Time Frame</b> |
|----|---|-----------------------|-------------------|
| a. | Form a task force to study and consider the needs of an older and aging segment of the population, including their needs related to emergency preparedness. | Town Council          | 2016              |

**Economic Development Element****Goals**

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change.

**1. Provide a balance between preservation of natural resources and economic development.**

|    | <b>Implementation Strategy</b>   | <b>Responsibility</b>                  | <b>Time Frame</b>   |
|----|--|--|---|
| a. | Ensure that future Development Agreements recognize the "Town's Vision" while also providing for appropriate economic development and orderly growth (See Natural Resources Element Goal #1a). | Town Council<br>Planning<br>Commission | When<br>Development<br>Agreements are<br>replaced or<br>amended |
| b. | Ensure land use and zoning ordinances implement the Town's Comprehensive Plan (See Natural Resources Element Goal #1b).  | Town Council                           | Ongoing   |





## Natural Resources Element

### Goals:

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change:

**1. Complete the Island's development in a way that maintains the Island's environmental integrity and natural beauty and is consistent with the Vision of the Town.**

|    | Implementation Strategy  | Responsibility                    | Time Frame |
|----|--|-----------------------------------|------------|
| a. | Utilize site design and construction standards, methods, and practices to minimize natural area disturbance resulting from building design, location and construction. Standards in the ARB Building and Landscaping Guidelines, "Designing with Nature" should be used as a guide.  | Town Council, Planning Commission | Ongoing    |
| b. | Provide for or create open spaces, including undisturbed spaces, natural habitat areas, and access thereto throughout the Town (open space is intended to protect the natural and visual character of the community, provide for appropriate active and passive recreational uses and preserve corridors for wildlife travel between larger open space areas). | Town Council, Planning Commission | Ongoing    |

**2. Develop and maintain an environmentally sustainable system of parks and open spaces which provide access to the beach and river; preserves, protects and enhances natural resources; and meets the diverse recreational needs of the Town's population.**

|    | Implementation Strategy   | Responsibility                                    | Time Frame |
|----|---|---|------------|
| a. | Maintain existing programs to monitor and protect natural resources, wildlife species and habitat and expand these programs to include all groups of species on the island. | Town Wildlife Department, Environmental Committee | Ongoing    |



|    |  |  |               |
|----|--|--|---------------|
| b. | Support and encourage research on wildlife and natural resources by outside entities, such as colleges and universities, to expand our knowledge and understanding of the natural systems on the island. | Town Wildlife Department,<br>Environmental Committee | Ongoing       |
| c. | Conduct aerial orthophotography of the island every 3 years to monitor changes to the beach and dunes, <u>salt marsh</u> , interior habitat areas, and ongoing development.                              | Town Wildlife Department,<br>Environmental Committee | Every 3 years |
| d. | Improve access to the beach, Kiawah River and other open space areas by allowing for parking near key access points.   | Environmental Committee                              | Ongoing       |

**3. Maintain the existing quality of the natural resources on Kiawah Island, as well as the waters and marine environment surrounding the Island.**

|    | <b>Implementation Strategy</b>  | <b>Responsibility</b>                                | <b>Time Frame</b> |
|----|---|--|-------------------|
| a. | Minimize disturbances to or impact on the Island's natural resources and unique natural setting.  | Environmental Committee                              | Ongoing           |
| b. | Discourage land uses that are threatening to wildlife and wildlife habitats.  | Environmental Committee                              | Ongoing           |
| c. | Protect natural habitats and corridors essential for the health and integrity of native plant and wildlife populations. Control invasive species. | Town Wildlife Department,<br>Environmental Committee | Ongoing           |
| d. | Recognize that native vegetation should be protected and used to protect and stabilize lagoons and stream banks.                                  | Environmental Committee                              | Ongoing           |



#### 4. Maintain and expand public education and outreach programs.

|    | <b>Implementation Strategy</b>   | <b>Responsibility</b>                                | <b>Time Frame</b> |
|----|--|--|-------------------|
| a. | Maintain and expand existing wildlife website  | Town Wildlife Department,<br>Environmental Committee | Ongoing           |
| b. | Continue to produce wildlife nature guide and other pertinent publications and distribute to residents and visitors. | Town Wildlife Department,<br>Environmental Committee | Ongoing           |
| c. | Maintain wildlife interpretive signs and update as necessary.  | Town Wildlife Department,<br>Environmental Committee | Ongoing           |
| d. | Continue and expand public outreach programs, including presentations and school group field trips.                  | Town Wildlife Department,<br>Environmental Committee | Ongoing           |

#### **5. Formalize a marsh management plan that explores various methods of protection for the Island's marsh and manages the interface between highlands and critical area that is vital to a healthy salt marsh.**

|    | <b>Implementation Strategy</b>  | <b>Responsibility</b>   | <b>Time Frame</b>    |
|----|---|---|----------------------|
| a. | <u>Conduct aerial orthophotography of the island every 3 years to monitor and record changes to the beach, dunes, and salt marsh.</u> | <u>Town Wildlife Department,<br/>Environmental Committee,<br/>Planning Director</u> | <u>Every 3 years</u> |
| b. | <u>Monitor local and regional marsh front and or shoreline development regulations changes.</u>                                       | <u>Town Wildlife Department,<br/>Environmental</u>                                  | <u>Ongoing</u>       |



|           |   |  |                |
|-----------|---|--|----------------|
|           |   | <u>Committee,</u><br><u>Planning Director</u>  |                |
| <u>c.</u> | <u>Research shoreline erosion mitigation strategies (living shorelines, restoration).</u> | <u>Town Wildlife</u><br><u>Department,</u><br><u>Environmental</u><br><u>Committee</u> | <u>Ongoing</u> |

**6. Coordinate with public and private organizations on the impacts to or preservation of marsh front properties.**

|           | <b><u>Implementation Strategy</u></b>  | <b><u>Responsibility</u></b>   | <b><u>Time Frame</u></b> |
|-----------|--|--|--------------------------|
| <u>a.</u> | <u>Coordinate with local state and federal agencies including the Conservancy, KIARB, KICA, DHEC OCRM to assess the health of the salt marsh and explore long-term protection of the salt marsh.</u> | <u>Town Wildlife</u><br><u>Department,</u><br><u>Environmental</u><br><u>Committee</u><br><u>Planning Director</u> | <u>Ongoing</u>           |
| <u>b.</u> | <u>Review land use regulations and building codes impacting development along marsh front properties.</u>  | <u>Community</u><br><u>Development</u><br><u>Services</u>  | <u>Every 5 years</u>     |

## Cultural Resource Element

### Goals

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change.

**1. Encourage the development of programs and services that improve the delivery of cultural activities to all of Kiawah Island and its visitors.**

|           | <b><u>Implementation Strategy</u></b>   | <b><u>Responsibility</u></b> | <b><u>Time Frame</u></b> |
|-----------|---|------------------------------|--------------------------|
| <u>a.</u> | <u>Support the Town Arts and Cultural Events Council which is chartered to foster community appreciation and involvement in the visual and performing</u> | <u>Town Council</u>          | <u>Ongoing</u>           |



|    |   |                                    |         |
|----|---|------------------------------------|---------|
|    | arts through a range of programming, services, support and cultural education.  |                                    |         |
| b. | Coordinate with other public and private organizations, including KICA, KIGR, KDP, among others, to encourage the further development and delivery of recreational and cultural activities such as arts, clubs, and common activities, for the Town's resident, non-resident property owner, and visitor populations. | Town Council                       | Ongoing |
| c. | Promote available events and programs for the benefit of the Town's resident, non-resident property owner, and visitor populations, and outreach events for neighboring communities.  | Arts and Cultural Events Committee | Ongoing |

## **2. Encourage the identification and preservation of archaeological and historic resources located on Kiawah Island.**

|    | <b>Implementation Strategy</b>   | <b>Responsibility</b> | <b>Time Frame</b> |
|----|--|-----------------------|-------------------|
| a. | Monitor preservation of identified archaeological and historic resources.  | Town Council          | Ongoing           |
| b. | Evaluate requests for zoning permits to identify any previously unidentified archaeological or historic resources within the Town. | Planning Director     | Ongoing           |

## **Community Facilities Element**

### **Goals**

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change.

#### **1. Coordinate with all public and private organizations for the provision of essential community services.**

|    | <b>Implementation Strategy</b>  | <b>Responsibility</b>                         | <b>Time Frame</b> |
|----|---|---|-------------------|
| a. | Evaluate the provision of public safety services to ensure the safety and security of the Town's resident, non-resident property owner, and visitor populations, including security, fire protection, and emergency medical care, among others; provide Town Council with an annual report of status. | Town Administrator<br>Public Safety Committee | Annually          |



|    |  |   |            |
|----|--|---|------------|
| b. | Evaluate the provision of utility services to meet the quality, volume and emergency needs of existing and proposed development. Such services include electricity, water, wastewater management, solid waste management, cable, telephone and other services; provide Town Council with an annual report of status. | Town Administrator<br>Public Safety Committee | Annually   |
| c. | Evaluate the merits of developing the Town's borrowing capacity as a source of funding to address critical community services that may be needed on an emergency basis.  | Ways and Means Committee                      | Biannually |

**2. Monitor and sustain the continued adequacy of emergency preparedness plans and communicate regularly such plans to resident, non-resident property owner, and visitor populations.**

|    | Implementation Strategy  | Responsibility   | Time Frame |
|----|--|--|------------|
| a. | Coordinate reviews of the Town's Emergency Preparedness Plan, and related processes and infrastructure, with all relevant local, state, and national authorities. Update the Plan accordingly. | Town Administrator<br>Public Safety Committee          | Annually   |
| b. | Communicate regularly the essential elements of the Town's Emergency Preparedness Plan to residents, non-resident property owners, and visitors.   | Town Administrator<br>Public Safety Committee          | Annually   |
| c. | Develop plans for a variety of potential post-emergency event scenarios and estimate clean-up, recovery and replacement costs for Town assets.   | Town Administrator<br>Emergency Preparedness Committee | Annually   |

**3. Work to ensure an environmentally sustainable system of parks and open spaces are developed and maintained. This system should provide access to the beach and river; preserve, protect and enhance natural resources; and meet residents' diverse recreational needs.**

|    | Implementation Strategy                              | Responsibility | Time Frame |
|----|--|----------------|------------|
| a. | For strategies see Natural Resources Element Goal #3 | Town Council   | Annually   |

**4. Maintain professional development and training for Town Council, Boards, Committees and Staff.**

|  | Implementation Strategy | Responsibility | Time Frame |
|--|-------------------------|----------------|------------|
|--|-------------------------|----------------|------------|



|    |   |                                  |          |
|----|---|----------------------------------|----------|
| a. | Ensure that required training courses are completed annually. | Town Council, Town Administrator | Annually |
|----|---|----------------------------------|----------|

## Housing Element

### Goals

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change

#### 1. Encourage development of a diversity of housing stock, types and styles that meet different needs of the population.

|    | Implementation Strategy  | Responsibility   | Time Frame |
|----|--|--|------------|
| a. | Provide mechanisms to permit flexibility and innovation in residential project design to promote land use efficiency and environmental protection. | Town Council<br>Planning Commission<br>Planning Director | Ongoing    |

#### 2. Increase the transparency and understanding for everyone involved in all phases of the development process.

|    | Implementation Strategy  | Responsibility                            | Time Frame |
|----|--|---|------------|
| a. | Provide forums necessary to facilitate increased information flow at all levels of involvement in the development process. | Planning Commission<br>Town Administrator | Ongoing    |

#### 3. Consider the affordability of housing.

|    | Implementation Strategy   | Responsibility | Time Frame |
|----|---|----------------|------------|
| a. | Develop information and consider (i) the affordability of housing in and/or near the Town, (ii) any nonessential housing regulatory requirements that add to the cost of developing affordable housing but are not necessary to protect the public health, safety, or welfare, and (iii) any market-based incentives that may be made available to encourage development of affordable housing. | Town Council   | Ongoing    |



**4. Promote use of alternative energy sources and energy conservation measures that benefit the Town.**

|    | <b>Implementation Strategy</b>   | <b>Responsibility</b> | <b>Time Frame</b> |
|----|--|-----------------------|-------------------|
| a. | Monitor state and federal legislation that promotes energy efficiency and renewable or alternative energy sources. Also, facilitate educational outreach, training, and technical assistance to promote energy efficiency and the use of alternative energy sources. | Town Council          | Ongoing           |

**Land Use Element****Goals**

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change in land use:

**1. Maintain and enhance the residential character of the Town.**

|    | <b>Implementation Strategy</b>   | <b>Responsibility</b> | <b>Time Frame</b> |
|----|--|-----------------------|-------------------|
| a. | Develop standards that assure that new development and redevelopment is high quality and compatible with the existing community's residential character and natural habitat.   | Planning Commission   | Ongoing           |
| b. | Encourage the Developer (KDP and its successors) and the Resort (KIGR and its successors) to enter into development agreements with the Town which clearly set forth the rights and responsibilities of both parties and are consistent with the Vision Statement of the Island and this Plan. | Town Council          | Ongoing           |

**2. Provide for high quality, orderly, and controlled development and redevelopment.**

|    | <b>Implementation Strategy</b>   | <b>Responsibility</b> | <b>Time Frame</b> |
|----|--|-----------------------|-------------------|
| a. | Ensure development criteria and standards are determined to be consistent with the Vision Statement of the Island and this Plan. | Planning Commission   | Ongoing           |



|    |   |                     |         |
|----|---|---------------------|---------|
| b. | Develop standards that are flexible enough to allow property owners and developers to respond to changing conditions and ensure compliance with such standards.   | Planning Commission | Ongoing |
| c. | Maintain compatibility of commercial, residential, and resort areas with adjacent and nearby properties such that redevelopment will not create demands for recreational facilities, roads or utilities in advance of their availability. | Planning Commission | Ongoing |

### 3. Encourage expansion of the Kiawah Island Conservation Areas.

|    | Implementation Strategy   | Responsibility      | Time Frame |
|----|---|---------------------|------------|
| a. | Zone environmentally sensitive areas such as marshes and any future accreted land in the Conservation District. | Planning Commission | Ongoing    |

### 4. Thoroughly evaluate any annexation proposals.

|    | Implementation Strategy   | Responsibility | Time Frame |
|----|---|----------------|------------|
| a. | Ensure that annexation proposals protect environmentally sensitive areas, are consistent with the Town's Vision, the spirit of this Comprehensive Plan, and enhance the character of Kiawah Island. | Town Council   | Ongoing    |

### 5. Continue to improve monitoring and evaluating spatial relationships of physical properties and land use (such as zoning, lot size, natural resources, transportation, and community services) with updated, accurate GIS data.

|    | Implementation Strategy  | Responsibility   | Time Frame     |
|----|--|--|----------------|
| a. | Broaden use of the Town's GIS System and upgrade as appropriate.   | Town Council   | Ongoing        |
| b. | <u>Analyze the Town's zoning ordinances, building codes and related development strategies to recognize flood mitigation and rising sea level impacts.</u> | <u>Community Development Services, Environmental Committee</u> | <u>Ongoing</u> |



## Transportation Element

### Goals

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change:

#### 1. Promote compatibility among roadway improvements, land use patterns, community character and natural environment.

|    | Implementation Strategy  | Responsibility                      | Time Frame |
|----|--|-------------------------------------|------------|
| a. | Provide roadways designed to provide for safe and efficient traffic flow, minimizing impact on the environment, while enabling travelers to experience the natural beauty of the Island. | Town Council                        | Ongoing    |
| b. | Base the size and capacity of roads, parking areas, driveways and other impervious surfaces on the land uses they will serve.  | Town Council<br>Planning Commission | Ongoing    |
| c. | Ensure safe traffic flow on and protection of the Town's only evacuation route – the Kiawah Island Parkway.  | Town Council                        | Ongoing    |
| d. | Encourage adequate off-street parking for all residential, commercial and recreational development activities in the Town.   | Town Council<br>Planning Commission | Ongoing    |

#### 2. Ensure that the Island's roadway system is properly maintained to meet the safe and efficient mobility of residents, businesses, and visitors.

|    | Implementation Strategy   | Responsibility             | Time Frame |
|----|---|----------------------------|------------|
| a. | Develop and implement a strategic maintenance and replacement plan to ensure long-term maintenance of Town-owned transportation infrastructure (see Priority Investment Goals #3c. and #4b.). Coordinate with KICA and 3 <sup>rd</sup> parties regarding maintenance and replacement plans for their infrastructure within Town boundaries. | Town Council               | Annually   |
| b. | Collect and review roadway traffic count data and other information to assist in ensuring that the Highway Capacity Manual's Level of Service (LOS) "C" or better is maintained on collector and arterial streets and to serve development.   | Public Safety<br>Committee | Annually   |



|    |   |   |         |
|----|---|---|---------|
| c. | Encourage safe, non-motorized (e.g. walking, biking, etc) mobility on the Island. Ensure the efficacy and consistency of signage and pavement markings to improve safety of auto-non-auto interfaces (e.g., crosswalks, yield signs, etc.). | Public Safety Committee<br>Town Administrator | Ongoing |
|----|---|---|---------|

### 3. Support regional roadway initiatives to improve traffic flow between Kiawah Island, Seabrook Island, Johns Island, and the Greater Charleston Metro Area.

|    | Implementation Strategy   | Responsibility | Time Frame |
|----|---|----------------|------------|
| a. | Encourage the Charleston Area Transportation Study (CHATS) and Charleston County to improve roadways from the Betsy Kerrison Parkway to Maybank Highway, Savannah Highway and Charleston. | Town Council   | Ongoing    |
| b. | Encourage approval and funding for the "Sea Islands Greenway."  | Town Council   | Ongoing    |
| c. | Assure adequate and effective emergency evacuation routes from Kiawah Island are in place.  | Town Council   | Annually   |
| d. | Support the completion of I-526.  | Town Council   | Ongoing    |

## Priority Investment Element

### Goals

To help the Town further realize its Vision, the following goals should be considered when evaluating proposals for change:

#### 1. Conduct an assessment to identify the Town's exposure to all types of hazards, using the Charleston Regional Hazard Mitigation Plan as a baseline, and consider appropriate mitigation steps and associated resources or funding needed.

|    | Implementation Strategy   | Responsibility     | Time Frame |
|----|---|--------------------|------------|
| a. | Lead a collaborative effort to develop a detailed and organized hazard mitigation plan to reduce disaster losses.                 | Town Administrator | 2016       |
| b. | Plan for, budget, and justify improvements identified through the hazard assessment to mitigate the effects of potential hazards. | Town Administrator | 2016       |



|    |  |                    |      |
|----|--|--------------------|------|
| c. | Position the Town to seek a bond rating should bond issuance become necessary to facilitate disaster recovery. | Town Administrator | 2016 |
|----|--|--------------------|------|

**2. Establish a process for regularly conducting community appraisals of existing resources and assets and identify gaps, barriers, and future needs.**

|    | <b>Implementation Strategy</b>  | <b>Responsibility</b>              | <b>Time Frame</b> |
|----|---|------------------------------------|-------------------|
| a. | Use surveys, Town Hall meetings, and other methods to seek input from residents, as well as public and private entities to identify desired community services, facilities, and programs. | Town Administrator<br>Town Council | Ongoing           |
| b. | Form partnerships to coordinate and implement additional identified priorities.   | Town Administrator                 | Ongoing           |
| c. | Identify feasibility, community impact and potential costs associated with implementing new initiatives.  | Town Administrator                 | Ongoing           |

**3. Establish a Capital Improvement Plan**

|    | <b>Implementation Strategy</b>   | <b>Responsibility</b>                | <b>Time Frame</b> |
|----|--|--------------------------------------|-------------------|
| a. | Budget for an emergency preparedness component of the Capital Improvement Fund, and other actions to mitigate hazard risks.  | Town Administrator<br>Ways and Means | 2015              |
| b. | Seek additional funding sources for priority investments to leverage existing Town funds.  | Town Administrator<br>Town Council   | 2015              |
| c. | Develop maintenance requirements, replacement plans and budget requirements for infrastructure and other assets, tied to estimated useful lives and anticipated maintenance schedules (see Transportation Goal #2.a.). | Town Administrator<br>Town Council   | Ongoing           |

**4. Focus the Town's investment on the priorities identified as critical to the sustainability of the Island.**

|    | <b>Implementation Strategy</b>  | <b>Responsibility</b> | <b>Time Frame</b> |
|----|---|-----------------------|-------------------|
| a. | Work with utility companies to ensure adequate replacement plans for utility service to the Island. | Town Administrator    | 2016              |



|    |  |  |         |
|----|--|--|---------|
| b. | Identify, locate and log all storm drains on Town-owned streets or easements—develop maintenance and/or replacement schedules (see Transportation Goal #2.a.).                               | Town Administrator                               | By 2015 |
| c. | Continue to monitor beach erosion or accretion rates, dune formation or other shoreline changes. Use the Beach Management Plan as a planning tool for establishing beach-related priorities. | Wildlife Biologist<br>Environmental<br>Committee | Ongoing |
| d. | Consider additional uses of the Town-owned GIS system. Provide additional training, information and hardware as required.  | Town Administrator                               | Ongoing |
| e. | Conduct feasibility studies regarding development of (i) an island-wide Wi-Fi network and (ii) cellular service. Consider external resources to support such studies.                        | Town Administrator                               | By 2015 |

## APPENDIX B: Definitions

**Employed:** Persons 16 years and over in the civilian non-institutional population who, during the reference week, did any work at all as paid employees; worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family. Each employed person is counted only once, even if he or she holds more than one job. Excluded are persons whose only activity consisted of work around their own house or volunteer work for religious, charitable, and other organizations.

**Unemployed:** Persons aged 16 years and older who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the 4-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

**Labor Force:** The labor force includes all persons classified as employed or unemployed in accordance with the definitions contained in this glossary.



**Family Group:** A family group is any two or more people residing together, and related by birth, marriage, or adoption. A household may be composed of one such group, more than one, or none at all. The count of family groups includes family households, related subfamilies, and unrelated subfamilies.

**Family household:** A family household is a household maintained by a householder who is in a family, and includes any unrelated people who may be residing there. The number of family households is equal to the number of families. The count of family household members differs from the county of family members, however, in that the family household members include all people living in the household, whereas family members include only the householder and his/her relatives.

**Town of Kiawah Island (TOKI):** The Town of Kiawah Island, was incorporated by the State of South Carolina on September 13, 1988 and operates as a Mayor-Council form of government. The Town Council is composed of a Mayor and four Council Members. The Mayor is the chief executive officer of the Town. The Town Administrator provides support and advice to the Mayor and Council and runs the day to day operations of the Town. The Town provides services to its property owners and visitors including, but not limited to: public safety; street and drainage maintenance; solid waste disposal; planning and zoning administration; municipal court administration; beach maintenance and safety; communications and wildlife management. The annual budget serves as the guide for the Town of Kiawah Island's financial planning and control. The Town's operations are funded by business license revenue, franchise fees, aid to subdivisions, accommodation taxes, solid waste fees and other miscellaneous revenue. Unlike most municipalities in South Carolina, the Town of Kiawah Island does not levy property taxes to its residents.

**Kiawah Island Community Association (KICA):** Incorporated in 1976, The Kiawah Island Community Association (KICA) is a non-profit organization whose mission is to preserve and enhance the quality of life and property values of its members. All property owners on Kiawah Island become members of KICA upon purchase of their property. The association owns, maintains, insures and improves common properties such as roads behind the main security gate, drainage systems, rights-of-way, the Sandcastle Community Center and pool, boardwalks, bridges, lakes and leisure trails. KICA also provides premise security on the island, enforces its covenants and rules and regulations, and seek to foster a sense of community through social, recreational and outreach programs. Through its programs and services, KICA plays a leadership role in ensuring that Kiawah Island is a beautiful, safe, well maintained and friendly community.





**Kiawah Island Golf Resort (KIGR):** For the first two decades of its existence, the developer and resort were all part of the same company. In 1989, the island's owner separated the real estate/developer operations from the resort amenities and sold the resort amenities to California-based Landmark Land Company, Inc. After the Ryder Cup, Landmark went bankrupt as a result of the Savings and Loan collapse and their holdings were turned over to the government's Resolution Trust Corporation. In 1993, the resort's current owners (under the name of Virginia Investment Trusts) bought the resort facilities at auction (with the Ocean Course being sold in 1995). The resort consists of the former Kiawah Island Inn property, the Straw Market in West Beach, Cougar Point Golf Course, the West Beach Tennis Center, the Roy Barth Tennis Center in East Beach (including the Tennis Center pool), the East Beach Conference center, Town Center Market, the Sanctuary Hotel, the Night Heron Park, nature center and pool complex, Turtle Point Golf Course, Osprey Point Golf Course, The Ocean Course and Oak Point Golf Course on John Island.

**Kiawah Partners (KP):** KP is the Kiawah Island master developer and creates attractive real estate purchase opportunities on the island. It is sensitive to the ecology and natural beauty of the island as it builds new roadways and designs new neighborhoods. KP's functions are: Owning un-subdivided land and operating the Kiawah Island Club (Beach Club, Cassique and River Course), Kiawah Island Real Estate, Freshfields Village (a mixed use commercial village) and the water and sewer provider Kiawah Island Utilities (KIU); Providing recreational facilities to member of the Kiawah Island Club and publishing Legends and Island insight to promote island living; Recovery of KP properties after natural disasters and insurance of KP properties; Providing planning and development services for new neighborhoods, approval of modifications to homes and building of new homes on undeveloped lots via the Architectural Review Board.

**Kiawah Island Conservancy (KIC):** The Kiawah Island Natural Habitat Conservancy, Inc. (Kiawah Conservancy) is a 501(c)(3) non-profit organization established by the Island residents and incorporated in 1997. Its mission is to provide for the identification, preservation and appropriate management of the critical, natural habitat needed to maintain a healthy, balanced and diverse population of native flora and fauna on Kiawah Island. The Kiawah Conservancy publishes a bi-annual magazine - Naturally Kiawah, offers an annual presentation series - Conservation Matters, maintains two websites – [www.kiawahconservancy.org](http://www.kiawahconservancy.org) and [www.sweetgrassaward.org](http://www.sweetgrassaward.org), sponsors the Habitat Improvement Program and co-sponsors a variety of research studies. The Kiawah Conservancy is also a holder of land and conservation easements, and as such it acts as a land trust. Since its inception, the Kiawah Conservancy has preserved 21 properties, totaling 324 acres of pristine barrier island habitat.

**Architectural Review Board (ARB):** The Kiawah Island ARB is committed to protecting and enhancing property owner's precious assets. To do this, they help Kiawah Island property owners achieve an environmentally sensitive design for your



new home through careful consideration of the configuration of your home site, the Lowcountry climate, existing vegetation, and topography of the building site. Thus, one of their primary objectives is to assist property owners with planning efforts. Ultimately, the goal of the Kiawah Island Architectural Review Board is to achieve an uncommon and visually pleasing blend of natural beauty and manmade improvements by providing standards and guidelines for community areas as well as residence, in accordance with the development's comprehensive Master Plan.

**The Community Emergency Response Team (CERT):** The Community Emergency Response Team Program educated people about disaster preparedness for hazards that may impact they area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. Ultimately through training, citizens can manage utilities and put out small fires; treat the three killers by opening airways, controlling bleeding, and treating for shock; provide basic medical aid; search for and rescue victims safely; and organize themselves and spontaneous volunteers to be effective.

**Community Rating System (CRS):** The Community Rating System is a voluntary incentive program that recognizes and encourages community floodplain management activates that exceed the minimum National Flood Insurance Program requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS: reduce flood losses; facilitate accurate insurance rating; and promote the awareness of flood insurance. The lower the number of the CRS class rating, the higher the flood insurance premium discounts to the citizens.

**Geographic Information System (GIS):** A method of storing geographic information on computers. Geographic information can be obtained from a variety of sources, including topographic maps, soil maps, aerial and satellite imagery, and many others. Using GIS software, the computer can create special maps for presentation, can analyze spatial data from different sources simultaneously, and can generate interpretive maps. Among the many benefits of GIS are easily updated digital databases that can be used to print maps easily and efficiently, that can be easily shared by many users, and that can be used to analyze spatial relationships among the physical, social and natural environments.

**Parks and Recreation:** Parks, playgrounds, swimming pools, recreation facilities, and open spaces available to the general public, either without a fee or under the management or control of a public agency.



**Development Rights:** Development rights entitle property owners to develop land in accordance with local land use regulations.

## APPENDIX C: References

Kiawah Island Community Association. 2013. *Kiawah Island Community Association Membership Study 2013*. Kiawah Island Community Association.

U.S. Bureau of Census. American Community Survey 2009-2013 Five Year Estimates. 2014.

Kiawah Island Real Estate Publication. 2014. *Kiawah Island Property Report: 2014 Results in Review*. Charleston County: Kiawah Island Real Estate.

Town of Kiawah Island. 2014. *Town of Kiawah Island Comprehensive Annual Financial Report*. Charleston County: Town of Kiawah Island.

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Town of Kiawah Island Architectural Review Board. 2015. *Town of Kiawah Island Architectural Review Board Permit Summary 2008-2014*.

Town of Kiawah Island Community Association. 2014. *Seasonal Traffic Count Through the Main Gate Study, 2014*.

Charleston County Assessor's Office. 2015. *Freshfields Gross Receipts for 2011 through 2013*. Charleston County

Town of Kiawah Island Arts Council. 2015. *Kiawah Island Arts Council Event Budget Review, 2010-2015*. Town of Kiawah Island.



## APPENDIX D: Legal Authority for Comprehensive Planning

### Legal Authority for the Comprehensive Plan

In 1994, the *South Carolina Local Government Comprehensive Planning Enabling Act* (S.C. Code Sections 6-29-310 through 6-29-1200) was passed to replace all previous planning and zoning statutes in South Carolina. Among other things, the *Enabling Act*, as amended, charges the Town of Kiawah Island Planning Commission with responsibility for comprehensive planning. The Planning Commission must establish and maintain a planning process which will result in the systematic preparation, continual evaluation and updating of a Comprehensive Plan (S.C. Code Section 6-29-510(A)). At a minimum, the planning process for each comprehensive plan element must include the following items: (i) inventory of existing conditions, (ii) a statement of needs and goals, and (iii) implementation strategies with time frames (S.C. Code Section 6-29-510(C)). Comprehensive plans must include, at a minimum, the following nine elements: (i) population, (ii) economic development, (iii) natural resources, (iv) cultural resources, (v) community facilities, (vi) housing, (vii) land use, (viii) transportation, and (ix) priority investment (S.C. Code Section 6-29-510(D)). The Act requires the Planning Commission review the comprehensive plan or elements of it no less than once every five years to determine whether changes in the amount, kind, or direction of development of the area or other reasons make it desirable to make additions or amendments to the plan and to update the comprehensive plan, including all elements of it, at least every ten years (S.C. Code Section 6-29-510(E)).

### Plan Approval Process

The process for review and adoption of the Comprehensive Plan is established by the *South Carolina Local Government Comprehensive Planning Enabling Act* (S.C. Code Sections 6-29-520 and 6-29-530), as well as the Town Code. Accordingly, the following steps comprise the process for this review:

- 1. Preliminary Review:** Members of the Planning Commission work with the professional staff of the Town of Kiawah Island and the Charleston County Planning Department to review each element of the Town's Comprehensive Plan which was last updated in 2010. Among many things, this review consists of the gathering and analysis of statistical and archival data related to the plan's elements, coordination with important organizations within the Town (such as KDP, KICA, and KIGR), and an analysis of changes in regulatory requirements since 2010. A draft revision of the Town's Comprehensive Plan was prepared to solicit input from the public.



2. **Consideration of Public Comments.** The Planning Commission holds informational sessions to solicit comments on the Comprehensive Plan from interested members of the public. All such comments were considered by the Planning Commission and further revisions to the draft plan were made.
3. **Recommendation and Resolution.** The Planning Commission considers a resolution recommending the review of the Plan to the Town Council for adoption. The resolution explicitly refers to maps and other descriptive material intended by the Planning Commission to form the recommended review of the plan. The resolution was recorded in the official minutes of the Planning Commission. A copy of the recommended review of the Plan was transmitted to the Town Council.
4. **Town Council Hearing.** The Town Council holds public hearings prior to adopting the recommended review of the plan. In each case, at least 30 days' notice of the hearing time and place was provided in a general circulation newspaper in the Charleston area
6. **Adoption Ordinance.** The Town of Kiawah Island Council adopted the recommended review of the plan by ordinance.

### **Plan Implementation**

Following adoption of the *Comprehensive Plan Re-evaluation* by the Town of Kiawah Island Council, the Town will move forward, as appropriate, with a series of implementation actions. These actions will include revisions to ordinances, programs, and routine Town operations, as appropriate, to achieve consistency with the goals of the Town of Kiawah Island Comprehensive Plan.

### **Legal Authority for the Reasonable Regulation of Land Development and Use**

As a product of the state-mandated comprehensive planning process, the Town Council is authorized to adopt zoning ordinances and maps that are consistent with the Comprehensive Plan. These changes are made pursuant to the Planning Commission's recommendations based on its analysis and study of any specific or comprehensive planning matter. Numerous zoning techniques are contemplated by the state Planning Enabling Act, including cluster development, floating zones, performance zoning, and planned development districts. However, state statutes expressly authorize the Town to adopt other reasonable and lawful regulations that implement the policies and provisions of the Comprehensive Plan. Additionally, the Town, like all local governments in South Carolina, has broad home rule authorities conferred pursuant to a 1973 amendment to the South Carolina Constitution and new state legislation adopted in 1976.



Tab | 3

**TOWN COUNCIL**

**Agenda Item**





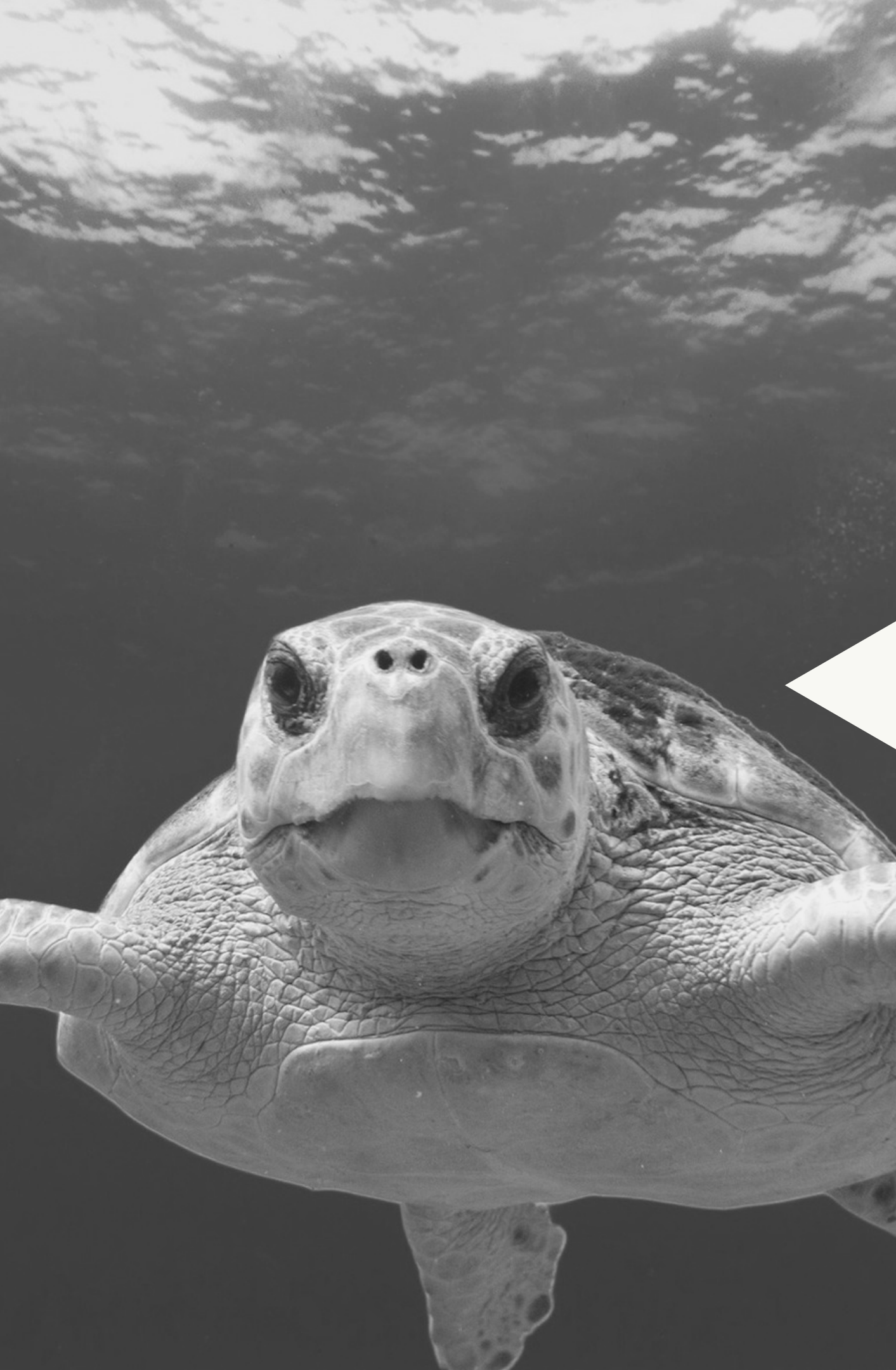
# Single-Use Plastics Ban



Communications Plan 2019



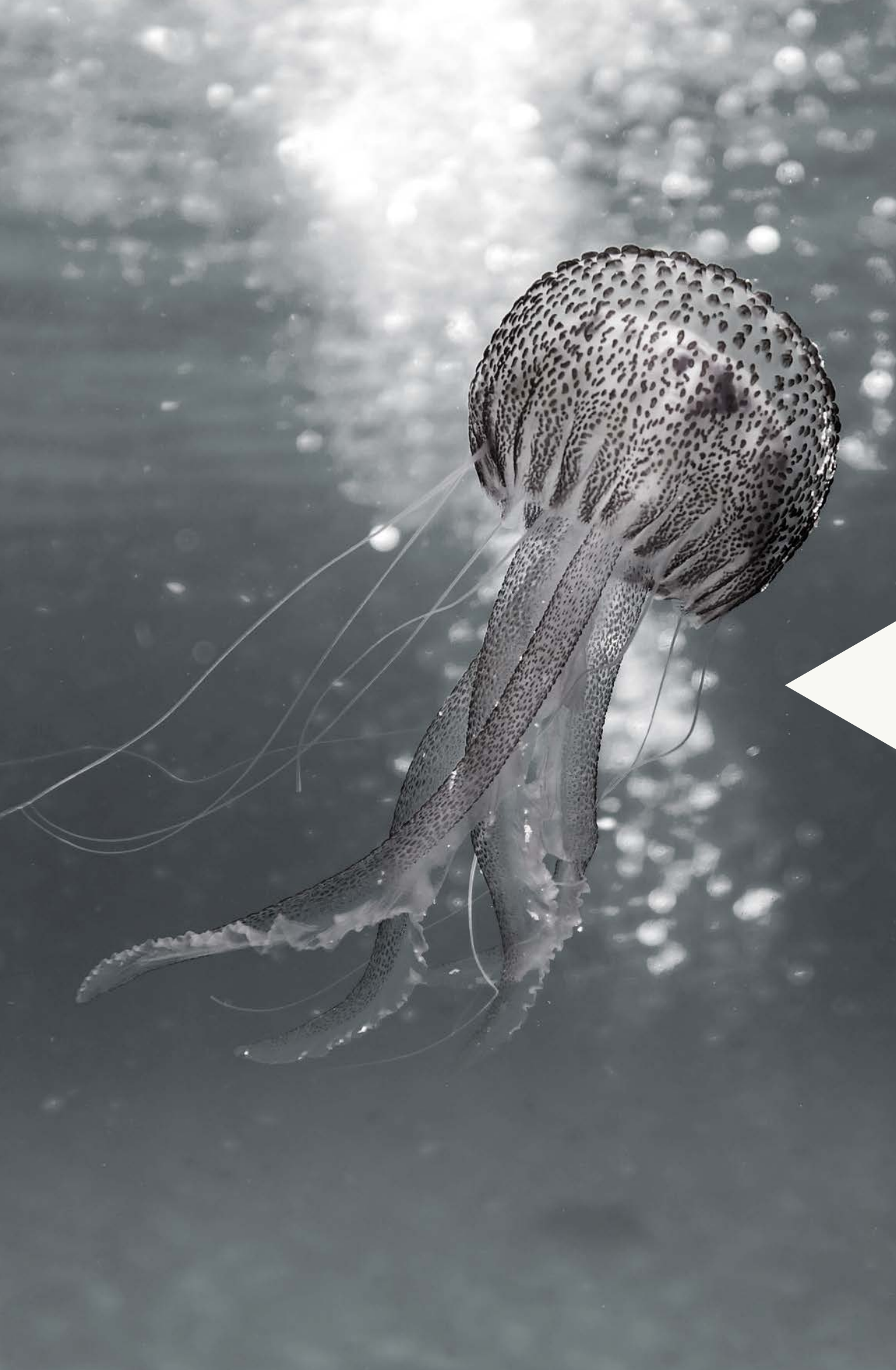




# Audiences



- Businesses
- Residents
- Visitors



# Goals

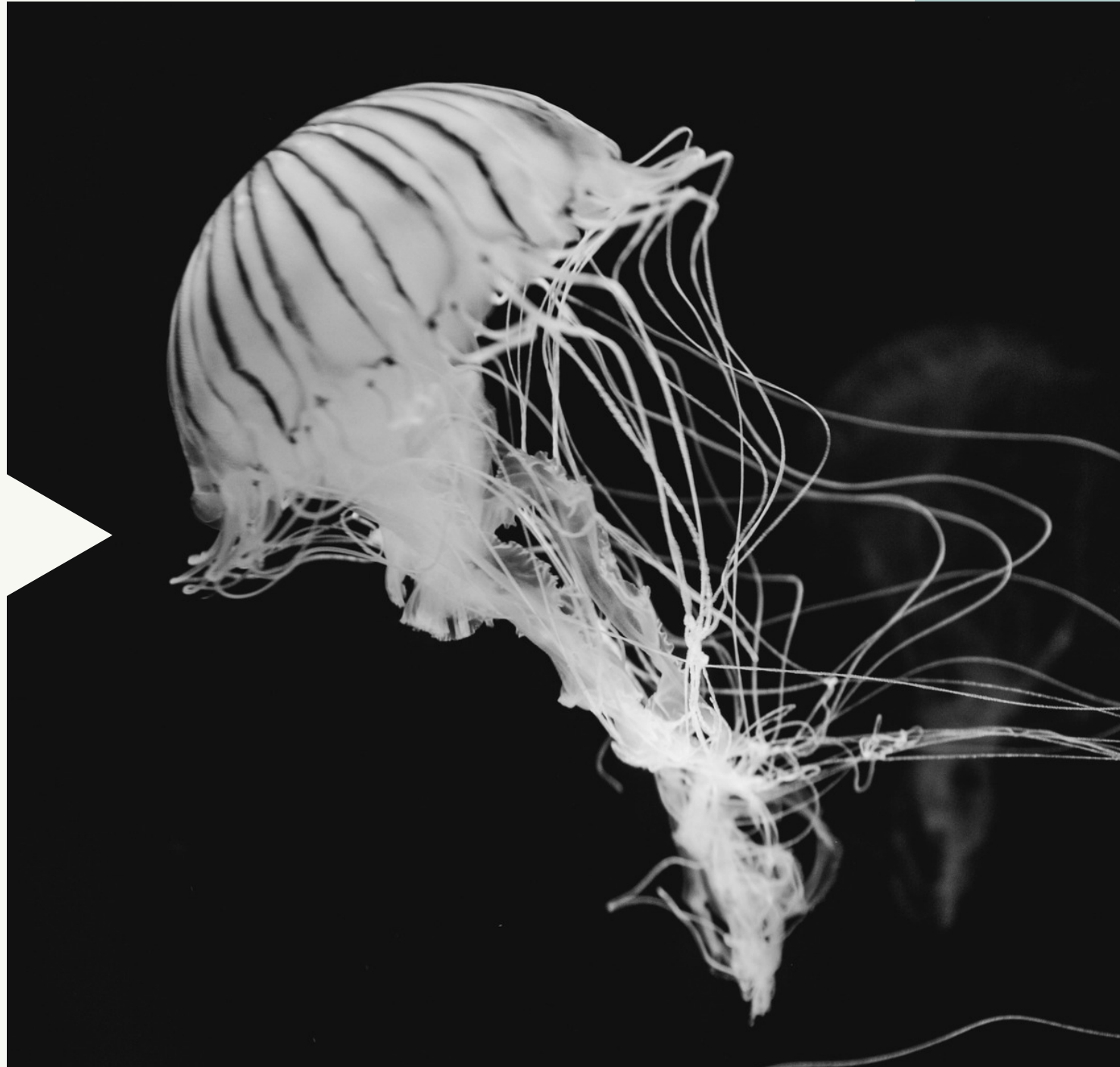
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- Inform businesses & support them in communicating to their customers
- Public Education
  - What the ban applies to
  - What they can expect from retailers
  - Change in beach regulations
  - The intent of the ban
  - Why single-use plastics are harmful
  - Key messages - environmental & marine life protection



# PRESS

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- **June** - Press release issued to Island Connection, Channel 2,4,5 and Post and Courier.
  - Yielded little County coverage
  - Island Connection published
- **July** - Requested outlets update digital articles to include Kiawah in their listings of coastal communities that have enacted a ban.
- **August-** Resend press release one week prior to the effective date.



# BUSINESSES

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Freshfields Merchants  
Business License Holders  
Resort & Club Retailers

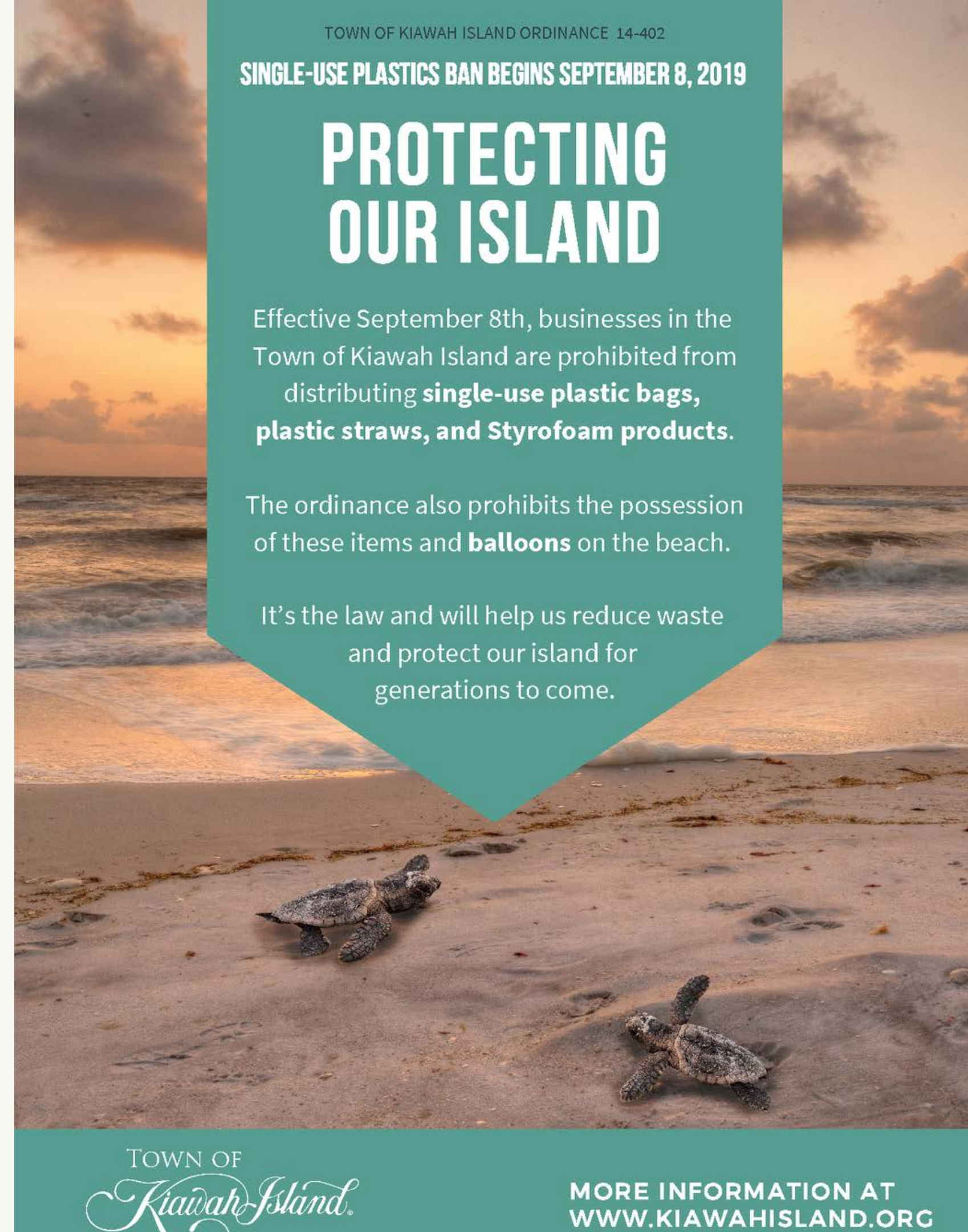


# Businesses Communication

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## Whats been done?

- Created webpage on ban.
- Created FAQ's webpage.
- Created promotional flyer. ➡
- Formal notice and flyer issued by email to TOKI business license holders & rental agencies.



TOWN OF KIAWAH ISLAND ORDINANCE 14-402

SINGLE-USE PLASTICS BAN BEGINS SEPTEMBER 8, 2019

## PROTECTING OUR ISLAND

Effective September 8th, businesses in the Town of Kiawah Island are prohibited from distributing **single-use plastic bags, plastic straws, and Styrofoam products.**

The ordinance also prohibits the possession of these items and **balloons** on the beach.

It's the law and will help us reduce waste and protect our island for generations to come.

TOWN OF  
*Kiawah Island*

MORE INFORMATION AT  
[WWW.KIAWAHISLAND.ORG](http://WWW.KIAWAHISLAND.ORG)



- **Freshfields Merchants**

- TOKI email notice and delivered a hardcopy notice with laminated flyer to display
- Northwoods noticed tenants

- **KIGR & KICA** - Notified. Already made the switch. Working through inventory.

- KI Club - Notified.

- Reminders will be issued 1 wk before

TOWN OF KIAWAH ISLAND ORDINANCE 14-402

**SINGLE-USE PLASTICS BAN BEGINS SEPTEMBER 8, 2019**

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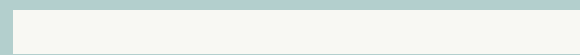
The ordinance also prohibits the possession of these items and **balloons** on the beach.

It's the law and will help us reduce waste and protect our island for generations to come.





# PUBLIC



Residents | Visitors



# WE NEED SIGNAGE!

The standard way municipalities communicate with tourist on beach related ordinances.

- Opportunity for messaging at 41 boardwalks:
  - 25 KICA boardwalks
  - 2 KIGR boardwalks (minus the Sanctuary)
  - 14 regime boardwalks



Member and Guest Use Only

## Please Keep Off the Dunes

- No Glass
- No Balloons
- No Plastic Carryout Bags
- No Plastic Straws
- No Styrofoam
- No Metal Shovels



Dogs must be leashed  
March 16 - Oct. 31

# KICA BW SIGNAGE

---

- KICA's new boardwalk sign package was already in progress.
- Worked with KICA & ARB to redesign their package for their 25 boardwalks.
- ARB approved redesign pictured here.





## New Signage in W. Beach



**Metal Cap | Concrete Base**

Member and Guest Use Only

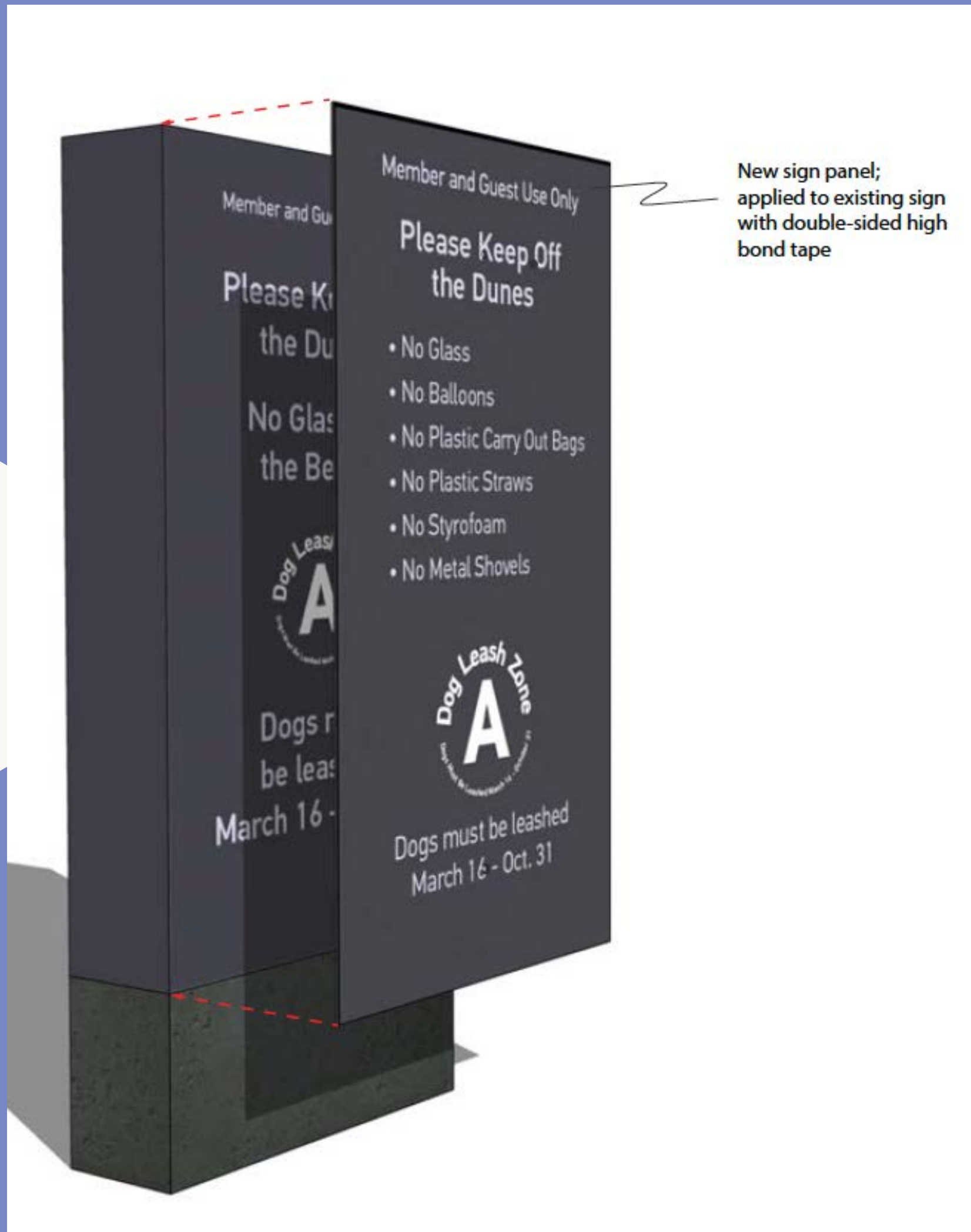
## Please Keep Off the Dunes

- No Glass
- No Balloons
- No Plastic Carryout Bags
- No Plastic Straws
- No Styrofoam
- No Metal Shovels



Dogs must be leashed  
March 16 - Oct. 31





# KICA BW SIGNAGE

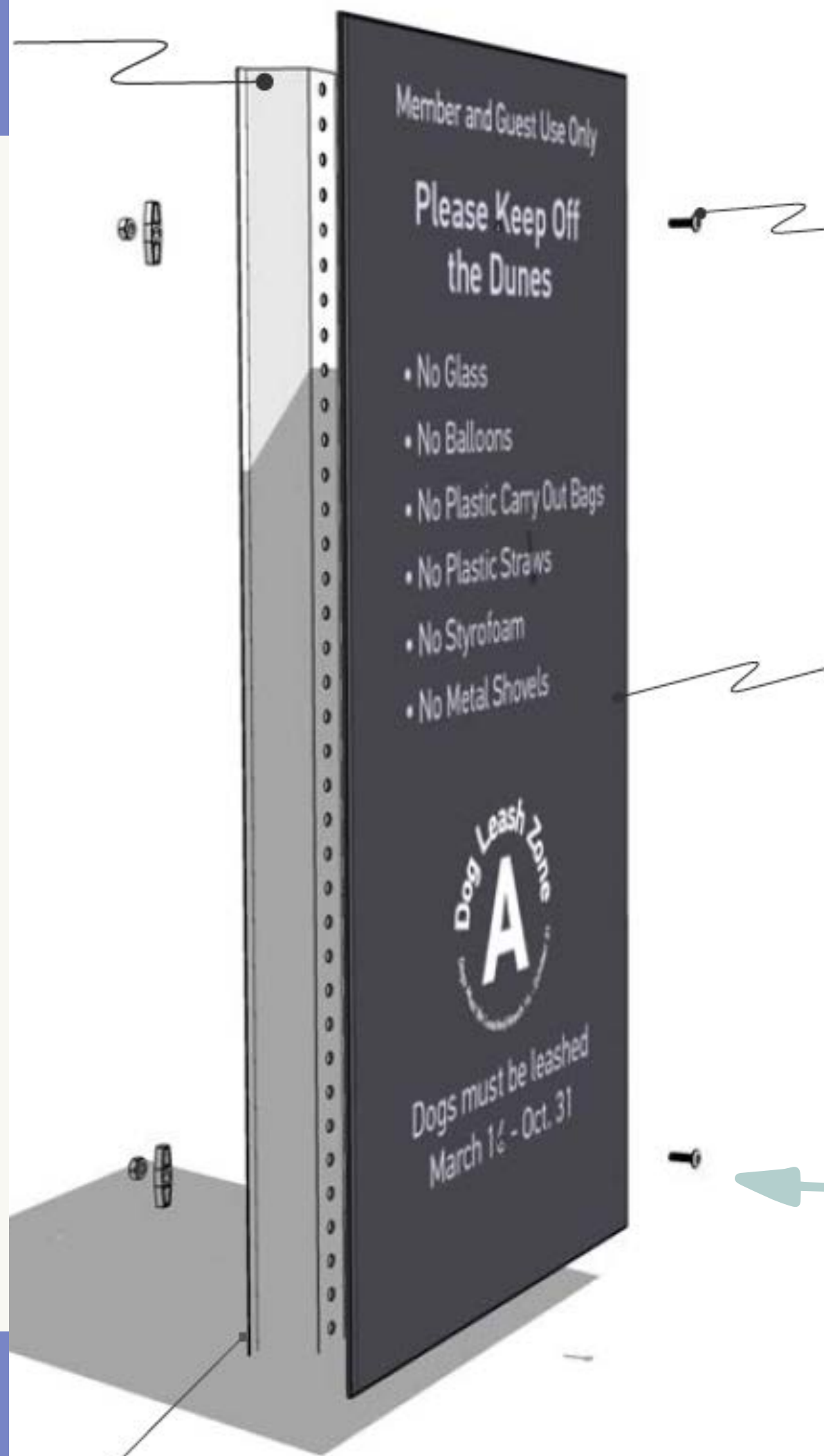
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- West Beach signs (11) that have already been installed will be retrofitted with temporary sign panel until redone.
- East Beach permanent signs will not be installed until 2020.

# KICA BW SIGNAGE

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Pictured here is temporary signage for East Beach KICA boardwalks (14) that will be installed until permanent replacement (2020).

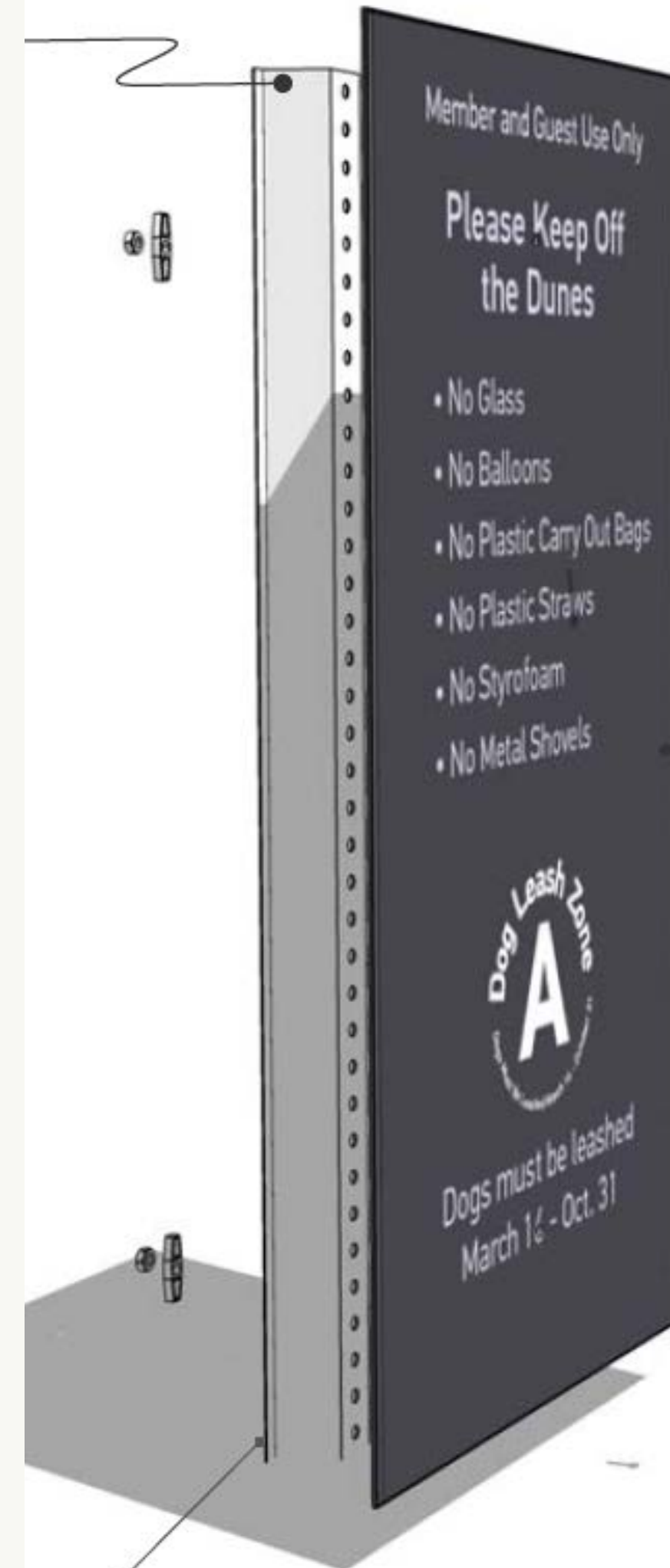


# PRIVATE BW SIGNAGE

Currently securing permission from owners.

## Status:

- Beachwalker Park - granted
- KIGR - granted
- Regimes - in progress



Member and Guest Use Only

**Please Keep Off  
the Dunes**

- No Glass
- No Balloons
- No Plastic Carryout Bags
- No Plastic Straws
- No Styrofoam
- No Metal Shovels



**Dogs must be leashed  
March 16 - Oct. 31**



## Other Boardwalk Signage Option

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If regime permission is not granted, other options could include imprinted message on boardwalk planks as pictured.

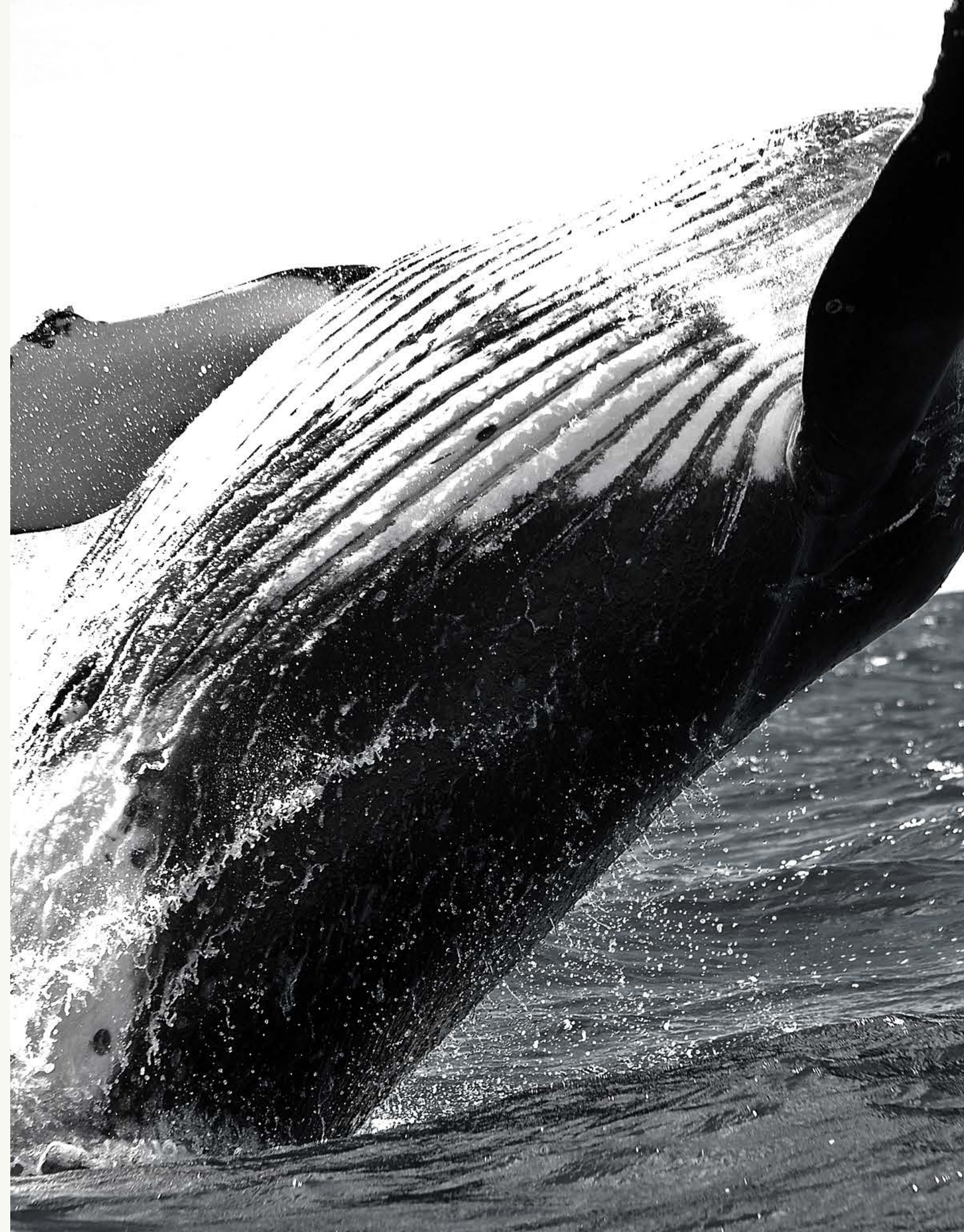




# Cost for Signage

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- Quoted three vendors
- One responded
- Cost could be taken out of Restricted Funds





# Public Communication

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## Print

- Town Notes Front page Q3
- Island Connection Article
  - Published in June
  - Rerun in August 16 edition
- KICA Digest | September
- Naturally Kiawah Article | September
- KIGR Activity Guide update (Jan 2020)





# Public Communication

## Display and Digital

- Protecting Our Island poster @ Freshfields Kiosk and Nature Center
- Freshfields publicized
- TOKI Eblast notice | June - Sept
- Social Media Campaigns Aug - Sept
- KIGR & Conservancy will partner sharing our SM campaign





# Public Communication

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## Other

- Turtle Patrol Cards Redesign
  - distributed by TP on the beach & Farmers Market @ Freshfields
- My Charleston - Updated beach rules







Need assistance?

Contact:

Beach Patrol  
@ 843-518-2880

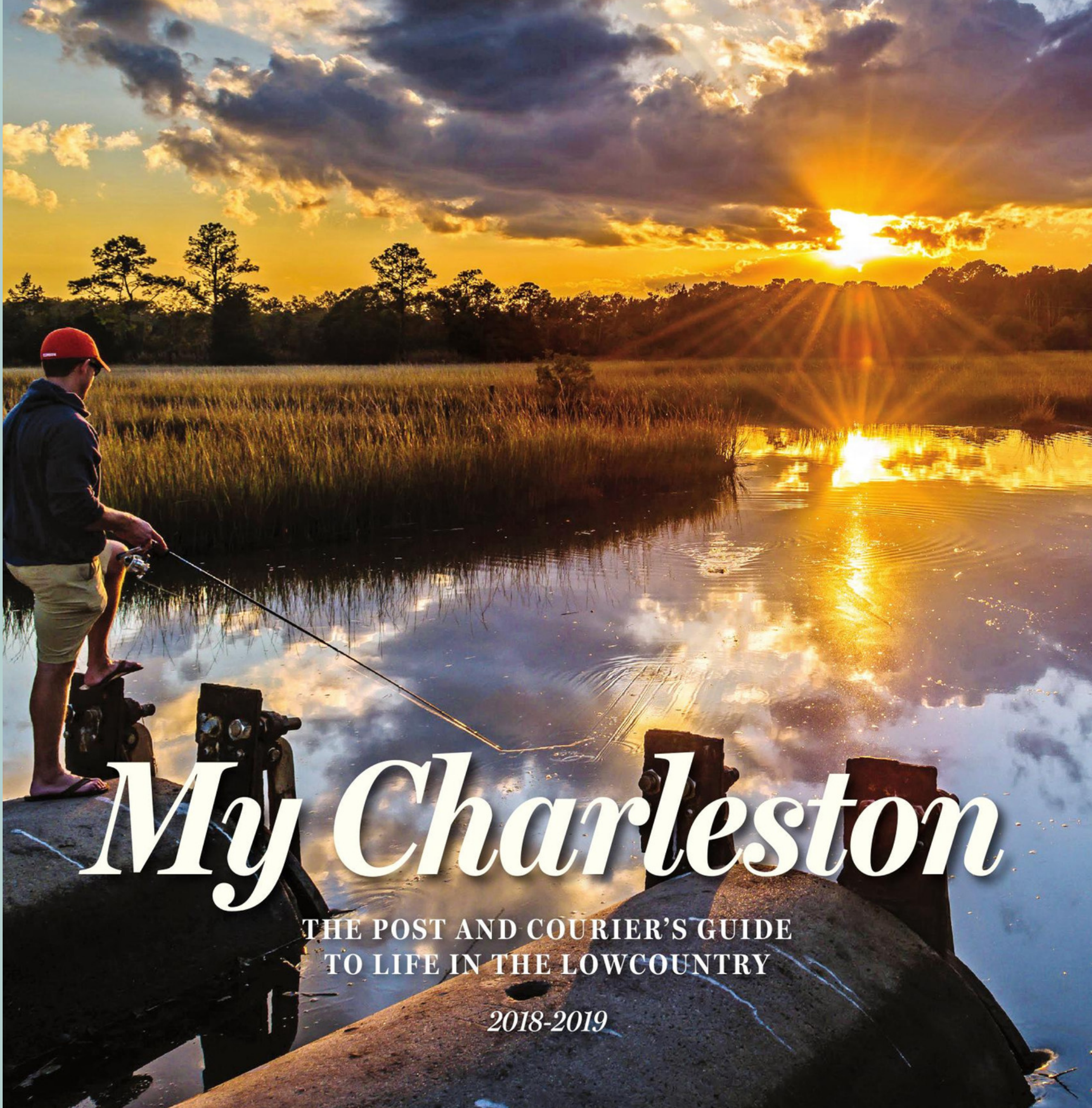
Code Enforcement  
@ 843-768-9166



# Rules of the Beach

- No metal shovels or plastic shovels larger than 14" - please fill in your holes
- All dogs must be leashed Mar. 16 - Oct. 31
- No feeding or harrassing of wildlife
- Keep off the dunes
- No glass, balloons, plastic carryout bags, plastic straws or styrofoam





# *My Charleston*

THE POST AND COURIER'S GUIDE  
TO LIFE IN THE LOWCOUNTRY

2018-2019

## The rules

### ● Beach rules

1. No glass containers, open fires, fireworks or overnight storage of beach equipment.
2. No launching or beaching of motorized vessels, including jet skis.
3. Fishing is allowed on the beach with a saltwater fishing license.
4. Leashed dogs are allowed with the following regulations:
  - Dogs are prohibited year-round in critical habitat areas located on each end of the island.
  - Dogs are allowed off leash under control year-round from 7 a.m. to 7 p.m. between the eastern boundary of the Beach Club and the Ocean Course Clubhouse.
  - Pets must be leashed in this area

1-March 15: Pets are allowed off leash 7 a.m. to 7 p.m. except in critical habitat areas. Electronic leashes are prohibited.

5. No trespassing on dunes. Use designated boardwalks.

6. Removal or disturbance of natural resources or wildlife is prohibited.

7. Lights out for sea turtles May-October. Flashlights and exterior lights are prohibited to illuminate the front beach between 9 p.m. and dawn.

8. Do not dig holes that change the contour of the beach. Metal shovels are prohibited, and plastic shovels can be no longer than 14 inches.

9. Town ordinances are enforced by Beach Patrol, who are authorized to ticket and fine offenders.

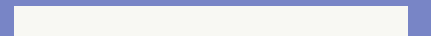
100,000 copies distributed at the airport, restaurants, hotels, popular tourist destinations, and major events SEWE, the Bridge Run and Spoleto.





# Future

- Short Term Rental Rules and Regulations Ad Slick







Tab | 4

**TOWN COUNCIL**

**Agenda Item**

# WORK IN PROGRESS

The documents for this tab are nearly completed but still a work in progress. They will be sent to you electronically when I completed.

I apologize and thank you very much for your patience.

Petra



Tab | 5

**TOWN COUNCIL**

**Agenda Item**

## THE TOWN OF KIAWAH ISLAND

### ORDINANCE 2019-05

**AN ORDINANCE TO AMEND THE TOWN OF KIAWAH ISLAND MUNICIPAL CODE OF ORDINANCES ARTICLE 7, PUBLIC SAFETY; BY ADDING CHAPTER 3, SECTION 7-301 “DRONES AND MODEL AIRCRAFT”; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, the Town of Kiawah Island Municipal Code currently contains Article 7 – Public Safety, and;

**WHEREAS**, the Town wishes to address privacy and public safety concerns by regulating the launching and landing of drones and model aircraft within the jurisdiction of the Town of Kiawah Island, and;

**WHEREAS**, the Town wishes to amend the current Article 7 with the addition of Chapter 3, Section 7-301, relating to drone and model aircraft regulations.

**NOW, THEREFORE, BE IT ORDERED AND ORDAINED BY THE COUNCIL OF THE TOWN OF KIAWAH ISLAND, SOUTH CAROLINA, AND IT IS ORDAINED BY THE AUTHORITY OF SAID COUNCIL.**

#### **Section 7-301**      **Purpose**

The Municipal Code of Ordinance of the Town of Kiawah Island is hereby amended Article 7, Public Safety; by adding Chapter 3, Section 7-301. - Drones and Model Aircraft.

#### **Section 7-302**      **Drones; Model Aircraft**

##### **a. Purpose.**

As a result of the rapid implementation of drone and model aircraft technology, many issues arise from their use, such as the privacy and concerns for public safety. Drones and model aircraft have the ability to carry wireless cameras that record data and/or transmit live streams of data. Without regulating the take-off and landing of drones and model aircraft within the jurisdiction of the Town of Kiawah Island, they could be used to invade the privacy of Town residents and guests who are enjoying the use of their property, beach, and other public places.

In addition, drones and model aircraft are defined as unmanned aerial systems (UAS's). They pose a public safety concern not only to other aircraft or objects in the air but to the residents and guests of the Town and their property. Some of these concerns include but are not limited to, unexpected drone or aircraft malfunctions,

loss of control, unforeseen incidents that can cause inability to sustain flight as intended, their ability to carry weapons and the potential for use in the planning and execution of a wide variety of criminal activity.

**b. Definition.**

“Drone / Model Aircraft” is defined as a powered, aerial vehicle that:

- a) Is any contrivance used or designed to navigate or fly in the air;
- b) Does not carry a human;
- c) Uses aerodynamic forces to provide vehicle lift;
- d) Can fly autonomously or be piloted remotely;
- e) Can be expendable or recoverable
- f) Model aircraft of less than three pounds and which do not carry a camera are not included within this definition.

**c. Prohibition.**

No person or entity may operate a drone or model aircraft within the confines of the Town of Kiawah Island unless specifically exempted or permitted in accordance with the terms of this ordinance.

**d. Exemptions.**

The following shall be exempt from the prohibitions stated above subject to their meeting all applicable Federal Aviation Administration (FAA) rules regarding operation and registration.

- a) Where, it is determined that a drone or model aircraft is necessary to assist law enforcement, fire personnel or ocean rescue personnel in emergency situations or critical incidents;
- b) Town of Kiawah Island and the Kiawah Island Community Association;
- c) Commercial use of “unmanned aircraft” (re: real estate sales) may be permitted, provided the company is properly licensed, and permission is granted by the Town of Kiawah Island. Permission will be limited to a specific location with no photography, video, or other surveillance of adjacent properties; and
- d) Where the drone or aircraft is operated only within the boundaries of the operator’s real property and where the drone or model aircraft operation is for personal use.

**e. Drone / Model Aircraft Operation Requirements Subject to Issuance of a Permit:**

Drone/model aircraft operation used for educational, environmental or commercial purposes may be permitted for operation within the Town of Kiawah Island, subject to the operating requirements listed below: The drone or model aircraft

- a) Must remain within the visual sight of the operator at all times;

- b) May not be operated over any person, gathering of persons or residences that would cause a hazardous or unsafe condition;
- c) May not be operated at an altitude that would create a hazardous condition and/or interfere with any plane, helicopter or other aircraft already in flight, as per FAA requirements;
- d) Must comply with FAA requirements regarding operations within a certain proximity to airports;
- e) May not have airspeed in excess of 100 mph;
- f) Must be operated between sunrise and sunset;
- g) May not be operated in a careless or reckless manner;
- h) Operator and model aircraft equipment must meet all current FAA requirements for commercial UAV operations; and
- i) Must be properly registered with the FAA according to FAA guidelines.

**f. Penalty.**

Any person or entity in violation of any of the provisions of this ordinance shall be subject to the Town of Kiawah Island Municipal Code Chapter 1, General Provisions, Section 6-106, Fines and Penalties.

**Section 3     Severability**

If any part of this Ordinance is held to be unconstitutional, it shall be construed to have been the legislative intent to pass said Ordinance without such unconstitutional provision, and the remainder of said Ordinance shall be deemed to be valid as if such portion had not been included. If said Ordinance, or any provisions thereof, is held to be inapplicable to any person, group of persons, property, kind property, circumstances or set of circumstances, such holding shall not affect the circumstances or set of circumstances, such holding shall not affect the applicability thereof to any other persons, property or circumstances.

**Section 4                     Effective Date and Duration**

This Ordinance shall be effective upon its enactment by Town Council for the Town of Kiawah Island.

**PASSED, APPROVED, AND ADOPTED BY THE COUNCIL FOR THE TOWN OF KIAWAH ISLAND ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2019.**

\_\_\_\_\_  
Craig Weaver, Mayor

\_\_\_\_\_  
Petra S. Reynolds, Town Clerk

\_\_\_/\_\_\_/2019 1<sup>st</sup> Reading

\_\_\_/\_\_\_/2019 2<sup>nd</sup> Reading



Tab | 6

**TOWN COUNCIL**

**Agenda Item**





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Charleston Area Regional Transportation Authority

July 26, 2019

Mayor Craig Weaver  
Town of Kiawah Island  
4475 Betsy Kerrison Parkway  
Kiawah Island, SC 29455

RE: CARTA Budget Approval Request

Dear Mayor Weaver:

In accordance with state law, the CARTA Board of Directors is submitting the attached proposed budget for the fiscal year October 1, 2019 – September 30, 2020 for your review and approval. In addition to the budget, I have enclosed a copy of a memorandum which was provided to the CARTA Board of Directors prior to their approval of the proposed budget. Hopefully, it will serve to address any questions you or members of your council may have regarding increases and decreases in the individual budget line items. In addition, staff is available to attend your committee and/or council meeting if you would like for us to be present to address any questions or provide any additional information which may be needed.

Finally, for you and your council's information we have enclosed a brief summary of CARTA's accomplishments over the last couple of years. We appreciate your continued support of CARTA and are ready to provide any assistance needed to facilitate this process.

Respectfully Submitted,

Ronald E. Mitchum  
Executive Director

Cc: City/ County Administrator  
CARTA Board members



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## Charleston Area Regional Transportation Authority

CARTA has recently made, and continues to make, a wide array of advancements in regional public transportation, including operating debt-free. Please see below of an overview of ongoing progress.

### TECH

- Developed a new real-time **Transit App** that provides customers with the ability to track buses and estimated arrival times.
- Developed a new mobile-friendly **CARTA website** ([www.RideCARTA.com](http://www.RideCARTA.com)) to make the online experience more intuitive for our users.
- Updated **customer service operations center** with new software and phone hardware to eliminate missed calls and reduce customer wait times.
- Installation of **61 solar-powered shelters** and **45 benches** underway.

### PLANNING

- **Long Range Transportation Plan:** A federally mandated 25-year look ahead to prioritize transportation projects. It's the key document for federal infrastructure funding in the region. An update [is complete and available at BCDCOG.com](http://bcdcog.com).
- **Regional Transit Framework Plan:** Together with the overall long-range plan, this framework sets the foundation for transit investment as part of a multi-modal transportation system. The study examined how we travel across the region and where development patterns are favorable to high-capacity transit services. The report is available at [bcdcog.com/framework](http://bcdcog.com/framework).
- **BCDCOG Regional Park-and-Ride Study:** This study, produce a comprehensive plan identifying dozens of suitable sites for permanent satellite parking locations in the region. These sites will not only be serviced by CARTA commuter buses but will also be available to carpooling commuters who wish to share a ride to locations not served by CARTA.

### SERVICE

- **Increased on-time performance** from less than 80% to an average of 90% despite an aging fleet, increasing congestion and numerous weather and other events (Wando bridge closure, for instance) that impact our ability to maintain a schedule.
- Launched the **Hospitality on Peninsula** service and park and ride facility.



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## Charleston Area Regional Transportation Authority

### FACILITIES

- Opened the new **Rivers Avenue Park-and-Ride** facility featuring 289 parking spaces with amenities including shelters, bathroom facilities, fencing, bike racks and 24/7 camera surveillance.
- **Completed improvements to the Superstop hub**, including exterior/interior painting, upgrading of restroom facilities and increased lighting.
  - Installed a new bus wash system and lights
- The **North Charleston Transit Center** is now opened and servicing Amtrak and Southeastern Stages. The CARTA route is scheduled to start serving that facility in the next few months.

### FLEET REPLACEMENT & UPGRADES

- Purchased new buses to replace the aging fleet, including:
- 2 30-foot DASH Shuttles
- 23 40-foot Express Buses
- 30-foot Airport Express Shuttle
- 2 Low-Floor Buses
- Maintenance road call truck.

### COMMUNITY OUTREACH

- Launched a **Free Students Fare** pilot program.
- Expanded **Senior Fares** and seniors can now ride the system during operating hours for the senior fare of \$1.00.
- **Eliminated transfer fees.**
- Implemented a **new pass structure** to ease financial commitment for riders.
- Launched a **video series** focused on CARTA and the ease of using the system.

### ADDITIONAL EFFORTS UNDERWAY

In partnership with the BCDCOG/CHATS, CARTA has several important studies and initiatives underway. While some bemoan expenditures for studies and plan development, a lack of adequate planning is clearly responsible for many of CARTA's past problems. Some of our current efforts include:

- **Lowcountry Rapid Transit:** The forthcoming Bus Rapid Transit line will be the region's first true mass transit project, connecting Summerville, North Charleston and Charleston. A consultant has been selected to lead initial engineering and



environmental review, and a contract should be finalized later this summer. More information is available at [lowcountryrapidtransit.com](http://lowcountryrapidtransit.com).

- **CHATS Safety Committee:** A newly formed group which will examine bicycle/pedestrian safety issues. As part of this initiative the committee will be looking at the location and safety of bus stops and shelters to ensure that we are not encouraging unsafe activities by our customers.
- **Bus Stop/Shelter Design Standards:** These guidelines are being developed to ensure a consistent design that can be provided to member governments and developers in order to promote the inclusion of transit amenities in new developments.
- **Automatic Vehicle Location (AVL) System:** The procurement and installation of AVLs will allow dispatchers to see the location of all active, in-service vehicles and how they are performing relative to their schedule. Dispatchers will be able to assist drivers in re-routing to avoid lane closures, blocked train tracks, flooding and other events that affect route/system performance. In addition, the system uses in-vehicle tablets using a color-coded system to help drivers easily see if they are ahead, behind or on schedule.



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Charleston Area Regional Transportation Authority

MEMORANDUM

TO: Board of Directors

FROM: Robin W. Mitchum, Deputy Director of Finance and Administration

SUBJECT: FY19/20 Proposed Budget

DATE: June 12, 2019

Please find attached the FY19/20 Proposed Budget for your consideration. It is necessary for us to proceed with the approval of the proposed budget now in order to give us time to submit to our member governments. Please remember that our fiscal year does not begin until October 1<sup>st</sup> and therefore the budget is based on preliminary and estimated revenues and expenditures and will be revised in the first quarter of the year.

**Revenues**

A detailed explanation of line item changes includes:

- Federal revenue includes estimated 5307 Urban funds, 5310 Enhanced Mobility for Seniors & individuals with disabilities, and 5339 funds to purchase buses. CARTA receives funds as a direct recipient from FTA and Pass Through funds from the BCDCOG. These funds are based on a federal formula and therefore, are subject to change each fiscal year.
- State Mass Transit Funds are operating funds and capital funds to match federal funds for the purchase of buses and charging stations. These funds are also formula based and are subject to change each fiscal year.

**Expenditures**

A detailed explanation of anticipated changes is as follows:

- Staff salaries and benefits increase reflects the increase in employer contributions for retirement and insurance benefits as they relate to wages.
- Marketing is decreased by the Community Pride project from the prior fiscal year. This was a discretionary grant that was received in the previous fiscal year.
- Automotive is decreased by the City of Charleston Parking lot fees.
- Postage is decreased to align the budget with average expenditures.
- Equipment rental is decreased by the removal of the HOP Lot portable toilet.

- Office Equipment Maintenance includes IT services (managed server services, email hosting, website management, and other general IT services), Camera system maintenance, and AVL software maintenance. The annual software maintenance cost was discounted for the first year and will increase this fiscal year.
- Rent is decreased to align the budget with average expenditures for document storage fees. The agency's record retention policy requires that we maintain records on various schedules.
- Communications is decreased by the removal of the HOP Lot internet service which provided connectivity to the lot's security cameras. Additionally, the slight increase is for Charleston County's monthly digital radio frequency cost which is a per radio fee.
- Utilities are decreased due to the removal of the electricity required at the HOP Lot. However, it does include a slight increase for increased electricity charges associated with the new bus charging stations that will be coming on line in the latter half of the fiscal year.
- Advertising is decreased. The majority of marketing services are provided by BCDCOG staff and Rawle Murdy and the cost is passed on from the BCDCOG to CARTA under the intergovernmental agreement.
- Professional services are decreased by the removal of the HOP Lot Security Guard.
- Contract Services – This line decreased by the conclusion of the Melnick Property Engineering project, Shelter/Bench Engineering project, and the HOP Lot Low Line Engineering.
- Vehicle Maintenance is decreased to align the budget with average and anticipated expenditures.
- Insurance is increased based on the Insurance Reserve Fund's projected increases across their services provided. Additional insurance will be required with the addition of the new buses.
- Fuel cost has been increased to align with average expenditures.
- Fixed Route contract operating costs have been increased based on estimated services provided by Transdev. The contracted hourly rate increases 3% on July 1.
- Paratransit contract operating costs has been increased based on estimated services provided by Transdev. The contracted hourly rate increases 3% July 1.
- Interest is the interest accrued on the Melnick park and ride loan for the acquisition of the property.
- Rolling Stock is being reduced to the amount of rolling stock CARTA anticipates receiving in this fiscal year.
- Bus Facilities/Charging stations is for the purchase of charging stations for the new electric buses.
- Security Cameras and Equipment are funds available to purchase security equipment at our facilities and on buses.
- Capital includes funds for Facility Maintenance, signage, and other capital assets related to the operation of the transit system.

We will continue to monitor the budget to insure revenues and expenditure remain aligned and we will make recommended revisions as necessary.

If you have any questions, please contact me at 843-529-2126 or [robinm@bcdcog.com](mailto:robinm@bcdcog.com).

**CARTA**  
**FY2020 Proposed Budget**

|                                      | <b>Budget</b><br><b>FY 2019</b> | <b><span style="color: red;">Proposed</span></b><br><b>Budget</b><br><b>FY 2020</b> | <b>Variance</b> |
|--------------------------------------|---------------------------------|---|-----------------|
| <b><u>Revenues</u></b>               |                                 |   |                 |
| Farebox                              | 2,240,483                       | 2,240,483   | 0               |
| Passes                               | 552,551                         | 552,551   | 0               |
| HOP Lot Parking Fees                 | 115,000                         | -   | (115,000)       |
| COC Shuttle                          | 457,600                         | 457,600   | 0               |
| MUSC                                 | 815,455                         | 815,455   | 0               |
| City of Charleston - DASH            | 553,280                         | 553,280   | 0               |
| City of North Charleston             | 1,104,246                       | -   | (1,104,246)     |
| Community Pride                      | 4,669                           | -   | (4,669)         |
| Federal                              | 20,625,582                      | 12,714,213  | (7,911,369)     |
| State Mass Transit Funds             | 1,664,354                       | 1,040,472   | (623,882)       |
| SCPRT                                | 1,605                           | -   | (1,605)         |
| Sales Tax - Charleston County        | 12,014,250                      | 12,439,250  | 425,000         |
| HOP Lot                              | 136,350                         | -   | (136,350)       |
| Capital Revenue                      | 2,000                           | -   | (2,000)         |
| Advertising                          | 800,000                         | 700,000   | (100,000)       |
| Interest                             | -                               | -   | 0               |
| Insurance Proceeds                   | 92,760                          | -   | (92,760)        |
| Sale of Asset                        | 50,000                          | 5,000   | (45,000)        |
| Miscellaneous                        | 600                             | -   | (600)           |
| TOTAL REVENUES                       | 41,230,785                      | 31,518,304  | (9,712,481)     |
| <b><u>Expenditures</u></b>           |                                 |   |                 |
| Staff Salaries & Benefits            | 158,322                         | 160,578   | 2,256           |
| Supplies                             | 15,200                          | 15,200  | 0               |
| Printing                             | 47,500                          | 47,500  | 0               |
| Marketing                            | 14,669                          | 10,000  | (4,669)         |
| Automotive                           | 2,570                           | 650   | (1,920)         |
| Accounting (Auditing)                | 28,800                          | 28,800  | 0               |
| Postage                              | 2,000                           | 1,200   | (800)           |
| Dues/Memberships                     | 500                             | 500   | 0               |
| Office Equipment Rental              | 1,410                           | 675   | (735)           |
| Office Equipment Maintenance         | 185,090                         | 211,156   | 26,066          |
| Rent                                 | 24,600                          | 22,900  | (1,700)         |
| Communications                       | 170,007                         | 170,381   | 374             |
| Utilities                            | 12,550                          | 12,650  | 100             |
| Advertising                          | 15,000                          | 5,000   | (10,000)        |
| Money Transport                      | 6,715                           | 7,500   | 785             |
| Professional Services                | 137,976                         | 30,465  | (107,511)       |
| Contract Services                    | 1,734,173                       | 2,037,021   | 302,848         |
| HOP Lot - Low Line Contract Services | 225,000                         | -   | (225,000)       |



**CARTA**  
**FY2020 Proposed Budget**

|   | <b>Budget<br/>FY 2019</b>                   | <b><span style="color: red;">Proposed</span><br/>Budget<br/>FY 2020</b> | <b>Variance</b>                             |
|---|---|---|---|
| Shelter/Bench Contract Services                               | 360,978                                     | 226,481   | (134,497)                                   |
| Melnick Property Contract Services                            | 173,318                                     | 55,259  | (118,059)                                   |
| Vehicle Maintenance   | 357,310                                     | 250,000   | (107,310)                                   |
| Operating Fees & Licenses                                     | 27,500                                      | 27,500  | 0   |
| Insurance   | 583,237                                     | 630,780   | 47,543                                      |
| Fuel  | 1,444,525                                   | 1,494,728   | 50,203                                      |
| Fixed Route   | 13,214,377                                  | 13,610,808  | 396,431                                     |
| Paratransit   | 2,740,179                                   | 2,822,384   | 82,205                                      |
| Miscellaneous   | 7,741                                       | 7,741   | 0   |
| Interest  | 67,724                                      | 64,080  | (3,644)                                     |
| Intermodal Infrastructure - Construction                      | 4,976,233                                   | -   | (4,976,233)                                 |
| Rolling Stock   | 10,518,364                                  | 7,839,674   | (2,678,690)                                 |
| Bus Facilities/Charging Stations                              | -   | 580,000   | 580,000                                     |
| Bus Shelter Construction/Bench Install                        | 1,016,410                                   | 400,504   | (615,906)                                   |
| Security Cameras/Equipment                                    | 397,235                                     | 452,102   | 54,867                                      |
| Intermodal FF&E   | 25,000                                      | -   | (25,000)                                    |
| Capital (IT, Facility Repairs/Maint)                          | 397,033                                     | 294,087   | (102,946)                                   |
| Melnick PNR   | 2,141,539                                   | -   | (2,141,539)                                 |
| <b>TOTAL EXPENDITURES</b>                                     | <b>41,230,785</b>                           | <b>31,518,304</b>   | <b>(9,712,481)</b>                          |
| <br>Excess (Deficit) of Revenues Over<br>(Under) Expenditures | <br>-<br><u><u>                    </u></u> | <br>-<br><u><u>                    </u></u>                             | <br>-<br><u><u>                    </u></u> |

## CARTA

## Proposed Budget FY19/20 Detail

|   | Administration | Operating         | Capital          | TOTAL             |
|---|----------------|-------------------|------------------|-------------------|
| <b>EXPENDITURES:</b>                        |                |                   |                  |                   |
| Salaries & Benefits                         | 69,049         | 91,529            | -                | 160,578           |
| Total Direct Personnel                      | 69,049         | 91,529            | -                | 160,578           |
| Supplies                                    | 6,900          | 8,300             | -                | 15,200            |
| Printing                                    | -              | 47,500            | -                | 47,500            |
| Marketing                                   | 10,000         | -                 | -                | 10,000            |
| Automotive                                  | 650            | -                 | -                | 650               |
| Accounting (Auditing)                       | 28,800         | -                 | -                | 28,800            |
| Postage                                     | 1,200          | -                 | -                | 1,200             |
| Dues/Memberships                            | 500            | -                 | -                | 500               |
| Equipment Rental                            | 675            | -                 | -                | 675               |
| Office Equipment Maintenance                | 50,000         | 161,156           | -                | 211,156           |
| Rent  | 8,500          | 14,400            | -                | 22,900            |
| Communications                              | 13,164         | 157,217           | -                | 170,381           |
| Utilities                                   | -              | 12,650            | -                | 12,650            |
| Advertising                                 | 5,000          | -                 | -                | 5,000             |
| Money Transport                             | -              | 7,500             | -                | 7,500             |
| Professional Services                       | 30,465         | -                 | -                | 30,465            |
| Contract Services                           | -              | 2,037,021         | -                | 2,037,021         |
| HOP Lot - Low Line Contract Services        | -              | -                 | -                | -                 |
| Shelter/Bench Engineering Contract Services | -              | 226,481           | -                | 226,481           |
| Melnick Property Contract Services          | -              | 55,259            | -                | 55,259            |
| Vehicle Maintenance                         | -              | 250,000           | -                | 250,000           |
| Operating Fees & Licenses                   | -              | 27,500            | -                | 27,500            |
| Insurance                                   | 12,750         | 618,030           | -                | 630,780           |
| Fuel  | -              | 1,494,728         | -                | 1,494,728         |
| Fixed Route                                 | -              | 13,610,808        | -                | 13,610,808        |
| Paratransit                                 | -              | 2,822,384         | -                | 2,822,384         |
| Miscellaneous                               | 7,741          | -                 | -                | 7,741             |
| Interest                                    | 64,080         | -                 | -                | 64,080            |
| Rolling Stock                               | -              | -                 | 7,839,674        | 7,839,674         |
| Bus Facilities/Charging Stations            | -              | -                 | 580,000          | 580,000           |
| Bus Shelter Construction/Bench Install      | -              | -                 | 400,504          | 400,504           |
| Security Equipment                          | -              | -                 | 452,102          | 452,102           |
| Capital (IT, Facility Repairs/Maint)        | -              | -                 | 294,087          | 294,087           |
| <b>TOTAL EXPENDITURES</b>                   | <b>309,474</b> | <b>21,642,463</b> | <b>9,566,367</b> | <b>31,518,304</b> |

## CARTA

## Proposed Budget FY19/20 Detail

|   | Administration | Operating         | Capital          | TOTAL             |
|---|----------------|-------------------|------------------|-------------------|
| <b>REVENUE</b>                              |                |                   |                  |                   |
| Farebox                                     | -              | 2,240,483         | -                | 2,240,483         |
| Passes                                      | -              | 552,551           | -                | 552,551           |
| COC Shuttle                                 | -              | 457,600           | -                | 457,600           |
| MUSC  | -              | 815,455           | -                | 815,455           |
| City of Charleston - DASH                   | -              | 553,280           | -                | 553,280           |
| Federal - 5307                              | -              | 5,632,341         | 3,675,620        | 9,307,961         |
| Federal - 5339                              | -              | -                 | 1,373,444        | 1,373,444         |
| Federal Passed through COG                  | -              | -                 | 2,032,808        | 2,032,808         |
| SCDOT - OPT                                 | -              | 462,222           | 578,250          | 1,040,472         |
| Sales Tax - Charleston County               | 309,474        | 10,228,531        | 1,901,245        | 12,439,250        |
| HOP Lot - Local                             | -              | -                 | -                | -                 |
| Capital Revenue                             | -              | -                 | -                | -                 |
| Advertising                                 | -              | 700,000           | -                | 700,000           |
| Interest                                    | -              | -                 | -                | -                 |
| Insurance Proceeds                          | -              | -                 | -                | -                 |
| Sale of Asset                               | -              | -                 | 5,000            | 5,000             |
| Miscellaneous                               | -              | -                 | -                | -                 |
| <b>TOTAL REVENUES</b>                       | <b>309,474</b> | <b>21,642,463</b> | <b>9,566,367</b> | <b>31,518,304</b> |
| <b>EXCESS OF REVENUES OVER EXPENDITURES</b> | -              | -                 | -                | -                 |

**CARTA**  
**DETAILED BUDGETED EXPENDITURES**  
**FY 2019/2020**

|                        |                                  | <b>Budget<br/>FY 2019</b> | <b>Proposed<br/>Budget<br/>FY 2020</b> | <b>Increase<br/>(Decrease)</b> |
|------------------------|----------------------------------|---------------------------|--|--------------------------------|
| SALARIES &<br>BENEFITS | Salaries                         | 112,919                   | 112,919                                | -                              |
|                        | Retirement                       | 16,731                    | 17,853                                 | 1,122                          |
|                        | FICA                             | 8,638                     | 8,638                                  | -                              |
|                        | SUTA                             | 774                       | 774                                    | -                              |
|                        | Workers Comp                     | 365                       | 365                                    | -                              |
|                        | Insurance                        | 13,948                    | 14,716                                 | 768                            |
|                        | Retiree Insurance                | 4,947                     | 5,313                                  | 366                            |
|                        |                                  | <u>158,322</u>            | <u>160,578</u>                         | <u>2,256</u>                   |
| SUPPLIES               | Admin/Operations                 | 15,000                    | 15,000                                 | -                              |
|                        | Supplies - HOP LOT               | 200                       | 200                                    | -                              |
|                        | Total                            | <u>15,200</u>             | <u>15,200</u>                          | <u>-</u>                       |
| PRINTING               | Printing                         | 45,000                    | 45,000                                 | -                              |
|                        | Printing - HOP LOT               | 2,500                     | 2,500                                  | -                              |
|                        | Total                            | <u>47,500</u>             | <u>47,500</u>                          | <u>-</u>                       |
| MARKETING              | Promotional                      | 10,000                    | 10,000                                 | -                              |
|                        | Contractual                      | 4,669                     | -                                      | (4,669)                        |
|                        | Total                            | <u>14,669</u>             | <u>10,000</u>                          | <u>(4,669)</u>                 |
| AUTOMOTIVE             | Parking/Mileage/Service          | 2,570                     | 650                                    | (1,920)                        |
|                        | Total                            | <u>2,570</u>              | <u>650</u>                             | <u>(1,920)</u>                 |
| ACCOUNTING             | Contractual                      | -                         | -                                      | -                              |
|                        | Audit                            | 28,800                    | 28,800                                 | -                              |
|                        | Total                            | <u>28,800</u>             | <u>28,800</u>                          | <u>-</u>                       |
| POSTAGE                | John Street                      | 2,000                     | 1,200                                  | (800)                          |
|                        | Total                            | <u>2,000</u>              | <u>1,200</u>                           | <u>(800)</u>                   |
| DUES &<br>MEMBERSHIPS  | Metro Chamber                    | 500                       | 500                                    | -                              |
|                        | Total                            | <u>500</u>                | <u>500</u>                             | <u>-</u>                       |
| EQUIPMENT<br>RENTAL    | Portable Toilet Rental - HOP LOT | 735                       | -                                      | (735)                          |
|                        | Miscellaneous Equipment          | 675                       | 675                                    | -                              |
|                        | Total                            | <u>1,410</u>              | <u>675</u>                             | <u>(735)</u>                   |
| OFFICE<br>EQUIPMENT    | IT                               | 50,000                    | 50,000                                 | -                              |
|                        | Money Counting Equipment         | 2,000                     | 2,000                                  | -                              |



**CARTA**  
**DETAILED BUDGETED EXPENDITURES**  
**FY 2019/2020**

|                          |                                 | <b>Budget<br/>FY 2019</b> | <b>Proposed<br/>Budget<br/>FY 2020</b> | <b>Increase<br/>(Decrease)</b> |
|--------------------------|---------------------------------|---------------------------|--|--------------------------------|
| MAINTENANCE              | Super Stop Cameras              | 2,371                     | 2,296                                  | (75)                           |
|                          | AVL Cloud Manager               | 15,519                    | 19,160                                 | 3,641                          |
|                          | AVL                             | 115,200                   | 137,700                                | 22,500                         |
|                          |                                 | <u>185,090</u>            | <u>211,156</u>                         | <u>26,066</u>                  |
| RENT                     | Land                            | 6,000                     | 6,000                                  | -                              |
|                          | Park & Ride                     | 8,400                     | 8,400                                  | -                              |
|                          | Document Storage                | 4,200                     | 2,500                                  | (1,700)                        |
|                          | SC Works Charleston Center      | 6,000                     | 6,000                                  | -                              |
|                          |                                 | <u>24,600</u>             | <u>22,900</u>                          | <u>(1,700)</u>                 |
| COMMUNICATIONS           | Telephone/Internet              | 13,164                    | 13,164                                 | -                              |
|                          | Internet - HOP LOT              | 1,634                     | -                                      | (1,634)                        |
|                          | Tablets - Buses                 | 80,609                    | 80,609                                 | -                              |
|                          | Radios                          | 74,600                    | 76,608                                 | 2,008                          |
|                          | Total                           | <u>170,007</u>            | <u>170,381</u>                         | <u>374</u>                     |
| UTILITIES                | Electricity                     | 7,250                     | 9,350                                  | 2,100                          |
|                          | Electricity - HOP LOT           | 2,000                     | -                                      | (2,000)                        |
|                          | Water                           | 3,300                     | 3,300                                  | -                              |
|                          |                                 | <u>12,550</u>             | <u>12,650</u>                          | <u>100</u>                     |
| ADVERTISING              | ALL                             | 15,000                    | 5,000                                  | (10,000)                       |
|                          |                                 | <u>15,000</u>             | <u>5,000</u>                           | <u>(10,000)</u>                |
| MONEY COUNTING           |                                 | 6,715                     | 7,500                                  | 785                            |
|                          |                                 | <u>6,715</u>              | <u>7,500</u>                           | <u>785</u>                     |
| PROFESSIONAL<br>SERVICES | Legal                           | 12,239                    | 7,500                                  | (4,739)                        |
|                          | Other                           | 11,400                    | 20,650                                 | 9,250                          |
|                          | Security Guard - HOP LOT        | 112,132                   | -                                      | (112,132)                      |
|                          | Payroll                         | 2,205                     | 2,315                                  | 110                            |
|                          |                                 | <u>137,976</u>            | <u>30,465</u>                          | <u>(107,511)</u>               |
| CONTRACT<br>SERVICES     | Management Services             | 75,000                    | 75,000                                 | -                              |
|                          | Shared Services (IGA)           | 1,659,173                 | 1,962,021                              | 302,848                        |
|                          | HOP Lot - Low Line (IGA)        | 225,000                   | -                                      | (225,000)                      |
|                          | Shelter/Bench Engineering (IGA) | 360,978                   | 226,481                                | (134,497)                      |
|                          | Melnick Property (IGA) Eng      | 173,318                   | 55,259                                 | (118,059)                      |
|                          |                                 | <u>2,493,469</u>          | <u>2,318,761</u>                       | <u>(174,708)</u>               |
| VEHICLE MAINTENANCE      |                                 | 357,310                   | 250,000                                | (107,310)                      |
|                          |                                 | <u>357,310</u>            | <u>250,000</u>                         | <u>(107,310)</u>               |

**CARTA**  
**DETAILED BUDGETED EXPENDITURES**  
**FY 2019/2020**

|                              |                                    | <b>Budget<br/>FY 2019</b> | <b>Proposed<br/>Budget<br/>FY 2020</b> | <b>Increase<br/>(Decrease)</b> |
|------------------------------|------------------------------------|---------------------------|--|--------------------------------|
| OPERATING FEES<br>& LICENSES |                                    | 27,500                    | 27,500                                 | -                              |
|                              |                                    | <u>27,500</u>             | <u>27,500</u>                          | <u>-</u>                       |
| INSURANCE                    | Administration                     | 11,000                    | 12,750                                 | 1,750                          |
|                              | Operating                          | 572,237                   | 618,030                                | 45,793                         |
|                              |                                    | <u>583,237</u>            | <u>630,780</u>                         | <u>47,543</u>                  |
| FUEL                         | Fuel                               | 1,373,934                 | 1,434,844                              | 60,910                         |
|                              | Fuel - HOP LOT                     | 70,591                    | 59,884                                 | (10,707)                       |
|                              |                                    | <u>1,444,525</u>          | <u>1,494,728</u>                       | <u>50,203</u>                  |
| FIXED ROUTE                  | TRANSDEV                           | 12,281,195                | 12,649,631                             | 368,436                        |
|                              | TRANSDEV - HOP LOT                 | 933,182                   | 961,177                                | 27,995                         |
|                              |                                    | <u>13,214,377</u>         | <u>13,610,808</u>                      | <u>396,431</u>                 |
| PARATRANSIT                  | TRANSDEV                           | 2,740,179                 | 2,822,384                              | 82,205                         |
|                              |                                    | <u>2,740,179</u>          | <u>2,822,384</u>                       | <u>82,205</u>                  |
| MISCELLANEOUS                | MISC                               | 7,500                     | 7,500                                  | -                              |
|                              | MISC - HOP LOT                     | 241                       | 241                                    | -                              |
|                              |                                    | <u>7,741</u>              | <u>7,741</u>                           | <u>-</u>                       |
| INTEREST                     | BB&T - Melnick Property            | 67,724                    | 64,080                                 | (3,644)                        |
|                              |                                    | <u>67,724</u>             | <u>64,080</u>                          | <u>(3,644)</u>                 |
| CAPITAL                      |                                    |                           |  |                                |
|                              | Intermodal Facility                | 4,976,233                 | -                                      | (4,976,233)                    |
|                              | Rolling Stock/Fleet Repair         | 10,518,364                | 7,839,674                              | (2,678,690)                    |
|                              | Bus Facilities/Charging Stations   | -                         | 580,000                                | 580,000                        |
|                              | Bus Shelters/Benches               | 53,465                    | -                                      | (53,465)                       |
|                              | Security/Cameras                   | 397,235                   | 452,102                                | 54,867                         |
|                              | Signage                            | 70,015                    | 70,015                                 | -                              |
|                              | FF&E Intermodal                    | 25,000                    | -                                      | (25,000)                       |
|                              | Capital (IT, Facility Maintenance) | 327,018                   | 224,072                                | (102,946)                      |
|                              | Shelter Project - Wildwood         | 962,945                   | 400,504                                | (562,441)                      |
|                              | Melnick PNR Construction           | 2,141,539                 | -                                      | (2,141,539)                    |
|                              |                                    | <u>19,471,814</u>         | <u>9,566,367</u>                       | <u>(9,905,447)</u>             |