

ENVIRONMENTAL COMMITTEE MEETING
Kiawah Island Municipal Center
Council Chambers
October 10, 2019; 1:30 PM

Minutes

I. **Call to Order:** Mr. Jordan called the meeting to order at 1:30 pm.

II. **Roll Call:**

PRESENT: Jim Jordan, Chairman
Jim Chitwood
Lynne Sager
Jane Ellis
Pam Wilson
Jack Kotz
KINHC: Lee Bundrick
KICA: Matt Hill
ARB: Sara Senst
KIGR: Liz King

ABSENT: Jim Sullivan
David Pumphrey
Scott Nelson
TOKI: Aaron Given

Also Attending: Mayor Weaver

III. **Approval of Minutes:**

A. Environmental Committee Meeting Minutes of July 9, 2019

Approval of the Environmental Committee meeting minutes was deferred to the next meeting.

IV. **New Business**

A. Funding Proposal Discussion

a) **Lowcountry Marine Mammal Network**

Project Title: Atlantic Bottlenose dolphin strand feeding at Captain Sam's Inlet Education and Outreach.

Applicants: PI: Lauren Rust, Lowcountry Marine Mammal Network; Collaborator: Wayne McFee, National Ocean Service

Project Description: "Strand feeding" is a unique hunting behavior in which bottlenose dolphins (*Tursiops truncatus*) work together in small groups to herd fish towards the shore. They then use a powerful wave to push the fish onto the shore and then lunge onto the shore to grab the fish. Giving the dolphins their space while strand feeding is important to ensure they are not harassed, and this specialized hunting strategy is not disrupted. This project aims to increase awareness of the importance of maintaining a distance from strand feeding dolphins and how to responsibly view them without causing harassment during important foraging activities, thus, preserving this extremely unique viewing experience and allow for Kiawah Island to become leaders in this conservation effort. Identifying feeding hotspots will allow us to focus conservation efforts on those areas as well as understand the impacts on individual strand feeders if these habitats are lost or if the behavior is abandoned. Implementation of an educational program will involve monitoring on the beach during peak times for strand feeding to observe and record dolphin behavior and engage the public about maintaining a safe viewing distance. Educational materials will be available and provided to local residents and businesses both directly and at local events on Kiawah. The project team will

establish relationships with the Town of Kiawah to better understand the value of this behavior to the community while working together towards the conservation of a rare and unique behavior.

Mr. Jordan stated that the Lowcountry Marine Mammal Network project has been funded by the Environmental Committee for the past three years and asked if there were any questions on the project.

Committee members questioned Ms. Rust on her efforts to educate kayakers and communication with kayakers that are on the water. Ms. Rust stated the task was very challenging and typically the only communication is by gesturers or if the kayaker is beached the educator will intervene and provide information on the proper etiquette. Ideally, the kayakers have received the appropriate information before getting on the water. She noted there is a small sign in the inlet which could possibly be made more substantial.

Mr. Jordan indicated that he felt this was a great program and brought attention to some negative comments and concerns that were received from beachgoers over the past year. Following further discussion, the Committee agreed to recommend funding for the project.

b) OWLs program

Project: Outdoor Wildlife Lessons in Science (OWLS) Outreach Program

Requested By: St. John's High School and Kiawah Island Nature Program - Melissa Davis & Juliana Smith

Description of Proposed Project: Funding will be used to secure transportation for students, provide lunches during the field trips, and supply lab supplies to be used during the program, including, but are not limited to, notebooks, microcopy tools, lesson materials like seed samples, dyes, writing utensils, lab tools like droppers, scalpels, magnifying glasses, and identification guides. This project meets the third goal and its objectives of the Town of Kiawah Island's 2015 Comprehensive Plan.

Mr. Jordan stated that the Outdoor Wildlife Lessons in Science (OWLS) Outreach Program project had been funded by the Environmental Committee for the past three years.

With no questions, the Committee agreed to recommend funding for the project.

c) Kiawah Conservancy

Mr. Jordan stated that every year, during the budget process, the Town has a line item in which it establishes an amount from Accommodation Taxes to fund Conservancy projects which is separate from the Environmental project funding. He indicated that this year, there is \$70,000.00 in the line item for project funding. The following projects proposed by the Conservancy are focused on topics that the Town is very interested in.

Mr. Bundrick reviewed each of the submittals engaging in a detailed discussion of each:

Project: Groundwater Table Research and Monitoring (\$50,000)

Description of Proposed Project: The project proposed herein would be the first phase of a multi-phase project to monitor groundwater across Kiawah Island, with a focus on salinity level and water table height. The initial exploratory phase of the project would take place over a period of 2 years. This would provide baseline information about groundwater on Kiawah and assist in strategizing for a long-term monitoring program of the island's freshwater lens. Two methods would be considered concurrently for this project; 1) stratified sampling at 2-3 suitable sites with several stationary monitoring wells placed in close proximity and at different elevations (long-term monitoring to study groundwater dynamics) and 2) hand augering across the island in 10-25-acre section. Monitoring the freshwater lens over time can help us understand the dynamics of the groundwater with respect to fluctuations due to weather events and flooding. Hand augering would help create a map of the island's groundwater table. In summary, studying the groundwater will provide valuable information to prepare for vegetative die-back of major forest species, policies regarding the island's drainage infrastructure, promotion of salt-tolerant landscape plantings, and siting for

landscape low impact development practices (e.g., rain gardens, constructed wetlands, permeable walking surfaces).

Project: Marsh Vulnerability Study (\$19,000)

Description of Proposed Project: This project would rely on a graduate assistant (preferably a master's degree candidate) to conduct research on the marshlands along the Kiawah River watershed. Mapping software would be used to study historical and current LiDAR imagery gathered by the drone to study shoreline changes and marsh extent, as well as map any human influences on the marshland (e.g., drainage outfalls, bulkheads, docks, bridges). Data from the Coastal Resilience Evaluation and Siting Tool (CREST), compiled by the National Fish and Wildlife Foundation (NFWF), will be used in conjunction with the collected and publicly available data for this project. These data combined will provide information to identify vulnerable areas in the marsh which impact humans and wildlife and to prioritize restoration projects. Dr. Norm Levine, Director of the Santee Cooper GIS Laboratory and Lowcountry Hazards Center at the College of Charleston, has agreed to provide resources and equipment for the project, including recruitment of a graduate student to conduct the research.

Project: Native Plant Symposium (\$18,000)

Description of Proposed Project: Landscaping with dense native vegetation enhances the available habitat for wildlife on Kiawah Island. Whenever a higher percentage of native plants is incorporated into these landscapes, the benefits to the island's biodiverse wildlife are maximized and will help sustain their populations. By promoting the use of native plants and educating the public on the suite of benefits these plants provide, residents and island entities would be more amenable to the use of native plants in their landscaping. Dr. Doug Tallamy, Professor of Entomology from the University of Delaware and author of several books describing the benefits of native plants, recently gave a presentation to a Kiawah Island audience that received positive feedback from the community.

Committee expressed their pleasure that the projects dealt with some of the critical issues of the Sea Level Rise Report and conveyed their support for all the projects. Mr. Jordan pointed out that the \$87,000.00 requested exceeded the available funding amount. He indicated that the Town would not fund the projects until the Conservancy has encumbered the expense. There is a good chance that all three projects could be funded. Committee members agreed but indicated that the funding of the *Groundwater Table Research and Monitoring* and the *Marsh Vulnerability Study* would have priority before funding the *Native Plant Symposium*.

V. Old Business

A. Kiawah Landscaping Workgroup (Grow Native)

- Kiawah Parkway Landscaping RFP
 - Interviewed three outdoor landscaping firms
 - Selected Outdoor Spatial Design
 - Conceptual plans to be available in November

B. Shorebird Stewardship Program

- No update

C. Flood Mitigation and Sea Level Rise

- Town Council approved changes to Comprehensive Plan
- Tide/Weather Monitoring Stations under consideration (two stations)
 - Equipment pricing underway

Discussion included the updating of the Sea Level Rise Report and archiving of pertinent reports for future updates.

D. Plastics Workgroup

- Plastics Ordinance now in effect
- One issue with non-compliance which was resolved
- Signage at boardwalks going up tomorrow

- E. Kiawah Nest Box Program
 - No update
- F. Grow Native Interpretive Trail
 - The trail was redone after the storm with Gyro Trac
 - Mulch to be delivered soon
 - Benches and plantings to go in this fall

VI. **Reports:**

A. Town of Kiawah Island

 Alligator Research

- Collaborative research project with Clemson/Nemours
 - Flight distance surveys are still ongoing
 - Two GPS tags still transmitting

 Bobcat GPS Study

- Three males and Three females fitted with GPS collars
- No collars currently transmitting
- Three collars recovered and sent back to Lotek for analysis
- Four of the six collared have died
- Adult female that died on August 2nd was killed by second-generation anticoagulant rodenticide poisoning

Anticoagulants Screen Analyte	Result in parts per billion (PPB)	Reporting limit (PPB)
Brodifacoum	570	50
Bromadiolone	1900	50
Chlorophacinone	Not detected	20
Coumachlor	Not detected	20
Difethialone	160	50
Diphacinone	550	50
Warfarin	Not detected	20
Difenacoum	Trace	50

Mr. Jordan explained that four of the anticoagulants in the chart above, were found in the bobcat’s liver at toxic levels. He expressed his concern that this bobcat picked-up five different types of rat poison, noting that each type of bait typically carries only one kind of poison.

Rodenticide	Secondary risk to birds	Secondary risk to mammals
Warfarin	low risk	low risk
Chlorophacinone	low risk	high risk
Diphacinone	moderate risk	high risk
Bromadiolone	moderate risk	high risk
Difethialone	high risk	high risk
Brodifacoum	high risk	high risk
Bromethalin	low risk (based on limited evidence)	low risk (based on limited evidence)
Cholecalciferol	low risk (based on limited evidence)	low risk (based on limited evidence)
Zinc phosphide	low risk	low risk
Strychnine ^{17,24}	possible (insufficient data)	possible (insufficient data)

Mr. Jordan explained the table above shows the most lethal poisons with secondary effects, and all the top four with the highest risk were found in the dead bobcat. The poisons were

ingested by the bobcat from other animals poisoned by bait boxes located throughout the island. The boxes are places by professional exterminators and some homeowners for rodent control.

Committee members engaged in an in-depth discussion of the poisons, secondary effects, alternatives for rodent control available, education of homeowners, and if the poisons should be restricted on the island. Also added to the discussion was the issue of the widespread inappropriate use of mosquito misters on the island.

Mr. Jordan briefly discussed deer management options to control the rising deer population. As a first step, he reviewed a survey that would be released to residents gauging how they feel about deer.

Mr. Given gave updates on the Smithsonian Geolocator Study, Nanotag Study and Fall Migration banding.

B. Kiawah Island Community Association Land & Lakes Management

Mr. Hill reported that draining the ponds and refilling them created some water quality issues resulting in some fish kills. With the storm coming through, clean-up is ongoing.

C. Kiawah Island Golf Resort

Ms. King reported that she was contacted by a resident of Inlet Cove who was inquiring about getting a “No Wake Zone” posted. She noted that the appeal was made to the Community Association years ago but was not resolved. She requested the Committee review the request since the boat traffic has increased in that area. Mr. Jordan stated that the state is the only one that can designate a “No Wake Zone”, so the request would have to be made to the state.

D. Kiawah Island Architectural Review Board

None

E. Kiawah Conservancy

Mr. Bundrick reported that the Conservancy closed on an additional property for preservation and also reported on additional projects and events. He stated that a letter was sent to Kiawah residents to raise money for turtle research when federal funding was cut and a total of \$39,000.00 was raised for the program.

F. Turtle Patrol

Ms. Sager reported that there were a total of 611 nests for the season, 576 nests on the main beach, and 35 nests on Sandy Point. She noted that there were no nests predated, but nests were lost to wash over mainly due to King Tides.

VII. Citizen Comments:

None

VIII. Chairman’s Comments:

None

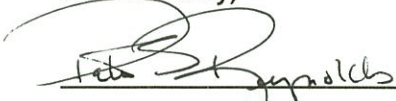
IX. Committee Member Comments:

Mr. Sullivan congratulated Mr. Hernandez on the publication of his very informative summary of Hurricane Dorian in the Kiawah Digest.

X. Adjournment:

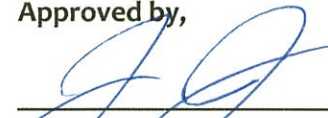
Mr. Chitwood made a motion to adjourn the meeting at 2:53 pm. The motion was seconded by Ms. Sager and was unanimously passed.

Submitted by,



Petra S. Reynolds, Town Clerk

Approved by,



Jim Jordan, Chairman

1-9-20
Date