

ENVIRONMENTAL COMMITTEE MEETING
Kiawah Island Municipal Center
Council Chambers
March 3, 2013; 3:00 PM

MINUTES

- I. **Call to Order:** *Mr. Labriola called the meeting to order at 3:00 pm.*
- II. **FOIA:** Notice of this meeting has been published, and posted in accordance with the Freedom of Information Act and the requirements of the Town of Kiawah Island.

III. **Roll Call:**

Present: John D. Labriola, Chairman
David Elliott
Jim Chitwood
William Stewart
Amanda Mole
Norm Shea, KICA
Dave Achey, KICA
Liz King, KIGR
Jack Kotz, KINHC
Justin Core, KINHC
Jim Jordan, TOKI
Aaron Given, TOKI

Absent: John Wright
Marilyn Olson
Leila Gable, KICA
Tumiko Rucker, TOKI Administrator

IV. **Approval of Minutes:**

- A. Environmental Committee Meeting Minutes of January 6, 2014

Mr. Chitwood made a motion to approve the minutes of the January 6, 2014 Environmental Committee meetings. The motion was seconded by Mr. Jordan and was unanimously approved.

V. **Old Business**

None

Mr. Labriola stated that in the past few months he received inquiries and points of interest requesting time on the Environmental Committee agenda. He stated that in preparation for the meeting, he requested that Mr. Jordan, Town Biologist, to prepare a white-paper on the coyote and bobcat trapping agenda items for Committee Members to get a better understanding of the Town's position on these issues .

Mr. Labriola stated that Mr. Jordan will report on the agenda items, followed by reports and then

the correspondence items will be discussed. He stated following the discussion “citizen’s comments” will be taken on any of the items. Mr. Labriola requested that in the interest of time, comments be limited to five minutes.

VI. New Business

A. Coyotes on Kiawah Island

Mr. Jordan discussed his presented “white-paper” report;

General Coyote Information

Coyotes are typically grayish or reddish-brown in color and have the general appearance of a small shepherd-type dog. They have slim muzzles, erect pointed ears, and a bushy tail. They stand 23-26 inches high at the shoulder and weigh between 25-40 pounds. Contrary to popular belief, coyotes do not typically form packs. They are usually solitary or can be found in pairs. A group of coyotes, larger than 2, is likely a family group in which the young have not yet dispersed. Coyotes are omnivorous and will eat a wide variety of prey items, including: muscadine grapes, acorns, persimmons, and rodents, rabbits, and deer fawns.

Coyotes Across the Country

Coyotes are found in every state in the United States except Hawaii. They are found in and around all of the major cities in the United States, including Washington D.C., New York City, Boston, and Chicago.

History of Coyotes on Kiawah Island

Coyotes first appeared on Kiawah Island in 2008 and numbers have slowly increased since that time. Coyotes are not native to the island and historically were found only west of the Mississippi River. Coyotes were first reported in the Upstate of South Carolina in 1978 and can now be found in all 46 South Carolina counties. Although some coyotes were brought to our state by fox hunters, most of our coyotes arrived here on their own as they expanded their range eastward. Historically, the native red wolf (now endangered) roamed the entire southeast, but habitat change and persecution eliminated red wolves from our state by the early 1900’s. This created a void for a medium-sized canine to exploit, and coyotes have done just that.

Coyotes Density and Distribution on Kiawah Island

Coyote population densities are very difficult to estimate. Studies have used illicit call response, scat surveys, camera surveys, and scent station surveys to attempt to estimate coyote abundance. The most reliable method available is scat surveys using fecal genotyping to noninvasively mark and recapture individual coyotes. This method is costly and based on the low numbers of coyote scats found during a preliminary survey in 2014 is not feasible on Kiawah Island. The best information we have on coyote distribution and abundance comes from resident sightings and trapping encounters as detailed below.

Resident Sightings - *Coyotes have been seen on all portions of Kiawah Island in the last 5 years. Resident and visitors are encouraged to report all sightings and encounters via email or phone to Town Biologists. Sightings are recorded in a spreadsheet and made available to the public in an online map on the wildlife website. Total coyote sightings by year are listed below and a map of sightings can be found on the next page.*

2010- 2; 2011- 2; 2012 – 27; 2013 – 22; 2014 – 2 during first 2 months of this year.

Trapping Encounters – *Beginning in 2013, we had coyotes attack a number of our bobcat cage traps and drag them off into the woods. During 2013, coyotes attacked 6.5% of our cages. During 2014, coyotes attacked only 0.5% of our cages.*

Coyote numbers on Kiawah Island appear to have stabilized or possibly even decreased in the last year.

Coyotes and People

Coyotes have a natural fear of people and rarely approach people unless they have been accustomed to being fed. People should never feed coyotes or leave pet food outdoors after dark. In addition, coyotes should never be allowed to feel “comfortable” around people. If a coyote is encountered, people should face the coyote and make noise and movements to scare the coyote away. People should never run away from a coyote.

Domestic Dogs bite 4.5 million people a year in the US. By comparison, coyotes attacked an average of seven people a year (between 1985 – 2006). Half of the attacks occurred in California where a 3-year-old was killed in 1981. Most of the attacks involved coyotes that had been fed by people. Domestic Dogs killed 129 people in the United States in the last 4 years alone. By comparison, coyotes have killed 1 person in the United States in recent history.

There have been no reports of coyotes attacking people on Kiawah Island.

Coyotes and Pets

On rare occasions, coyotes will prey on domestic pets. Pet predation is usually due to the territorial nature of the coyote or a lack of available prey. Keep unattended pets indoors after dark. In the unlikely event that you encounter a coyote while walking your dog, you should make plenty of noise and raise your arms to be sure the coyote is aware of your presence. As an added precaution, you should keep your leashed pet as close to you as possible or pick up your pet if it is small enough to easily do so. Cats should always be kept indoors and should never be allowed to roam free.

There have been no reports of coyotes attacking pets on Kiawah Island.

Coyotes and Deer

Coyotes do kill deer, especially fawns during the summer months. Predation rates vary greatly based on a variety of factors, including coyote density, deer density, and habitat. Kiawah’s current deer population is 54 deer per square mile. By comparison, densities across South Carolina typically range from 15-35 deer per square mile. We conduct biannual surveys to monitor deer density as well as fawn recruitment and survival. Surveys will be continued indefinitely to monitor changes in the island deer population.

We have seen no effect on deer numbers or fawn recruitment since the arrival of coyotes on Kiawah Island.

Coyotes and Loggerhead Turtles

Coyotes will depredate loggerhead sea turtle nests. Most depredations occur on the night the nest is laid, but coyotes will also depredate nests closer to hatching. An extensive literature search failed to find any scientific journal articles documenting the extent of coyote depredation on turtle nests. Of the 54 nesting

beaches in SC, 9 have reported coyote depredation in the last 6 years. The percentage of nests depredated by coyotes on

Coyote depredation of turtle nests on Kiawah Island is currently low. Turtle nest depredation by coyotes should be tracked closely in the future. The collection of additional information and details during depredation events will be very helpful in documenting any changes in this area.

Coyotes depredated a small portion of Loggerhead Turtle nests on Kiawah Island during 2012 (3.1%) and 2013 (6.7%). During 2012, the depredation rate was 6.6% if depredation events classified as other are included.

Control of Coyote Numbers

Coyote populations are extremely difficult to control. Coyotes in western states have been persecuted for over a hundred years using a variety of lethal techniques (poisoning, aerial gunning, trapping, and shooting) and populations have not only remained stable but have expanded. A study conducted by Dr. Mike Connor in South Georgia found that 15 years of intensive trapping had no effect on predator populations, including coyotes, on their study site.

Lethal control of coyotes can have negative consequences. Data from nearby communities (Sea Pines, Seabrook) indicate that coyote sightings and encounters are typically highest as coyotes first move into an area and attempt to establish and defend territories. Coyotes are extremely territorial and aggressively defend their territories against encroachment by other coyotes. Once territories are established, coyote numbers stabilize and encounters tend to decrease. Intensive lethal control of coyotes disrupts this social structure and can actually increase problems and encounters with coyotes as the new arrivals attempt to establish new territories.

Coyote Control Methods

➤ Trapping

This is the most effective technique for catching and killing coyotes in our area. Coyotes are very rarely caught with cage traps. Steel foothold traps and snares are the only efficient trapping methods available. These traps are non-selective and can capture a variety of animals, including domestic dogs, opossums, raccoons, bobcats, and foxes, as well as coyotes. Injuries using this technique are minimal with larger species but traps can cause significant injury to raccoons and opossums. We used foothold traps to capture bobcats on the island for our research project up until March 2009. We discontinued their use after catching a property owner's dog in one of these traps. The dog received minor injuries to his paw that required a visit a veterinarian.

➤ Shooting

Coyotes can be killed at night using specialized firearms and equipment. Shooting is not a practical solution for killing large numbers of coyotes but can be effective when targeting a problem animal in a specific area. The specialized equipment needed includes a suppressed high-powered rifle (\$3,000) and a night vision or infrared scope (\$4,000-\$10,000).

➤ Toxicants or Poisons

There are no registered toxicants or poisons that can be used to kill coyotes. Any attempt to poison a coyote with any substance is a violation of State and Federal law.

Extreme caution must be exercised when trapping or shooting within a developed community. These activities would also require written authorization from landowners to perform this work on their properties.

Coyote Management on Kiawah Island

There has been no active management or lethal control of coyote populations on Kiawah Island to date. Town Biologists are currently focusing their efforts in the 3 areas listed below.

➤ **Monitoring**

- 1. Monitor abundance and distribution on the island using sightings from residents and visitors*
- 2. Monitor and document any and all human/coyote conflicts that may arise.*
- 3. Monitor and document any and all pet/coyote conflicts that may arise.*
- 4. Monitor and document any and all coyotes that appear to have lost their fear of humans as well as any direct or indirect feeding of coyotes.*
- 5. Monitor negative impacts to other wildlife species (bobcats, sea turtles, nesting shorebirds, etc.)*

➤ **Public Education**

Town Biologists have begun a public education campaign to educate residents and visitors regarding coyotes. This has included public meetings, website information, and news articles. This program is ongoing and will be expanding into new areas of communication as necessary.

➤ **Research**

Town Biologists are currently monitoring habitat use and behavior of coyotes using GPS collars. This research provides detailed data on the type of habitat coyotes are using, movement patterns, food sources, territory size, reproduction, and much more. This data is vital to documenting the effects coyotes are having in our area. One male coyote was collared during 2013 and he spent the majority of his time in undeveloped areas on the eastern end of the island. Biologists plan to collar 2 more coyotes this winter.

Mr. Elliott expressed his concern that the Town need to know what to do, before it is done. He noted that this had been the driving force behind his 18 years of membership on the Environmental Committee and is work with the Kiawah Island Conservancy. Mr. Elliott stated that he felt decisions needed to be made on scientific judgment and knowledge rather than an immediate reaction. He stated that the program that Mr. Jordan outlines was the way to go.

Mr. Labriola discussed with Mr. Jordan the methods he has used in the trapping of coyotes; the use of trappers and the success rate of using either method as in the elimination of a coyote population. Mr. Chitwood added that in following the newspaper articles over the years, he has come to the conclusion that no one has found a feasible way to tackle the problem.

B. Bobcat Trapping Bait

Bobcat Trapping Protocol

Bobcats are captured using Tomahawk live traps fitted with a custom enclosed compartment on the back containing a live bantam rooster. There is a water dish mounted to the inside of the rooster compartment. We place palm fronds or other vegetation over the rooster compartment to shield the rooster from the elements. We visit the traps each morning, refill the water cup, and give the rooster about ¼ pound of feed. Feed is placed on the ground inside the rooster compartment. Chickens are accustomed to eating food off the ground, it is how they forage.

We have never had a rooster die in a trap due to stress or lack of food and water. After we complete trapping, roosters are given to a local family that keeps them as pets.

Beginning in 2014, we began experimenting with a new cage trap system and methodology for trapping bobcats. Visual attractants and scents are used in the place of roosters to attract bobcats into the trap. We caught several bobcats during 2014 using this technique, though the use of roosters remained a more effective technique.

Permits and Approval of Activities

All trapping activities and protocols are authorized by the South Carolina Department of Natural Resources under Scientific Collection Permit G-14-01. State Law requires that traps are checked once per day. Our trapping protocol was approved by the University of Georgia's (UGA) Animal Care and Use Committee in 2000 and 2004. The protocol remains the same even though we are no longer required to obtain approval from UGA since our research is no longer affiliated with the university.

Bantam Chicken Physiology

Bantam chickens (like all birds) have a variety of physiological adaptations that allow them to live and survive outdoors. Their physiology is not changed if they are raised in captivity or living in the wild. Chickens are direct descendants of Red Jungle fowl, native to southern Asia.

- *Uropygial gland (oil gland) - This gland is located at the base of the tail and birds spread oil from the gland to their feathers during preening. This gland serves several functions including water-proofing, dirt-proofing, and maintaining the overall integrity of the feather.*
- *Feathers - Feathers provide insulation/protection from cold and water.*
- *Digestion - Chickens ingest a variety of non-food items when they forage. This includes dirt, small pebbles, bits of leaves, etc. These items contain bacteria that aid in digestion in the stomach. In addition, small pieces of pebbles (grit) remain in the bird's gizzard allowing it to grind up food particles prior to digestion.*

Mr. Labriola discussed for clarification that he used a standard method of trapping that was commonly used and the work that was done with the University of Georgia.

C. Terrapin Bycatch Reduction Devices

Mr. Jordan explained that for several years the Town had worked with Mrs. Blizzard in her efforts with the endangered Diamondback Terrapin. He noted that April 22nd, Earth Day, has been designated by Town Proclamation as Diamondback Terrapin Day. Mr. Jordan stated Mrs. Blizzard again requested a table is set up outside Town Hall where individuals can pick up educational information on the Terrapin and a Bycatch Reduction Device (BRD) kit or bring their crap traps to

have a BRD installed free of charge.

Mr. Jordan stated that Mrs. Blizzard had arranged donation of the BRDs and requested that the Environmental Committee fund the shipment from Florida as it had done in previous years.

Mr. Jordan stated that Mrs. Blizzard is working to put up signage that would require the use of BRDs on Crab Traps used in the Kiawah Rivers off community docks on the Island. He stated that she has worked with Inlet Cove and is now working to accomplish the same task on the other community dock provided that the Community Association will allow it. Mr. Jordan noted that owners of private docks are allowed to make requirements/restrictions on their docks.

Mr. Jordan encouraged the public to report incidental terrapin sightings to the Town.

VII. Reports:

A. Town of Kiawah Island Wildlife Department – Jim Jordan/Aaron Given

2013 Predator GPS Project

- Bobcat 450 died around February 15 near the end of Sparrow Road. Bobcat 350 appears to have been feeding on the carcass and is now occupying Bobcat 450's old home range. Last year, their territories did not overlap.
- Trapping for 2014 was conducted February 3 - February 28
 - 5 collars deployed (3 adult females, 1 adult male, 1 juvenile male)
 - Bobcat 350 – Adult Female – Town Hall (2012 – Bobcat 800, 2013 – Bobcat 700)
 - Bobcat 600 – Juvenile Male – Captain Sam's Spit (offspring of 2013 Bobcat 450)
 - Bobcat 250 – Adult Female – The Preserve (2012 – Bobcat 200)
 - Bobcat 800 – Adult Male – The Preserve (2004 – VHF collar as a juvenile, 2008 – Bobcat 360, 2009 – Bobcat 110)
 - Bobcat 400 – Adult Female – Beach Club (2011 – Bobcat 800, 2012 - Bobcat 250)
- Additional trapping to attempt to catch 1 more bobcat and 2 coyotes will occur in March

Aerial Photography

- Was flown by Kucera International February 14, 2014
- Replication of 2010 photography
- Photography should be available by April

East End Beach Erosion

- Significant erosion has occurred in the last 2 months adjacent to the Ocean Course Driving Range
- Will be meeting with SCDNR, USFWS, DHEC-OCRM, and CSE on March 26 to discuss erosion issue and possible solutions

Deer Spotlight Surveys

- Conducted January 26 and 28, 2014
- Density was 56 deer/square mile
- Deer numbers remain stable
 - January 2011 – 57
 - January 2012 – 53
 - January 2013 - 54

Sea Island Christmas Bird Count

- January 3, 2014
- 51 participants covered a 15 mile diameter circle including Kiawah, Seabrook, Wadmalaw, and John's Island
- 24,067 individuals (last year = 22,652)
- 154 species (last year = 146)
- Highlights included: Long-tailed Duck, American White Pelican, Wilson's Plover, American Woodcock, Peregrine Falcon, American Pipit, Vesper Sparrow, Painted Bunting, Rusty Blackbird, and Purple Finch.

Marsh Sparrow Banding

- 11 sessions
- 89 new birds (82 recaptures)
- Next banding dates: March 28 – April 1

Winter Songbird Banding

- 3 sessions
- 328 new birds (102 recaptures)
- Next banding date: March 5th

- B. Kiawah Island Community Association Land & Lakes Management – Norm Shea
- C. Kiawah Island Golf Resort – Liz King
- D. Kiawah Island Architectural Review Board – Amanda Mole
- E. Environmental Science Committee – Jack Kotz

VIII. Correspondence:

- A. E-mail from Mr. Mike Hutchins

Ron Corley – Snowy Egret

Mr. Corley stated that he was a neighbor of Mr. Hutchins who was not to attend the meeting. He explained that Mr. Hutchins had an extensive history with the Department of Natural Resources (DNR) and was appointed to its Commission. Mr. Corley stated that Mr. Hutchins is concern was with deer population and the proliferation of coyotes.

Mr. Corley expressed his own concern with the coyote population on the Island and questioned how the population can stabilize with the 5 or 6 offspring per litter the coyote have per year

versus the one offspring that the deer have. Mr. Jordan responded by stating that accepted studies show as a predator, the coyote have the ability to control their own numbers and not exponentially increase in an area.

Mr. Corley warned how dangerous coyote were by recounting a story in which his own pet which suffered extensive puncture wounds inflicted by a coyote in his front yard in North Carolina.

Barbara Gore - SCDNR Marine Turtle Conservation Program

Ms. Gore gave a presentation on the Impact of Coyotes on South Carolina Barrier Islands. She stated that she had extensive experience with Kiawah's volunteer Turtle Patrol.

Ms. Gore noted that on the history of coyotes;

- ▶ Coyotes have typically been found in the western half of the U.S, although now they are found through North America
- ▶ In South Carolina, coyotes are considered an invasive nuisance species since their arrival in 1978
- ▶ They first appeared in the upstate in 1978 and are now present in all South Carolina counties
- ▶ They are opportunistic feeders, meaning they will prey on anything available to them including turtle nest
- ▶ Coyotes are now depredating nests on Hilton Head Island, Hobcaw, Yawkey Wildlife Center, and now Kiawah since 2012.

Ms. Gore explained the different strategies that were used at the Yawkey Wildlife Center to try to prevent the depredation of turtle nest which included night patrols, deer chasers and contracted trappers. She stated that in the years that coyotes were trapped and euthanized the number of depredated nests dropped dramatically from 51% to 2%.

Mrs. Gore stated that coyotes first began depredating sea turtle nests on Kiawah in 2012. In 2013, 33 nests were depredated and that 27 of those nests were depredated by coyotes (81%). She stated their presence on the beach will impact sea turtles as well as other species that use the beach for nesting such as Wilson's Plovers, Oystercatchers, and Least Terns. She stated in support of the preservation of Kiawah's rich wildlife, and community, she suggested that the Town act now in order to protect a federally listed species and maintain an overall healthy ecosystem.

Mr. Labriola questioned if the presentation was an official position of DNR. Ms. Gore confirmed that it was for the Marine Turtle Conservation Offices of the DNR who issue the federal permits required by the volunteer groups to work with endanger species. Mr. Labriola also confirmed that the trappers hired at the Yawkey Wildlife Center were sanctioned and funded by DNR. Ms. Gore responded that funding was though the Yawkey Foundation and DNR.

Ms. Gore discussed with Mr. Chitwood and Committee Members the differences in trapping coyotes in places like a wildlife center verses a populated area such as Sullivan's or Kiawah Island

and the precautions required.

Mr. Pezzullo, with the Kiawah Turtle Patrol, expressed his increasing concern with the growing depredation of the turtle nest that has been experienced in the past year on the Island. He reminded that a non-native predator is going after an endangered species protected by law. He indicated that it is his fear that the depredation will increase in the future was due to print sightings of adult coyotes as well as offspring on the beach.

Mr. Chitwood stated that he felt the community was 100% behind the efforts of the Turtle Patrol and efforts to protect turtle as well as other habitat. He stated that the Committee's quandary is how to be effective in providing the best natural habit and to provide a positive difference on the Island.

Ms. King stated that the coyotes have made it onto the Island on their own and that is the course of nature. She noted that even though some kind of action may need to be taken, Kiawah has a reputation of going above and beyond to protect its wildlife. Ms. King stated that the DNR position that no further research is required on coyotes does not apply to a place a unique as Kiawah and that further study of the coyote's impact on the Island is required. She suggested that Kiawah take the time and make the effort to be the model community in South Carolina that finds a new and unique ways to co-exist with the coyote and to protect the turtle nests.

Mr. Anderson – Oyster Rake

Mr. Anderson as a member of the Turtle Patrol called attention to the fact that most of the depredation at this time is at both unpopulated ends of the beach, which might provide an opportunity to make a controlled intervention.

Mr. Labriola commented that this was indeed a complicated issue and asked Committee Members to make a motion for discussion and recommendation to be taken to Town Council.

Ms. Liz King made a motion to allow Mr. Jordan to continue his research of the coyotes. The motion was seconded by Mr. Stewart and was unanimously passed.

Ms. King made a motion to at this point not hire a trapper to remove or to euthanize coyotes on the Island for this year. The motion was seconded by Mr. Chitwood and was unanimously passed.

Ms. King made a motion to be proactive this year in the search for a solution to provide greater protection for the sea turtle nests this summer and creating a long term research study on the Island. The motion was seconded by Mr. Kotz and was unanimously passed.

Committee Members engaged in an in-depth discussion of each of the individual motions and Mr.

Labriola clarified and confirmed with Committee Members that the “other side of the coin” would be the engagement of a contractor for a period of time, ongoing, to euthanize the animals with no guarantee of success.

B. E-mail from Ms. Paula Feldman

Ms. Feldman stated that she supported the research/study of bobcats and deer on the Island but express her concern with the humane treatment of the animals of used in that process. She encouraged pursuing not using live roosters in the cages to trap the bobcats. Ms. Feldman stressed the need for better protocol or standards in the management of care of roosters while in the traps. Mr. Jordan responded by stating that the comments would be evaluated and possible improvement recommendations or reports would be brought back to the Committee.

C. E-mail from Mrs. Marilyn Blizard

Mrs. Blizard thanked Mr. Jordon for his presentation for the Diamondback Terrapin. She stated that the Terrapin were an increasingly rare turtle of the marsh and had been recognized by the Town last year in a “Year of the Diamondback” Terrapin proclamation.

Mrs. Blizard stated that this year’s event was scheduled for Earth Day on April 22nd and asked if the requests made by Mr. Jordan required a formal action on the Committee’s part.

Mr. Jordan made a motion to provide help with the setup of a BRD installation station at Town Hall on Earth Day, look into putting signage at KICA docks and to approve funding of the shipping charges of the BRD by the Environmental Committee. The motion was seconded and unanimously passed.

IX. Citizen Comments:

Mr. Jim Sullivan – The Preserve

Mr. Sullivan commended their discussion on the coyote issue. He stated that he felt the vast majority of the residents would object tremendously to the killing one species to protect another. Mr. Sullivan pointed out that data is very important to determine if it make sense to proceed with a plan and the information from the Turtle Patrol would be reliable.

Mr. Sullivan also noted that a year ago he saw coyotes at Night Heron almost daily, and could hear coyotes in the marsh now he does not hear or see any. He stated that the quality of the data needed to be updated.

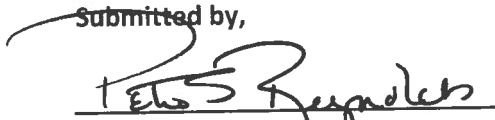
Mr. Sullivan suggested that the Committee may need to have a discussion on at what point action needs to be taken. He felt that individuals wanted the Committee to be pro-active but he felt that the Committee was restrained.

X. **Committee Member Comments:**
No further comments

XI. **Adjournment:**

The meeting adjourned at 4:51 pm.

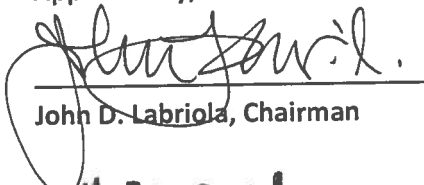
Submitted by,



Petra S. Reynolds

Petra S. Reynolds, Town Clerk

Approved by,



John D. Labriola

John D. Labriola, Chairman

4-30-2014
Date