Status of the Beaches
By Suzanne E. Dorsey, Ph.D.
Executive Director, BHI Conservancy

It’s the end of the summer; peak hurricane season and our beaches haven’t been re nourished since 2010. To say that we are in a precarious situation is an understatement indeed.

South Beach has suffered extreme erosion with the first groin structure requiring drastic sand bagging to save it last winter. The deep angle in the beach profile is evidence that millions of cubic yards of sand have moved from the beach to the Point and from there into the channel. Turtle nesting is impacted and so are our beautiful views. The coast is vulnerable to any storm but especially to a hurricane with its storm surge and wave action. We need sand on this beach and soon.

The first groin has been adequately shored up with sand

Summer Wrap Up
By Tracey Ritchie, Director of Education

Now that the laughing gulls have lost their summer plumage it is a sure sign that the fall season is upon us. My first summer on BHI was a whirlwind experience! Many people told me it would go quickly, but I had no idea that it would flash by in a blink of an eye. I met so many wonderful people and was overwhelmed with the positive responses received during all of our programs.

The theme of our 2012 summer camps was based on the BHI Conservancy mission statement: “Learning to live in harmony with nature.” Each week focused on a different class of animals including birds, mammals, reptiles and amphibians, fish and invertebrates. Each day campers learned about a different animal and the role they play in the BHI ecosystem. We stressed the lessons of interdependence and resource conservation. We explored the different habitats of the island and talked about actions the campers can take to help protect not only the natural wonders of the island, but in their hometowns as well.
My absolute favorite part of the summer was spending time with our wonderful interns. We were so fortunate to have 16 of the most amazing young adults I have ever met. The 2012 interns came from all over the country and brought a diverse set of talents and skills. From working at the Information Center and Turtle Central to conducting all night sea turtle patrols and managing summer campers in sweltering heat, the interns did it all. We had one of our most successful summers to date and we owe a huge THANK YOU to all of our interns.

On top of all of their job responsibilities, each intern also completed a summer research project. These projects covered a wide range of topics from shore bird counts to kiosk effectiveness. One project that is probably the most visible is the new native garden in the front of the Conservancy Campus. This garden was designed by Emily Chapin, one of our education interns. Emily used native plants, many donated by local nurseries. The intent of the garden is to demonstrate all the benefits to using native plants in your home’s landscaping. The project is now being taken over by girl scout, Alex Hanyok, who is working on her Gold Award. Alex has constructed a bench for the garden as well as a trellis to foster the growth of the many native vines. Alex will also be working on a brochure to help with plant identification as well as some tips for native landscaping in your own yard and curriculum that we can use in our summer camps to teach children about the importance of planting native. We hope this garden demonstrates how you can still have a beautiful formal garden with native plants and in turn save money and time! Native plants require less watering, pesticides and herbicides and are better for local wildlife. Please visit the Conservancy Campus soon to check out the garden!

While summer has come to an end we are still excited about all the programs that will be continuing in the fall. There will also be many user groups in the dorms participating in education programs with the Conservancy. If you work with a local school, scout group or any type of group that would be interested in staying at the Conservancy and participating in our programs, please contact Tracey Ritchie to check our availability. We often put together custom education programs to help reach badge requirements and address age appropriate curriculum standards.

We look forward to working with your group soon! Contact us at richie@bhic.org or 910-457-0089 ext 21.
Eco-friendly Merchandise

Learn to recycle old paper into handmade art or recycle a plastic bottle into a light fixture. Turtle Central has kits to help you save our environment. These green creativity kits are fun for all ages. Don’t forget to stop by our jewelry case to see recycled glass, recycled paper and other eco-friendly jewelry. Maggie Bags are a wonder; made of recycled seat belts in all colors. These large heavy duty totes are beautiful to look at and hold a lot for traveling. One of our top sellers, the Mosey bags, have so many pockets and are a great tool for all your electronics. Mosey bags are made of recycled water bottles; a purchase which really helps the environment.

Our online store is growing. Please check it out at Turtle Central’s www.BHIC.org/store. Apparel, toys, gifts and symbolic adoption of island animals can be purchased in the convenience of your home. If there is something you saw at Turtle Central that you wish you purchased but you’re already back home… don’t worry… check online and if the item isn’t there…call us at 910-457-0917 we’ll ship the item to you.

As the weather gets colder, the sales get better at Turtle Central. Come by to see what’s new and what great deals are available. We’re having a special fall promotion during the entire month of October. Stop by to get the details of the Free gift with purchase.

Don’t forget that 100% of the proceeds support the BHI Conservancy. Shopping here saves Turtles! We are open daily from 10 am to 5 pm

**Volunteer at the BHI Conservancy!!**

Make a difference with your time. The BHI Conservancy has many departments (Conservation, Education, Administration and Retail) that could use assistance. If you are interested in helping the BHI Conservancy while you are staying on the island, love to work with people, and would enjoy volunteering, contact Elyse Brown at Elyse@bhic.org or call 910-457-0917.

**Volunteer Opening:** BHI Conservancy seeks informed volunteers to serve at our BISC information desk. Hours flexible! Call 457-0089 ext 10.
bags and an emergency re nourishment using sand from the mouth of Bald Head Creek. It looks like it will hold under average conditions. But if a significant storm hits before the planned 2012/13 federal re nourishment the failure of that one groin could cause the “unzipping” of all the others. The groins are designed to slow sand flow into the channel. The groins do not stop sand migration and they are designed to work only when filled with sand. Without re nourishment, they can fail in a spectacular manner with all the sand they’ve held back for the last couple of years quickly moving into the navigation channel.

West Beach has a brand new shape with two points. Erik Olsen is the Village’s coastal engineer in charge of monitoring the wet sand, modeling sand movement, and designing the terminal groin. He predicted that the second bulge we are now seeing is a result the Point at the convergence of West & South Beach moving farther north. Erik’s hypothesis is that this new beach shape leaves the coast less sheltered from ocean waves. In a recent conversation, he emphasized that the low volume of sand on our beaches has caused destabilization to a state that this area of Bald Head Island hasn’t experienced in the past, despite years of impact from the channel. He emphasized that with such a low volume of sand the behavior of the beach relative to the waves, currents, and storms is difficult to predict.

Another factor that may be influencing the new shape of West Beach is the narrowing of the channel. As sand from South Beach fills in the channel located just west of the island, the main flow from outgoing flood tides is squeezed. Just like squeezing a garden hose the flow rate increases in the channel and actually transports sand out of our system—but more about that later. As the ebb tide angles east at Southport and then seeks the deepest and broadest outlet into the ocean it meets a narrow channel. The channel may be too narrow to contain the volume of outflowing water. some overshoots the channel and hits west beach right around Seagull Trail. This overflow from a flood tide scours the shoreline and puts sand in motion.

This new embayment north of the Point may cause secondary effects that add to the scouring from ebb tides. If water moves around this embayment it could circle back and cause a whirlpool-like effect, adding to the tidal scouring and pulling yet more sand off the beach.

What should be done about this? Individual property owners are talking to neighbors about sandbagging their properties as the scouring continues to erode sand from in front of their houses. CAMA rules preclude sandbagging until escarpment is within 20 feet of their homes, unless they can establish accelerated erosion conditions.

The Village of BHI is pursuing both negotiations with and legal actions against the Army Corps of Engineers to force them to uphold the “Sand Management Plan”. It was in the plan that the federal government agreed to place sand on Bald Head’s beaches every second and fourth year of a six-year cycle and to study and mitigate any adverse effects to Bald Head’s beaches.

The Army Corps of Engineers is moving forward to dredge their overly narrow channel and put sand back on BHI beaches this winter. The Village
BHI Conservancy is now taking requests for Ad space, listings inclusions as well as changes/corrections for the 2013 Communications Directory. The 2013 Directory will continue to be in the 6” x 9” format. The Directory has a wealth of information about the BHI Conservancy, the island, business and service provider listings, business ads, 2013 tide tables and of course listings of residents, families and individuals who choose to be in it.

The Directory will be available for purchase the second week in November for $25.00 each. Advance Orders can be made through the BHI Conservancy for $22.00 each through November 1st. Call 910-0089 ext 10, stop by Turtle Central or email jane@bhic.org.

All proceeds support the BHI Conservancy’s mission of fostering community-based barrier island conservation, preservation & education to live in harmony with nature.
has been working through representatives in Washington DC and through local contacts at the Wilmington Army Corps of Engineers. A big part of these discussions involves the exact distribution of that sand. Erik Olsen is giving feedback about how to best distribute the sand to ensure that both West and South beach benefit. Dredging the channel may relieve some of the pressure on West Beach, allowing more of the ebb tide to flow out of the channel. In addition the wider channel will slow the flow of water through it—like letting up on the garden hose—and less sand will be transported to deeper water making it economically unavailable to our coastal system.

The permitting process to approve a terminal groin structure is on-going with the goal of building the terminal groin in the 2014/15 winter. This structure would be located at the Point along the convergence of South and West Beach. The goal is to slow the movement of sand into the channel even more, thereby helping the community to survive longer periods without re nourishment. Details of the design include a ‘leaky’ structure that will allow some sand to circulate through the rocky substrate to help keep West Beach healthy and stable.

The BHI Conservancy seeks to support the community in making the best decisions to protect the natural dune/beach environment, which in turn protects the homes and island infrastructure behind those dunes. The BHI Conservancy has been involved in beach stabilization efforts for years now. The role we play is to provide biological monitoring in support of legal and permitting efforts. We work with permitting agencies like US Fish and Wildlife, Wildlife Resource Commission and Division of Coastal Management to give them the broader context for the non-natural erosion and encourage rational decision-making. We support Village efforts by providing critical feedback for reports presented by Erik Olsen and other contracted entities. We have been available to the Village attorneys to serve as expert witnesses. Staff has provided needed monitoring during re nourishment to insure that the process can continue into the spring bird-nesting season. We challenge the Army Corps of Engineers to provide better technical input for their decisions and insist that they stand up and admit that the erosion on South and West Beaches is non-natural, accelerated and caused by their channel. Finally the BHI Conservancy works with our colleagues at the Coastal Federation and other environmental non-profits who are advocating against terminal groins. We have explored non-engineered solutions (unsuccessfully) to our engineered problems on BHI.

The terminal structure on Bald Head Island is an engineered, medium-term solution to an engineered problem (the Corps channel). It is not the ideal and those of you who may be paying for it have told me it’s not something you would choose for Bald Head Island. It may, however, be the least-worst solution to a vexing problem that is caused by an unresponsive agency. One that refuses to or is unable to live up to its agreements and ignores basic science in an attempt to avoid responsibility for the damage it has caused.

This fight sometimes seems to be going on in the dark. Often your Village staff is constrained by lawsuits and closed-door negotiations from sharing the details of the process. From my perspective, Village Staff is working as hard as they can within the rules and regulations established under federal and state law to bring about the best outcome for the community of BHI. I also strongly believe, that the community of BHI can contribute positively to resolving our problem with the Army Corps of Engineers and that input and critical review whenever possible by the community will improve the outcome of the efforts being lead by the Village of BHI. If for no other reason than to advocate for reasonable rules and laws that protect coastal natural infrastructure as a primary goal and that have reasonable exceptions for coastlines impacted by US Army Corps activities.

The BHI Conservancy welcome’s your thoughts and input as we continue to support the Village of BHI in their efforts to provide a more stable coastline.

(We acknowledge input from Village Staff Consultants, Volunteers and BHI Conservancy Board)
Whether you enjoy the wildlife on Bald Head Island, hiking through the maritime forest, relaxing on the beach or taking in the marsh views, the BHI Conservancy has been working hard in the background to protect the areas you love the most through ongoing conservation efforts. The Annual Fund for the Environment underwrites these conservation efforts. Gifts to the Annual Fund not only strengthen the BHI Conservancy but also enhance your quality of life on this special island.

BHI Conservancy conservation efforts directly benefit you by providing you the following services:

- Sea Turtle Protection
- Rabies management
- Deer population estimate
- Forest conservation
- Alligator management
- Invasive species monitoring and beach vitex removal
- Animal control
- Aquifer monitoring
- Stranded animal response
- Forest trail maintenance
- Water quality sampling on beaches and creeks
- Nesting shorebird protection
- Amphibian monitoring
- Residential wildlife response
- Injured bird response

Protect the beauty and serenity you have invested in on Bald Head Island and help to ensure it is available for generations to come. Give a gift to the Annual Fund today.
Sea Turtle Season Wrap-up
Alyssa Taylor, Sea Turtle Program Coordinator

We have experienced another exceptional nesting year on BHI. Our season ended with 2 species of turtles nesting on our beaches; loggerhead and green. North Carolina had its best nesting season since 1999 with a total of 1,095 nests. This included both species we saw on BHI as well as a handful of leatherback and Kemp’s Ridley nests. Our genetically distinct population of loggerheads is called the Northern Recovery Unit (NRU), and includes North and South Carolina as well as Georgia. Our population has overall seen a good nesting year. Conservation and education efforts throughout these states have definitely had a positive effect on sea turtle nesting over the last few years. It is extremely difficult to assess nesting population statuses due to the sea going lifestyles that these animals lead. Genetic analysis at the University of Georgia is working to identify individual females nesting in the NRU to try and provide a census of the actual nesting populations within this unit and in the states individually.

Bald Head Island has averaged approximately 60-70 nests over the last ten years. This good year does not mean we can let our guard down with conservation efforts. It is extremely important that we continue our efforts to gain a better understanding of sea turtle populations and their habitats in hopes of one day restoring populations to what they once were.

Nature Photography Lecture and Workshops

October 20 & 21, the BHI Conservancy will host a nature photography lecture and workshop with Dr. David Blevins. Learn how to improve your nature photography by creating images that tell stories. Becoming a better photographer by using your camera to help people learn about nature. Participants will be able to submit their images for publication in the 2013 BHI Conservancy Wall Calendar!

David is an award winning freelance nature photographer and forest ecologist. David co-authored his first two books on Boundary Bay, British Columbia while completing a Ph.D. in forest ecology at the University of British Columbia. His third book, *Wild North Carolina*, is an introduction to the diversity and significance of North Carolina’s natural communities. David is currently working on a book on the natural areas of North Carolina’s barrier islands. You can learn more at www.blevinsphoto.com.

- **Lecture**: How to improve your photography, Saturday afternoon, 2-4pm, October 20th, $20
- 1st field session, Saturday, 4-7:00pm, October 20th, $50 (Limit 6 people)
- 2nd field session, Sunday, 7-10:00am, October 21th, $50 (Limit 6 people)
- Image editing and post processing, Sunday from 10:00am-1:00pm $50 (Limit 6 people)

*Lecture is free to anyone signing up for all sessions!*

You may make reservations by calling Call 910-457-0089 ext 10 or emailing jane@bhic.org.

All proceeds support the BHI Conservancy’s mission of fostering community-based barrier island conservation, preservation & education to live in harmony with nature.

“What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another.”

— Mahatma Gandhi