

WILMINGTON DISTRICT NEWS
ONLINE

JUNE 2007

BIOLOGY AND ENGINEERING WORKING IN TANDEM

THROUGH TRIAL AND ERROR, WANCHESE HARBOR PROJECT OFF TO GOOD START

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It's only 10 acres in size, but it's making a huge mark in ecosystem restoration in North Carolina.

Coastal wetlands that used to exist helped protect the entrance at Wanchese Harbor from erosion, and had whittled down over the years to a thin strip of vegetation that was incapable of stopping further erosion. In addition, it ceased being a sanctuary for small creatures. It threatened not only the harbor entrance that leads fishermen to open ocean, but the North Carolina Seafood Industrial Park as well. Then the Beneficial Use of Dredged Material Interagency Work Group stepped in to offer a solution; a project that would give Wilmington District biologists and engineers an opportunity to use dredged material from a nearby navigation channel to restore the estuarine habitat and protect the remaining marsh.

"The Wanchese Harbor is an important harbor area," said Wilmington District Ma-



Bill Skaradek from the U.S. Dept. of Agriculture examines test plots of U.S. Government grown plants at the Wanchese Harbor restoration site. (Chuck Wilson Photo)

rine Biologist Chuck Wilson. "We used dredged material from the navigation channel to try and stop erosion and bring back the ecological balance that was once there."

So far, Wilson said the project is working. Plants are thriving, and a variety of waterfowl are beginning to investigate the man-made area. However, the initial stages of the project were a guessing game of trying to build an ecosystem from scratch. Through

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UP FRONT**DESIRE, KNOWLEDGE AND OPPORTUNITY**

There are three basic components that must be present for criminal activity to occur.

They appear in varying degrees according to the crime, but are consistent as a requirement for premeditated crimes such as robbery, vandalism, and even terrorism.

Which of these can we, as everyday citizens and government employees, affect? **Desire** is left to the individual criminal. You can't make someone not WANT to commit a crime if that is what they wish to do. **Knowledge** again falls to the individual. A criminal's knowledge is gained through environment, education, role models (however lacking or negative they may be), circumstances, etc.



Greg Barr, SAW
Chief of Security

That brings us to the one element we CAN influence; **OPPORTUNITY**. It is our job to minimize the opportunity available to the criminal element. It is known as “getting the monkey off your back”. In a perfect world we would not have to worry about crime or violence. Unfortunately, that is not the case and we must take steps to make ourselves a less attractive target.

If you were going to break into a house, would you select the one with deadbolts, an alarm system, and adequate illumination at night or would select the house where the doors are seldom locked, the lighting is poor, no alarm system is present and there are bushes next to windows and doors? Would terrorists rather “hit” a building or facility that has a fence, 24-hour guard presence, surveillance cameras, or would they select a softer target?

What about the most significant crime deterrent available? YOU! An informed citizen/employee who is watchful, alert and sensitive to their surroundings is more of an asset than all the electronic gadgets in the world. History shows that many crimes could have been thwarted or their significance greatly reduced had an individual acted on their instincts rather than “shrugging it off”. Information is time sensitive and suspicious activity should ALWAYS BE REPORTED to the appropriate authority as soon as possible. YOU CAN MAKE A DIFFERENCE!

Please visit the District Security web page for additional information:

<http://sawintra:8080/homeplate/SAW/SL/default.aspx>

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U.S. Army Corps of Engineers

Wilmington District



MIKE ANNAND PART OF U.S. PRESENCE STILL IN BALKANS TO HELP MAINTAIN STABILITY



Mike Annand (far left) poses with other USACE employees and local nationals at Camp Bondsteel in Kosovo.

While world attention is focused on Iraq and Afghanistan, a well known area that made headlines in the mid-1990s is still under watchful eyes.

Mike Annand returned to the Wilmington District from the Europe District in Wiesbaden, Germany last year, but soon volunteered to help with the peacekeeping mission in Kosovo at Camp Bondsteel. This multinational outpost is the main base of the U.S. Army under the Kosovo Forces (KFOR) command in the eastern part of the United Nations administered province of Kosovo, Serbia. The base serves as

NATO headquarters for KFOR's Multinational Task Force East (MNTF-E).

“The Balkan Support Program that I had been responsible for when I was in the Europe District which I supervised was under the Installation Support Branch,” Annand said. “I knew a lot about it and I

knew all of the players. Volunteering to go to Kosovo was something that I had wanted to do when I was based in Wiesbaden, but I could never find the time to do it.”

Annand headed back to Europe to become Camp Bondsteel's Deputy Director of Public Works providing government direction and oversight for the base Operations and Maintenance contractor Kellogg, Brown and Root.

“The Directorate of Public Works, which fell under the Area Support Group Manager, was sup-

ported by five local nationals. What we did was issue directions to the contractors. Their operation is about 90 percent local national.”

Annand got to know a few of the locals. In casual conversations he realized that fear and resentment will take a long time to go away.

“There's definitely still resentment there. I think the feelings are all under the surface. One of the reasons that they'd like the U.S. to stay in the area is because we're keeping an eye on things.”

Annand had the chance to travel around Europe when he was assigned to the Europe District, but he found out things about deploying that he said he never would have discovered had he not volunteered.

“You get to handle real issues in real time. Answers need to be given quickly and things move rather quickly. The operational pace is very fast, and you have a lot more direct impact. I enjoyed that.” ■



Annand took this picture in Albania of a flyer for a festival honoring the U.S.



THE WILMINGTON DISTRICT'S DESIGN SECTION: WORKING BEHIND THE SCENES

Each year tons of sediment flow down the Cape Fear River, much of it settling within the federal channel in the Wilmington Harbor. This requires annual maintenance dredging by the Wilmington District to get the muck out of the way so container ships and other vessels can continue to make their way safely. When the District dredges the channel the material has to go somewhere. Eagle Island contains more than 700 acres of dredge spoil, but nearly every year the island will have to be modified to hold even more material. Finding a solution to that potential problem is one area of a cooperative effort between the Design Section and other organizations within the Wilmington District.

“People don’t realize how much material there is,” said Carroll Niesen who heads the section. “Recently we dredged about 1.3 million cubic yards to put on Eagle Island. About a year or two ago we



David Rochelle puts down his mouse and picks up a pencil to jot down information. Designers often revert to this method to keep track of data.

had another project where we had something like 1.8 million cubic yards of material. That’s just tremendous volume.”

Niesen goes to Eagle Island occasionally to check conditions. While there she tries to visualize what a future dredge disposal area could look like.

“We get contract surveys to assist in our capacity calculations. Also, for future work, of course there isn’t anything to survey, so you have to create that with your imagination. I have used shoaling volumes that Coastal H and H has come up with that help figure out projections. There’s a lot of intuition involved.”

Overall, the design section members work in a world of precise decision-making. They’re given data to work with, and they must follow strict design specifications. But when they’re making the blueprint for a project, Niesen says it’s her team’s reputation is on the line.

“On our designs for Eagle Island we worked closely with the Geo



WHERE DOES IT ALL GO? Heavy equipment operators shift dredged material around on Eagle Island. The Wilmington District Design Section is helping to figure out how much more space is available there for the next 20 years.

Technical section and with the Construction Branch, but ultimately it’s the design person who has the responsibility for putting everything together.”

Doug Wall joined the section last year, bringing his Computer Aided Design and Drafting skills with him. He soon found out that in his new position he *wouldn’t* be buried in his computer just designing.

“There’s a lot of coordination, a lot more than I expected. There’s more detail that has to be worked out to get plans and specifications to fit together.”

Larry Creech said he sometimes has to make a site visit to listen to not only the project manager, but stakeholders, too.

DESIGN SECTION CON'T

“It’s a combination of the local sponsor, the project manager, design members and construction members. Anything that happens out there, like when environmental issues come up, we have to change things and adapt. You have to be flexible”

Being flexible extends to the Wilmington District’s role as the regional design section under the Wilmington Regional Engineering Center. Doug Wall, who’s working on a Myrtle Beach project with the Charleston District and other Wilmington District employees who are located in that District, has to know and adapt to another District’s way of doing business.

“Other districts sometimes operate differently and you have to conform to their way of doing business. You still want to interject your knowledge and experience, but it takes a lot of encouraging and getting them to understand the idea that you’re trying to get across.”

The Design Section has become more diverse in its capabilities since becoming a regional team in 2005 when new team members in Charleston and Savannah were added. The list from Charleston includes; Charles Harbin, a mechanical engineer; Keith Ellmers, electrical engineer; Cynthia Ruddy, architectural engineer; and Vernard Cleveland, civil engineer. Hal Thomas who works for the Wilmington District but is Savannah, recently came here to work with Ray Batchelor to inspect a potential location for a flood control project in

Windsor, NC.

“I’m more of a specialist,” Thomas said. “You have to be a jack of all trades because of the few structural design types of work. Before I moved over into civil types of design I spent 25 years doing military design.”

Thomas was called to accompany Batchelor to look at the flood wall locations to add any additional input for the nearly completed study. Although he spent nearly his entire career designing military projects his ability to zero in on tiny details was an invaluable asset.

“A structural design is very unique. If I don’t design it right, buildings fall. The consequences for structural work are far greater. That’s why in the private sector a lot of successful engineers in small structural firms face a lot of liability insurance which is very high. Sort of like malpractice insurance for a doctor.”

The design section members are experts at attention to detail. They use various engineer manuals and other technical resources to promote consistent, reliable and safe designs.

“There are a lot of standards and engineering manuals that apply to different features of work,” said Ed Dunlop. “And there are a lot of engineering manuals that still have the calculations in them and you have to use them. You can computerize



Design engineer Larry Creech, left, confers with Jim Jacaruso about the Roanoke Flood Reduction Project.

all that, but you still have to know the theory and have an idea, for example, of how much water 500 cubic feet per second is and what it could do to a bank along a stream.”

Creech added that designers must have a lot of confidence in their skills and abilities. He said designers develop a knack for pinpointing potential problem and knowing how and when to fix them in the design process.

“You still have to have that intuitive knowledge that you can’t get from computer software. If you don’t put in something that’s correct you still have to understand how something is done. You have to put in the right parameters.” ■

WILMINGTON DISTRICT HOSTS WATER SAFETY FORUM AT W. KERR SCOTT LAKE

By Penny Schmitt

& R.G. Absher

Corps of Engineers Rangers are only a few of the officials who try to keep people safe on regional lakes and rivers. Still, their leadership in water safety is unparalleled, according to many of the other state and local agency representatives who participated in a recent Water Safety Forum at W. Kerr Scott Lake.

Terry Everhart, of the Charlotte/Mecklenburg Police force that patrols Lake Wiley, is just one example. He said “I stole all my best ideas from the Corps of Engineers!” Everhart met Wilmington District Water Safety Coordinator Paula Carper at a regional boat show, found her ideas, equipment, and publications inspiring, and has been tapping into the District’s ideas ever since. His force now owns a twin of the District’s ‘Safety Sam’ talking tugboat that so successfully communicates water safety to young children.

Others at the Forum included representatives from the U.S. Coast Guard Auxiliary, the North Carolina Wildlife Resources Commission, North Carolina State Parks, The Lake Wiley Marine Commission, Sheriff Department officers from several counties, and local fire safety and police officers who regularly patrol regional lakes. The Corps influence in the water safety field extends far beyond the shorelines of our own lakes and rivers, as forum



NC State Park Ranger Crystal Dillard gives Water Safety Forum participants a lesson in safe canoeing.

participants hailed from lakes and rivers outside the Corps’ systems.

As the participants’ lively exchanges proved, keeping lake visitors safe is a tough task. Some challenges come from government and laws, others from the behaviors of individuals.

Like our own John H. Kerr Lake, which has shoreline in both Virginia and North Carolina, Lake Wiley has shoreline in North and South Carolina. Both lakes extend through more than one county. In the past, jurisdictional concerns have slowed response times or confused enforcement actions.

Sharing information and working jointly to solve problems, a constant theme in Corps Water Safety activities, has helped overcome the jurisdic-

tional problem. “We began to solve that when we all got radio-phones and started talking to each other, it just naturally followed that we started to work together better.” said Joe Stowe of the Lake Wiley Marine Commission. Everhart agreed. “Now we don’t have two white shirts from different counties (sheriff’s deputies) up on the bridge disputing about who needs to take care of the wreck, we just get moving to the scene of the problem and do what we can to fix it.” When radio exchanges reveal a problem, Everhart added, the officer closest to the scene responds, without worrying about jurisdiction.

The Forum seemed to provide a good

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WATER SAFETY CON'T

way to continue the communication and shared problem solving, as participants exchanged ideas on a variety of safety issues and emerging problems.

- Danny Martin, a Ranger at Philpott Lake, surprised many with new information about the potential problems ethanol-containing fuel can cause in motor boats. “This type of fuel has compounds that are not compatible with materials used in boats. It can literally dissolve plastics in fuel tanks, can cause fires, serious inefficiencies or motor failure.” He alerted several participants to potential fire and motor failures hazards they had been unaware of.
- Juanita Souther, a Ranger at W. Kerr Scott Lake, demonstrated a wide variety of per-

sonal flotation devices (PFDs), and described her outreach to the many Hispanic visitors who come to all regional lakes for recreation. She also shared ways to work with local communities to sponsor swimming lessons, and her own program to teach swimmers at Scott Lake.

- Becky Frasier, of the Jordan Lake Safety Council, reported on the strong success her group has had attracting people to take donation-sponsored swimming lessons at regional YMCAs.
- Crystal Dillard, a North Carolina State Park Ranger who is based at the New River State Park, spoke about her efforts to educate canoe and kayaking enthusiasts who come to the

New River, sometimes without much experience. She outlined the most helpful river rescue approaches, and emphasized the ongoing need to convince visitors to wear their PFDs.

- Tanya Grant, of the Corps’ Hartwell Lake, and Connie Gunter, Water Safety Coordinator for Mobile District, both talked about outreach and marketing efforts that successfully raise public awareness about water safety. They are working hard to find ways to lodge indelible messages in the minds of 18- to 45-year-old males, the hardest demographic group to win over to wearing PFDs. Their efforts included giveaway items like floating key chains, that would actually be used by anglers, and use of messages from football coaches and team members from Clemson University and University of Georgia. “People really DO respond to giveaways in their favorite school’s colors,” said Grant.
- Kelly Townsend, with the Lake Hickory U.S. Coast Guard Auxiliary, talked about boating safety programs and boat inspections on the heavily visited Lake Hickory, near Hickory, NC.



Attendees of the Water Safety Forum.

WANCHESE CON'T

adaptive management the team found an excellent formula that worked.

Bill Dennis helped design the Wanchese Harbor Project. “The most difficult thing we had to work with was the different sediments that eventually got into the basin,” he said. “There was a whole range of coarse sands, silt, and clay, quite a mixture. To come up with a way to contour the area to meet specific elevation requirements with all of that mix was difficult. There was a lot of ‘guesstimation’ as well. So it took some effort on the construction side because we needed something stable that we could smooth into the contours.”

From an engineering standpoint Dennis said the key was to establish and maintain the right elevation so plants would take root and be able to exist in the fluctuating tide as nature had intended.

From the biological side, Wilson said a combination of hard science, intuition and applying what they had learned from restoring shoreline marsh

at Festival Park gave them insight into how the plants would probably grow with the unpredictable fluctuation of the tide. The thriving growth of the recently planted marsh grasses



Skaradek shows Chuck Wilson (left) and Project Manager MAJ Rob Hilliard samples of recently planted marsh grasses that are thriving at the site. (Bill Dennis Photo)

was a good indicator of the overall health of the emerging ecosystem, and it also was a good sign that the elevations grade and planting operations were correct.

“The marsh grasses are growing



Part of recreating a wetlands area is knowing plant survivability. The live plant on the right has a more developed root system. (Wilson Photo)

well, and we have about 90 percent survival of plants. Ducks and geese are already using the new marsh which is a good sign of it being a potential wildlife habitat. We just hope they don't graze too much.”

Wilson said the majority of those plants were provided by a planting contractor. However, a portion came from the Cape May Plant Ma-

terial Center in New Jersey, a U.S. Department of Agriculture-run facility. He said the plants grown in New Jersey were used in conjunction with a contractor's plants to establish test plots for quality control.

“If there was any catastrophic plant mortality, the test plots could help us determine if it was a problem with the plants or the site conditions. If the contractor's plants died, but the government plants lived, it would indicate that it was a problem with the plants and not a problem with the design.”

Wilson added that Bill Skaradek of the Cape May facility will use test plots to look at the performance or different nursery-grown plant con-

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tainers in these tough growing conditions. One benefit that is already noticeable is that plants with deeper roots may prevent geese from pulling the plants up, minimizing damage.

The success of the Wanchese Harbor Project is a good example of how engineering and biology work together for ecosystem restoration. For Dennis and Wilson it was an opportunity to somewhat cross train to get a better idea of how all the pieces of the project were put together.

“It’s definitely a team effort,” stated Dennis. “We learned a lot from each other. I learned what plant species grew there, and Chuck is learning the engineering side of using riprap; how high to stack them and where to place them.”

The big picture is that this 10-acre USACE project is one small part of an overall plan by various state agencies and private organizations to help protect and preserve North Carolina’s coastal ecosystems. The overall goal, Wilson said, is to help restore the Albemarle/Pamlico Sound National Estuary.

“The State of North Carolina Division of Marine Resources, the Coastal Federation and the Nature Conservancy are building oyster reefs and similar projects in the estuary. All our joint work is a step in the right direction for the state. The



Wilson and MAJ Hilliard inspect the contours of the site at normal high tide. (Dennis Photo)

Wilmington District has had a lot of experience in coastal restoration. Our oldest project which has been very successful is the Morehead Army Reserve Center, now 12 years

“The most difficult thing we had to work with was the different sediments that eventually got into the basin.”

Bill Dennis

old. It’s considered a successful site, as well as Island 13 and Festival Park. The Wilmington District has been fortunate to receive national recognition on all of these sites.”

What motivates Wilson is a simple love of biology and unlocking of

various doors that only Mother Nature could open. He’s passionate about his work, and he feels that teamwork motivates others to do excellent work.

“I love what I do. When we’re building these habitats that are functioning it’s a great legacy to be able to leave behind, a place that you can go to. We’re building them from ground up. It’s interesting taking what used to be barren piles of sand and turning them into what are now thriving primary nursery areas. I think we’re making a real contribution to the local environment and to science because pilot projects like Wanchese Harbor are good examples for others to observe.” ■

HAPPY TRAILS AWAIT CYCLISTS AND HIKERS AT W. KERR SCOTT LAKE

By Penny Schmitt

“Some of the best mountain biking in the Blue Ridge can be found along the scenic shores of W. Kerr Scott Reservoir near Wilkesboro. The lake is home to over a dozen miles of sweet singletrack, with more under construction. “

We didn't make this claim! Members of the Brushy Mountain Cyclist Club lead into their guide to bike trails at W. Kerr Scott Reservoir

with that statement. (Visit this web site www.bmcc.us to learn more.) And they should know, since club members have been active in building and grooming trails and sponsoring major cycling events at the lake.

“We are becoming a national center for heritage tourism, hiking and mountain biking,” said Terry Ramsey, Project Operations Manager at W. Kerr Scott Lake. “Because there's such strong community interest and

participation, and such a great wealth of historic sites in the area, we are seeing some real growth in recreational use of our areas.”

In fact-, after giving a lightning introduction to the trails, Ramsey's next stop for the day would be a tri-county meeting about long range-plans to develop further Heritage Tourism with officials from Wilkes, Yadkin and Watuga Counties in western North Carolina.

Part of their long-term effort will be to extend the “Yadkin River Greenway” across the region. As is often the case with the proactive W. Kerr Scott team, the lake already sports a handsome sign and a Greenway trail-head access just below the W. Kerr Scott Dam.

Dark Mountain Trail

The Dark Mountain Trail, developed through a partnership between the Brushy Mountain Cycling Club and the U.S. Army Corps of Engineers staff at Scott, and the Overmountain Victory Trail, part of a National Park Service trail system, are putting W. Kerr Scott Lake on the mental map and under the wheels and hiking boots of many outdoor enthusiasts.

A map of the six-mile network of trails shows a core trail that is relatively flat and easy going, branching off into eleven tributary trails that range from a ‘connector’ short cut, to the challenging ‘Snake’ full of switchbacks and steep climbs. Cyclists and hikers have three overlook points to choose from that bring them up to beautiful vistas of the lake.

The 140-acre tract devoted to the Dark Mountain Trail allows for a short walk in the woods

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A competing cyclist rounds a sharp curve on the Dark Mountain Trail.

HAPPY TRAILS CON'T



Ranger Bryant Curry (rear) watches as a worker carves a new loop of the Overmountain Victory Trail through woodlands near W. Kerr Scott Lake.

available to anyone who wants to get on the trail from the parking lot of the W. Kerr Scott Visitor Assistance Center. The trail also can and does handle cycling events like the annual late spring “Burn 24” in which men and women compete in a night-and-day-long mountain bike race that offers outstanding challenges for competitive cyclists. Whether you’re out to see the mountain laurel bloom along the “Rhodo Tunnel” or swoop down the twisty steep single track “Ranger Trail,” the Dark Mountain Trails offer plenty of fun.

Overmountain Victory Trail

The Overmountain Victory National Historic Trail is much larger and longer than the 5.7 mile stretch that goes through W. Kerr Scott

Lake lands. In fact, the National Park Service calls the trail “330 miles of Revolutionary War History.” Originating in Tennessee and Virginia and extending through North Carolina into South Carolina, the branching trail retraces the routes of the patriot militia and British Armies to their fateful meeting at King’s Mountain

in South Carolina, where they fought a battle considered a decisive turning point in the war for independence.

One of the partners in building and maintaining the trail, the Overmountain Victory Trail Association, has contributed volunteer time to clearing a part of the trail that goes through W. Kerr Scott lands. Each year, the association conducts a reenactment along some part of the trail. Visit their site at www.ovta.org

Today, the trail is still a work in progress. Rangers at W. Kerr Scott have

laid out an additional 5.2 miles of trail, with some extra challenges for those who especially like to bike up and down mountainsides. The crew building the trail are using a ‘Ditch Witch’—basically a small dozer with a sharp blade that can be operated by one person—to clear a path through the woods.

“We had to take the path pretty high up the mountainside to avoid the safety hazard of putting hikers and cyclists too near a steep drop onto a rocky streambed,” Curry said. “That makes the trail both safer and more challenging at the same time.”

Still, stops can be both scenic and restful. Along the trail, we found a beautiful overlook, picnic shelters, and even a great spot for fishing. Whatever path you take, steep and twisty, or short and gentle, the trails at W. Kerr Scott Lake offer a great way to get back into the natural world. ■



Fishermen enjoy some of the more leisurely pursuits available at W. Kerr Scott Lake.

WATER SAFETY CON'T

The group went beyond sharing ideas to sharing techniques as well. Jerre Killenbeck, of the W. Kerr Scott Ranger Staff, taught Reach and Throw shoreline based rescue techniques. Crystal Dillard, of New River State Park, demonstrated the basics of canoe handling skills, and sent her trainees out onto the lake's waters. Mark Minton, of the NC Wildlife Commission, showed participants what to look for in a boat inspection, Kevin Bounds,

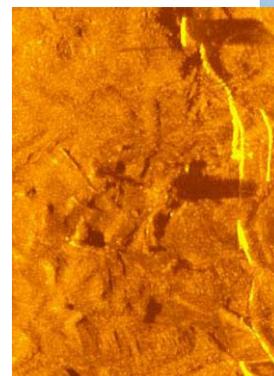
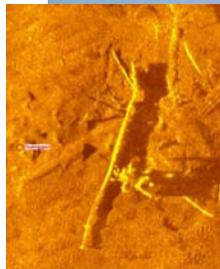
of the Wilkes County Fire Marshal's Office, demonstrated fire suppression.

Over and again, the group agreed on the factors that come into play when someone drowns. And overwhelmingly, the group found that not wearing a PFD was the number one thing that made the fatal difference. Not knowing how to swim, alcohol consumption, fatigue, hypothermia, parents not watching children, boat

fires, collisions, horseplay, and not knowing lake conditions were other factors noted. As the conference closed, sad news arrived that a 16-year-old fisherman had drowned on Jordan Lake because he vaulted into the water in a vain attempt to retrieve a dropped cell phone. These rangers and water safety folks truly are engaged in a ceaseless battle to turn fatal moments of thoughtlessness into safer decision-making. ■

BEAUFORT HELPS THE SNELL "SEE" UNDERWATER

The Debris Boat Snell was involved in removing a wreck at Oregon Inlet of the Angel Dawn, a trawler that sank two years ago. The survey vessel Beaufort acted as the Snell's "eyes" by running side scan sonar to determine what remained to be retrieved from the ocean floor. The Snell and Beaufort have performed numerous cooperative recovery efforts to eliminate navigation hazards from navigation channels. The side scan sonar used by the Beaufort provides detailed images that permit the Snell's crane operator to place "claw" accurately and retrieve sunken objects. This unique teamwork allows the District's dredging and survey fleet to help keep boating areas safe in high traffic areas like Oregon Inlet. (Photos by SAW Navigation, Charles Potter)



LEADERSHIP DEVELOPMENT PROGRAMLEARN TO **PLAN AHEAD****By Adam Faircloth**

The Morris Island Lighthouse was originally constructed in 1876 over 1,000 feet onshore, just north of Folly Beach, SC. After countless waves, tide changes, and storms the sand that once surrounded it was swallowed back into the ocean leaving it where it is today, over a 1000 feet offshore and leaning into the surf. Efforts are currently underway to stabilize and fortify this historic structure. No doubt there have been many hours of planning and communication to finalize these plans.

On our visit to the north end of Folly Beach in early June, our LDP Class didn't have the luxury of planning when we were handed a 6ft. long 4"x 4" beam of wood meant to represent our "lighthouse". We were quickly instructed to stand it up straight and fortify it with whatever we could find on the beach within a few short minutes. The time allotted for gathering materials literally flew by as we scrambled to grab driftwood, shells and broken asphalt. As you

can imagine the "lighthouses" that we built were of very sub-par quality. Some didn't even make it through a gentle breeze before toppling over and the others were compromised as the tide rose and washed out the foundations.

Proper planning is essential for any project's success, large or small. In the case of our "wooden lighthouse" we were given a very

unrealistic deadline but still had to carry through and make the best of the resources and time given to us. In order to be more responsive and productive in such rushed or emergency situations we should all remember to keep the communication lines open with co-workers, know our roles, and be ready to provide the crucial answers when we are called upon. ■



SAVE THE LIGHTHOUSE! The teams learned that planning is essential for long-term success.

WEBSITE HIGHLIGHTS

WITH BARBARA EKELUND

(www.nccoast.org)

is a non-profit group that is active in coastal management issues and wetlands preservation. Their advocacy is focused in four key areas: strengthening environmental standards; encouraging enforcement of environmental laws; restoring and protecting habitat and water quality; and, educating citizens and community leaders. In fact, the NCCF has three full-time professional “Coastkeepers” in Manteo, Ocean and Wilmington. They work with volunteers to keep an eye on the enforcement of environ-



mental regulations along the waterfront.

Another non-profit group involved with protecting our waters is the Low Impact Development Center

(www.lowimpactdevelopment.org).

This organization is dedicated to research, development and training for water and natural resource protection concerns. Low impact development is a new approach to land management and planning. It encourages engineering design with a goal of protecting the environment while allowing for land-use development.

On the federal level, the National

Wetlands Research Center

(www.nwrc.usgs.gov) is a terrific resource for ecological restoration. It offers a clearinghouse of scientific information about wetlands--wetlands' values, management, ecology, restoration and creation.

Just for fun!

Wanna' go green? Learn about sustainability? Be a tree hugger? www.treehugger.com is the site for you. I kid you not. Their blog is one of the highest ranking in the world, as determined by technorati and has also won the prestigious 2007 Webby award. Enjoy! ■

THINGS TO THINK ABOUT ON THE FOURTH

The United States of America is 231 years old, but she still wears her age well. Her colors have never been brighter, her people are still just as proud as they were in 1776, and the energy coursing through her veins is still as vibrant as it's always been.

Take a moment and remind everyone what made America as we know it today, possible. The Declaration of Independence could have remained just words on a piece of paper had it not

been for the strength, and will of the American people and its Army. For the Declaration of Independence did not make America independent from England—the Colonial Army did!

The Army, which is the oldest of the Armed forces one year older than the Nation, has been at the center of this call to freedom. It has been your Army—yesterday and today—which has helped forge the steel of our American democracy; and it will be your

Army which will continue to literally carry this fight into the future.

Bear in mind it was your Army who fought for our independence; it was your ***Army engineers who built our country's original network of roads and waterways***; it was your Army who trekked with Lewis and Clark across the fields and mountains of our Western territories on the Corps of Discovery expedition to

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PASTOR BILL

TREES WITH GREYBEARDS

The other day I was taking a long bicycle ride and I stopped under a large oak tree to rest in the



Bill Adams

shade and take a water break. As I stood there, my senses slowly took in what surrounded me - large quantities of Spanish moss. I have long been an admirer of Spanish moss. It can transform a tree into a thing of mystery and beauty, from a resident of the current age to a relic of the past. Simply put, trees without Spanish moss are just trees; trees with Spanish moss are icons of the Old South. All southerners sense the difference at some level. If you don't sense it yet, give yourself time. You will.

Spanish moss is a most extraordinary plant and one that most people take for granted. It is not actually a moss and, being found only in the Americas, it is certainly not Spanish. There are several theories and folk tales about how that name came about and I will leave curious readers to investigate those by

themselves. For myself, I much prefer the name "tree-hair" which is what the Native Americans called it or perhaps the common folk name "graybeard" because it more aptly describes its appearance and provides a nominal basis for kinship between the moss and me.

As I stood there a gentle breeze blew and the long strands of moss swayed back and forth, like dozens of windsocks hung from the tree. Spanish moss is what botanists call an epiphyte – it does not directly derive any nutrients from the tree it hangs from, it needs it principally for support. It collects nutrients from rainfall and from the dew that drips from the tree's leaves. Interestingly, Spanish moss must be lifted up by a tree or shrub, otherwise it will die. If it blows out of a tree during a storm and falls to the ground it dies a slow but certain death. Likewise, any moss that lands on fences or telephone lines will eventually perish for such places are not suitable for long-term survival.

I believe Spanish moss has a singular beauty that becomes even more apparent if it is examined

closely. The grayness of its long, interwoven strands is actually the product of numerous, intricately arranged water-trapping scales that coat a green interior where photosynthesis takes place. Even more beautiful are the diminutive three-petaled flowers it produces in late spring and the airborne seeds that follow. Neither is seen except by those who care enough to take time to get to know the plant.

Of course, none of the virtues of Spanish moss are overlooked by woodland creatures that know it so well. Many species of birds use it in nest building including robins, finches, orioles, and even bald eagles! Bats have been found hiding in it during the day and squirrels are known to use it for bedding material. Many insects and other invertebrates also live in its strands. They are so abundant that one predator, the Spanish moss jumping spider, lives there and nowhere else; its world is a tangle moss, a world that is just one windstorm away from being hurled down into oblivion.

I stood in that special place and

CORPS DAY 2007



It was hot, it was humid....it was fun! On Corps Day 2007 at Empie Park the Wilmington District honored team members for their years of service, one of whom reached (gulp!) 50 years, Mr. George Burch. We also honored the **Employee of the Year, Mitch Hall** of Project Management. Mitch's contributions to the Corps include a strong work ethic, demonstrating the Army Values and delivering results. Congratulations to a well-deserving colleague!

heels at 84 years old, was former Chief of Engineers, LTG (Ret.) John Morris. The former Chief helped District Commander COL John Pulliam and wife, Jacque, cut the Army and USACE Birthday cakes. Also helping with the ceremonial cake cutting honoring colleagues deployed overseas were the youngest and oldest....er, *wisest* team members, Jessica Haggett and Mr. Burch.

Softball...*Brayman's Backhalf Bombers* defeated J.P.'s Pirates by a lopsided score of 20-6...or something. And yes, there will be a rematch!



For the second year in a row, our very special guest, still kicking his



PASTOR BILL CON'T

watched the swaying strands. I soon was lost in thought. How like Spanish moss I sometimes long to be; no worries on earth to hold me down, instead living toward heaven confident I will receive everything I need. I searched and found the moss' tiny three-petaled flowers and while admiring it was reminded of the Holy Trinity. How often we can see the unity and grandness of creation through a hand lens! And when I looked at the aged oak that was lifting up that mossy kingdom, I remembered that long ago a man was also lifted up on a tree to give life to others. I cherished those

thoughts. I knew who sent them and was lifting my spirit (John 14:15-21).

Refreshed and ready to complete my bike ride, I walked over to some clumps of Spanish moss that had fallen to the ground, picked them up, and carefully placed them in my saddlebag to bring home. Rescued from certain death, they now have been added to the collection of wind-thrown moss that

hangs from the oaks and crepe myrtles at my home. There's not nearly enough Spanish moss in my life. I doubt there ever will be. ■



Spanish moss flowers (Photo by Bill Adams)

FOURTH CON'T

open new lands for America; and it was your Army's Soldiers who have often been at the forefront of advances in medicine, science and technology.

Yes, the men and women of the Army have sculpted the face of America, and will still be shaping our destiny 232 years from now. Everywhere you turn these days, you will find our Soldiers preventing attacks on the Nation, responding to natural disasters at home and abroad, helping to secure our borders and defending our national interests beyond our borders. Our Soldiers do all this filled with the "Spirit of '76," just as they've done for centuries.

Your support of your Army

comes in many ways: from providing the necessary funding in order to best equip and train our armed forces, to the simple act of turning to the Soldier waiting in line at the post office and saying, "Thank you for your service." For those Soldiers who are deployed, your support can come in the form of a care package, or by volunteering to baby-sit the children of a stressed-out Army wife for one evening a week. Each of these seemingly small acts mean a lot to our men and women in uniform; in their own way, they are demonstrations of patriotism, the kind of communal goodwill envisioned by our Founding Fathers.

On this Fourth of July, we celebrate the signing of a declaration that led to the improbable victory of our fledgling country as it defeated the most powerful government on earth at the time. It was the Army then who enforced the ideas of liberty and freedom then, and through the strength of our people and the courage of Soldiers, we will repeat history. We will once again triumph against all odds and declare victory over the tyranny of terrorism.

Army Strong

HOOAH!