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IN THIS ISSUE

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OUR WORK • OUR PEOPLE • OUR DISTRICT

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COMMANDER'S CORNER
MESSAGE FROM COL. ALAN DODD

SMALLER OFFICES VITAL TO DISTRICT'S SUCCESS

Big projects get big attention and rightfully so as they are tremendously important to our district and to our nation. In this month's column I'm going to highlight two of our smaller offices. Their staffs are much smaller but their missions are critical in making the Jacksonville District run smoothly. These offices contribute to our success in a multitude of ways.

Born on the 50th anniversary of D-Day, the Military / Interagency & International Services (PM-M) branch celebrated its 19th birthday in June. The branch houses the missions to support the military, other agencies, and foreign nations. The Formerly Used Defense Sites (FUDS) program falls under PM-M and Jacksonville District's has the fourth largest inventory in the nation. Led by John Keiser, in 2012 the FUDS program met or exceeded every established headquarters fiscal year 2012 FUDS metric and obligated more than 170 percent of the scheduled program.

Military/Interagency & International Services branch employees John Keiser and Jim Boone. (USACE photo).

Under the military mission, the district is involved with the planning, design, construction, and commissioning of the Antilles Elementary School at Ft. Buchanan, Puerto Rico. The state-of-the-art school incorporates 21st century innovation design elements. It will serve approximately 890 students and a staff of 120 and will include a gym, health services, art rooms, flexible studio learning areas and exploratory and outdoor spaces.

Supporting national security, our team has been there for the Navy, Coast Guard and Department of Homeland Security. At the Krome Detention Facility in Miami, we are upgrading the facilities and improving site security. New housing units we are building will provide increased bed capacity and security improvements will assist with detainee control.

PM-M also supports the U.S. Environmental Protection Agency in executing its Superfund program. This involves construction management, remediation contractor oversight, and periodic sampling at five Superfund sites in Florida. The district completed the first Five Year Reviews of previously approved decision documents for six projects. This EPA review period seeks to ensure human health and the environment continue to be protected after cleanup is complete. In 2013, the district established a partnership with the National Recources Conservation Service providing engineering, design and construction services for a variety of environmental related projects in Florida. PM-M also is supporting USAID in nation building efforts in the Caribbean basin pursuing work in Haiti, St. Lucia, Dominica, St. Vincent, and the Grenadines.

Switching tracks, everything we do is on someone's real estate. It may be federally, state, municipally or corporately owned but be certain that every project in this district is in some way affected by real estate. Luckily, we have a team of experts led by Audrey Omerod that know how to handle these issues. These are just a few of the things this important office handles: review project plans and designs to determine the appropriate real estate interest to support the government project and limit liability; review non-Federal Sponsor (NFS) land certifications to ensure the government has appropriate real estate interest over the life of projects; execute rights of entry for Defense Environmental Restoration Program and FUDS inspections and for unexploded ordinance removal; plans, negotiates, executes in-leases for the Department of Defense Military Program; review NFS lands, easements, rights of way, relocations and disposal area packages for credit toward project costs; and prepare economic updates for projects.

When you think about the mission and all of the projects in this district it doesn't take too long to figure out we would be lost without the work done by our smaller offices and support staff. Thank you for your support to the district's success.

Army Strong. BUILDING STRONG®. JaxStrong.

Alan M. Dodd
Colonel, U.S. Army
District Commander

Real Estate Division employees Tamara Crocker-Howard, Hansler Bealyer, Don Crabtree, Darrin Rosenau and Karl Nixon. (USACE photo).

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Fun, safe Memorial Day weekend at W.P. Franklin kicks off the summer

BY ERICA SKOLTE

(Photos courtesy of Phillip Hart)

A friendly manatee beckons swimmers to W.P. Franklin South swimming beach.

The U.S. Army Corps of Engineers is the nation's largest provider of outdoor and water-based recreation. That's why water safety is a key mission for the Corps, and the reason that the National Water Safety Team mascot made a personal appearance over Memorial Day weekend at the W.P. Franklin South Day Use Recreation Area on the Caloosahatchee River in Alva, Fla.

Bobber the Water Safety Dog helped spread the Corps' water safety message. Visitors met the life-jacket clad mascot and learned how to play it safe around the water. Bobber and Corps volunteers reached out to local children with coloring books and Frisbees, reinforcing the water safety messages taught at local schools.

One of Bobber's primary messages: The most important thing you can do to be safe in the water is to learn to swim, and to swim well, so it's almost second nature.

Bobber and the volunteers also teach the best way to help someone who is in trouble in the water. Although an initial instinct might be to jump into the water to try to save someone, that could lead to double trouble. Unless trained in water rescue, it is best not to get into the water. Instead, the correct approach is: Talk-Reach-Throw-Row-Don't Go.

First, try to talk to the person, and say something like "Stand up" or "I'm here to help." Many people who don't know how to swim sometimes panic and drown in areas where they could have easily stood up if they had been thinking more clearly.

Instead of offering your hand, try to reach the person in trouble with a fishing pole, a tree branch, a rope, a swim noodle, a life ring, a boat oar, a towel, an article of clothing or anything that can be used to pull the person out of the water and to safety.

Throw anything that will float, so the person can grab it and float to safety – even a picnic cooler, an empty plastic jug or a ball.

If a boat is available, row over to the person in trouble, rather than starting the engine and risking injury with the propeller.

Don't go into deep water to save someone, even with good swimming ability. A potential drowning victim is in panic and may grab the rescuer, putting both in danger. Yell for help or call 911 to enlist the aid of someone like a lifeguard who is trained to rescue people who are in trouble in the water.

Other reminders from Bobber are to swim with a buddy and always watch children. Last but not least, Bobber encourages everyone to always wear their life jacket whenever in or around water and while boating. Check frequently to make sure the life jacket is in good condition, that it is the appropriate type for you, that it fits and is buckled correctly. The Corps has life jacket loaner stations, operated on a first-come, first-served basis at the boat ramp at St. Lucie South Recreation Area in Stuart, the swimming beach and boat ramp at W.P. Franklin South Recreation Area in Alva, the boat ramp at W.P. Franklin North Recreation Area and the boat ramp at the Ortona North Recreation Area near Moore Haven.

W.P. Franklin South Recreation Area was not the only busy

Emily (left) and Angelina Allen (right), the daughters of Corps volunteer Linda Ross, visited with Bobber the Water Safety Dog.

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MEMORIAL DAY (continued from **PAGE 3)**

Swimmers and boaters alike enjoyed a beautiful day at W.P. Franklin on Memorial Day weekend. Jacksonvillle District's recreation areas along the Okeechobee Waterway kicked off the summer season by welcoming nearly 4,000 visitors.

spot along the Okeechobee Waterway. They came by land, and they came by sea. Traffic counters at the Corps recreation areas counted close to 4,000 visits over the weekend. The St. Lucie, Ortona and W.P. Franklin campgrounds were full all weekend. Judging by the number of vessels that locked through over the weekend, many boaters enjoyed scenic cruises along the Okeechobee Waterway. Lock operators were busy too, locking through 137 vessels at W.P. Franklin Lock, 94 at Ortona Lock and 59 vessels at St. Lucie Lock.

"Memorial Day, Labor Day and Easter Sunday are always big days for us here at the W.P. Franklin Recreation Areas," said Phillip Hart, park ranger. "We had a lot of people out enjoying the outdoors and it was a very successful Memorial Day weekend for us. The weather was great all weekend, everyone had a good time, and it was safe and incident-free. It's really important to us that everyone who comes out can have fun and return home safely to their family at the end of the day." ♦

Tips from Bobber the Water Safety Dog:

Learn to swim well

Always wear your life jacket when on or near the water

Always swim with a buddy

Never dive or jump into unknown water

If someone is in trouble:

Talk to them and say something like "Stand up" or "I am here to help"

Reach out with something

Throw something that floats

Row to the victim if a vessel is available

Don't go in the water

Instead, yell or run for help.

Call 911!

New survey vessel brings enhanced capability to support district missions

BY ERICA SKOLTE

The name on the transom says it all: the *Florida II* hails from Jacksonville, Fla. The A-frame on the stern is used to deploy sonar towfish capable of collecting data at depths of 30 to 1,000 feet, as well as specialized data such as the presence of metals. (Photo courtesy of All American Marine).

When you see it in action for the first time, it looks very impressive – sleek and powerful. It has all of the bells and whistles, but is much more than a shiny new toy. Like its predecessor, the survey vessel *Florida*, the *Florida II* provides critical support for key U.S. Army Corps of Engineers, Jacksonville District missions, including port dredging, navigation, shore protection, environmental studies, archaeological investigations, geotechnical analysis, military projects, emergency response and tours.

For the Corps, the purchase of a survey vessel is much like getting married and buying a house. It's a big investment and a long-term commitment. It's important to make the right choice to ensure success.

The *Florida II* is a 62-foot aluminum hydrofoil-assisted catamaran hydrographic survey vessel that was built to Corps specifications by All American Marine and commissioned in February 2013. The experienced crew, retired Capt. David Morrison and retired Capt. Rory Riker, along with survey system operators Thomas "Tommy" Thomas and Robert Jenkins trained on the state-of-the-art features and expanded capability of the vessel.

"[It's] stable, fast and can work in rough seas. When you are doing hydrographic surveys, those things are important to get quality survey data. We're more efficient because we can get from place to place faster, and there's less downtime. We can continue to work under heavier seas and in much bigger ports," said Morrison.

The catamaran hull with two pontoons provides a smooth ride and the straight track necessary for surveying. A wave breaker, positioned between the pontoons splits the waves in half, cushioning the ride. With a draft of less than four feet, the 62-foot vessel can navigate relatively shallow waters.

Much of the thought process required for complex procedures like docking is taken care of by computers, said

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FLORIDA II (continued from **PAGE 5)**

Survey technician Jack Salzer at the helm of the *Florida II*. Salzer was working for the Corps when the *Florida* first arrived in 1973. (Photo by Capt. David Morrison).

Morrison. "In the old days, the captain had to look at wind, current and other conditions. It took a lot of concentration to get the vessel to the dock when you had to deal with all of that as well as the rudder and twin propellers."

With the *Florida II*, wind and current are not a concern. There is no rudder and there are no propellers – the jet-drive propulsion system works like a jet ski. "There is still a wheel at the helm, but there is also a joystick that can be used to maneuver," said Morrison. "If you move the joystick to the right, the vessel moves directly to the right, without the extensive back and forth work that used to be necessary with twin propellers. The adjustments for wind and current are made by the computer, so docking is automatic and safer.

"The jets and the joystick are a phenomenal combination," he added. "The maneuverability is amazing. The vessel can spin in its own length, or slide to one side or the other while moving forward or backward at the same time. If we are surveying, the ability to make tight turns means we can gather survey data more efficiently. Being able to move straight sideways at low speeds makes docking so much easier. You push the joystick over sideways and the vessel walks right over."

The *Florida II* cruises up to 36 knots when under way, moving quickly to the next job. Much of the hull is out of the water at higher speeds, thanks to the assistance of a fixed hydrofoil mid-ship. (Photo courtesy of All American Marine).

"It drives like a spaceship," said Riker. "We can walk around the vessel from bow to stern, 62 feet long by 24 feet wide, and control the engines and steer the vessel with the remote control. Being able to walk around the deck and even look over the side of the vessel to see the dock really comes in handy. It you've got a lot of boat traffic, tight docking situations, low visibility or hazards like dense fog, the increased mobility and visibility are a huge safety advantage."

Another key design feature is the hydrofoil assistance. In cross-section, the hydrofoil is shaped like an airplane wing. It lifts the vessel in the same way that airplane wings keep planes supported in the air. When the Florida II hits about 12 knots, the fixed hydrofoil mid-ship lifts the front third of the hull out of the water.

"The foils lift the 62-foot vessel, which displaces 85,000 pounds, reducing friction and drag," said Morrison. "You literally skim over the water, and you can travel at higher speeds while burning less fuel." Top speed on the *Florida II* is twice that of the *Florida*. Normal cruising speed is 30 to 35 knots, and the boat can travel at 25 to 30 knots in rough seas.

Jacksonville District welcomed the *Florida II* (left) and bid a fond farewell to the *Florida*, which served the district for almost 40 years. (Photo by Jerry Burchfield).

State-of-the-art electronics include NAVnet 3D, a navigation system that has a black box like an airplane. "Simon," the state-of-the-art security monitor and alarm system, notifies those on the vessel and supervisors on dry land about issues like flooding, intruders and fire as well as the location of the vessel.

New technology provides expanded options for survey work. In addition to a single-beam transducer that bounces sonar to the bottom and back in one beam, capturing single points of information, there is also a multi-beam transducer that uses an array of pulses at different angles, generating a surface with multiple points. It creates a three-dimensional surface model of the ocean floor, capable of increasingly higher resolution with multiple passes over the same location.

Another new tool is the A-frame and winch on the stern,

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FLORIDA II (continued from **PAGE 6)**

which are used to deploy sonar towfish on a cable to depths of 30 to 1,000 feet. The towfish includes side scan sonar for surveying a wide area, a sub-bottom profiler to distinguish differences in the density of various layers below the surface

The wave breaker positioned between the two pontoons of the catamaran hull splits the waves in half, cushioning the ride. (Photo by Phillip Bates).

and a magnetometer to detect metals.

Green features include LED house lighting on the deck and inside the cabins, and an innovative bottom coating that mimics one of Mother Nature's designs - shark skin. It decreases the friction between the vessel and the water, helping it to move through the water more easily and reducing fuel consumption.

Organisms have a difficult time forming an attachment to the smooth finish and can be easily removed. "Performance is dramatically affected by what is on the bottom of the vessel – things like barnacles, algae and seagrass. This coating keeps the vessel running faster and longer too," said Phillip Bates, mechanical engineer and district plant manager.

Why is the enhanced capability of the Florida II so important? Ports and navigational dredging are key missions for Jacksonville District, and surveying must be done before anything else can happen.

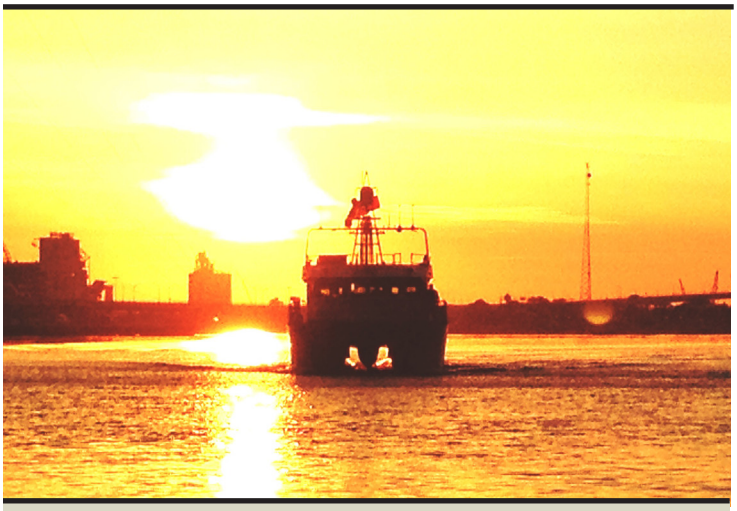
"We must do surveys in a timely manner, or we can't award contracts," said Brian Brodehl, chief of the Survey and Mapping Branch, Operations Division. "We can't do our job without it." Before each award, the area must have a hydrographic survey to record the depths and contours of the bottom. Before each contract is closed out, each area must be surveyed again to determine how much material has been removed, in order to pay the contractor for their work.

"Speed, efficiency and stability make the catamaran the new standard for survey vessels. With our expanded capabilities, we can perform any type of hydrographic survey work needed by the various branches of Jacksonville District," said Brodehl. ♦

The *Florida II* by the numbers:

Length overall: 62 feet
Breadth (beam): 24 feet
Draft: 3.5 feet
Displacement: 85,000 pounds
Cruise speed: 34 knots
Maximum speed: 36 knots
Survey speed: 9 knots
Fuel capacity: 1,400 gallons
Potable (drinkable) water: 150 gallons
Accommodations: Galley (kitchen) and head (bathroom) and 2 single bunks
Green features: Intersleek 900 Foul Release Bottom Paint and LED house lighting
View the video of the *Florida II* by All American Marine at http://bit.ly/11imWrk.

The jet propulsion system (rather than a rudder and propellers) provides improved maneuverability. Even docking is simple; the vessel can move sideways with one movement of the joystick. (Photo by Phillip Bates).



A wave breaker is positioned between the two pontoons of the catamaran hull. It splits the waves in half, much like a deep V-hull design, cushioning the ride. (Photo by Charles Wiggins).

Making people's lives better: engineer donates time and talents to help others

BY JEAN PAVLOV

Engineers Without Borders traveled to the community of Las Vegas in the Nahuaterique region of Honduras in May 2013, to gain water rights from landowners and establish community relations. Crystal Markley (right) is pictured with (l to r) Santos Cristobal (Treasurer of the Las Vegas Water Board) and his daughter, EWB-USA team member Rich Roberts and an unknown community team member. (Photo by Rosemary Takacs, EWB-USA travel team).

Many give of their time and talents to make the world a better place. While changing the lives of others, it's not uncommon that they are changing their own lives. When asked why they freely share of themselves, their answers represent a common theme, rooted neither in politics nor religion, nor a mission to travel and experience new things. What matters is they are making the lives of other people better.

With about 12,000 members, Engineers Without Borders-USA (EWB-USA) currently works on more than 350 projects in 45 developing countries to improve the lives of millions of people around the world.

The Jacksonville Professional Chapter of EWB-USA is currently working on a project in the Nahuaterique region of Honduras. The project is sponsored by a non-profit, non-governmental organization (NGO), Agua y Desarrollo Comunitario (ADEC). ADEC's mission is to provide water boards and specialized technical assistance, training, equipment and installation to improve the quality of water, sanitation, health and hygiene and thus achieve sustainable community development in the rural areas of Honduras.

Crystal Markley, civil engineer in Engineering Division, has worked on two such projects since joining EWB-USA. She has a degree in agricultural and biological engineering from Pennsylvania State University and joined Jacksonville District in July 2010, after a year working as a contractor to the Corps.

EWB-USA programs are partnerships with communities and one or more local NGOs. EWB-USA members train local community members and NGOs to successfully monitor and

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ENGINEERS WITHOUT BORDERS (continued from PAGE 8)

maintain the projects. These partnerships form the basis of a long-term relationship, ensuring the basic needs of the community are met, and will remain in place long after direct EWB-USA involvement ends.

"The first phase of the trip was last December, where we identified three potential projects," said Markley. "We returned in May to secure water agreements and establish community relations." However, one of the three projects was delayed due to problems obtaining a water agreement. The property with the water source is owned by a single landowner, requiring a two-hour trip into the mountains to obtain a signed water agreement. Surveys and soil strength samples must also be taken to support the design.

"Our overall mission is to improve access to clean water and sanitation in the Nahuaterique region of Honduras," said Markley. The water supply system was for the joint communities of Las Vegas and Caiman, with a combined population of about 300.

Providing clean water to these communities will improve the overall health of the community by reducing waterborne illnesses. The crop production and capabilities of the community may also improve, as people currently consumed with the task of gathering water will be able contribute to other tasks. Women will have more time to earn a living by making crafts to sell and children will have more time for education.

Water sources will be protected by implementing improved agriculture methods, irrigation and storm water management. As easier access to clean water becomes available, sanitation improvements may be implemented to treat the additional wastewater. The community partners will be educated about the operation and the maintenance of the systems, and a Water Board and fee structure will be developed to pay for the upkeep and maintenance. It was the community's wish to have tap water at each house.

> ***"We can ask ourselves if we have shown enough kindness and generosity and compassion to the people in our lives. Perhaps we question whether we're doing right by our children, or our community, whether our priorities are in order. We recognize our own mortality, and we are reminded that in the fleeting time we have on this Earth, what matters is not wealth, or status, or power, or fame; but rather, how well we have loved, and what small part we have made of making the lives of other people better."*** **- President Barack Obama**

Markley said that it is imperative that the community has a part in construction of the project as it gives them ownership. "The community will gladly do the manual labor, from digging trenches and collecting rocks to assisting with tank construction," said Markley. They are taught how to maintain the project and EWB returns periodically to ensure the system works as long as possible.

"The thing I love about Engineers Without Borders, is that when I'm working with them, I feel like I'm giving back by using my engineering skills, said Markley. She said that among the best benefits she has received from working with EWB are leadership, problem solving and communication skills.

Crystal Markley, right, sits with children who are wearing the Disney shirts she brought for them on her latest trip with EWB-USA to Las Vegas, in the Nahuaterique region of Honduras. (Picture by Rosemary Takacs, member of the EWB-USA travel team).

The EWB team often brings gifts for the impoverished children of the villages they service. Markley walks through the village distributing hair bows, tank tops and toys to the children.

Now that data collection is complete, Markley's team will work on project design, which will be submitted to EWB-USA for approval. They plan to travel back to Honduras for construction of the project in two phases – in October 2013 and March 2014. Markley takes annual leave to travel with EWB.

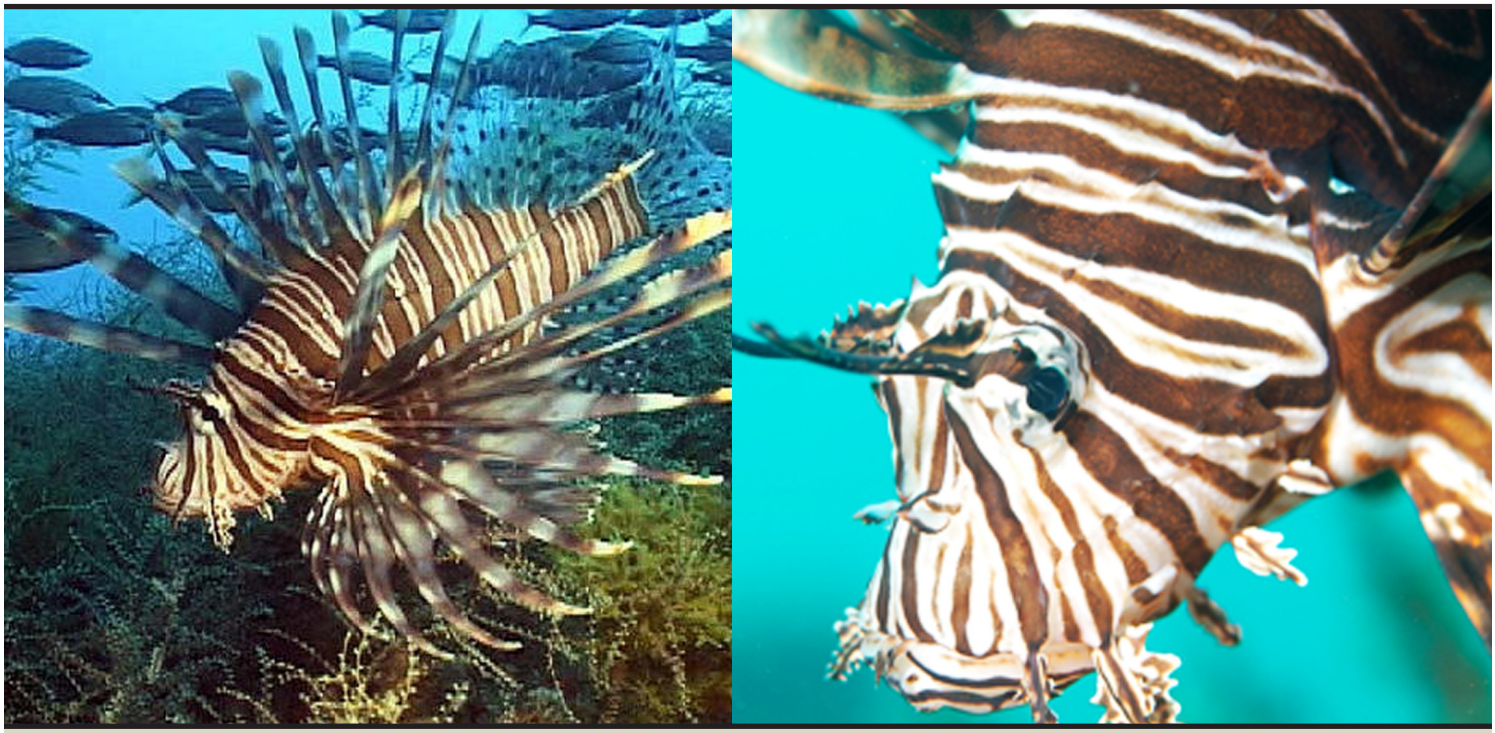
Markley said that it helps to travel with other experienced professionals. "You tend to find the people who have been around the block a few times. There is one woman who worked first for the Peace Corps and now works with our EWB chapter," said Markley. "I get all my tips from her. Every time you go on one of these trips, you learn what to do and what not to do. And if you have a seasoned professional [with you], who has been all over the world, and knows many languages and many cultures, you are ahead of the game."

Markley doesn't know Spanish, but plans to learn it soon. "It would really help, especially where I am now."

"The things that people in Engineers Without Borders do are an inspiration to me and that's why I like volunteering with them," said Markley. "The effort to help a fellow human being and make their lives better. To give back some of what we have." ♦

Lionfish continue to populate, pose threats to coral reefs

BY ANNIE CHAMBERS



(Left) A red lionfish swims in the Atlantic Ocean. The aquarium trade is the most likely explanation for the invasion of the lionfish in the Atlantic Ocean. (Photo courtesy of NOAA website). (Right) Lionfish were first reported off Florida's Atlantic Coast in 1985, according to the Florida Fish and Wildlife Conservation Commission website. Lionfish can reach up to 22 inches in length and have a venomous spine that can cause painful wounds. (Photo courtesy of Florida Fish and Wildlife Commission).

Their dorsal spines and zebra-like bodies may draw one in for a closer look. Commonly used in aquariums for show, the invasive lionfish has made its way from the South Pacific and Indian Oceans to the east coast. In the past decade, they've been rapidly expanding from Florida to North Carolina, as well as the Caribbean.

Lionfish may live longer than 15 years and reach sizes exceeding 20 inches. Their venomous spines are capable of fending off predators and stinging humans, according to the Reef Environmental Education Foundation (REEF), an active organization of divers and marine enthusiasts. Lionfish reproduce throughout the year, nearly every four days, and females can spawn more than two million eggs per year.

Lionfish are venomous and have up to 18 needle-like spines. However, the meat of the lionfish is not poisonous. If stung, the National Oceanic and Atmospheric Administration (NOAA) recommends treating a puncture wound by immersing it in hot water for 30-90 minutes, and seeking medical attention as soon as possible. The Poison Help Hotline at 1-800-222-1222 is available 24 hours a day.

Coral reef community population structure and dynamics are at risk as a result of the influx of lionfish. These predators out-compete other species such as fish and invertebrates for food resources and they have few known predators, according to NOAA's Coral Reef Information System (CORIS) website.

NOAA's experts believe that lionfish populations will continue to grow and are unable to be controlled with conventional methods. Lionfish are established along the southeastern coast of the United States, Bermuda, the Bahamas and throughout the Caribbean.

The Florida Fish and Wildlife Conservation Commission recently waived the recreational fishing license requirement to harvest lionfish. The change allows divers to easily assist in the control of the lionfish population. This will allow people to take as many of the invasive fish as possible.

NOAA and the United States Geological Survey (USGS) as well as professional and recreational diving communities are working to help remove and control lionfish. The Florida Fish and Wildlife Commission encourages people to remove lionfish; they can be speared, caught in hand-held nets or caught on hook and line. Lionfish can be reported to REEF's online reporting form. ♦

OVERSEAS CONTINGENCY OPERATIONS

WELCOMEHOME

GRISELLE GONZALEZ

FRANK ZEPKA

Jacksonville District prepares for potential emergency

BY JOHN H. CAMPBELL

Senior leaders from Jacksonville District listen as Emergency Management Branch Chief Aaron Stormant fires questions to the group during a Continuity of Operations (COOP) exercise conducted June 4. The exercise tested the COOP plan through a discussion on how critical operations would be conducted if the district's headquarters building were inaccessible due to disaster. (Photo by John Campbell).

"Logistics, what's your role at this point?"

"Corporate Communications, how are we getting information out to our employees?"

"Is everyone's computer working at this location?"

That's just a sampling of some of the questions that were asked during Jacksonville District's Continuity of Operations (COOP) exercise held June 4. The exercise was the latest activity conducted by the district in preparation for hurricane season, which began June 1.

"It was a great exercise," said Col. Alan Dodd, district commander. "It was a great opportunity for us to come together and focus on what we would do and how we would do it during a disaster."

The exercise tested the COOP plan, which identifies critical actions that must continue in the event the district's headquarters building was no longer inhabitable because of fire, flood or some other event.

"The objectives were to exercise and remind our Crisis Action Team (CAT) on what is involved in a potential building closure or threat from both notice and no-notice events," said Aaron Stormant, Emergency Management Branch chief. "This exercise allowed the CAT to go to the actual COOP site, which will become a strategic command post for our operations. It familiarizes the team on where they would go in a real event."

The district's CAT consists mostly of division heads and staff chiefs. As part of the exercise, they described considerations, decisions and actions as a simulated hurricane moved toward Florida's east coast, with Jacksonville in its crosshairs.

"We have a responsibility to fulfill our missions whether we are in the headquarters building or if we need to work some place else," said Dodd. "This exercise gave us the opportunity to look at how we would operate should our building be uninhabitable."

Stormant says participants met the objectives of the exercise, even though it was a new experience for many of them.

"We got great feedback from the CAT during our hotwash at the end of the exercise," said Stormant. "Many leaders had no idea what was involved in a COOP, as several that were here for the last COOP in 2010 have moved on, retired or are in other positions."

The Emergency Management Branch is now updating the district's COOP plan. Stormant continues to remind people to avoid becoming complacent.

Col. Alan Dodd, district commander, addresses participants during the COOP exercise June 4. Dodd reminded staff, "We have a responsibility to still be able to fulfill our missions whether we are in the headquarters building or if we need to work someplace else." (Photo by John Campbell).

"The last time we had a major hurricane come through Jacksonville was Hurricane Dora in 1964," said Stormant. "The last time we had a major scare was in 1999 from Hurricane Floyd, where cars were backed up all over the place. People were not prepared."

"There's always a chance a disaster could happen in Florida," said Dodd. "We need to be able to react to that. That means more than just taking care of our families. For some people, it means continuing to do our jobs and continue our operation. Everyone needs to think about what they would do in case of a disaster or hurricane and put personal plans into effect." ♦

District celebrates 19 years of Military/Interagency & International Services support

BY NAKEIR NOBLES

Mike Ornella, Interagency and International Services branch chief, addresses celebration attendees. Ornella says the small IIS program operates on a limited budget but contributes a considerable percentage to the district's full time equivalent. (Photo by Annie Chambers).

Staff gathered Thursday, June 6, to celebrate the 19th birthday of Jacksonville District's Military/Interagency & International Services (PM-M) branch. Joining the celebration were two former employees who were instrumental in the program's creation.

Richard Bonner, retired deputy for programs and project management and Jim Boone, retired chief of PM-M, played key roles in the development of the PM-M program.

Bonner, referred to as the district's "grandfather of Support for Others," said it is one of the few branches that has direct customers.

"These [customers] have an option and can choose whom they want to do business with. We're a customer-oriented service," he said.

Before it was known as IIS, the branch was called Support for Others. Its long history began in 1948 with the construction of the first launch pad for the nation's early space program. Two engineers for the district's Tampa office laid the concrete.

The Corps' IIS program provides reimbursable technical services to other federal agencies as well as states, local units of government and international governments. The program's objective is to identify and match Corps engineering and related services with the evolving needs of the American and international communities. In the age of government downsizing, many agencies need the capability to effectively accomplish engineering or construction support of their mission.

"This program is sometimes forgotten about," said Mike Ornella, branch chief. "Our small program operates on a limited budget of approximately $70 million out of an approximate $500 million district budget; however, we contribute 25 percent of the district's full time equivalent." A full time equivalent is an opening that an organization has available to hire a full-time person.

In comparison to the district's more popular programs, PM-M projects are small. Civil works projects can have a multi-million dollar price tag, whereas PM-M projects generally range from a few hundred thousand to approximately $2 million.

"Even though a project may be a small one for us, it could be that [organization]'s only project and their only interface with the Corps," Bonner said.

Jim Boone, who Ornella calls the "father of Jacksonville District's military and Support for Others program," said the Corps has supported the nation since President Washington's era.

"When the Corps of Engineers was first created, we were the nation's only engineers. After the Revolutionary War, the Corps was called upon to implement many national activities. Those activities included building and maintaining ports and harbors, water supply, infrastructure, whatever the nation needed," Boone said. "When the nation needed insurmountable assistance, they called the Corps."

PM-M has integral roles in projects with the Miccosukee Tribe of Indians of Florida, Department of Defense Education Activity, Commonwealth of Puerto Rico and locally with the U.S. Navy and the U.S. Coast Guard at Naval Air Station Jacksonville and King's Bay, among others.

The branch also boasts that its Formerly Used Defense Site (FUDS) program has the fourth largest inventory in the Corps. With more than 200 projects in Florida and Puerto Rico, approximately one-third of those projects are active, with a study or remediation in progress.

"Whatever the need of the nation is, you're doing it. The fact we continue to exist is a tribute to everyone in this room," said Boone.

"We have a chance to serve the nation and do the right things," said David Hobbie, deputy for programs and project management. ♦

Regulatory's Caitlin Hoch and team headed to national competition

BY NANCY J. STICHT

Tampa Regulatory Office's newest environmental engineer Caitlin Hoch has already added a pretty impressive credential to her resume. The recent University of South Florida graduate and her student design team, EMC Magnitude Design, Inc. took first place in a recent competition sponsored by the Florida Water Environment Association, beating 10 other teams from seven state universities. They will advance to represent the state in the national competition at the Water Environment Federation Technical Exhibition and Conference this fall.

EMC Magnitude Design, Inc. was contracted by its client, the city of St. Petersburg, to investigate algae blooms within Booker Creek, a high quality water resource that drains into Tampa Bay, and to suggest stormwater improvements to alleviate nitrogen over-enrichment.

"Excess loading of nitrogen and phosphorous compounds is one of the most prevalent causes of water quality impairment in the United States, significantly impacting aquatic life and long-term ecosystem health, diversity and balance," said Hoch. "It results in harmful algal blooms, reduced spawning grounds and nursery habitats, fish kills and oxygen-starved hypoxic or 'dead' zones."

Algal blooms can block sunlight needed for submerged grasses and other organisms to grow. They can increase turbidity, impairing the ability of aquatic life to find food, and can damage or clog the gills of fish and invertebrates.

Excess algal blooms also result in a range of economic losses, including lost revenue from impacts to commercial fisheries, recreational fishing and boating trips and tourism. Drinking water costs increase and waterfront property value decreases.

According to research conducted by EMC Magnitude Design, Inc., Florida's marine recreational fisheries economic value is higher than any other state in the country, contributing more than $5 billion to Florida's economy in 2006. In 2008-09, more than one million individuals bought a marine recreational fishing license, generating approximately $29 million in revenue. Similarly, Florida has one of the nation's top producing commercial fisheries.

Booker Creek is located in Pinellas County, the most densely populated county in Florida, where about 90 percent of the area has been converted from its natural state to urban land uses. The suspected main source of nutrient loading into Booker Creek is residential and commercial fertilizer applications. The primary objective for the design team was to address these concerns by reducing human-caused nutrient levels and coupling it with a design to treat stormwater runoff.

After analyzing data, land uses and several other sources, the team determined that the headwaters of Booker Creek, specifically Woodlawn Lake, were the primary contributor to the impairments and focused their efforts on reducing the nutrients draining from the lake into Booker Creek.

Their proposed design included building a new component to add to an existing weir to limit the amount of water draining from the lake, re-grading the banks of the lake and widening the littoral shelf. Holding water in the lake for a longer period allows time to treat the water and remove a percentage of the pollutants by allowing them to settle and then be absorbed by vegetation, resulting in cleaner water flowing into the creek. An overflow weir will allow water to drain from the lake when there are heavy rains, so the surrounding neighborhood will not flood.

The members of EMC Magnitude Design, Inc. at Booker Creek, the site of their award-winning water environment improvement design. Pictured left to right is Miki Skinner, Caitlin Hoch and Brett French. Team members not pictured are Erin Morrison and Josh Becker. (Photo courtesy of Caitlin Hoch).

Another element of the proposed design is the placement of Floating Treatment Wetlands (FTWs), buoyant mats through which plants grow into the water below. The plant roots stay suspended in the water column, providing a large surface area for direct nutrient uptake from the water column and treating the water as it passes through the roots. Finally, the team recommended non-structural elements such as public education and routine maintenance, including mowing the lawn, removing dead vegetation, planting new vegetation and cleaning up trash.

"The main goal of the entire project is to gain some 'real

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CAITLIN HOCH (continued from **PAGE 13)**

world' experience, so we acted as an actual engineering firm, not just a student team," said Hoch. "EMC Magnitude Design, Inc. stands for Erin, Miki and Caitlin, the three original members of the team. Two other members joined us later."

Hoch's role on the team was to analyze historic and current water quality data within Booker Creek. She analyzed data that was uploaded to an online data warehouse managed and maintained by the U.S. Environmental Protection Agency. The team also had water quality samples taken within the headwaters of Booker Creek at Woodlawn Lake and Booker Lake to be tested for levels of total nitrogen, dissolved oxygen, and chlorophyll a in support of their study.

"We were able to successfully identify a significant problem within the Booker Creek watershed and develop an achievable design that has beneficial results. Our client was so pleased with our design that he is working to have it implemented," Hoch reported.

EMC MAGNITUDE DESIGN

Hoch, who has served in Jacksonville District as a student aide since 2008, earned her bachelor's degree in civil and environmental engineering and was recently promoted to her new full-time position. She and her team will present their project design at the national competition in Chicago in October. ♦

Corporate Communications Office
U.S. Army Corps of Engineers, Jacksonville District

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