# CONSTELLATION

Baltimore District

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Fall 2013

# CONSTELLATION



## Inside this Edition

Ceremony celebrates the grand opening of the Greenside Pathway at Raystown Lake
*-- Photo by Steven Bryson*

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***http://about.me/usace.baltimore***


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# Contractor support is **the key to our success**

The Baltimore District is busy with major projects in all of our business areas and we can only do this with the effective and robust support from the contracting community.

It is my privilege to lead a multi-talented team of civilian and military professionals as we work projects such as environmental remediation, military construction, support for the Intelligence Community and many other areas.

All of the work you will see in the Constellation can only be accomplished with the dedicated support of the contracting community. The Baltimore District serves as the construction and program manager for our civil works, military and environmental projects. We must have and maintain a strong relationship with contractors who will work closely with us. I have a renewed outreach effort (see the story on page 5) so that my District and the contractor community stay in constant touch. We are also using social media outlets to increase our outreach so that the government gets the best value and innovation in completing our projects.

I recognize that every project we do is high-profile for a very simple reason – there is a community or organization that really cares about it and needs our expertise to see it through safely, on time and on budget. My program and project managers recognize that as well.

As an example, the Spring Valley neighborhood in northwest Washington, D.C., has had a Corps presence for almost 21 years as we constantly work to clean up and remove threats to human health or safety from chemical weapons research done at the American University Experiment Station (AUES) during World War I. The District leads on this project with the able partnership of EPA Region III and the District Department of the Environment. For the next year, we are concentrating our work at 4825 Glenbrook Road. Last November, we demolished an upscale home there and since then, we have prepared the property for an extensive excavation similar to an archaeological dig. In coordination with our partners, the neighbors and the local Restoration Advisory Board, we will search under the former residence down to bedrock to remove any AUES debris. During the summer, our technicians completed training and began the work in late September. We will keep the community informed on our progress.

Supporting the intelligence community, we issued the contract on Fort Meade for the High Performance Computing Center. In Bethesda, the Intelligence Community Campus renovation is underway and on schedule.

We continue to serve our Soldiers with new and renovated facilities on installations in Maryland, Pennsylvania and northern Virginia. At Fort Detrick in Frederick, we completed the Emergency Services Center. On Fort Meade, we continue building the new headquarters for the Asymmetric Warfare Group and renovating and expanding the Defense Information School. We have multiple infrastructure projects on Fort Belvoir in northern Virginia.

There is much more, and you will see a good cross-section of stories in this edition. We continue to support our Nation and our customers by using the expertise and dedication of our diverse team in every project. Let me know what you think!

***Essayons! Building Strong!***

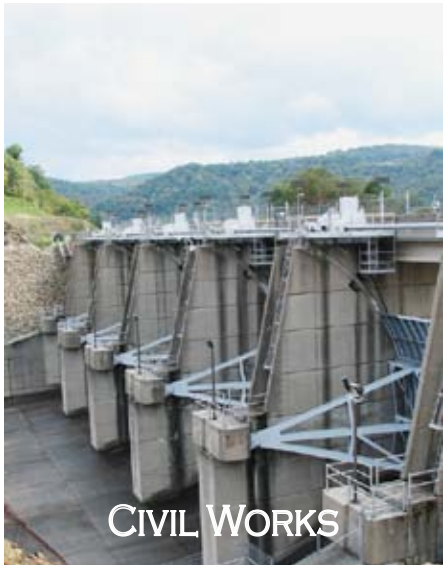
COL Trey Jordan
U.S. Army Corps of Engineers
Baltimore District Commander

# U.S. Army Corps of Engineers
## Baltimore District

# Industry Day

### Discover New Business Opportunities







November 5, 2013 • 8 a.m. – 12 p.m.
Sheraton Baltimore City Center

For More Information & to Register:
www.nab.usace.army.mil/BusinessWithUs/IndustryDay

# Corps engages Maryland
# contractors and small businesses

**Story and photo by Julia Battocchi**

Baltimore District leaders are engaged in strategic efforts to highlight contracting opportunities for industry groups across the region through traditional outreach and social media.

The number of events, ranging from a Maryland construction roundtable in May hosted by Sen. Barbara Mikulski to a small business military engineer forum to be held later this fall, is increasing as online engagement is also growing.

"I'm really excited about this," Mikulski said to a standing-room-only audience at the Department of Labor, Licensing and Regulation (DLLR) in May.

Contractors, representatives of the Maryland DLLR and Col. Trey Jordan, Baltimore district commander, met to strengthen the partnership and relationship between veterans, small businesses, contracting companies and the state of Maryland.

"The Corps needs a robust private industry that can spur innovation and competition to build each project, whether it is a military hospital or covert data center, and deliver it to the our valued customers," said Jordan.

District leaders are holding industry forums to increase competition on specific projects. One recent meeting elicited requirements directly from contractors.

"This is a win/win recommendation which will result in cost savings," said Jeff Wiggin, project manager for Baltimore Harbor Maintenance Dredging.

In fiscal 2014, the Baltimore District will undertake construction of numerous projects, which run the gamut from environmental cleanup at former munitions sites and defense relocations to facilities necessary to medical research and cyber security. These high profile projects, and others like them, require firms with unique technical expertise.

Reaching these firms is no longer exclusively a matter of holding events. Today the District posts opportunities, capabilities, and events on LinkedIn and has an online business card that loops interested parties into the full range of networks we use. Using social media and other web-based tools, we are connecting with audiences that may have been harder to pursue in the past.

Internally, meetings like the recent Small Business Administration (SBA) training on the DoD/SBA 8(a) partnership agreement are aligning employee capabilities with business objectives to increase small business participation.

"The training enables not only contracting professionals, but project managers and technical staff to achieve better acquisition outcomes," said Tamika Gray, deputy for small business.

Later this fall, Col. Jordan is slated to speak to a series of industry groups, including local chapters of American Council of Engineering Companies and Society of American Military Engineers. The season's culminating event will be an industry day with District leaders, including the heads of all major program areas. Architecture, engineering, and construction firms will hear about upcoming business opportunities and the District's mid-term outlook, in addition to one-on-one networking with technical leads following the presentations.

A Maryland contractor, Col. Trey Jordan and DLLR Commissioner James DeJulius speak following the Construction Roundtable.

For more information on doing business with Baltimore District, visit:

**http://www.nab.usace.army.mil/BusinessWithUs**

# Multi-agency team begins careful excavation at 4825 Glenbrook Road

After 10 months of preparation including equipment placement, intense training and multi-agency coordination, Baltimore District's Spring Valley team is turning dirt to excavate the key investigation site in the upscale Spring Valley neighborhood in Washington, D.C.

A three-person dig team trains inside the ECS wearing the full personal protection equipment. Photo courtesy Engineering Division.

People passing by 4825 Glenbrook Road during the last year probably noticed the site's enormous transformation. A stately colonial brickhouse once stood on this half-acre property, now owned by American University. After thorough coordination and input, the house was demolished in November 2012, making it the first house to be removed at a Formerly Used Defense Site (FUDS).

The house demolition marked completion of the first phase of the cleanup of the property, which was used in World War-I for research and testing of chemical agents, equipment, and munitions at the former American University Experiment Station (AUES). Once crews demolished the house they began preparing the site for high probability operations. The team uses the phrase high probability to emphasize the likelihood that they will find and remove chemical warfare materiel in specified areas of the property.

"Staff from across the Corps of Engineers, Department of the Army, Environmental Protection Agency, District Department of the Environment and American University has worked tirelessly to get to this point of the investigation," said Brenda Barber, project manager. "The team is aware and prepared for the discovery of AUES debris throughout this process. This is a very complex environmental cleanup project, and we will be using proven engineering control technologies to protect our workers and the community throughout the process."

From the curb on Glenbrook Road to the back edge bordering Kreeger Road on the American University campus, the property rises approximately 30-40 feet on three plateaus. This geography made it challenging to place equipment for the operations. Each of these key pieces of equipment has been tested and used for years at Spring Valley and other Formerly Used Defense Sites (FUDS) across the country.

Where the former house stood, now you see the ***1) Engineering Control Structure (ECS)***, a 60'x80'x27 tan tent with its polyurethane material pulled taut over a metal skeleton. This tent is secured to the ground, and kept under negative air pressure by the ***2) Chemical Agent Filtration Systems (CAFS)***. This means that no air will escape from under or around the tent. Assurance that the tent is under negative pressure has been tested and proven by Edgewood Chemical and Biological Command, one of our multi-agency team members. Under the ECS, workers in full personal protection equipment will use an excavator and at times dig by hand to excavate soils down to bedrock to find and remove any AUES debris.

The CAFS are connected to the ECS by a large duct, a large aluminum tube similar to HVAC ducting that allows the air inside the ECS to be transferred from the ECS to the CAFS for treatment. The three CAFS are large pieces of equipment, each with multiple carbon filters to clean the air coming from the ECS. The CAFS has a unique


1) Engineering Control Structure (ECS)
2) Chemical Agent Filtration Systems (CAFS)
3) Noise Dampeners
4) Continuous Near Real-Time Air Monitoring System (MINICAMS)

Photo by Steven Bryson

The Engineering Control Structure is secured where the house stood in the front yard at 4825 Glenbrook Road. Photo courtesy Engineering Division

feature called ***3) noise dampeners*** to ensure that their operating noise level is within the Washington, D.C. guidelines (55 decibels) at the edge of the project.

Additionally, a ***4) continuous near real-time air monitoring system***, called MINICAMS, has been installed on the site in trailers near the CAFS. While it looks like a trailer from the outside, the inside of the MINICAMS is a high-tech monitoring and near real-time analysis of the air coming out of the ECS. Its monitors, located in the CAFS, look for key chemicals in the airflow. If a sensor notes a chemical of concern, the technicians from the Edgewood Chemical Biological Center alert the site leadership. Coordinated protocols have been established with extensive situational training on how to respond.

Coming up a steep hill at the back of the property sits the command trailer and the worker's break trailer. This is the nerve center for the entire site. From here, project leaders will have radio communications and visual oversight of the project area. In addition, 360-degree-view cameras inside the ECS provide the site leadership with an immediate update on excavation operations as the three-person dig team works deeper and deeper into the soil.

The dig team will wear a full personal protection equipment ensemble, including a breathing apparatus. Site leaders carefully review the weather each day and adjust work schedules if local conditions (heat and humidity) could cause a safety issue.

A site crew of approximately 50 workers, representing multiple agencies and organizations, will be onsite every day during this work. This includes Corps colleagues from the Huntsville Center, Army representatives from the Edgewood Chemical-Biological Center and 20th Support Command (CARA), and District of Columbia police personnel. For safety, an ambulance will be parked near the command trailers, ready to respond to any injuries that may occur on the site.

During the almost 21-year Spring Valley Formerly Used Defense Site (FUDS) project, nearby residents have not needed to shelter in place to avoid a chemical release. However, as an added safety layer, the Corps of Engineers has implemented a Shelter-in-Place system that includes an evacuation zone, a notification system with a strobe light and siren alerting system to alert residents, and a ring down call system.

There are eight residences and designated American University staff that would be notified if any chemicals of concern are released into the atmosphere. Project leaders have met with these families, and tested telephonic and email notification systems in English and Spanish. This system will be tested monthly throughout high probability operations.

Recognizing that this is a high-profile project, Barber and her team have maintained a robust and transparent communications effort. This includes meetings with community members, weekly updates on the District's website, and multiple news media interviews, emphasizing project safety.

"Our communications efforts will continue throughout the remainder of the project," Barber said.

To see an interactive tour of the 4825 Glenbrook Road project visit:

http://youtu.be/yVws5UnBuZw

*-Brenda Barber, Clem Gaines and Andrea Takash contributed to this article*

# Modern Emergency Services Center opens at Fort Detrick

Story and photo by Brittany Bangert

Baltimore District Commander Col. Trey Jordan, left, joins Fort Detrick officials in the ribbon cutting for the new 42,000 square foot Emergency Services Center that will house the Fort Detrick Fire Department, the Provost Marshal and administrative support.

The U.S. Army Corps of Engineers Baltimore and New York Districts, in coordination with the Fort Detrick Fire Department, officially opened the Emergency Services Center on Aug. 28.

The $16.1 million, 42,000 square-foot facility supports the National Interagency Bio-defense Campus, and allows many organizations – including the Fort Detrick Fire Department, the Provost Marshal and administrative support – to work collaboratively in the same building to keep the base and community safe.

"This isn't just a building," said Baltimore District Commander Col. Trey Jordan. "It's enhanced emergency services capabilities to serve the Fort Detrick community for years to come."

The facility, designed and constructed in a little more than two years, supports public safety with key features such as the six-bay emergency equipment garage with drive-through access, offices and meeting rooms for emergency services personnel, a fitness center, recreation room, dorms, dining areas and sleeping quarters for the police and fire department personnel working extended hours.

"Our engineers and architects in the military design branch, in coordination with our colleagues in New York District, wrote the design criteria," said Christy Pispitsos, Engineering Division. "This in-house design process reduced overall project costs, leveraged our expertise and delivered a product quicker. Also, the teamwork with New York was fantastic," she said.

The center includes a fire station control system that automatically sends color-coded messages throughout the bays to initiate the doors to open. In an emergency, televisions will mute and the fire fighters will see the color-coded messages displayed on the screens, and will then respond accordingly, said Scott Ercolino, officer engineer for the Corps' Baltimore District.

Additionally, the cutting edge center includes an apparatus bay that initiates exhaust ventilation before the engine starts.

"It's very rare to have a ventilation system that initiates before the engines do," said Will Hettchen, the project manager for the Corps' Baltimore District. "But, this system helps to efficiently ventilate the air within the garage."

This facility also features an on-site, 50-foot training tower allowing firefighters the ability to conduct training without leaving the site, as well as a manhole at the base of the tower for confined space training, said Hettchen.

Aside from the technical advancements, the center also helps protect the environment. Earning Leadership in Energy and Environmental Design, or LEED, Silver certification, the project features a vegetative green roof to improve air quality and permeable pavers to help reduce runoff to the Chesapeake Bay.

"Thanks to a partnership with the Corps of Engineers, this project reaches wider than just the community of Fort Detrick and what's inside the fence. It actually touches the community outside," said Col. Steven Middlecamp, commander of Fort Detrick.

Both Fort Detrick and parts of Frederick outside the installation will be served by this center.

# NGA CONSTRUCTION CONTRACTOR
# REACHES CRITICAL SAFETY MILESTONE

**Story and photos by Julia Battocchi**


**Representatives of Corps headquarters, Baltimore District, AKHI Construction, TMG Construction and Ahtna Engineering celebrate an important safety milestone during construction at the Fort Belvoir New Campus East.**

Contractors for the National Geospatial-Intelligence Agency New Campus East (NGA-NCE) project, along with the Baltimore District, were recognized June 11 for reaching 1,400 days without an accident resulting in lost work time.

"This is an outstanding achievement that speaks highly of the safety culture of both our contractor teammates here at the NGA project as well as our U.S. Army Corps of Engineers (USACE) leadership that are committed to keeping our entire team healthy and safe," said Richard Wright, USACE chief of safety and health.

TMG Construction Corporation has been involved with NGA-NCE construction since the beginning of the project. Working with subcontractors, they ensured the safe environment of their employees during construction of a field office, and on a variety of gas, IT, electrical, sewer and power contracts. Company-wide, TMG has reached 1,000,000 hours without an accident resulting in lost work time across their entire portfolio.

"I strongly believe that these achievements are the result of a work culture based on hard work and commitment to teamwork, training, communication, personal ownership, and continuous improvement," said Ed DeNeale, director of safety and health at TMG.

Part way through the construction, TMG partnered with another small firm – Ahtna Engineering Services – to form a joint venture around their shared values. The venture, called AKHI Construction, completed additional work focusing on the project's infrastructure, including roads, a water tower and critical utilities installation. AKHI worked 1,400 days – and counting – without a lost time accident.

"Today was a rare opportunity to celebrate with our partners as they mark a significant achievement as the result of the successful management of their safety program," said Patrick Morris, chief of Baltimore District's safety and occupational health office. "Achieving 1,000,000 hours/1,400 days without a lost work time accident is noteworthy, especially in the construction industry, where hazards are common, not routine and change daily."

Workers across the construction industry are exposed to occupational risks on a daily basis. According to the Occupational Safety and Health Administration, there were 738 deaths in the private sector in 2011, over 50 percent of which were attributed to just four causes.

"We need to commit ourselves to plan and to engineer out unsafe conditions," said Joseph Matthews, TMG principal.


**Col. Trey Jordan, District Engineer, addresses contractors and safety professionals at the partners in safety celebration, following contractor achievement of 1,000,000 hours without a lost work time accident or injury.**

Another critical component of TMG's success was their ability and willingness to partner with the Baltimore District.

"From USACE's perspective, communicating the safety message and enforcement of safety and health requirements, is always a challenge," said Morris. "This challenge is lessened when we have willing partners like TMG and AKHI that value safety and health as much as we do. When we work safely as a team, we all benefit and are better able to focus on delivering a quality product to our customers on time and within budget."

# Corps celebrates America's Great Outdoors, opens new pathway

**Story: Stacy Ouellette / Photos: Steven Bryson**


**Center: A sign outside the Raystown Lake Ampitheater announces the grand opening of the Greenside pathway. Bottom Left: The newly opened Greenside Pathway stretches 2.3 miles around Seven Points Recration Area. Bottom Middle: Keynote speaker Ms. Jo-Ellen Darcy speaks before a crowd of visitors and dignitaries at the Grand Opening Ceremony. Bottom Right: Two visitors enjoy the view of Raystown Lake from one of the many benches positioned along the pathway.**

A new 2.3 mile pathway around the Seven Points Recreation Area, made 100 percent out of recycled materials, should reduce traffic congestion, increase pedestrian safety, and provide a healthy alternate to driving.

The U.S. Army Corps of Engineers (USACE), Baltimore District, celebrated an America's Great Outdoors event to officially open Raystown Lake's Greenside Pathway, June 20.

The Assistant Secretary of the Army for Civil Works Jo-Ellen Darcy was the keynote speaker for the formal presentation taking place at Raystown Lake Amphitheatre.

"The trail here at Raystown is a perfect example of how we in the Corps are incorporating the President's initiative on America's Great Outdoors and sustainability," Darcy said. "This trail was made from recycled rubber. It looks beautiful, is easy to maintain and connects 19 different sites within this park."

And Greenside Pathway promises to connect visitors to nature.

"The trail gives us an opportunity to connect people to the America's Great Outdoors, to link the visitors to a healthier lifestyle, and educate visitors about a greener way of life," said Jude Harrington, Raystown Lake acting operations manager. Made of 38,000 recycled tires, the trail serves as a tangible symbol of environmental stewardship, said Brig. Gen. Kent Savre, USACE North Atlantic Division commander.

Ms. Jo-Ellen Darcy, Maj. Gen. Michael J. Walsh, and Brig. Gen. Kent Savre, listen as Jude Harrington speaks about the Greenside Pathway during the opening ceremony.

"The trail actually does a lot of things – it promotes safety by keeping people off the roads, fitness, environmental stewards and it's a first-class trail that ties all the facilities here together," Savre said.

But the main force that drove the project from its inception was safety for the popular and busy recreation area.

"The project started with a simple goal of getting our visitors off this road as it was very dangerous," Harrington said. "We have the number one revenue generating campgrounds in the whole Corps of Engineers and the largest marina in the state of Pennsylvania."

As the largest recreation provider within the federal government, USACE facilities receive more than 370 million visitors a year. Ninety percent of USACE recreation sites are easily accessible being located within a 50-mile radius of a metropolitan area, Darcy said.

"The recreation side of our house is a result of many of our construction projects. We have dams that have created lakes like Raystown and because of that, we have provided this huge recreation facility for the state of Pennsylvania for everybody to enjoy," Darcy said. "We're pretty proud of that and when you think of that red castle next time, think of it next to a lake," she added.

The pathway was made possible by a grant for $854,450 provided by the Federal Transit Administration's Alternative Transportation in the Parks and Public Lands Program. Raystown Lake was the only USACE project to receive money from this funding source at the time, Harrington said.

Partnerships are the key factor in getting the word out about USACE recreation sites, and those relationships also provide volunteers nationwide.

One of USACE's greatest partnerships is with the people who use the facilities. USACE is known for its dams and reservoirs, but the facilities do not enjoy the same type of fame, Darcy said.

Following the ceremony, Ms. Jo-Ellen Darcy joined Park Rangers Allen Gwinn and Tara Whitsell with Brig. Gen. Kent Savre for a walk on the pathway. The pathway was paid for with a grant through the Federal Transit Administration's Alternative Transportation in the Parks and Public Lands Program

"It's the people that live nearby who treasure the resources and help us to provide our recreational services," Darcy said. "We've had 55,000 volunteers to help us (nationwide). We have recreation sites in 43 of our 50 states."

A ribbon cutting ceremony took place after the formal presentation at the kiosk adjacent to the trail near the Huntingdon County Visitor's Bureau.

Following the ribbon cutting, distinguished guests, Darcy and Maj. Gen. Michael J. Walsh, USACE deputy commanding general for civil works and emergency operations, planted two American Chestnut trees with Boy Scouts from Troop 24. The planting was in partnership with the American Chestnut Foundation.

Go to www.recreation.gov for more information on USACE run recreation sites nationwide.

# Two Baltimore District teams recognized **for excellence in sustainability**

**By Ashley Roberts**

A group of students look at a bioretention area, or rain garden, during low impact development training. Courtesy photo

Two Baltimore District Planning teams were recognized at the 2013 USACE Sustainability Awards for their excellence in sustainability, design and construction achievement, with one team winning the Green Innovation Award and the other winning the Green Dream Team Award.

The Green Innovation Award, presented to the Chesapeake Bay Total Maximum Daily Load (TMDL) team, recognizes an innovation or idea with clear potential to transform the Federal community's overall energy and environmental performance.

The Chesapeake Bay TMDL is the first and only region-wide TMDL crossing six states and Washington D.C., and its focus is on targeting water quality impairments for three pollutants in the watershed – nitrogen, phosphorus and sediment.

"This is not your standard project," said Chesapeake Bay Coordinator and Technical Lead Heather Cisar. "Something like this, that covers a whole region over many states, has never been done before. The team really had to put their heads together to meet the TMDL requirements, and we had to tap in to a variety of technical expertise to find a scientific and logical approach to the problem."

The Green Dream Team Award, presented to the Low Impact Development Technical User Guide team, recognizes exceptional leadership by an interagency team that effectively places a Federal sustainability idea into action.

"In 2007, the Energy Independence and Security Act requires that any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction and maintenance strategies for the property," said Sharon Sartor, project lead for the low impact development team. "This is done to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume and duration of flow."

To meet this requirement, the Army required the use of low impact development through the Sustainable Development and Design Policy Update. With these new requirements and a shift away from the conventional methods for managing stormwater, the Corps of Engineers, in coordination with the office of the Assistant Chief of Staff for Installation Management, developed an Army Low Impact Development Technical User Guide.

"The Army Low Impact Development Technical User Guide is a resource for everyone in the Army that helps explain what the Federal stormwater requirements are and how to meet them using low impact development," said Sartor. "By using a vast array of technical expertise and experience, we were able to create a guide that makes LID easier to understand and accomplish."

For their first place finish, both teams will now compete in the White House Green Gov Presidential Awards.

"[Both teams] exemplify what can be accomplished using in-house expertise, innovation and a desire to exceed customer expectations," said Planning Chief Amy Guise. "Partnering with Army, and our other customers, to develop strategies and tools to best manage their land, water resources and watersheds, is a contribution to our nation's future.."

Members of the TMDL team include: Craig Thomas, Jared Scott, Heather Cisar, Karl Kerr, Jason Rinker, Michael Schuster, Marco Ciarla, Tyler Burrage, Jim Green, Vaso Karanikolis, Marisa Lewis, Ellen Maguire, Laura Jones, Robert Nagy, Angie Sowers, and Andrew Roach.

Members of the Low Impact Development Technical User Guide team include: Sharon Sartor, Erin Mahoney (EN), Marco Ciarla, Jason Rinker, Michael Schuster, Heather Cisar, Karla Hill, Marisa Lewis, Ellen Maguire and Laura Jones.

# Baltimore District, partners team up for Labor Day water rescue simulation

**Story and photos by Stacy Ouellette**

Members of the water rescue and recovery simulation team transport a patient from the ground to medical evacuation helicopter during a demonstration conducted by the Baltimore District at Tioga-Hammond and Cowanesque Lakes, Guthrie Air, Middlebury and Tioga Fire Departments and the Wellsboro Fire Department Dive Team, Aug. 31.

Did you know it only takes less than a half cup of water in your lungs to drown? Whether you are a great swimmer or non-swimmer, it could happen to anyone not wearing a life jacket.

On Aug. 31, more than 50 visitors witnessed a water rescue and recovery simulation conducted by the Baltimore District at Tioga-Hammond and Cowanesque Lakes, Pa., partnering with Guthrie Air, Middlebury and Tioga Fire Departments and the Wellsboro Fire Department Dive Team.

"The main message to everyone was to always wear your life jacket," Jacob Dawson, student intern and event organizer said. "Today we really wanted to focus on that aspect and not drinking while boating. Most people know how to swim; we still recommend they wear a life jacket because you never know when you're going to end up in the water and what the conditions will be."

Dawson is one of 15 Student Conservation Association interns within the Corps this year designated specifically for water safety education. As part of his internship, he is required to find unique ways to promote water safety awareness in efforts to minimize fatalities.

All too often visitors ask why they need a life jacket if they can swim or are great swimmers. The answer is simple – it could save your life, Dawson said.

"You could end up going in unconscious and being a good swimmer isn't going to help you, a life jacket could," Dawson said. "If you're unconscious and underwater with people who cannot swim, you'll be in some trouble."

The simulation scenario involved three people, two wearing life jackets and one without one, consuming alcohol while boating. After their canoe flips over, those wearing life jackets are easily found and rescued. Third person needs to be recovered by the dive team.

In this scenario, the last person was found and medically evacuated for treatment. In reality, the participants were fine, yet this situation could happen to anyone with tragic consequences.

"The simulation went as we planned for with all the players doing their part as we would in an emergency situation," Dan Rice, Middlebury fire chief said. "We are a volunteer department and support educating the community to prevent a rescue mission from turning into a recovery mission."

When taken by surprise, people may naturally gasp in shock resulting in water getting into the lungs. Panic and accidentally swallowing water can contribute to drowning quite easily. On average, it only takes 60 seconds for an adult and 20 seconds for a child to drown.

"This event was a great chance for us to practice our water safety rescue and recovery mission with our local partners," Dina Henninger, park ranger said. "We want the public to know we do have a plan in place in case something happens. The best thing anyone can do is wear a life jacket for any water related activity. It really could save your life."

Members of the Middlebury, Tioga and Wellsboro Fire Departments work together to rescue a patient who was not wearing a life jacket when her canoe flipped over during a water rescue simulation event at Hammond Lake, Aug. 31.

# SMA Chandler visits Washington Aqueduct, learns about unique Corps mission

Story and photos by Stacy Ouellette

Ronald Cornell, welding and sheet metal shop supervisor, describes the shop's operations to Sgt. Maj. of the Army Raymond T. Chandler, the highest ranking Non-Commissioned Officer in the Army. Corps Command Sgt. Maj. Karl J. Groninger (right) and Washington Aqueduct employees Glenn Bates (left) and Jay Nolan (right) joined the briefing.

Sgt. Maj. of the Army Raymond F. Chandler III came to the Washington Aqueduct June 5 to visit the people charged with a unique, and vital, but frequently unseen mission.

The Washington Aqueduct is a federally-owned and operated public water supply agency that produces an average of 160 million gallons of water daily at two treatment plants in the District of Columbia.

"Those 156 Civilians are part of our Army team. No matter what the conditions or circumstances, the people there provide us something that we likely take for granted," Chandler said. "One of the people I met has been with the Corps at the Aqueduct for 38 years - making sure that the water we drink is safe. That's commitment."

In 1859, the U.S. Army Corps of Engineers (USACE) designed, built and began operation of the Aqueduct. At that time, the mission was to supply raw river water to a sparsely populated District of Columbia. Over time, the Aqueduct has substantially expanded and improved its capacity and functions.

Today, the Aqueduct provides safe drinking water to more than one million people in the District of Columbia, Arlington County and the city of Falls Church, Va. This includes permanent residents and visitors to the Nation's capitol.

"When I was deployed, I often saw Army Corps of Engineers signs, but I didn't really understand the total impact that those professionals have at home and worldwide," Chandler said. "I didn't learn about that until I came to my current position at the Pentagon. Their civil works and construction projects happen all over."

Many may know USACE as the nation's engineers, conjuring thoughts of building and constructing facilities. That is one of the many missions it contributes worldwide. More than 37,000 Soldiers and Civilian employees in USACE work side-by-side to provide services to more than 130 countries.

"The U.S. Army Corps of Engineers has nine divisions with 44 districts worldwide committed to creating sustainable projects that are environmentally friendly, cost effective and beneficial to all customers every day," said USACE Command Sgt. Maj. Karl J. Groninger. "Our mission is a diverse and complex one - from emergency operations to overseas contingency operations to reducing the risk of flooding nationwide - we have well disciplined professionals behind every project. The Corps is a great organization with a robust day to day mission that exceeds the standard engineering definition."

Far beyond building, constructing, and maintaining crucial infrastructure lies a diverse and complex mission consisting of delivering vital public and military engineering services, partnering to strengthen national security, energizing the economy and reducing the risks caused by disaster.

Groninger and the Aqueduct's General Manager, Tom Jacobus, provided an operations briefing and led Chandler's visit of the facility.

"The Washington Aqueduct was delighted to have SMA Chandler spend time with the employees who have the singular focus of producing, safe and reliable water service to our nation's capital," Jacobus said. "We are all proud to be Army Civilians serving in the Corps of Engineers in this long standing mission. His visit reinforces how important the Army is to the nation in so many ways."

As part of the visit, Chandler also met with five noncommissioned officers within the Baltimore District, the command unit for the Aqueduct, and offered to answer any of their questions.

Sgt. 1st Class Shermaine Malone, Contracting Division, requested advice from Chandler to give his son, who recently enlisted in the Army.

"Being the best at what you do and looking for opportunities to show you can do more than one thing sets you apart from the group," Chandler said, noting that the Corps of Engineers team does that every day.

"My visit to the Washington Aqueduct was fascinating," Chandler said. "If you think about how critical that is — for our nation, our government and our citizens — you realize that it takes people of character, commitment and competence to deliver that service 24-hours a day, seven days a week."

**Baltimore District non-commissioned officers enjoyed a once-in-a-career opportunity to meet Sgt. Maj. of the Army Raymond T. Chandler during his Washington Aqueduct visit. From left: Sgt. First Class Shermaine Malone, Sgt. First Class Adrin Young, Sgt. First Class Octavia Warfield, Staff Sgt. Shanna Golden**

# Corps of Engineers builds largest **induction solar wall in the country**

By Andrea Takash

As the sun beats down on one of biggest buildings in the country, solar thermal collectors go to work providing enough heat for a 1.7 million square foot warehouse.

Spread across more than 40 acres, the Defense Logistics Agency's (DLA) Eastern Distribution Center in New Cumberland, Pa., provides critical supplies for the military stationed overseas. DLA needed an alternative, cost-saving way to provide heat for this massive warehouse.

In the summer of 2011, Headquarters U.S. Army Corps of Engineers approached the U.S. Army Engineering and Support Center, Huntsville, about an Energy Conservation Investment Program energy reducing project. Huntsville Center teamed up with the Baltimore District to build the largest induction solar wall in the country.

"The project installed Solar Thermal Collectors on portions of the East and South walls for a total of 55,263 square feet of solar wall," said Dennis Lacy, Huntsville Center project manager. "This system provides preheated outside air to air handling units and the large fans located inside the warehouse."

Lacy compared the solar wall to layered clothing on the skin of the building. "The air gets in, and the sun warms it, providing heated air for the building's use," he said.

This two-phased solar wall contains a bottom portion of normal solar wall with a top portion that seals the air intakes.

"The bottom portion lets the air in," Lacy said. "The heated air rises and goes up to the top half, which is sealed off with a membrane to cover the perforations. The membrane considerably assists the outside air to only entering the system at the bottom section of the solar wall, providing additional insulation to the top half of the solar wall."

When the wall reaches 180 degrees, the dampers at the top portion open up to allow the heat to enter the warehouse, where large fans are strategically placed to circulate the heat evenly. In the summer, DLA will close the dampers to prevent unnecessary heat in the warehouse.

Spread across more than 40 acres, the 1.7 million square foot Defense Logistics Agency's (DLA) Eastern Distribution Center in New Cumberland, Pa., provides critical supplies for the military stationed overseas. Courtesy Photo

"It could be 27 degrees outside, but the sun beating on the wall will still heat it up to 180 degrees," said Curt Ellsworth, Baltimore District construction representative.

It is estimated that this solar wall will save DLA $350,000 in annual energy costs.

"The Project Delivery Team determined the location on the walls the solar wall should be placed to provide the best return on investment for the longest amount of winter sun exposure," Lacy said. "Prior to construction, the contractor developed an estimated baseline of energy usage for a one year period. The contractor will also provide a measurement and verification report showing the energy savings for a typical year resulting from the installation of the solar wall."

Remi Bollana, Baltimore District's Harrisburg Area Office resident engineer, said he looks forward to seeing the results from the measurement and verification test. "The test will show us how much fuel DLA can expect to save each year. and those funds can be re-allocated toward other programs," Bollana said.

This $3.4 million project took less than a year to build. Lacy attests this success to the teamwork between Huntsville Center, Baltimore District, DLA and the contractor staff.

"Huntsville Center worked closely with Baltimore's Harrisburg Area Office and the customer in developing the scope, awarding the project, design reviews, and managing the construction of the project," Lacy said. "The Project Delivery Team always had great cohesion, actually creating a great friendship with British Exchange Officer Capt. Matthew Fry. He was my eyes and ears on the ground."

After Capt. Fry rotated out of the Harrisburg Area Office, Mike Notto took over the responsibilities as the project engineer and brought the project to completion, said Bollana.

"We worked very well with Huntsville's project manager, Dennis Lacy," Bollana said. "We had a mutual goal to successfully complete this contract, and we achieved it through cooperation and communication."

# Corps continues STEM outreach through interactive program in Baltimore

By Brittany Bangert

On April 22, more than 80 students from eight different counties throughout the state of Maryland — some driving for more than three hours – gathered in Baltimore, Md., to dissect a squid, investigate a crime scene, and compete in a windmill competition. What may seem as a day of simple games and experiments actually represents a critical step forward in furthering the awareness of science, technology, engineering, and math (STEM) education.

With forecasted shortages in students pursuing a STEM education, and only 16 percent of high school seniors proficient in math according the U.S. Department of Education, the emphasis on STEM outreach continues to grow throughout the Department of Defense, the U.S. Army, and U.S. Army Corps of Engineers.

"In China, they will graduate 700,000 engineers a year," said U.S. Army Corps of Engineers Commanding General Lt. Gen. Thomas P. Bostick. "We do about 70,000 in America. And, many of those engineers go back to their home countries."

Several districts throughout the Corps have expanded and amped up their STEM outreach. Baltimore District, for example, partners with Maryland schools, which are ranked number one in the country, to conduct many of these events. During the 2012-2013 year, Baltimore District employees have participated in more than 30 STEM events, reaching 6,400 students.

A local pulmonary doctor demonstrates how the lungs work using a mannequin which showcases different lung functions. The Baltimore District partnered with the Society of American Military Engineers to create "Easy as Pi," a STEM event for over 80 students from eight Maryland counties. The students had the chance to dissect a squid with the National Aquarium, conduct forensic testing, compete to build the most powerful fan, and more. Photo by Brittany Bangert

Most recently, members of the Baltimore District and the Society of American Military Engineers (SAME) organized the fifth annual "Easy As Pi" event, a STEM-based outreach program held at the Engineers Club in the Mount Vernon area in Baltimore.

District employee Emily Schiffmacher, an environmental engineer, spearheads the program as a member of the SAME Baltimore Post's Scholarship and Educational Outreach Committee. She is the military project management section chief for the Environmental and Munitions Design Center. After hearing about a STEM program started in Pennsylvania and the declining interest in engineering fields, Schiffmacher was inspired to join forces with the SAME to create "Easy As Pi."

The concept is simple – "Easy as Pi" brings together local professionals from a variety of STEM-related fields to educate participants on future career possibilities. The program caters toward specific student interests and exposes them to the exciting world of STEM opportunities. More than 80 middle school students attended this year's program.

"Programs such as 'Easy As Pi' are very important to our post because the declination of engineering students in our country has been plaguing our industry for many years," said Matt Wallace, SAME Baltimore Post president. "These types of STEM events help us promote, enhance, and reinforce the professional and technical competence of present and future engineers through outreach, training, and continuing education programs for kindergarten through 12th grade students."

Since "Easy As Pi" began in 2008, the event continues to expand each year and attract more schools. In part, the program has gained popularity as attendees return to their schools to share their experiences. Additionally, the agencies sending representatives to provide information about STEM career fields keeps going strong.

"We continually receive outstanding feedback from teachers, students and parents on our involvement in the mentoring of the students through these STEM programs," said Wallace.

This was the first year that schools from the Eastern Shore traveled to Baltimore to participate.

"It still amazes me that Allegany and Washington County schools will drive two to three hours to participate," said Schiffmacher.

This year's program featured interactive presentations from the National Aquarium, Maryland Fire and Rescue Institute, the University of Maryland Baltimore County Department of Visual Arts, Weston Solutions, NASA, Johns Hopkins University, and the Maryland State Police.

Presenters kept the students busy with interactive activities such as dissecting a squid, creating photography light shows, testing for blood at a mock crime scene, competing to build energy-efficient fans, checking peer heart rates, and others, captured the students attention and had many of them wanting more.

Kathy Fuller, National Aquarium, assisted the students with dissecting the squid. "They had no qualms with getting their hands dirty," she said. "Many students came by to my room during the lunch break to ask many questions and investigate the squid even if they did not have the opportunity to participate in the squid dissection."

Fellow presenter Edward Wollack, a NASA astrophysicist, explains the importance of hands on approach to science.

"We each explore the universe with our senses -- the act of critically testing and sharing these observations is part of the adventure we call science," he said. "Hands-on activities can provide a simple and approachable means to gain physical intuition about how things work. The value I see in taking the time to engage youth with such puzzles is the possibility that they might continue to search for and share the patterns they see and continue in the STEM career path."

Schiffmacher has seen firsthand how the value in STEM events ignites interest in future generations through the many thank you letters students send after the event. Learning goes beyond the program and encourages students to seek out STEM careers that appeal to them directly.

"This event helps spark interest in STEM and develop our future scientists, engineers, and mathematicians," said Schiffmacher. "It is extremely rewarding to see the kids smile and get excited about STEM. It's important to show students

Kaeley Hitchings, daughter of Baltimore District project manager Michael Hitchings, points out Poplar Island on a display at the annual Meadowvale Elementary School career day (Havre de Grace, Md.) and talks to her peers about the ecosystem restoration that the U.S. Army Corps of Engineers continues at Poplar Island. Photo by Michael Hitchings

that STEM is more than just reading textbooks. It really is fun!"

The Baltimore District and SAME Baltimore Post are planning future STEM events as the partnership has proven to be beneficial to all those involved in the program. There are many members of SAME within the District, which also makes the partnership a lasting one.

"SAME Baltimore will always do everything we can to support STEM Programs because we enjoy the interaction with the students and teachers," said Wallace. "We also believe that creating this awareness to children is paramount to the successful future of the engineering profession in our great nation."

In the next few months, U.S. Army Corps of Engineers, Baltimore District will work with the Leadership Develop Program (LDP) to develop resources for employees to participate in the Morgan State STEM Fair, the Howard County STEM Festival, and several local school visits to encourage students to engage in STEM careers.

# 4825 Glenbrook Road Excavation photos

Technicians train in full personal protection equipment during the pre-operational exercises.

*-Photo courtesy Engineering Division*

The teams are trained to recognize and remove American University Experiment Station glassware, like this, that could be unearthed during the excavations. Analysis of this tube showed it had a small amount of tear gas.

*-Photo courtesy Engineering Division*

A completed soldier pile will hold back dirt as the teams dig down to bedrock on the site.

*-Photo courtesy Engineering Division*

Brenda Barber, project manager, briefs Glenbrook Road neighbors and Spring Valley Restoration Advisory Board members on the upcoming operations at the site.

*-Photo by Lattie Smart*