



# CONSTELLATION

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## *LEED promotes environmental sustainability, sets the standard for design and construction*

**By Katisha Draughn**  
Public Affairs Office

In 1957, Fort Belvoir, Va.'s, Dewitt Army Community Hospital was constructed with the goal of ensuring patients received quality health care and extraordinary service. Currently, a new hospital is being constructed under the Base Realignment and Closure (BRAC) program with that same goal — only it will be constructed using a design concept that promotes environmental sustainability.

That concept is the Leadership in Energy and Environmental Design (LEED).

LEED was developed in 1998 by the U.S. Green Building Council (USGBC), which is a non-profit trade organization that encourages sustainability in how buildings are designed, built and operated. LEED is a voluntary, consensus-based rating system that provides standards for construction and design of sustainable or green buildings, which is the design practice of increasing the efficiency with which buildings use resources.

“It’s a means of quantifying the sustainability of the construction of a project,” said Alan Eidsmore, chief of the architecture section in the Engineering Division.

Due to the reorganizing of many military installations as part of the \$7.1 billion BRAC program, using the LEED concept is becoming more important with increasing opportunities throughout the region.

The new Fort Belvoir hospital — which is managed by the Norfolk District — is embracing this concept by utilizing construction materials that promote environmental sustainability, include recycled content, recyclability, acceptable emissions limits and low-toxicity in product. It will also have a green roof



*(Photo rendering courtesy of HDR/Dewberry)*

**Shown is a rendering of the new Fort Belvoir hospital outpatient courtyard. The courtyard integrates the LEED concept by providing the public and staff access to nature, having pockets of landscape to increase daylight of the building’s interior and providing physical and visual connections to the outdoors.**

which will capture and treat stormwater, absorb air pollution, collect airborne particulates, store carbon and protect underlying roof material by eliminating radiation and extreme daily temperature fluctuations.

“Sustainable design and construction practices will contribute not only to improved building performance, but will also promote a healthy indoor environment so crucial in healthcare facilities,” said Lidia Berger, sustainable project manager with HDR/Dewberry, the design team for the hospital. “Sustainable

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U.S. Army Corps  
of Engineers  
Baltimore District

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## Commander's Comment

### Celebrating 233 Years of Service!

**By Col. Peter W. Mueller**  
Commander and District Engineer

In June we celebrated the 233rd birthdays of both the U.S. Army and the Army Corps of Engineers amongst our Corps Teammates and Families at Centennial Park. That event, along with the celebration of Armed Forces Day on May 17 and the Memorial Day observances on May 26, caused me to reflect upon our proud history and reinforced the pride I have in being part of a great military service and a tremendous organization. Understanding our lineage, knowing our history and recognizing the extreme sacrifices of our comrades — past and present — should instill pride, motivation and discipline to serve at our highest levels.

The Army's lineage dates back to June 14, 1775. On that day the Second Continental Congress approved enactment of legislation to establish the Army. Our Army has served with pride since that day. The Army's birthday commemorates America's Army, which includes Soldiers, Families and Civilians. As members of this team we should take extreme pride in this year's birthday theme: "America's Army: The Strength of the Nation." We are an integral part of building and maintaining our Nation's strength.

Two days after establishing the Army, on June 16, 1775, the Continental Congress resolved that, "There be one Chief Engineer at the Grand Army..." the beginning of our proud lineage! As the first Chief Engineer, Col. Richard Gridley and his men laid the fortifications for Bunker Hill. They also laid the foundation for the U.S. Army Corps of Engineers proud service to our Nation. Our District's past service is historic and exceptional. In 1776, our predecessors were responsible for efforts to fortify Whetstone Point, today better known as Fort McHenry. The District officially dates back 161

years to 1847 when Maj. Cornelius A. Ogden became our first District Engineer. Throughout the years, the Army Corps of Engineers has responded to various defense needs and demonstrated an important role in the development of this great country. The Corps has provided vital engineering services to our Nation, which includes designing and managing military construction projects, operating civil works projects and being the lead as an environmental preservation and restoration agency.

For the past several Commander's Comments, I have made reference to Jim Collins' book, *Good to Great*. In his book, Collins notes that a great organization is one that makes a distinctive impact and delivers superior performance over a long period of time. The Army Corps of Engineers has been doing that since its inception on June 16, 1775. We are continuing to grow our team to greatness. As I have stated before, Disciplined People are the foundation of any good organization and perpetuate the development into a great organization. Team Baltimore is on the right path!

Our history should motivate us to strive to execute our mission every day. We honor those who served before us by "*Doing What's Right, Always Doing Our Very Best*" in every aspect of our service. Fifty years from now our successors will look back at our legacies — BRAC inspired facilities, flood damage reduction projects that save lives and our economy, clean water delivered to millions of customers, a cleaner and safer environment and a strong Nation. We are doing an outstanding job, and I am confident that we will continue to represent the Army and the Army Corps of Engineers with pride for years to come!

Happy Birthday and Thank You Contracting Division for organizing a super picnic!

Army Strong , Engineer Ready, ESSAYONS!

## Leadership in Energy and Environmental Design (continued from the cover)

features such as access to natural light and views, low emitting products, improved thermal control and high-performance lighting will benefit the building's occupants by creating a comfortable and safer working environment."

Along with the hospital, the National Geospatial-Intelligence Agency (NGA) is also implementing the LEED concept by using low emitting materials — such as paint and carpet — having reduced site disturbances and implementing water use reduction by including low flow/low flush features in the design.

"BRAC is an important part of the LEED facilitation and progress," said Michael Hurley, senior design manager for the NGA campus. "BRAC is embracing LEED and the Army Energy Policy Act requires all federal buildings to be energy efficient."

Throughout the years, LEED has become the premier design concept for military construction projects worldwide.

To begin the LEED process, the project has to be certified, which is done by submitting an application for the project, along with the LEED registered project checklist.

According to the USGBC Web site, LEED's rating system addresses six major areas — sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality and the innovation and design process. Each area is evaluated on a point system and the accumulation of those points determines if the project will be LEED Certified, LEED Silver, LEED Gold or LEED Platinum.

Including the specified areas and the point system, there are nine LEED categories — new construction, existing buildings, commercial interiors, core and shell, schools, retail, healthcare, homes and neighborhood development. Each category is targeted towards particular customers and promotes the design and construction for that project.

Beginning in fiscal 2008, the U.S. Army Corps of Engineers required all vertical construction projects with climate-controlled facilities to achieve a LEED-New Construction Silver rating. The District currently uses LEED-NC for many of its projects.

District projects using LEED not only promote integrated and whole building design practices, but they also create healthier work and living environments and improve employees' health and comfort.

"It's great that we are taking a broader approach and looking at the health and well-being of the occupants," said Eidsmore. "LEED will help maximize the workers' safety."

Another District project capitalizing on the LEED concept is the Fort Meade Technology Center at Fort Meade, Md. This facility will feature green building construction and will be certified as LEED Silver.

LEED has become the building standard and is used with state and local governments and federal agencies.

"There has to be a stewardship issue with how we use the environment," said Eidsmore. "It is great that we are taking a leading role."

### **Quick Poll: What things did you do as a child or that you do now with your family to help the environment?**



**Adam Larrimore  
and his son, Samuel  
Construction Division**

*"When I was 10 years old, my whole neighborhood was really big on recycling. It was a big community event."*



**Steve Everette and his family,  
Rebekah, Candace and Maria  
Contracting Division**

*"We planted a tree together, we don't litter and we don't use lightbulbs that give off gas."*



**Michael Hitchings and his  
daughters, Kaeley and Raelyn  
Engineering Division**

*"We recycle, we have our own garden and we make bird feeders."*

# Organization Day

## Baltimore District employees, family



Libby Ouellette, daughter of Carrie Ouellette, Fort Detrick Integrated Programs Office, waits patiently as she gets her face painted.



David Hand, CO, prepares to hit the ball during the softball game.



Jeff Werner, PPMD, and Randy Winemiller, RE, chat after lunch during Organization Day.



Joshua Cwiek, son of Phil Cwiek, OP, gets ready to throw a horseshoe during a horseshoe game with his father.

# at Centennial Park

and friends enjoy a day of fun in the sun



Col. Peter W. Mueller (center) is joined by his sons, Alexander and Matthew, Nakisa Rafiee, daughter of Mehrnoosh Mirzaei-Fard, EN, and her friend, Isabela Wanis, as they cut the Baltimore District birthday cake.



Jenna and Mason Fritzges, children of Sean Fritzges, OP, take a break from climbing the monkey bars.



Terrence James, grandson of Joanie Collins, ACE-IT, proudly displays the fish he caught at the lake.



Volleyball was one of the many games played by District employees, family and friends at Organization Day.

*(Photos by Katisha Draughn and Garron Webb, Public Affairs and Joanie Collins, ACE-IT)*

# Handling the flow of water: Washington Aqueduct

Story and photos by  
**Jennifer Walsh**  
Public Affairs Office

When Tom Jacobus was in the fifth or sixth grade, his class went on a field trip to see the tide pools in Moss Beach, Calif. As part of the trip, students were able to lift up rocks to see starfish and mollusks in their natural habitat. For Jacobus, the experience was about more than looking at sea creatures, it was about unlocking his curiosity.

“The idea of staying curious about things is what keeps me going,” said Jacobus, chief of Washington Aqueduct (WA). “There’s so much you don’t know.”

Determined to continue learning, Jacobus graduated from high school and attended the U.S. Military Academy at West Point, N.Y. After graduating in 1967, he spent 27 years in the U.S. Army. He held a number of positions



As the chief of Washington Aqueduct, Tom Jacobus is responsible for providing safe, high quality drinking water to the District of Columbia and Virginia service area.

including battalion commander at Fort Leonard Wood, Mo., and the deputy chief of staff of Engineering and Housing for the Military District of Washington. In 1994, he retired as a colonel and accepted a job with Baltimore District as the chief of WA.

“This is my only job on the civilian side after 27 years of active duty,” said Jacobus. “I never expected I would be here, but this is the best thing that ever happened to me.”

As the chief, Jacobus is responsible for providing safe, high quality drinking water to three customers — Washington, D.C., Arlington County, Va., and Falls Church, Va.

“Our job is to take the water out of the river, make it safe to drink and get it to the right distribution system,” said Jacobus. “Then we turn the water over to the customers to distribute.”

On average, the Aqueduct produces 180 million gallons of water per day, and its customers are distributing the water to more than one million individuals who live, work in or visit the District of Columbia and Virginia service area.

“Washington Aqueduct is serving the headquarters of our government’s military,” said Jacobus. “We’re ensuring the water is safe and available. The government could not do it’s vital work unless we do ours successfully every day.”

Unlike other divisions within the District, the Aqueduct is considered an owner-operator, he said. As an owner-operator, the Aqueduct functions as a business and buys services from the District.



Tom Jacobus, chief of WA, watches as Ray Barela, a water treatment plant operator, analyzes flouride levels in the water.

“We purchase engineering, construction management and planning services from the Baltimore District in the same way that other District customers buy those services,” said Jacobus. “So in addition to being a part of the District, we are also a customer of the District.”

Although the Aqueduct buys services from the District, it primarily maintains its operations through its four branches — the administrative branch, planning and engineering branch, plant operations branch and the maintenance branch.

The administrative branch is responsible for the Aqueduct’s budget and financial tasks. The branch also handles the logistics operations to include operating a storeroom, providing information technology support and coordinating human resources functions.

The planning and engineering branch is responsible for planning, programming and obtaining designs for capital improvements to the facilities and then overseeing

their construction. There are no appropriated funds, so funding for daily operations as well as new construction comes from the customers.

The plant operations branch is responsible for water production on a day-to-day basis. The branch manages the Dalecarlia Water Treatment Plant, the McMillan Water Treatment Plant and the water quality laboratory, which are all located in Washington, D.C.

The maintenance branch maintains all the equipment and facilities that are part of the Aqueduct. Within the branch, there are specialized shops such as a control and instrument shop, a plumbing shop and a facilities maintenance and repair shop.

Among the four branches, there are approximately 165 employees. The majority of them work at the Aqueduct’s headquarters, the Dalecarlia Water Treatment Plant. A smaller number of employees work at the McMillan Water Treatment Plant.

According to Jacobus, being available to help solve a problem or perform an urgent maintenance task is accepted as part of the job. Employees go into work at night and on weekends when duty calls.

“The commitment of our employees is superb. This is an operation that never stops and when things may not go exactly as planned, those who can fix the problem willingly come in and do it regardless of the time of day or weather conditions,” he said.

While the employees focus on their individual tasks, Jacobus focuses on doing his part to keep the Aqueduct running smoothly.

“My responsibility is to motivate, provide resources, provide encouragement and resolve different methods of approach,” he said.

One of his primary responsibilities is maintaining the relationships that have been built with the Aqueduct’s three customers.

“Our real focus is on the customer because they depend on the product,” said Jacobus. “We never forget that we’re serving the public.”

Jacobus also promotes ways of developing the organization. Not only does he encourage employees to attend conferences to develop their individual capabilities, but he also ex-

changes knowledge with other water utility organizations to learn about new systems that could benefit the Aqueduct.

“We want to look at really great water utilities and learn from them and hopefully they’ll want to learn from us,” he said. “Improvement must be continuous for us to be successful.”

Although Jacobus is responsible for many tasks, he finds the most reward in communicating with people.

“It’s most rewarding to work with people, the customers and the public to deal with different viewpoints and requirements,” he said.

When Jacobus is not at the Aqueduct working with the employees and customers, he is spending time with his family.

He has been married to his wife for 37 years and they live in the Virginia area.

Overall, Jacobus said the Aqueduct provides a great service, but said there is more to the Aqueduct than just water.

“Washington Aqueduct is its people,” he said. “It’s the people who make it work.”

## Did you know...

- Jacobus has traveled to every continent except Antarctica.
- He finds that reruns of “The Simpsons” and “Seinfeld” provide useful insight into what is going on at work.
- He thinks one of the more helpful desk references is “The Magic School Bus at the Waterworks” by Joanna Cole.
- He enjoys using photography to capture the places he has been.
- He was born in Washington, but grew up in California.

## ***The Brazilian General comes to Baltimore...***



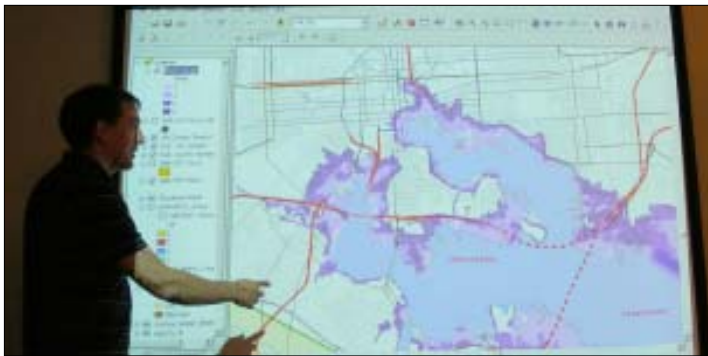
*(Photo by David Ruderman, Public Affairs)*

Gen. Marius Luiz Carvalho, commander of the Department of Engineering and Construction, Brazilian Army Engineers, presents a notebook to Project Manager Sheree Castain after a tour of the Library of Congress controlled environment archive being constructed on Fort Meade by the U.S. Army Corps of Engineers, Baltimore District. Castain briefed the visiting five-member delegation on the project and led a tour of both completed and under construction areas of the facility. Carvalho came to the Baltimore District June 10 to learn about the organization, structure, missions and the strategic direction of the District.

## ***Geographic Information Systems evolving with the Corps***

Story and photo  
**by Christopher Augsburger**  
Public Affairs Office

Imagine traveling back through time to watch a levee inspection on a computer in nearly the same way you navigate a video game. You follow in the path of the team, clicking on each inspection point, tree or pump to see photos, data and comments. This technology and way of sharing geographic data isn't just the imagination of a mad scientist, but rather real life technology made possible by Geographic Information Systems (GIS).



Jared Scott shows a map of Baltimore depicting the extent of a hurricane storm surge.

GIS represents one of the most rapidly growing fields of data management and sharing used by nearly every agency in the federal government, including the U.S. Army Corps of Engineers. As this digital-based data management and sharing technology slowly permeates into more Corps projects, it creates a greater opportunity to share that geospatial data that can serve internal and external customers.

To better manage this growing data, the Corps developed the concept of enterprise GIS (eGIS).

“eGIS creates and maintains a structure to support the geospatial data that is created at the Corps,” said Jared Scott, Baltimore District’s eGIS team leader. “It allows us to share geospatial data internally and with customers, sponsors and partners for multiple projects and multiple uses.”

With an array of information floating among different organizations, a requirement for eGIS is for users to implement a data management plan (DMP). The plan allows project managers to document important information pertaining to the geospatial data. While having a DMP is required for all new projects that have a geospatial component, it plays a key role in cataloguing data for future use, increase efficiency and reduces redundancy.

# Protect yourself from bites and diseases from insects

**By John Houvener**

Safety and Occupational Health Office

With the warm months of summer comes more opportunity to perform outside work, such as conducting dam and levee inspections, drilling wells, project boundary assessments and mapping future project and study sights. Therefore, it is very important to pay careful attention to the dangers that ticks, mosquitoes and other pests present.

The most common ailment caused by insects is Lyme disease, which is caused by a bacteria that is spread by the bite of a deer tick. A tick carrying this disease must be attached to the body and feeding for at least 24 to 48 hours before the bacterium can be passed on to a person. According to experts, about 70 to 80 percent of those infected with Lyme disease will develop a rash at the site of the bite. It most often starts as a small, pink or red rash that expands to approximately two or more inches across. The center of the rash may be clear giving the rash a bull's-eye appearance. Other symptoms include fever, headache, tiredness, stiff neck, joint pain and swollen lymph nodes.

There are some simple precautions you can take before heading out to the field to reduce your chance of

becoming a victim of a tick or mosquito.

Remember these important steps while working in the field:

- 1) Use protective clothing and repellents. A long sleeved shirt, long pants and high socks are a good way to protect your body from a mosquito or tick bite.
- 2) Tuck your clothing in, such as pushing your shirt into your pants and your pant cuffs into your socks.
- 3) Wear light colored fabrics that make it easier to detect ticks that are crawling on your clothing.
- 4) Do not sit on the ground or on logs in brushy areas.
- 5) Use a repellent containing N-N Diethyl-meta-toluamide — abbreviated DEET — on your clothing and skin. DEET is the most common active ingredient in insect repellents. It is intended to be applied to the skin and is primarily used to protect against insect bites. In particular, DEET protects against tick bites.
- 6) Conduct routine tick checks of the body.

- Check your skin as well as clothing.
- Do a careful check of your whole body once you come indoors.
- Look for new “freckles” on the skin or moving specks of dirt.
- Do “buddy checks” on companions and children, taking special notice of hard-to-see areas, like the back and behind the ears (keep in mind that using vaseline, nail polish remover or burning matches to remove ticks is neither safe nor effective).

• Remove a tick from your skin as soon as you notice it. Use fine-tipped tweezers to firmly grasp the tick very close to your skin. With a steady motion, pull the tick's body away from your skin. Then clean your skin with soap and warm water or alcohol.

• Avoid crushing the tick's body. Do not be alarmed if the tick's mouthparts remain in the skin. Once the mouthparts are removed from the rest of the tick, it can no longer transmit the Lyme disease bacteria.

You are all important to us. Please protect yourselves during these summer months to ensure that you don't fall victim to Lyme disease.



*(Courtesy photo)*

The following picture shows a tick and a tick bite which results in a red circular rash with a pale center (will resemble a bull's-eye).



## *Real Estate Team plays a huge role in cleaning up Federal Creosote Superfund Site*

By **Katisha Draughn** - Public Affairs Office and **Gene Urbanik** - New York District

The Baltimore District Real Estate Environmental Team has proven that with hard work, dedication and teamwork, any task can be completed — no matter how challenging.

The Real Estate Environmental Team provided regional support to the North Atlantic Division (NAD) as they assisted the New York District in the remediation of the Federal Creosote Superfund Site in Manville, N.J.

The \$250 million project came into existence when the Federal Creosote Company began using the property to treat railroad ties and wooden poles with creosote, which is a wood preservative. During its operation, the site had several buildings used in the creosoting process and multiple above-ground tanks that contained the creosote.

When operations ceased in 1956, the property was purchased by developers. In the early 1960s, 137 single family homes were built on 35 acres of the Claremont Development of the 50-acre site. The remaining 15 acres were developed into the Rustic Mall. The redeveloped property was built on top of the contaminated soil and the waste lagoons and on at least one occasion, creosote sludge seeped into a residential basement sump and was pumped out into a storm sewer.

The site is located in a highly developed area in Somerset County, N.J., and was listed on the National Priorities List in January 1999 as one of the Nation's most hazardous waste sites.

Christine Milligan and Lesley Logue, realty specialists in Real Estate Division, worked very closely on the seven-year project.

"Seeing this project progress from beginning to end provides a great feeling of accomplishment," said Logue.

The two-person team conducted real estate planning, property acquisition, owner and tenant relocations and disposition of the residential properties that were acquired. Since a residential area was built on the contaminated soil, more than 20 residential properties were acquired and the residents were permanently relocated into new homes. In addition, temporary relocation services were provided to 10 families during the construction activities.

In the end, 450,000 tons of contaminated soil was removed and nearly 100 residential and commercial properties were restored.

"The North Atlantic Division is committed to addressing the environmental, infrastructure and water resource challenges in the region," said Brig. Gen. Todd T. Semonite, NAD com-



*(Photo by Mary Stavina, New York District Public Affairs)*

**Gene Urbanik, New Jersey Area Engineer, Col. Nello Tortora, New York District commander and Gen. Todd T. Semonite, North Atlantic Division commander (far right), congratulate Lesley Logue and Christine Milligan (center) for their work on the Superfund site.**

mander, during a completion ceremony earlier this year. The ceremony was attended by Rep. Michael Ferguson, N.J. 7th District; Col. Nello Tortora, New York District commander; Alan J. Steinberg, regional administrator for the U.S. Environmental Protection Agency; and Lillian Zuza, mayor of the Borough of Manville, N.J.

Semonite recognized Milligan and Logue along with the project delivery team members and thanked them for their hard work in accomplishing the mission. Team members included Kansas City District, who oversaw the remedial design and technical assistance; Philadelphia District, who provided quality assurance; Omaha District, who contributed to contract cost control; New York District, who was responsible for leading the remedial action phase and overall contract management, quality assurance and safety enforcement; and Baltimore District, who was responsible for all real estate services and activities.

"I thought it was great that [Semonite] took the time to recognize each person individually," said Milligan.

Although the project is near completion, there is still additional real estate work to be completed, which includes selling the properties which were acquired by the government for clean-up.

"This project is a true example of pulling together regional assets and leveraging all combined talents to make a difference in America's communities," said Semonite.



US Army Corps of Engineers  
Baltimore District

## What can ACE-IT do for you?



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## A visit with the Chief...



(U.S. Army Corps of Engineers photo)

Kevin Thomas and Jeff Smith, high voltage electricians in the Distribution and Equipment Unit of the Maintenance Branch at the Washington Aqueduct, show Lt. Gen. Robert Van Antwerp, the Chief of Engineers, the D & E Unit's capability to disassemble and repair specialty electric motors used to support the water treatment operations. Antwerp visited Spring Valley and the Washington Aqueduct June 5 to meet employees and see more of the District's projects.

## Baltimore District's "Check It" Program

July's Theme is: Logistics



Thomas Brennan, the facilities manager in the Logistics Office, uses his hand held thermometer to make sure the building's temperature is being properly maintained.