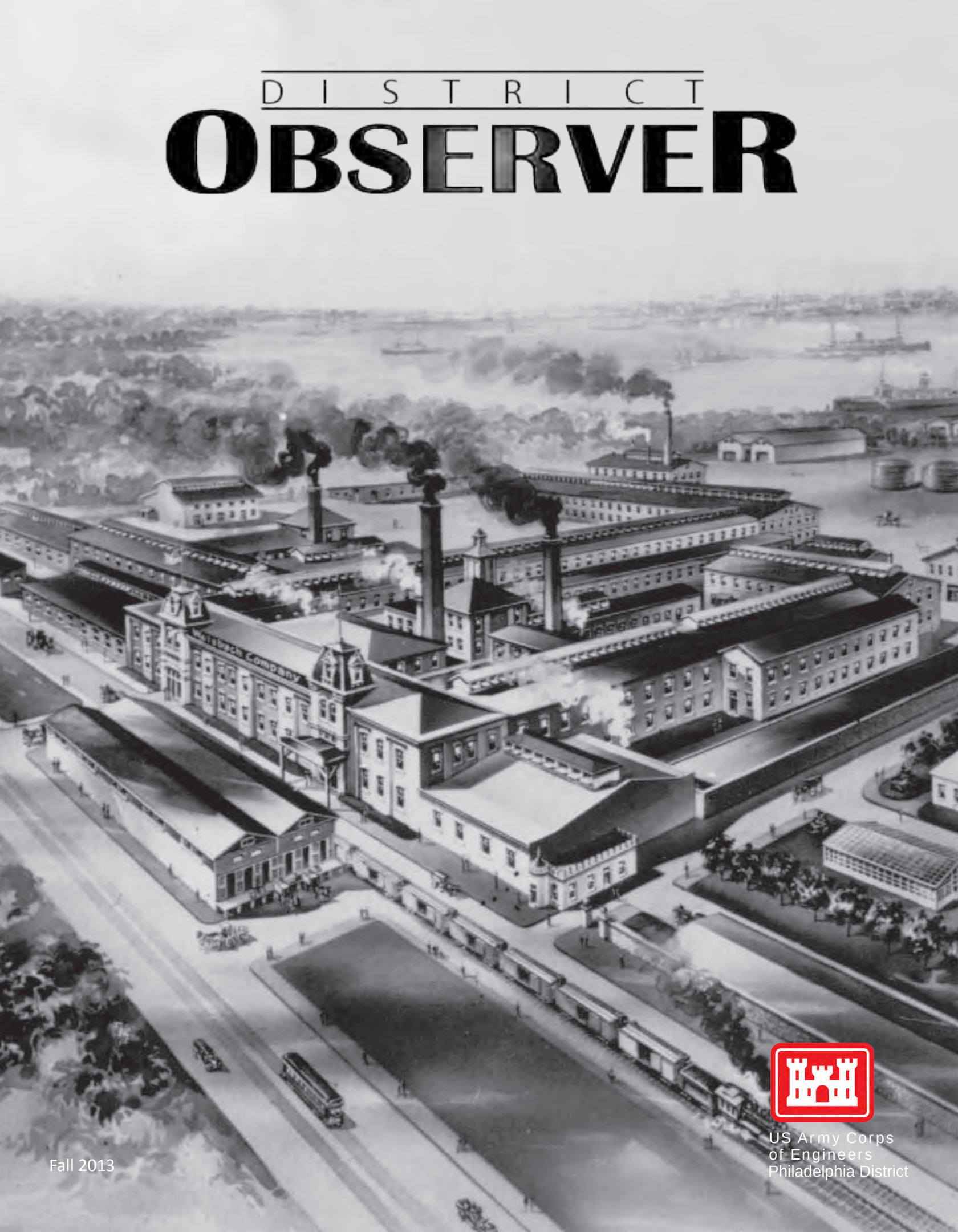
DISTRICT OBSERVER



US Army Corps
of Engineers
Philadelphia District

Fall 2013

On The Cover

The Welsbach Company, pictured here around the turn of the century (19th into 20th, that is) covered 12 acres and, in addition to belching smoke, turned out as many as 250,000 gas mantles a day. By the 1940s electricity had displaced gas as a source of lighting and the Gloucester City, N.J. company closed. All but one of the 25 buildings that made up Welsbach are gone. The name of the company lives on, however, as the title of a sprawling Superfund site that covers parts of Camden as well as Gloucester City. The federal Environmental Protection Agency and the Army Corps of Engineers are now in their second decade of efforts to remediate the site. The story of how radioactive material got spread into the community and what's being done to remove it starts on page 14.

Save The Date

- Friday December 6th, 12pm - 4pm. Philadelphia District Holiday Party at BRÜ Craft & Wurst, 1318 Chestnut Street, Philadelphia.

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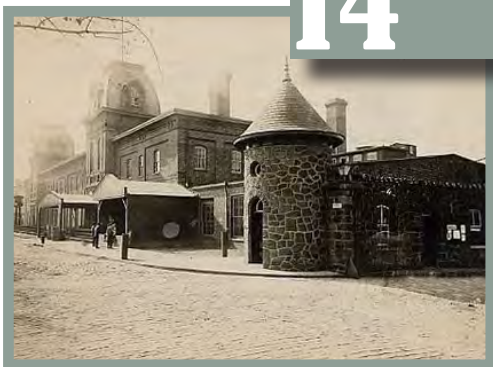

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USACE and partners hold stream restoration workshop in Philadelphia

Photos: Steve Rochette

Dave Derrick, Research Hydraulic Engineer, explains how USACE restored functionality to a section of the Tacony Creek in Philadelphia during a multi-agency stream restoration workshop.

By Steve Rochette

The U.S. Army Corps of Engineers partnered with the Environmental Protection Agency and the Philadelphia Water Department to host a stream restoration workshop July 22-24.

The multi-agency and disciplinary group included staff from the U.S. Army Corps of Engineers, Environmental Protection Agency, New Jersey Department of Environmental Protection, Pennsylvania Department of Environmental Protection, New Jersey Water Supply Authority, the Philadelphia Water Department, Philadelphia Parks and Recreation, and The Nature Conservancy.

"Our philosophy is that no one person has all of the knowledge and experience to solve the problems we encounter with rivers, creeks and streams," said Erik Haniman, manager of the Ecological Restoration Group for the Philadelphia Water Department. "When we come together for these types of events, there's a valuable exchange of ideas."

The workshop was taught by Dave Derrick, Research Hydraulic Engineer and Dr. Rich Fischer, Research Wildlife Biologist, both of USACE's Engineer Research and Development Center.

Participants learned about the many different aspects of restoring a stream, including stream bank stabilization techniques and working with riparian ecosystems and vegetation.

The workshop included site visits to two projects built by the U.S. Army Corps of Engineers' Philadelphia District and the Philadelphia Water Department: the Tacony Creek Ecological Improvement Project and the Cobbs Creek (Indian Creek) Habitat Restoration.

USACE and PWD restored Tacony Creek in 2010. The project included constructing several bendway weirs and planting more than 10,000 native plant species along the banks of the creek. The bendway weirs are rock structures that redirect stream flow away from banks and into the middle of the channel. This helps prevent erosion and can also create pools of water where aquatic life can thrive.

The Indian Creek project involved removing approximately 700 feet of the stream from a culvert, a practice known as daylighting. Contractors excavated a new channel, planted vegetation and converted the existing culvert into storage for combined sewage overflow. These measures serve to improve the habitat and reduce the amount of sewage overflow that may enter the creek during heavy rain events.

Dave Derrick, one of the course instructors, travels the country serving as a USACE expert on navigation, dam removal, dam decommissioning, aquatic and riparian corridors, and stream restoration. He worked on the design for the Tacony Creek and Indian Creek projects.

"One of the best aspects of the training is having participants walk through the project sites with the designers so they can appreciate what construction was like and observe the functionality we brought back to these streams and the ecosystems," said Derrick.

Derrick's experience and enthusiasm for all things water was one of the best aspects of the training according to participants.

"Dave Derrick lives and breathes rivers and streams," said Adrian Leary, a biologist for the U.S. Army Corps of Engineers Philadelphia District. "Having the opportunity to learn from someone so immersed in this type of work is motivating and it's effective."

Leary added one of the other benefits of the workshop was meeting counterparts from partner agencies at the federal, state and local level.

For more information on the Philadelphia Water Department's ecological restoration work, visit http://phillywatersheds.org/

USACE holds emergency response exercise in Philadelphia

By Steve Rochette

More than 150 U.S. Army Corps of Engineers personnel descended on Fort Mifflin in Philadelphia June 10-14 to participate in a national emergency response exercise. The exercise, which involved simulating response activities to a category 3 hurricane, was designed to prepare teams and individuals for real events.

"We hold exercises every year to ensure our people are ready and able to respond when we're called upon," said Paul Flamm, exercise coordinator and USACE rehired annuitant. "Every disaster is different, but this training enables responders to get more familiar with their missions, work with their colleagues and to practice."

USACE Planning and Response Teams that specialize in commodities distribution and emergency power generation participated in the "Northeast Express" exercise along with partners from the 249th Prime Power Battalion, the Federal Emergency Management Agency, the Pennsylvania Emergency Management Agency, Delaware Emergency Management Agency, and the city of Philadelphia Office of Emergency Management.

"The city of Philadelphia will benefit because we used the exercise as an opportunity to conduct facility power assessments and to train their staff on how to set up a commodities point of distribution," said Jim Monsu, chief of Emergency Management for the Philadelphia District. "Getting those accomplished helps improve readiness for real-life events."

The commodities teams specialize in distributing water following a disaster. They trained city and state emergency management personnel on how to set up a point of distribution. These locations are used by state and local governments to distribute necessities to citizens. Everything from choosing the right location to setting orderly traffic patterns can make a difference in efficiently getting commodities to people affected by a disaster.

"We measure our success by how quickly we go out of business and by that we mean getting commodities to the people who need them," said Trevor Lancaster, a Quality Assurance Supervisor for the commodities team.

The 249th Prime Power Battalion conducted power assessments at more than 300 critical facilities in Philadelphia and another 45 in Delaware during the exercise. The assessments are used to determine the specific power needs of facilities and are communicated to USACE teams who mobilize contractors to the sites with generators for installation.

For exercise participants, working through an entire disaster scenario and interacting with colleagues was a valuable experience.

"When our teams deploy, we're expected to hit the ground running," said Travis Fatzinger, who serves as a Mission Manager for the Philadelphia District Emergency Power Team. "Working through the whole process in this environment helps us prepare for that. We also had the opportunity to interact with Emergency Power teams from multiple districts and learn from them."

Every year, USACE sends people to respond to disasters around the world. In 2012, more than 3,300 USACE employees deployed in response to one or more of 15 major disasters. During and after Hurricane Sandy, USACE had approximately 3,000 employees within the North Atlantic Division, with an additional 990 team members deployed from other USACE divisions across the country, engaged to support the response mission.

Coordinators based all of the exercise scenarios on Hurricane Sandy and other past events.

Photo: Tim Boyle

Emergency exercise participants observe a power generation briefing.

Photo: Tim Boyle

Several DTOS units - Deployable Tactical Operations Systems - were used at Fort Mifflin throughout the exercise.

Photo: Steve Rochette

Sgt. Dana Beard (left) and Sgt. David Dewey of the 249th Prime Power Battalion Alpha Company check facility power assessment lists during the exercise.

Photo: Steve Rochette

Participants gather in a Fort Mifflin conference room for a briefing on the first day of the "Northeast Express" emergency response exercise.

Officials commend Army Corps' efforts to restore Delaware coastline

Hurricane Sandy caused overwash and flooding at the north shore of the Indian River Inlet, closing Route 1 for several days. The U.S. Army Corps of Engineers Philadelphia District is helping restore the north shore by pumping more than half a million cubic yards of sand from the inlet onto the beach and constructing a dune.

By Steve Rochette

Federal, state, and local officials gathered at the north shore of the Indian River Inlet in Delaware on Aug. 5 to witness the dredging, pumping and placing of sand onto a beach that was significantly eroded by Hurricane Sandy.

The work at the inlet is one of three contracts the Army Corps of Engineers' Philadelphia District has awarded to help restore the Delaware coast and is part of a larger effort to restore projects across the northeast.

"We were fortunate we didn't get hit worse by Hurricane Sandy," said Delaware Gov. Jack Markell. "Moving forward, having this kind of protection in place is incredibly important and I want to thank the Army Corps for their efforts here and elsewhere along the coast."

The Army Corps of Engineers' Philadelphia District and the Delaware Department of Natural Resources and Environmental Control have funded and operated a sand bypass plant at the Indian River Inlet since 1990. Each year, the state pumps approximately 100,000 cubic yards of sand from the south shore onto the north shore beach.

The scope of the current job is much larger than any work done in recent history – the Corps and state have not pumped more than 175,000 cubic yards of sand in a given year since 1984. The ongoing project involves dredging more than half-a-million cubic yards from the inlet and pumping it several hundred yards around the jetty and onto the north shore over a length of 3,500 feet.

The sand is then built up into a design – similar to what has been done along the other oceanfront beaches of Delaware – a berm backed by a dune with a crest width of 25 feet at an elevation of 16 feet (NAVD).

"When we went through the process to repair and restore the project under the Flood Control and Coastal Emergencies program, the question became whether we had authority to build a dune," said Jeff Gebert, chief of Coastal Planning for the Philadelphia District.

Since the Indian River Inlet Sand Bypass project authorization involves multiple documents from different decades, it took some research to answer that question, but a Senate report called for the construction of a dune.

continued on page 30

On site at the Indian River Inlet are, from left, Curt Heckelman, Deputy District Engineer of the Philadelphia District; Tony Pratt, Delaware Shoreline Administrator; Delaware Gov. Jack Markell; and U.S. Sen. Chris Coons.

Army Corps helps restore

By Steve Rochette

The U.S. Army Corps of Engineers' Philadelphia District and its contractors have been working hard to rebuild New Jersey beaches in the year since Hurricane Sandy devastated stretches of the Shore.

The District is completing the repair and restoration of its previously constructed Coastal Storm Risk Management projects from Long Beach Island to Cape May, N.J. In total, the restoration represents about $100 million worth of work and includes the pumping and placement of approximately seven-million cubic yards of sand.

Pictured at right are dredges from the Great Lakes Dredge and Dock Company moving into place to pump sand on to Long Beach Island.

The Philadelphia District's projects are part of a larger effort within the Army Corps' North Atlantic Division to address the problems caused by the hurricane.

"The team across the entire District deserves credit for the incredible task of getting many of these projects repaired to pre-storm conditions and restored to their full design template in a short amount of time," said Frank Master, Civil Works Program Manager. "As we complete the repairs and restorations our focus shifts to getting the unconstructed projects ready for construction."

Work has been completed in most of the communities where the Army Corps had previously constructed projects: Harvey Cedars, Surf City and Brant Beach on Long Beach Island; the northern end of Ocean City; Stone Harbor and Avalon. Work is ongoing in the Atlantic City- Ventnor area and in Cape May City.

Still to come is the initial construction of a number of projects, including the southern end of Ocean City, the rest of Long Beach Island and the 16-mile stretch of densely populated coastline from the northern end of Island Beach State Park to the Manasquan Inlet.

the New Jersey shore

Photo: USACE

Providing Power

By Richard Pearsall

The field full of diesel generators pictured below did not spring up overnight.

But close to it in the often complicated and tightly regulated world of government contracting and construction.

This "energy farm" at Bagram Air Base in Afghanistan took 55 days to erect from the time a contract was awarded on Aug. 2 to the day the job was completed and photographed on Sept. 25. The "before" picture (the vacant lot above) was taken on Aug. 18, just before the first modular generators began to arrive.

Up and running the day after the project was completed, the field of generators added more than 50 percent to the power generating capacity of Bagram, the largest and most important military facility in Afghanistan.

The quick turnaround is the latest accomplishment of the Philadelphia District's Power Team. Over the years, the Power Team has overseen the construction and installation of more than $3-billion worth of power generating equipment and infrastructure in Iraq and Afghanistan. The peak year was 2011, when the team awarded $513 million in contracts.

The quick turnaround is also a major feather in the cap of the contractor hired to get the job done, Louis Berger/ Cummins Joint Venture, of Washington, D.C.

Planning for the upgrade at Bagram began two years ago, according to Tom Gibison, the Philadelphia District's Power Team Manager. District engineers conducted a load analysis

Promptly

Photos: USACE

and concluded that Bagram needed a major increase in its capacity to generate electrical power.

With a drawdown of forces from Afghanistan anticipated, however, the decision was made to install temporary rather than permanent generating capacity.

Funding and legal issues delayed the start of the project. By the time it was determined that funding could come out of operating funds, only days remained in the fiscal year to use those funds. Bids were solicited in July and the contract awarded to Berger/Cummins Aug. 2.

The Washington-based company was awarded the contract – for $18.5 million – out of a field of six bidders.

"They did not build a power plant, "Gibison said. "They brought in modular units on trailers and dropped them into place."

"There's a huge cost benefit to the government to do it this way," Gibison said. "We're not taking ownership. These are containerized, portable units. When we're done using them, the contractor can come and take them back."

The field of generators has added 36 megawatts of generating capacity to the 56 megawatts of capacity the base receives from its turbine plant.

The additional capacity will enable the base to better weather the two, two-month periods of peak demand it experiences in winter and summer.

Regulators to the rescue

By Richard Pearsall

Frank Cianfrani and his band of regulators are not always greeted with open arms and words of praise.

Developers have been known to question the need for a permit to move a few tons of soil – "Wetlands? What wetlands?"

Environmentalists aren't beyond challenging regulators from the other flank, accusing them of being too permissive. "This project is going to mean the end of the (river, meadow, watershed, ecosystem, world) as we know it."

But along the Delaware River this spring, down where the river widens into the bay, folks had nothing but praise for the Army Corps of Engineers and its regulators.

Biologist Jim Boyer and Supervising Biologist Sam Reynolds, the Chief of Application Section II, were singled out for particular commendation by members of the American Littoral Society, the New Jersey Department of Environmental Protection and the Conserve Wildlife Foundation of New Jersey. Boyer and Reynolds were praised for their role in assisting the annual coming-together of horseshoe crabs and Red Knots on a number of beaches on the bay, including Reed's, Cook's and Pierce's Point.

Without the cooperation and hard work of Boyer and Reynolds, the environmentalists said, the annual horseshoe crab migration to spawn on bay beaches wouldn't have happened. And had the crabs not laid their eggs, the migration of the Red Knot, an amazing creature that annually travels as many as 9,000 miles from its winter retreat in South America to its summer abode in the Arctic, might very well have ended in mid flight. Traveling that kind of distance requires a huge amount of energy and by the time they reach New Jersey the birds are more than ready for the concentrated infusion of protein and fat and energy that the fertilized eggs offer.

Hurricane Sandy wreaked havoc with the shoreline of the River as well as the shoreline on the Atlantic.

"The beaches were denuded," said Bill Shadel, then the Habitat Restoration Program Director for the American Littoral Society of New Jersey.

Shadel's group huddled with others, including the N.J. DEP, the U.S. Fish and Wildlife Service and the Conserve Wildlife Foundation to survey the damage, solicit funding and develop a plan to restore as much of the bay beaches as they could.

By January they had a good idea of what they wanted to accomplish and gathered the necessary funding. By the end of February, with the help of the Army Corps and other regulatory agencies, they had completed their applications.

But time was running short. In order to finish the beachfill project in time for the arrival of the first crabs in April, they figured they needed to begin bringing in trucks full of sand by the middle of March.

They got their permits and the first trucks hit the beach Mar. 18.

"The folks who made this possible didn't have to do it," Shadel said. "They had a lot on their plates after Sandy. But they got it done. We're very proud of our team (the beaches got built, the crabs came and so did the Red Knots.) And we're grateful to regulators like Sam Reynolds and Jim Boyer."

"If they hadn't been our lead at the federal end," Larry Niles, a biologist with the Conserve Wildlife Foundation, said of Reynolds and Boyer, "we wouldn't have gotten this through. They helped us along with the permit application and made sure everything was in order."

Restoring beaches along the Delaware Bay devastated by Hurricane Sandy enabled horseshoe crabs (top photo) to spawn and provide nutrition for the migrating redknot (one of which is being tagged by a scientist in photo to the left). Pictured in the center is Reed's Beach, one of four, contiguous, bay beaches that were restored just in time by the New Jersey chapter of the American Littoral Society .

Photos: Tim Boyle

An old mill spawns Superfund monster

By Richard Pearsall

At its peak, in the early years of the 20th Century, the Welsbach Company employed 2,600 people at its sprawling industrial complex on the bank of the Delaware River in Gloucester City, New Jersey.

Working out of 25 buildings spread over 12 acres, the massive workforce, many of them women, turned out as many as 250,000 mantles for gas lamps each day, shipping the mesh bags around the world to illuminate homes and streets alike.

It was the kind of operation that made tiny Gloucester City and its larger neighbor, Camden, industrial powerhouses. Camden hosted a similar company, General Gas Mantle.

The gas mantle companies also inadvertently turned large swaths of the two cities into what would become, in 1996, one of the largest and most dispersed Superfund sites in the nation.

Waste from the plants was used for fill, particularly in marshy areas along the Newton Creek, to meet the voracious demand for more buildable land in the densely populated cities. And that waste, it turns out, was more than a little problematic, laced as it was with varying degrees of radioactivity.

Thorium, a radioactive element, was used to make the gas mantles burn brighter.

Years later, simply locating areas of concern turned out to be a major undertaking, for the state of New Jersey and its Department of Environmental Protection, as well as the federal Environmental Protection Agency. These agencies have to date investigated more than 1,000 properties in the two cities. More than 200 have been determined to have unacceptable levels of contamination.

In 2001, the EPA brought the U.S. Army Corps of Engineers on board, with the Kansas City District working on remedial design and the Philadelphia District providing construction support.

To date the Philadelphia District and its contractor, Sevenson Environmental Services, Inc., have excavated and disposed of more than 300,000 tons of radiologically contaminated soils and waste materials.

The material has been excavated from beneath houses, businesses, a swim club, and the future site of a middle school, as well as wetlands and recreational areas. It has been shipped by rail to a special disposal site in Idaho.

Work on a number of baseball and softball fields that border the Newton Creek is underway, with soil being removed to a depth of up to six feet and replaced with layered, well-drained, state-of-the art playing fields with new lighting, dugouts, fencing, and restroom facilities.

"We're putting these ball fields back better than they were," said James Ryan, an on-site construction supervisor for the Army Corps.

Brian Duffy, the team leader for the Welsbach project, said that one of the biggest challenges with the project has been working under and around gas mains. Another is dealing with the constant problem of ground water – keeping it out of the way and treating it for contamination.

Two temporary waste water treatment facilities have been set up to deal with contaminated water before discharging it into the municipal disposal system.

A workspace at the Armstrong Building, once alive with workers assembling gas mantels (photo inset) now sits vacant, wet and decaying.

Excavating to depths of 25 feet has required installing sheet piling 55 feet into the ground, for safety.

In the face of all these challenges, the District and its contractor, Sevenson, have compiled an admirable safety record.

"We just went over a million man hours on site without a lost-time accident," Duffy said.

The origin of the problem at the Welsbach Superfund site is thorium, a radioactive element found in the earth's crust.

In the late 19th century, an Austrian scientist and inventor, Carl Auer von Welsbach, discovered that by dipping gas mantles into a solution laced with thorium, he could get them to glow with a new intensity.

The Welsbach Company in Gloucester City was named for, but never owned by the Austrian nobleman. Ore containing thorium was shipped to the Gloucester City plant

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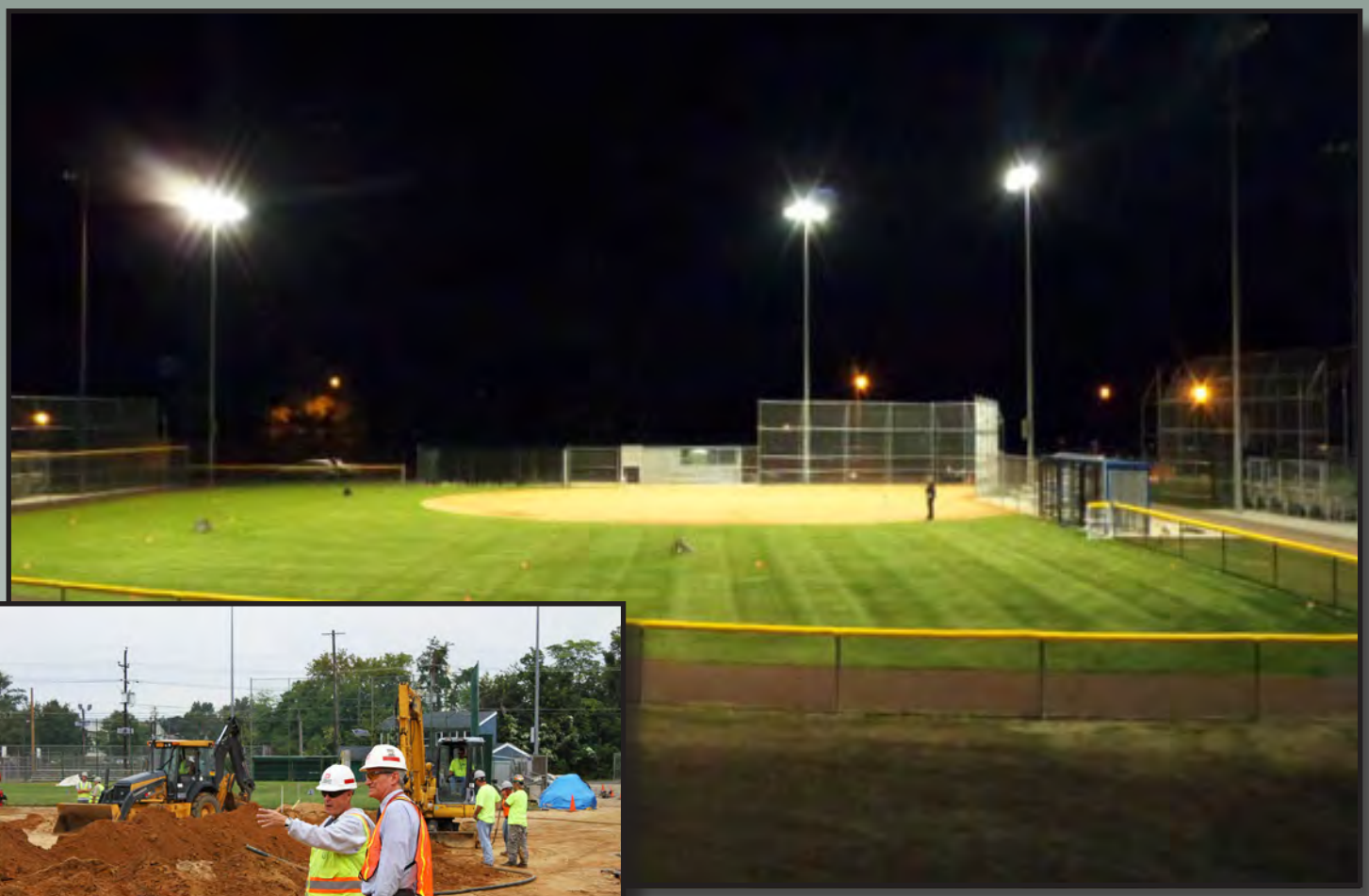


Above: One of the new ballfields built by the EPA and the Army Corps in Gloucester City.
Left: Jim Ryan, construction inspector for the Corps, at left, and Mark Wheeler, chief of Interagency and International Services, on the site of another ballfield under construction in the city.

by train and processed there to extract the thorium. The tailings were then deposited in huge piles at the plant. It is those piles, as well as other waste and debris from the plant – including material left over from demolition–that were deposited as fill in various locations in Gloucester City and Camden.

The Welsbach Company manufactured gas mantles at its facility in Gloucester City from the 1890s through the 1940s, while the General Gas Mantle Facility (GGM) operated in Camden from 1912 to 1941. Economics, not health concerns, led to the demise of the two companies as electric lighting replaced gas lamps as a source of illumination.

Now more than a decade old, the cleanup at Welsbach could go on for several more years.

"It all depends on what EPA decides it wants to do and what it can afford," said Mark Wheeler, Chief of Interagency and International Services for the Philadelphia District, the section that handles work for the EPA and other outside government agencies.

The ball fields in Gloucester City are expected to be completed next year. Additional soil removal projects are under investigation now.

The District completed demolition of the General Gas Mantle building in Camden in 2009.

The EPA has decided to decontaminate rather than demolish the Armstrong Building, the last remaining building on the old Welsbach site.

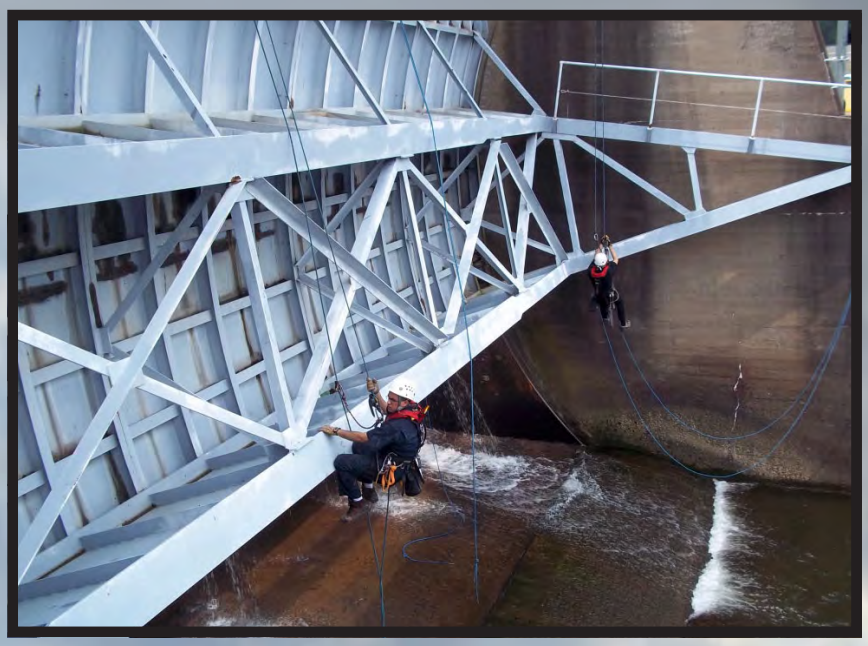
No funds have been appropriated to do the work at the Armstrong Building nor has a decision been made on what to do about the contaminated soil beneath the rest of the Holt site.

"That's the mother lode," Duffy said of the estimated 400,000 cubic yards of contaminated soil that lies beneath the asphalt at the shipping terminal.

THE WELSBACH TEAM

Mark Wheeler, Chief of Interagency and International Services
Christine Clapp, Chief, Construction Division
Brian Duffy, Team Leader
Eric Charlier, Project Manager
Rick Robinson, Resident Project Manager, EPA
Mark Pancoast, Project Engineer
Amado Domingo, Project Engineer
Jim Ryan, Construction Quality Inspector
John Johnson, Construction Quality Inspector
John Beckman (Baltimore District), Quality Assurance Inspector

Rappelling: Engineers dangle down for closer look



By Mark A. Rankin
Nashville District Public Affairs

Photos: USACE

Suspended by rappelling cables and ropes, Carl Leunig, and Adrian Kollias, civil engineers with the U.S. Army Corps of Engineers' Philadelphia District, lower themselves along the concrete wall beside the "Tainter" gates at the Corps' Wolf Creek Dam, in Jamestown, Ky.

Named for the 19th century engineer who invented them, Tainter gates are large, hydraulic gates that control the flow of water through dam spillways.

Working with two civilian contractors, Eddie Page and Chad Dahl, the Philadelphia engineers inspected 10 Tainter gates for signs of corrosion or structural damage in July.

The U.S. Army Corps of Engineers' Special Rope Access Climb Team is one of three specialized inspection teams that travel to a variety of locations, offering districts support tailored to their needs. The other teams are based in the San Francisco and Sacramento Districts.

The team uses specialized ropes, cables, karabiners, and harnesses to rappel into, over, and down into the hard-to-reach areas of bridges, dams and other large concrete and steel structures.

"We are ordinary civil engineers who get the opportunity to have a little adventure, risk and seriousness with our job," said Leunig.

Rappelling allows the inspectors to visually and physically inspect any areas with possible damage.

"Rappelling into a tight space or across a huge face of a Tainter gate offers us the opportunity to see and touch any area normally hidden or difficult that can't be spotted or touched from above or below," said Leunig.

The six-member team, made up of four Corps employees and two contractors from California, inspected the Wolf Creek Dam Tainter gates, checking for corrosion, rust and structural damage.

"Wolf Creek's gates really looked good and are in great shape because they have been maintained out of the water," said Leunig. "I thought it would be harder to rappel into some of the spaces because of what we saw on drawings, but when we started down, we found some good anchor points, and the inspection went well."

Leunig said the team is made up of civil engineers who have great jobs and primarily work from their desks when not climbing or providing service to sister USACE districts.

"Our inspectors are USACE-certified through accredited USACE courses and certifications," added Leunig.

Kollias said it is critical that the team assesses damage to structures early and by specifications.

"We know that our inspections help provide safety for a lot of people and we take it seriously," he said.

As the team moves through a structure, they carry and use Ultrasonic testers to detect corrosion or structural damage to every gate and beam.

"This team makes inspections look easy by the way they are maneuvering around," said Larry Craig, the Wolf Creek Power Plant superintendent from the Nashville District. "I understand why everyone's not capable of doing this job."

Like most large infrastructure around the world and particularly here in the United States, dams require yearly, continual inspections, maintenance and care to ensure their reliable operation, Craig said.

"Wolf Creek Dam will always need maintenance and that's one of the reasons the team is here," said Craig. "This dam is critical to our economy, community and livelihood."

Resident Engineers oversee overhaul at Tobyhanna

Left and middle: The District is managing the construction of a new wastewater treatment plant at Tobyhanna Army Depot. Contractors work on a 1300-cubic-yard, concrete slab that will serve as a foundation for the secondary treatment tank. Right: A newly renovated bay at Tobyhanna Army Depot will be used to repair and overhaul military systems and equipment.

By Steve Rochette

Visitors need travel no farther than the Main Gate to see that Tobyhanna Army Depot is in the midst of a sizeable construction effort. The gate is just one of the areas undergoing repair, renovation or new construction at the depot in northeastern Pennsylvania.

The U.S. Army Corps of Engineers' Philadelphia District is managing a $40-million military construction program, which includes nine projects under construction and a number of completed facilities going through the close-out process.

Perhaps most visible of all the ongoing work is the construction of a new wastewater treatment plant adjacent to the depot's main gate. The project involves demolishing structures from the previous wastewater treatment system and constructing a new sequential batch reactor treatment system.

The new treatment plant will have the capacity to treat 1.8-million gallons of wastewater a day. G.M. McCrossin, Inc., of Bellefonte, Pa., is the contractor for the $7-million project, which began in March and is slated for completion in July of 2014. Contractors completed work on a 1300-cubic yard concrete slab that will serve as a foundation for the secondary treatment tank.

Just a few hundred feet from the wastewater treatment plant is another highly visible project. Contractors from Turtle Associates are working on a five-phase project to improve Tobyhanna Army Depot's main gate. The Corps is constructing a wider entrance, guard structures, a small visitor/registration facility, and vehicle inspection shelters and parking areas.

Other projects on base include several warehouse renovations; HVAC upgrades; and the installation of a blast booth facility used to remove paint from military equipment. The warehouses and bays are critical to Tobyhanna Army Depot's mission of repairing and overhauling electronic equipment.

Most of the construction at Tobyhanna Army Depot involves renovating and rehabilitating existing structures rather than replacing them. In many ways, this is more difficult than typical vertical or horizontal construction according to Resident Engineer Jim Harbert.

"With a new facility, most of the steps involved with design and construction are the same even for different projects," he said. "But when it comes to renovating a 50-year old facility, you often find surprises and they present a unique set of challenges."

Those surprises can involve differences between the as-built drawings of a facility and the presence of utilities such as wiring and pipes.

During another project, crews discovered lead during a pre-construction survey that required remediation before any work could take place.

Harbert manages a team of 11 Army civilians at the Resident Engineer Office (REO), although several employees work on other projects, including coastal projects in New Jersey and Delaware and ongoing work for the Transatlantic Division in Winchester, Va.

The REO has constructed and renovated numerous buildings on post from family housing facilities to electronic maintenance shops over the years. One of the larger recently completed projects is the $23.46-million C4ISR Finishing Center, which enables personnel to repair, refinish and apply protective coatings to large and tactical military systems.

Tobyhanna Army Depot first opened in 1953, although the Army has had a continuous presence at the location since 1912. The installation encompasses about 1,300 acres and the total value of land facilities is estimated at $1.28 billion. It is the largest employer in the Pocono Region of Pennsylvania with approximately 5,800 personnel. Army civilians and contractors work on design, manufacture, repair and overhaul for hundreds of electronic systems for the Department of Defense.

SugarHouse agrees to $650K settlement

By Richard Pearsall

Bulldog tenacity on the part of the District's Enforcement section and artful negotiation by the District's Office of Counsel helped the U.S. Attorney's Office extract a $650,000 settlement from the SugarHouse Casino this spring in an environmental dispute.

The District presented evidence that the casino repeatedly violated environmental regulations in the course of constructing its complex on the Delaware River in Philadelphia.

The lion's share of the settlement, $625,000, has been sent to the Brandywine Conservancy, a non-profit organization dedicated to the preservation of wetlands and open space in a three-county area west and south of Philadelphia.

Jeff Steen, chief of the Surveillance and Enforcement Section for the District, called it a significant victory and had high praise for District personnel who helped make it happen, including attorney Barry Gale, senior biologist Kevin Maley and Steve Farrell, chief of field surveys.

SugarHouse was accused of discharging material into the Delaware without first obtaining a permit from the Army Corps, a violation of the federal Clean Water Act, and of performing other work in the river without a permit, a violation of the Rivers and Harbors Act.

"They were a knowing and repeat violator," Steen said. "They continued to violate the law even after receiving three cease and desist letters. Based on this pattern of behavior, we referred the case to the U.S. Attorney's Office."

Neither the area affected nor the damage to the environment was great, Steen said. But the principal at stake was important.

"If we only had a permitting program," Gale said, "no one would go through the process."

In the casino, furthermore, the District recognized "an opportunity to obtain a sizeable settlement," said Gale, now retired from the Office of Legal Counsel.

"The idea in cases such as this is to identify where we have leverage," Gale said. Assistant U.S. Attorney Stacey L.B. Smith handled the case for the U.S. Attorney's Office for the Eastern District of Pennsylvania, based in Philadelphia.

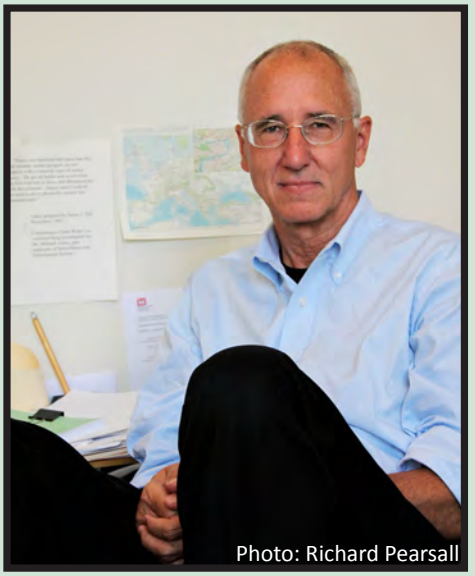


Photo: Richard Pearsall

Steen praised Gale for persuading the U.S. Attorney to take the case in the first place, then for "explaining why there needed to be a penalty of some substantial amount and why it made sense for the contribution to go to the local area."

"If the money went to the general treasury it could be used for anything – Afghanistan, a fence post in Arizona," Steen said. At the Brandywine Conservancy, the money "will be used to protect aquatic resources in our area in perpetuity."

The Brandywine Conservancy, based in Chadds Ford, Pa., has a proven record of preserving and managing both land and water resources, Steen said.

The enforcement action in this case involved extensive investigative work over a period of two years, led by Maley and assisted, in the field, by Farrell.

"Steve's survey work helped us develop the case," Steen said.

Above, enforcement chief Jeff Steen in his office. Below, members of the enforcement team inspect fill encroaching on the river at the SugarHouse site.

Photo: Kevin Malley

Prompton hosts barefoot waterskiing event for second year in row


Photo: Tim Boyle

On July 19-20, the American Barefoot Waterski Club held its Eastern Regional Championship at Prompton Dam for the second straight year.


Photo: John Martines

Johnathan completes an inverted jump during the competition.


Photo: Tim Boyle

John Martines helped organize the event while his grandson Johnathan competed as a pro-level barefoot skier.

By Steve Rochette

The exhilarating sport of barefoot waterskiing is about the closest humans get to walking on water. "Skiers" glide barefoot on the water pulled by a boat moving 40 miles per hour, attempting jumps, tricks and maneuvering laterally through the wake.

And one of the best spots to do it, according to participants, is none other than Prompton Dam, owned and maintained by the U.S. Army Corps of Engineers' Philadelphia District.

On July 19-20, the American Barefoot Waterski Club held its Eastern Regional Championship at Prompton for the second straight year. Before last year's event, Prompton had not hosted a barefoot waterskiing tournament since 1991.

"Prompton is beyond perfect for this sport," said John G. Martines, a Newton Lake, Pa., resident and one of the tournament organizers. "It's as good a location as we have along the east coast of the United States."

The reasons, Martines explained, have to do with the width of the lake, the nature of the shoreline and the amount of boat traffic. Prompton is narrow and straight, enabling boats to move at the speeds necessary for the sport. The shoreline doesn't have seawalls, bulkheads or other structures that deflect the wake back towards the middle of the lake. And lastly, typically there aren't many other boaters in the water creating additional wake.

More than 30 skiers from seven different states competed in the regional event this year, including males and females of different ages and skill levels.

"We have three basic skill levels – age group, which is an amateur level, open division, which is more intermediate and open pro, which is the highest level in the sport," said Martines, who is the proud father and grandfather of barefoot skiers.

His son, John E., competed in the regional event and helped organize it while his grandson Johnathan is a pro-level barefooter who is set to compete in the national championships in California.

The family tradition started when the elder Martines tried the sport in 1963 as a 16-year old at Crystal Lake in Lackawanna County, Pa. Years later, he no longer competes, but enjoys organizing events such as the regional championship and cheering on his grandson.

Martines was very appreciative of USACE and the Pennsylvania Fish & Boat Commission.

"They've been very supportive and helpful to us," he said. "When we finish the tournament, we leave the grounds and the lake exactly as we found it."

Recreational barefoot waterskiing is the latest example of increased recreation use at Prompton Dam. On June 8-10, the Friends of the Prompton State Park hosted the Pedal & Paddle Festival. More than 928 cars entered the park that weekend, their passengers bound for kayaking, paddleboarding and canoeing on the water.

Prompton State Park includes 26 miles of hiking trails and an 18-hole Frisbee golf course. Prompton Dam has prevented more than $23 million in damages since its construction in 1960. It was built in response to severe floods on the Lackawaxen River in 1936, 1942 and 1955.

Blue Marsh named 'best' in Army Corps

"Blue Marsh Lake is serving the Corps and our nation admirably through highly effective management even in this era of fiscal constraints." - Chief of Engineers Lt. Gen. Thomas P. Bostick

Photo: Tim Boyle

By Richard Pearsall

The District's own Blue Marsh Lake has been named the top recreational area in the Army Corps by Chief of Engineers Lt. Gen Thomas P. Bostick.

The Army Corps runs more than 400 recreation areas, which annually attract more visitors than the National Park system. Blue Marsh is by no means the largest among them, but it was recently recognized as the best.

In singling it out for the 2013 Natural Resources Management Project of the Year Award, Gen. Bostick took note of Blue Marsh's skill at attracting and deploying the services of volunteers and working with other agencies to help the park weather trying economic times.

"Your use of volunteers, interaction with multiple civic, local, county, state and federal agencies, and your ability to optimize your resources by leveraging in-kind services was outstanding," Gen. Bostick said in a message to District Commander Lt. Col. John C. Becking, announcing the award.

"Blue Marsh Lake is serving the Corps and our nation admirably through highly effective management even in this era of fiscal constraints," the general wrote.

With more than 36 miles of trails and a thousand-acre lake that accommodates swimming and boating, Blue Marsh is a recreational fixture in the Reading, Pa., area and draws visitors from Philadelphia and other more distant locations as well.

"This is an incredible honor for our folks working every day to make Blue Marsh an outstanding place for Americans to enjoy," Lt. Col. Becking said.

Typical of the Blue Marsh approach is its annual "Take Pride in Blue Marsh" Day, which in 2012 brought out 653 volunteers who did everything from picking up litter to building picnic tables to planting seedlings. All told they contributed more than 3,000 man hours and, just as importantly, demonstrated the breadth and depth of support for the recreation area in the surrounding community.

The dam at Blue Marsh was authorized in 1974 and completed in 1979, creating a multi-purpose project designed for flood control and water supply as well as recreation.

John Cave, Natural Resource Manager for Blue Marsh, expressed the satisfaction he and his staff feel in receiving the award.

"It's a pinnacle honor," Cave said.

It's all the more meaningful, he said, because it does not emanate from a single event or moment.

"It's a reflection of what this staff does on a day-by-day basis," Cave said.

Mechanical engineer by day... ...professional athlete by night

MDC engineer Nick Hirannet at work (standing, above) and at play (diving, below)

By Richard Pearsall

That's Nick Hirannet of the Marine Design Center, a man on the move whether on the job as project manager of the overhaul of the Dredge Wheeler in Mobile, Alabama, or at play, as a member of the Philadelphia Spinners.

The Spinners are one of eight teams in Major League Ultimate, the newest professional league in a sport that is sometimes called "ultimate frisbee" but has been shortened to "ultimate" because Frisbee is the trademark of the most famous manufacturer of the plastic discs used in the game.

Hirannet, who grew up playing soccer and tennis and a variety of other sports in Haverford, Pa., picked up "ultimate" from his older brother.

"He played in college, at the University of Delaware, so we would play when he came home."

Nick was hooked.

"It's a combination of soccer and football, exciting to play and exciting to watch.'

Nick followed his brother to the University of Delaware and on to its ultimate team.

Now he is not only a member, but captain of the Spinners, a newly-minted professional team.

Played on a footfield field, the game involves two teams of seven players each. The object is to pass the disc down the field and across the goal line. Once a player on offense catches a disc he has seven seconds to pass it on. The disc is advanced only by passing, not running and there is no checking. The only physical contact allowed is that incidental to two players reaching for a pass, the receiver to catch it, the defender to intercept. The game demands speed and entails the same kind of high-flying, acrobatic competition between receiver and defender associated with long passes in professional football.

"The action is constant. We've had several of these long passes show up on ESPN's 'Top Ten Plays in Sports.'"

Frisbee traces its roots back to the Frisbie Pie Company in New Haven, Conn. Yale students took to tossing the tin plates around their storied campus in the 1920s. The seven-on-seven game was invented at a New Jersey high school in 1967 and by the 1970s had graduated to the college level. In 1972 Princeton and Rutgers played the first intercollegiate match, doing for ultimate what they had done for football in 1869.

Played largely as a club sport in high schools and colleges and as an amateur sport beyond college, ultimate has recently branched into professional leagues.

The game is exciting enough that fans are willing to pay a modest admission charge ($16 in the Spinners case) and attend in enough numbers to make the league worthwhile.

"We're still playing for the love of the game," Hirannet said, "but now instead of everything coming out of our pockets we're getting our expenses covered."

Hirannet, who said tennis was probably his strongest sport at Haverford High School, said there's not much room for extra weight in ultimate.

"It involves more running than any sport," he said. "Constant sprinting."

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FROM FARM TO PHILLY: A MAJOR'S JOURNEY

By Richard Pearsall

A funny thing happened to Maj. Andrew Yoder when he first came to Philadelphia.

An architecture student at Temple, Yoder became a die-hard, Philadelphia sports fan.

"The kind who hates everything about the Dallas Cowboys," Maj. Yoder, now the deputy commander of the Philadelphia District, said in an interview this summer.

The major has a rich and varied background, which includes boyhood on a dairy farm and tours of duty from Korea to Iraq, and explains his robust work ethic. But as the story behind his fandom reveals, he also has a well-developed sense of humor.

Yoder recalled how he became a sports fanatic in the early morning hours at Temple.

"I had the alarm clock set to sports radio," Yoder said. "So every morning I'd wake up to this crazy sports talk, back and forth, on 610. I listened for three weeks and finally got hooked. I'd tune into some crisis in the morning and have to tune back in at night to see how it played out."

"I was a casual fan before, but that's how I became a die-hard fan."

Growing up in central Pennsylvania, Yoder was on "the dividing line between Pittsburgh and Philadelphia."

Most people in his area, including most of his family, leaned toward the Pirates and Steelers. But one day his grandfather took him to a Phillies game _ "I watched Mike Schmidt play" _ and Yoder decided it was Philadelphia for him.

Today he has the pleasure of taking his two sons, 11 and 14, to Citizens Bank Park. The latest addition to the family, Peyton Grace, born in May, may have to wait one more season.

It isn't just the sports that the major enjoys about Philadelphia. Having been raised in a small town and been stationed in some relatively out- of- the-way places _ Fort Campbell, Kentucky; Fort Stewart, Georgia; Fort Polk, Louisiana, _ he's appreciative of the resources and opportunities a big, Eastern city offers.

Deputy District Commander Maj. Andrew Yoder

"I love Philly. Everything's here in this metropolitan area."

Yoder enlisted in the Army upon graduation from high school.

"I wasn't ready for college," he says.

But he was ready to see more of the world.

"I grew up as a farm boy," he said, living and working on his family's dairy farm.

He recalls milking and feeding cows, tending to the field crops, working before school and after school and during school vacations.

"My family didn't take vacations," he said.

"I think the furthest I traveled was about two hours away," he added, with the enigmatic smile that he often displays at the District.

"My Dad got injured and sold the farm when I was 16," Yoder said. He recalled his wonder at "moving into a new house where we had heat at the push of a button. In the farmhouse, heat had been a matter of 'straight up firewood.'"

Yoder acknowledged that he is imbued with "old fashioned values, a belief in hard work and the idea that things are earned, not given."

After his three-year tour as an enlisted man, Yoder returned to school, enrolling in college with the Army's help. He spent one year at Penn State, close to his family's home in Reedsville, but transferred to Temple after concluding College Park was "too close."

At Temple he majored in architecture and joined the Reserve Officer Training Corps with the idea of becoming an officer in the Army Reserve.

Married with child by the time he graduated, Yoder decided to forego the prospect of a three-year internship as an architect and opted instead for a tour of active duty as a commissioned officer with an engineering regiment. That three-year tour turned into a career.

It's a decision he doesn't regret.

"The Army has afforded me opportunities I wouldn't have had _ travel, friends, and the chance to obtain a master's degree."

In addition to duty at various bases in the United States, the major has done tours in Germany, Korea, Afghanistan and Iraq.

Joining the Philadelphia District involved some adjustment, Maj. Yoder acknowledged.

"You have to change leadership styles. The Army has high turnover rates and it's geared toward 'plug and play.' Here there is more technical expertise and fewer turnovers. Basically everyone here knows their job. The Army Corps of Engineers is moving forward at all times. My job is to help the organization maintain standards and be a mediator where necessary. "

Nick Hirannet continued from page 26

Players are mostly in their 20s. One Spinner is 41, "but he's an anomaly, " Hirannet said. "The next oldest is 33."

Players are divided roughly into two categories, handlers and cutters, the cutters being those who try to break loose to receive a long "touchdown" pass. Height as well as speed is valuable in that position. Handlers are more like quarterbacks, looking to find and get the disc to an open cutter.

At 5'9" and 150 pounds, Hirannet is a handler.

As the project manager for the overhaul of the Wheeler, Hirannet has been overseeing a myriad of tasks, including major work on the engines, the electronics and the steering system.

With a degree in mechanical engineering, he has not yet attained certification as a Professional Engineer, the upper case recognition those in his profession value.

"I'm working on that now," he said.

But professional engineer, lower case?

Absolutely, his colleagues and supervisors in the Marine Design Center attest.

For more information on Major League Ultimate, visit the website, http://mlultimate.com/

Delaware Coastline continued from page 7

When complete, the dune will help protect a critical location in Delaware. Hurricane Sandy caused extensive damages and overwash on the north shore of the inlet as several feet of sand covered Route 1. The major thoroughfare was closed for several days.

"We will have far better protection for Route 1 than we've had for a long time," said Tony Pratt, shoreline administrator for the Delaware Department of Natural Resources and Environmental Control.

Manson Construction Company began work on July 23 and expects to complete the project in November.

A separate project to restore beaches both north and south of the Indian River Inlet is also underway.

The $19.3-million contract with Great Lakes Dredge & Dock Company includes the dredging, pumping and placing of 1.3-million cubic yards onto Rehoboth, Dewey, Bethany, South Bethany and Fenwick Island beaches. Work began at the end of July and is expected to be complete in the fall.

On the Delaware Bay, the Philadelphia District will restore the Roosevelt Inlet-Lewes project by trucking in 21,000 cubic yards of sand. All of the projects will be restored to full design levels.

"It's exciting to know that the beaches are not just being replenished but fully restored," said U.S. Sen. Chris Coons. "I'm grateful for the prompt response by the U.S. Army Corps of Engineers in getting these projects under way on our coastline."

Corps joins celebration of C&D trail opening

By Richard Pearsall

Delaware officially opened the Michael N. Castle Trail on the Army Corps' Chesapeake and Delaware Canal Oct. 18. Named for a former governor and congressman who championed recreation in general and the construction of this project in particular, the trail extends just under nine miles, from the Summit Bridge to an area outside Delaware City.

The Army Corps, which was involved in the design and planning of the trail, turned the project over to the state of Delaware for construction and now operation. The trail is designed to accommodate walkers, joggers, bicycle riders and equestrians, and will eventually extend 16 miles, the length of the C&D Canal, from Delaware City to Chesapeake City in Maryland.

In the picture to the right, Castle is shown speaking at the ribbon cutting ceremony beneath the St. George's Bridge. To his right is Nicole Majeski, Deputy Secretary of the Delaware Department of Transportation. An Army Corps survey boat, the Shuman, can be seen cruising in the background, along with a Delaware police boat.

A number of officials from the Army Corps' Philadelphia District attended the ceremony, including Lt. Col. John C. Becking, the District Commander; Jim Tomlin, project

Photo: Tim Boyle

engineer for the C&D; Tim Kelly, project manager for the canal; and Mark Eberle, the District biologist involved early on in planning and designing the trail. The Delaware Department of Transportation constructed the nine-mile trail. The Division of Fish and Wildlife, part of the state's Department of Natural Resources and Environmental Control, will operate it.

The U.S. Army Corps of Engineers' Philadelphia District dredged more than 500,000 cubic yards of sand from the Indian River Inlet and pumped sand onto the north shore to restore the area. Hurricane Sandy caused extensive flooding and overwash in the area, closing Route 1 for days. Work was completed in November of 2013

Photo: USACE

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