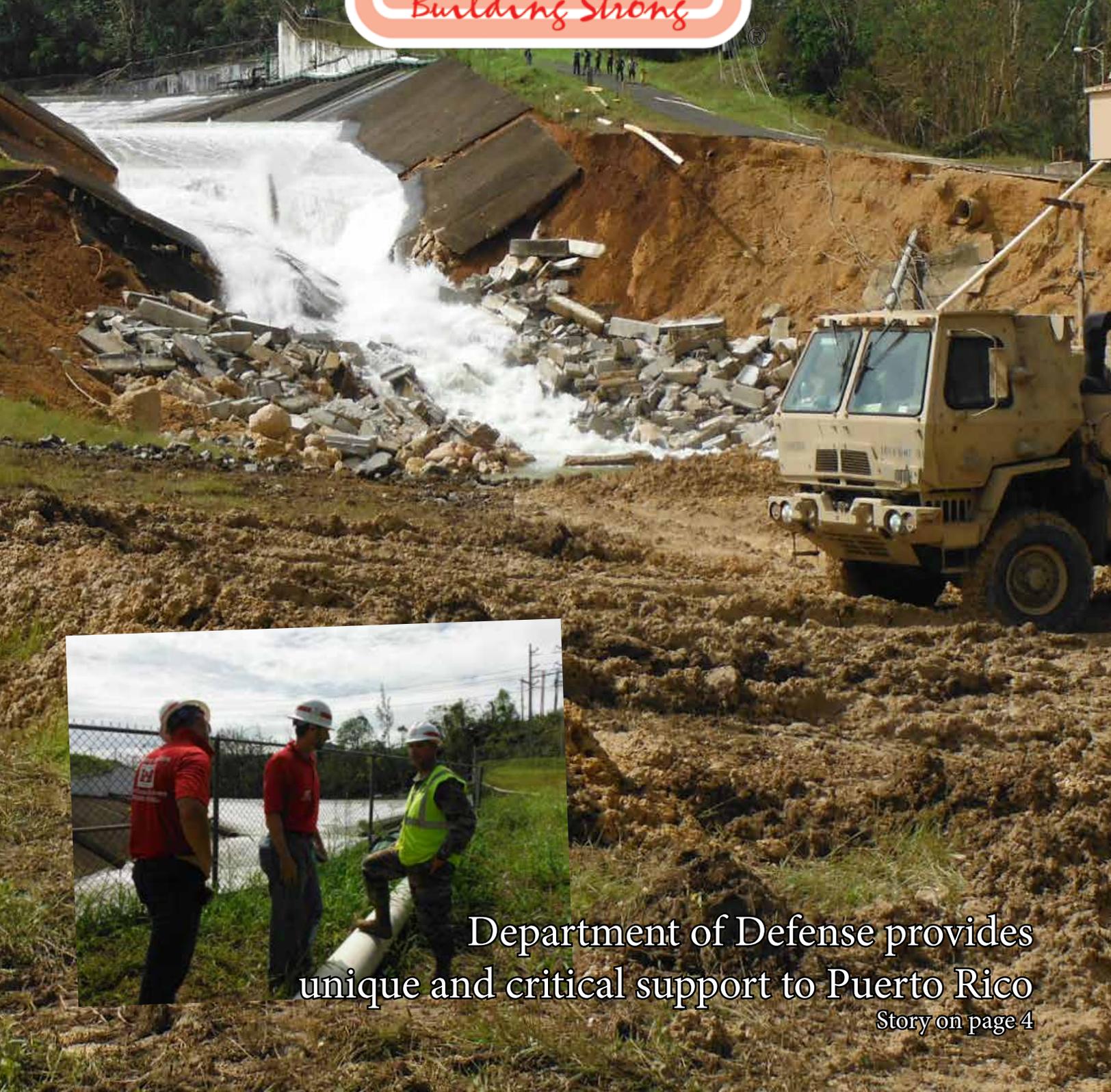


Yankee Engineer

U.S. Army Corps of Engineers, New England District, Volume 51, No. 2 November 2017

Building Strong



Department of Defense provides
unique and critical support to Puerto Rico

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Yankee Voices

Janet Patev, Denise Kammerer-Cody and Mike Narcissi



Observing National Native American Heritage Month

November is National Native American Heritage Month, honoring American Indians and Alaskan Natives. "Standing Together" – the theme of this year's observance gives us the chance to reflect on the achievements and contributions of Native Americans to the Army and to our nation. Embracing and celebrating diversity makes our Army stronger, and we are dedicated to ensuring equality for all our Soldiers, Civilians and Family Members.

Yankee Engineer Digital Mailing List

New England District team members who are retiring may request to be placed on the Yankee Engineer Digital Mailing list. Subscribers will get an e-mail informing them when the next issue of the Yankee Engineer is available for viewing. Those interested may send their personal e-mails to the editor at annmarie.r.harvie@usace.army.mil.



Costumed participants of the Halloween Potluck pose for a picture.

Photos by Brian Murphy

New England District WE Committee hosts annual Halloween potluck lunch

Halloween isn't just for kids. Adults like treats too, and dressing up in a fun costume. On October 31, the New England District celebrated the not-just-for-kids holiday during its Halloween potluck lunch.

Held in the Concord Park cafeteria, New England District team members shared some of their favorite dishes during the annual event. "We had salads, macaroni and cheese, meatballs, tons of cookies, cupcakes and a really great mulled cider that came in under the name of Witches Brew," said event organizer Denise Kammerer-Cody. "We enjoyed each other's company with good food and good laughs!"

Costumes, of course, were encouraged and District team members didn't disappoint. Engineers, scientists and other professions transformed into cowhands, witches and medieval knights. Even Bobber the Water Safety Dog made an appearance.

The annual Halloween potluck lunch is a free event. Costumes and a dish to share are encouraged, but not required. It's a chance for District Team members to get away from their computers during lunch and interact on a social level.



Commander's Corner: Thank you and keep up the great work

By Col. William Conde
New England District Commander



I wanted to take a moment to sincerely thank the entire New England District team for both your warm welcome to me and my family this summer and for all your hard work and dedication on delivering the program this year. Over the past three months, I have been able to see firsthand the amazing and truly interesting engineer

projects we do with our partners across all six New England states and among our sister districts in the Corps.

I have also had the privilege to engage directly with many of our stakeholders and I can tell you that they all appreciate the District's professionalism and the quality of products and services we deliver. The Team pushed

through the fourth quarter with some outstanding results and accomplishments, and your efforts are recognized by many across our organization and up our vertical chain through North Atlantic Division and Headquarters USACE.

As we enter the new Fiscal Year, I would ask that each Division and Branch try to maintain some of that focused determination that got us successfully through the fourth quarter in order to buy us some space at the end of this next year. There were so many things the Team did well, but there was also little room at the end of September for slips or uncontrollable variables. You all are true professionals and I recognize your passion, dedication, and spirit. Let's make 2018 another outstanding year for the New England District and continue to deliver the program on time and on budget for our trusted partners across the New England District.

I wish you all a very Merry Christmas and wonderful New Year. Watch out for your teammates and Family as we transition fully into winter and be sure to take a little extra time to prepare for missions and travel on the New England roads.

Thanks for all you do and I am so proud to be a part of your Team.

Corps to issue statewide Vermont General Permits for projects with minimal impact to aquatic resources

By Timothy Dugan, Public Affairs

The New England District plans to issue the statewide Vermont General Permits (GPs), pursuant to 33 CFR Part 325.5(c)(1), for projects with minimal impact to aquatic resources on Dec. 6. The Vermont GPs will replace the prior statewide Vermont GP, which expires on Dec. 6, with a series of multiple GPs covering activity specific categories. These GPs become effective on Dec. 6, and will continue the expedited review process for activities subject to Corps jurisdiction under Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899, in waters of the U.S., including navigable waters, within boundaries of the state of Vermont. General Permits are used as a way to streamline state and Federal regulatory programs. The New England District has already had success with streamlining these programs with the use of GPs throughout New England. These GPs are designed to authorize activities covered under the Nationwide Permit (NWP) program and the prior VT GP.

Some major changes from the previous GP include: 1) The new VT GPs are organized into 21 activity-specific GPs

(Appendix A). This was intended to satisfy the requirements of Section 404(e) of the Clean Water Act, which allows the Corps to issue general permits for activities that are similar in nature and will cause only minimal individual and cumulative adverse environmental effects. Identifying specific activities allows the Corps to adequately assess cumulative impacts of permitted activities, as well as fully assess impacts on threatened and endangered species.

The 2017 Vermont GPs will supersede the previous VT GP which will expire on Dec. 6. Activities that were authorized by the previous VT GP but had not commenced or were not under contract to commence by Dec. 6, will need to apply for a new authorization under the new VT GPs. Conversely, activities authorized by the previous VT GP that have either commenced or are under contract to commence will have an additional year from the expiration date of Dec. 6, to complete the work. The public notice, with more specifics and a copy of the Vermont GPs, can be viewed on the Corps website at www.nae.usace.army.mil/Missions/Regulatory/PublicNotices.aspx.

DoD provides unique and critical support to Puerto Rico

Story and photos by

John MacPherson, Cape Cod Canal

Hurricane Maria struck Puerto Rico on September 20 as a Category 4 storm with maximum sustained winds over 150 mph. The storm dropped over 20 inches of rain, causing at least 49 deaths on the island and crippled virtually all the island's infrastructure systems.

On September 30, New England District team members joined the Jacksonville District, Mobile District and other DoD personnel on the Island to help stabilize a dam in danger of breaching and to provide clean drinking water to residents.

The Guajataca Dam was constructed in the 1920's to create Lake Guajataca. The lake is used as a water source to produce drinking water for 250,000 people in three different municipalities. The 1,000-foot-wide earthen dam is owned and operated by the Puerto Rico Electrical and Power Agency (PREPA). After the storm, the water level in the lake quickly rose to flood stage and water started to flow over an emergency spillway. The massive volume of flow over the spillway spared damage to the earthen dam but exceeded the capacity of the concrete lined spillway and it began eroding and crumbling.

The erosion and undermining began at the leading edge of the spillway and was progressing back towards the dam. Complete failure of the dam was imminent if the erosion continued. The damage at the spillway also severed the water connections to all three water treatment plants downstream of the dam leaving over 250,000 residents without clean water.

The dam is located in the mountainous jungle typical of the Island's interior region with approximately 200 homes that lie within the downstream flood plain. The storm



An aerial view of the Guajataca Dam in Puerto Rico.

downed trees and power lines, crippled cell towers and caused landslides and flooding on roads all around the dam. One landslide also blocked the 96-inch outlet pipe of the dam that restricted the normal flow of water out of the lake to the Guajataca River. When local officials became aware of the deteriorating conditions at the dam, a flash flood warning was posted and all residents were evacuated from vulnerable homes downstream of the dam. Without any electrical power or functional communication systems, local police and fire personnel had to go door-to-door to warn residents.

Personnel working for PREPA did what they could to get the gates in the outlet pipes open in an effort to lower the water level in the lake. Water flowing over the spillway continued to undermine and destroy sections of the concrete spillway, threatening the integrity of the entire dam. Realizing that the work required at the dam exceeded their capabilities, PREPA reached out to the Puerto Rico Emergency Management Agency and FEMA for help. FEMA tasked the Corps of Engineers to provide subject matter expertise and management to advise PREPA on potential means and

methods to stabilize the Guajataca Dam. The USACE Recovery Field Office, established to respond to Hurricane Maria, and an engineering team from Jacksonville District quickly conceived a plan that would be executed in phases. Phase 1 included immediate measures to lower the water level in Lake Guajataca to a level below the spillway crest and stabilize the eroding spillway. Phase 2 included work to further stabilize and anchor the remaining sections of the damaged spillway to make it functional if weather conditions caused the lake's water level to rise again and start spilling. Phase 3 of the plan would require a large construction project to build a new and improved emergency spillway and repair all of the known damage to the dam.

Phase 1 began with work to remove landslide material in the river channel that was obstructing the discharge from the 96-inch outlet works pipe. Maximizing discharge from the existing outlet pipe was important to lower the water level in the lake. Jacksonville District quickly awarded an emergency contract to have ten large pumps transported and set up at the dam. Each 18-inch pump in the contract had

a capacity to discharge up to 25 cubic feet per second. To expedite pump installation, the first two of the 18" pumps were flown to Puerto Rico on military aircraft with the rest arriving via barges. The next task of Phase 1 was to place some type of hard material into the active erosion area to dissipate the energy of water that continued to flow over the spillway. Based on availability, concrete Jersey barriers were selected as the material to be placed at the leading edge of the damaged spillway. The method of placing the barriers, however, presented a challenge, as the area was out of reach of any excavator or crane that could make it to the dam. DoD quickly stepped up with a solution for placement. Marines from the 26th Marine Expedition Unit used CH53 Sea Stallion helicopters to lift and deliver the concrete barriers. The barriers were trucked to the crest of the dam, sling loaded below the helicopters and released into the eroding area of the spillway. The marines placed a total of 505 barriers over several days of flying helicopters mobilized off of the Naval ship Kearsarge.

With the concrete barriers in place, the next task was to further minimize the active erosion by constructing a check dam across the spillway area downstream of the concrete barriers. The purpose of the check dam was to create a plunge pool that would slow the velocity of any water that flowed over the spillway. Super-size sand bags with integrated lifting straps which could each hold one cubic yard of sand were selected as the material to construct the check dam. FEMA was able to quickly deliver 1,800 of the sand bags to the Island via military aircraft. Placement of the sand bags was again another challenge where the DoD stepped up with a solution. CH-47 Chinook tandem-rotor, heavy-lift helicopters flown by Army National Guard units from Pennsylvania and Georgia were used to lift and place 1,338 of the sand

bags at the dam. Precise placement of the sand bags was important to ensure the dam would hold a pool of water so USACE personnel on the ground directed locations for the bags. The loaded sand bags were hooked up to the helicopters at a small airfield about 20 minutes from the dam and flown to the dam to be placed. The CH47's delivered the sand bags in groups of four and eight at a time.

Roads in the vicinity of the dam were narrow with numerous trees, debris and downed power lines. After some debris removal on local roads, the dam owner, PREPA, was able to mobilize an excavator to the site and arrange for delivery of rock materials from a local quarry. Traversing the roads, particularly with large trucks, was a challenge. The main access road to the dam had one section that remained flooded for weeks after the hurricane's landfall. Getting rock materials to the dam was critical to reinforce and harden the side slopes of the eroding area. PREPA and FEMA again reached out to the DoD for support in getting rock materials delivered to the dam. Most local trucks were fully engaged in other recovery work to remove debris or distribute food, water or other essential supplies. The 130th Engineer Battalion of Puerto Rico's Army National Guard (130th EN BN) with support from the 44th Infantry Brigade Combat Team (44th IBCT) were tasked with hauling stone from a local quarry. Soldiers using 10-ton dump trucks travelling

in convoys delivered over 100 tons of rock material per day to the dam. The 130th ENBN with support from 44th IBCT also worked alongside PREPA civilian work crews to clear obstructions and landslide material from a canal that was necessary to re-establish the flow of water from the lake to downstream treatment plants.

To help with short term water distribution, the Army's 3rd Expeditionary Sustainment Command (3rd ESC) mobilized Reverse Osmosis Water Purifying Units (ROWPU's) to a location adjacent to Lake Guajataca. Soldiers from 3rd ESC pumped water from the lake and filtered it through the ROWPU to produce clean water. Local residents in the remote communities near the dam picked up the clean water in improvised bulk containers and smaller containers that were made available from FEMA.

The emergency stabilization work at Guajataca Dam was a unified effort performed by municipal, government and non-governmental organizations. The work performed by DoD demonstrates the unique capabilities that well-trained and prepared troops can offer FEMA during Defense Support to Civil Authorities (DSCA) events.

The New England District personnel that supported work at the dam as part of the Joint Forces Land Component Command (JFLCC) includes Col. William Conde, Mark Anderson, Capt. Steve Kraus, John MacPherson, Maj. Sonny Avichal and Joe Mazzola.



The Army National Guard places sandbags at the Guajataca Dam.



New England District team members host an information booth and answer questions from the public.

The Public Speaks... and your Corps of Engineers in New England answers the call

**Commentary by Jess Levenson
Public Affairs Office**

After 242 years, honeymoon long over, the New England Corps of Engineers and the public have settled into life as an old married couple: they can't live with, or without, each other.

The public cares about the Corps in New England. They perpetually voice genuine concerns running the gamut of the Corps' authorities, from hazards in their backyards to rising recreation costs; from traffic jams along the Cape Cod Canal to complex permitting activities.

In turn, the Corps cares for the public by addressing environmental hazards and impacts to waters and wetlands, by making available pristine recreation opportunities at 31 Corps New England projects, by maintaining navigation and coastal infrastructure, by informing the public of pending traffic impacts, and so much more.

The public speaks; the Corps listens and responds - individually, directly, and quickly.

What is the key to this symbiosis?
The secret to success is

communication. Criticism is a healthy and necessary form of communication, not an indication that the relationship is unhealthy or in trouble. The District Public Communication and Outreach Program demonstrates daily the Corps' dedication to fostering a healthy, open, and honest dialogue.

Since my first day working in New England's Public Affairs Office seven years ago, I've been responsible for responding to public inquiries. I've helped thousands of people find the answers they need in the District's extensive purview, from reporters seeking new developments on projects, to congressional officials seeking progress on programs, to the public seeking updates about, well, the things that matter to them.

Millions of people are passionate about diverse New England regulatory actions like the precedent-setting Cape Wind permit. Hundreds of millions nation-wide have a stake in other Corps permits such as the Dakota Access Pipeline. While New England wasn't at the forefront of that pipeline project, the Public Affairs

Office was the first point of contact for many. I spoke with numerous upset callers and gave them an opportunity to voice their concerns.

In my experience, producing first-rate customer assistance doesn't take a backseat to delivering services because people remember their experience with the Corps.

For instance, on Cape Cod alone, I helped a man find information on donating a park bench in honor of his father's memory. His father had been an avid fisherman along Cape Cod's shores and had always wanted to remain there. Another resident contacted me about his late father and reminisced about how they would fish by the Buzzards Bay docks and gaze at the tugs berthed by the Corps' field office. His favorite tug had long since disappeared, and I helped him discover what became of it.

The bottom line is we care about each other. The Corps of Engineers has provided quality customer service for 242 years and will continue to do so well into the future. It's impossible to imagine doing anything else.

Mark Koenig retires after 30 years of service

Mark Koenig, Project Chemist, said goodbye to coworkers during his retirement celebration, Sept. 29 in the New England District theatre. Koenig retired with 30 years of service.

Rose Schmidt, Geology and Chemistry Section Chief, hosted the official ceremony. As the audience found their seats, ceremony organizers played a PowerPoint presentation of old photos and well-wishes from Koenig's co-workers set to the music of some of his favorite songs.

Once everyone settled in, Schmidt introduced retirees and friends in attendance. She presented Koenig's wife, Robin, with a bouquet of flowers to commemorate Mrs. Koenig's own retirement from the University of Massachusetts.

The official presentations immediately followed. Maj. Sonny Avichal, Deputy District Engineer, presented Koenig with a Superior Civilian Service Award for his many faithful years of dedicated service, a District Commander's Coin and his retirement certificate.

Schmidt presented Koenig with gifts to include a shower curtain with a periodic table of the elements to celebrate his life-long love of chemistry, a desk name plate engraved with his name and Chemistry Section under it, T-shirts, a gift card to a sporting goods store, a fossil fish and a Minuteman statue.

Entertainments abounded during Koenig's retirement celebration to include modified versions of the songs that included "Harvest Moon," by Neil Young and "Imagine," by John Lennon. Many friends, co-workers and retirees went to the front of the theater to talk about Koenig. They included Raimo Liias, retired chief, GeoEnvironmental Branch; David Lubianez, retired chemist and Koenig's chemistry lab partner at Fitchburg State, David Margolis, GeoEnvironmental Branch Chief. Yuri Yatsevitch, retired chief, Geology and Chemistry Section presented Koenig with a fish statue. Ellen Iorio, Project Manager for New Bedford Harbor, presented him with a jar of fake sediment from the New Bedford Superfund



Maj. Sonny Avichal presents Mark Koenig with his retirement certificate.

Photos by Brian Murphy

site. Kathy Malinowski, told the story of how Koenig leapt into action, running to bring an eyewash station to an injured coworker years ago.

Schmidt and Paul Young gave a rendition of a Presidential Letter Koenig was supposed to get, but had not yet arrived. Schmidt read a letter from Chemists at the Environmental Community of Practice, thanking Koenig for his dedication to the Chemistry profession over his career.

When Koenig got his turn at the microphone, he told a story of a class he took many years ago in Vicksburg, Mississippi when he and a co-worker tested their lab supervisor's patience when they took an unscheduled trip to Bourbon Street in Louisiana.

After the conclusion of the formal ceremony, celebrants changed venues to a Chinese Restaurant in Bedford, Massachusetts and then returned to Concord Park for cake in the cafeteria.

Koenig was a District Chemist for 30 years, first serving at the New England Division's environmental laboratory in 1987, and then moving to Engineering Division when the laboratory closed in 1998.

Prior to joining the Corps in New England, he held jobs at companies that included Doble Engineering and Teknor APEX. Some of the high profile projects Koenig worked on for the District included New Bedford Harbor, Joint Base Cape Cod, the former Fort Devens and numerous Formerly Used Defense Sites.

Koenig's interests outside of work include guitar, fishing, hunting and a summer home in Newfoundland. The couple plan on traveling and visiting friends during their retirement. The Planning Committee that orchestrated Koenig's celebration was Peter Hugh, Cindy Auld, Kathy Malinowski, Paul Young, Jessica Rudd and Tracy Dorgan.



Friends and co-workers sing songs with modified lyrics during Mark Koenig's retirement celebration.

Dredging up the past



Superstorm Sandy laid waste to much of the Northeast coast to include this New York Beach in November 2012. The Corps of Engineers has been working hard ever since to repair the damage the storm created. One such project is the recently completed Camp Cronin in Rhode Island.

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