



Yankee Engineer

U.S. Army Corps of Engineers, New England District, Volume 51, No. 9 June 2018

Building Strong®

The Nature Conservancy, New England District
Release Connecticut River Flow Restoration Study Report

Story on page 4

Yankee Voices

Jennifer Flanagan, Deborah Gabrielson,
Greg Buteau and Jodi Johnson



Suicide Prevention Resources

According to the American Foundation for Suicide Prevention, suicide is the 10th leading cause of death in the U.S.

In 2016, there were 44,965 recorded suicides, up from 42,773 in 2014, according to the CDC's National Center for Health Statistics (NCHS).

On average, adjusted for age, the annual U.S. suicide rate increased 24-percent between 1999 and 2014, from 10.5 to 13.0 suicides per 100,000 people, the highest rate recorded in 28 years.

We can all help prevent suicide. The national suicide prevention lifeline is available 24 hours every day. 1-800-273-8255.

The lifeline provides free and confidential support for people in distress.

In addition, the EAP is a voluntary and confidential employee benefit available to federal employees and their family members at no cost.

Call anytime, day or night. 24 hours a day 800-222-0364, TTY: 888-262-7848 or go to foh4you.com <http://www.foh4you.com/>

Engineering team nominated for USACE Innovation award for work at CRREL

The New England District, Engineering Division, Geo-Environmental Engineering Branch, CRREL RI/FS Project Delivery Team was nominated for the 2018 USACE Innovation of the Year Award. The nomination was based on their work in identifying potential health threats due to underlying intrusion of trichloroethene (TCE) vapors at CRREL and the solution to reduce those health risks challenged them to find a tool and protocol to respond as quickly and cost effectively as possible. The nomination states that, "through their efforts, they found that the HAPSITE® field portable Gas Chromatograph Mass Spectrometer (GC/MS) more than met those challenges. The innovative sampling method developed by the PDT involving the HAPSITE® has transparently and successfully supported the rapid assessment of TCE concentrations, and the timely mitigation of environmental exposure and risk at the Lab."

According to the nomination, the HAPSITE® was designed as a portable instrument for the war fighter attempting to detect chemicals being released in chemical warfare and can identify and quantify Volatile and Semi-Volatile Organic Compounds. The device is capable of measuring all of the compounds of concern at the CREEL site in air, water and soil.

Modifying the programming and operation of the HAPSITE® at CRREL has saved the Army several millions of dollars in sampling and analysis costs and allowed the PDT to respond rapidly to human health hazards. "This innovative project meets the criteria of 'creativity and risk-taking,' demonstrates 'innovativeness through implementation of an original idea or innovative application of a new or existing technology or approach,' and its applicability easily transfers (indeed, has transferred) to USACE, Army, and industry as a whole."

Members of the New England District, Engineering Division, Geo-Environmental Engineering Branch, CRREL RI/FS Project Delivery team are Darrell Moore, Daniel Groher, Lawrence Cain, Katherine Malinowski and Steven Potts.

Words Worth Repeating

"Sometimes you can't see yourself clearly until you see yourself through the eyes of others."

- Ellen DeGeneres



Maj. Gen. Graham pays last visit to New England District projects as Division Commander

Outgoing NAD Commander Maj. Gen. William Graham and incoming commander Maj. Gen. Jeffrey Milhorn visited New England District to meet some members of the New England District team and to tour a sampling of New England District projects and programs. Maj. Gen. Graham was in New England from May 20-22. Maj. Gen. Milhorn visited on May 20.

The visit was the last for Maj. Gen. Graham and Maj. Gen. Milhorn's first. The commanding officers spent the first afternoon of their visit touring the Cape Cod Canal and its visitor's center. Sean McDonald, Cape Cod Canal Manager, provided a briefing and a tour of the facilities. Maj. Gen. Milhorn departed New England at the end of the day.

The next day, Maj. Gen. Graham received an MIT-Lincoln Labs presentation by Project Manager Dan Stenstream. The New England District is constructing a new advanced compound semi-conductor lab and microsystems integration facility.

According to the project manager, the facility will be a three-story building constructed using concrete foundations, steel or reinforced concrete superstructure, masonry infill walls and energy efficient roofing. Site improvements will include access roads, utilities, landscaping and all other work necessary to make this a complete, and usable project. The design for the project is 35-percent finished. It is expected to take about two to three years to complete construction of the new facility.



Photo by Sean McDonald
Maj. Gen. William Graham talks with Park Ranger Samantha Gray during his trip to the Cape Cod Visitor's Center.



Photo by Brian Murphy
Jim Conway, Construction, briefs Maj. Gen. Graham on the District projects at Hanscom Air Force Base during his visit.

The general then met with the Leadership Development Program team to get a briefing on the current project being worked on by the group. Maj. Gen. Graham ended the meeting with a question and answer period.

Hanscom Air Force Base was the next stop on the NAD Commander's schedule. New England District team members gave the general a tour of the Hanscom Primary and Middle Schools as well as the Hanscom Dormitory construction sites. The District is constructing a \$12.5 million design-build new military dormitory on the base. The three story building will have 66 rooms and will be 25,000 square feet. The District broke ground on the project in March 2017 and it will take about two years to complete.

The new Primary School is being constructed as an addition to the already completed Middle School building. Work on the 80,000 square foot school began in spring 2017 and will take 30 months to complete. The \$36.9 million project will include the demolition of the existing school. The District cut the ribbon on the new, state-of-the-art Middle School on April 26, 2016. The 85,000 square foot Middle School can hold 312 students.

After a lunch break, Maj. Gen. Graham was on the road again, this time to Maynard, Massachusetts to attend the FEMA Senior Leader Seminar, concluding his day's journey.

On this final day of his visit to New England Maj. Gen. Graham began the travel home, visiting several District projects on his way back to North Atlantic Division.

The Change of Command Ceremony between Maj. Gen. Graham and Maj. Gen. Milhorn will take place in July 19.



This dam located on the Connecticut River will be studied under the Flow Restoration Study Report.

Planning photos

The Nature Conservancy, New England District release Connecticut River Flow Restoration Study Report

A new study of dam operations and river flows in the four-state Connecticut River watershed could provide insights for dam operators and natural resource managers as they balance the multiple uses and needs of the watershed's rivers.

The Nature Conservancy and the U.S. Army Corps of Engineers, along with the University of Massachusetts Amherst, recently completed the multi-year Connecticut River Flow Restoration Study, which investigated dam operations and river flows for the 73 largest dams throughout the Connecticut River watershed in Vermont, New Hampshire, Massachusetts and

Connecticut.

The purpose of the study was to evaluate the feasibility of operational changes at large dams in the watershed to benefit ecological health and function while maintaining important services provided by dams, such as flood risk management, hydropower, water supply and recreation.

Various tools, such as operation and optimization computer models, were developed to assess current and potential future dam management scenarios. The Report is available for review at: <http://nature.org/ctriverwatershed> or [\[Topics/Connecticut-River/\]\(#\).](http://www.nae.usace.army.mil/Missions/Projects-</p></div><div data-bbox=)

The Connecticut River watershed has more than 3,000 dams that have had significant impact on the watershed's ecosystem, including its migratory fish, floodplain forests, and rare and endangered aquatic species like dwarf wedgemussel and puritan tiger beetle.

These impacts include alterations to the watershed's natural hydrology, such as elimination of natural high flow events that are important for transporting nutrients and sediments critical to healthy floodplain forests, and increases in short-term flow fluctuations that can significantly alter habitat for fish

and aquatic invertebrates.

The study examined ways in which the largest of these dams have contributed to the alteration of the natural pattern of water flow in the Connecticut River and its tributaries, and how the operation of these dams might be modified to restore the health and function of the ecosystem in the future.

In order to better understand the Connecticut River watershed's pattern of water flow and identify ways to better manage its dams for human uses and ecological needs, the Corps of Engineers, The Nature Conservancy and their partners interviewed stakeholder groups and dam owners and operators about river uses and needs and developed several basin-wide hydrologic models to support resource management and decision making. These tools will be used to help decision makers and other stakeholders understand the positive and negative environmental, economic and social consequences of various management options. This will in turn help to determine how management of these dams can be modified for environmental benefits while

maintaining beneficial human uses such as water supply, flood risk management and hydropower generation.

"This is an excellent example of the Corps of Engineers working with diverse partners and stakeholders to execute a successful study to benefit the region and the residents of Connecticut, Massachusetts, New Hampshire and Vermont," said Col. William M. Conde, commander of the New England District, U.S. Army Corps of Engineers. The Corps operates 14 flood risk management dams in the basin.

"This study gave our department the opportunity to use our depth of experience in water modeling to tackle the most complex modeling problems we've ever attempted. It also provided a wonderful learning platform for learning for dozens of masters and doctoral students," said Dr. Richard N. Palmer, department head and professor, Department of Civil and Environmental Engineering at the University of Massachusetts Amherst. "We were proud to be a partner and that we are hopeful that this study will be the foundation of potential re-management of the systems of reservoirs in the

Connecticut basin in the future."

"The results of the study will provide water managers and natural resource experts with new tools to make difficult water allocation and management decisions pertaining to dam management," said Katie Kennedy, applied river scientist with The Nature Conservancy's Connecticut River Program. "The Nature Conservancy will be using these tools to find science-based water management solutions that provide benefits for nature while continuing to provide the important services of existing infrastructure."

The Nature Conservancy is already using these tools to assist stakeholders in the current hydropower relicensing process underway in the Connecticut River watershed. In this case and elsewhere, the tools developed for the study have potential to reduce conflict by helping water resource managers and stakeholders understand how water management decisions impact their objectives and the objectives of other parties, and to develop creative options for meeting multiple needs and uses of the river.

(New England District, Nature Conservancy Joint Press Release)



View of the Connecticut River.

Cape Cod Canal's Samantha Gray selected as 2018 Legend by American Recreation Coalition

The U.S. Army Corps of Engineers Headquarters in Washington, D.C., recognized what most in the New England District already knew: Samantha Gray, Lead Interpretive Ranger at the Cape Cod Canal is a "legend."

Gray was selected by the Corps for the American Recreation Coalition's 2018 Legends Award. The award recognizes federal managers for outstanding work in improving outdoor recreation experiences and opportunities for the American people. Gray was one of seven federal managers to receive the award this year.

The awards were presented during Great Outdoors Month in an awards ceremony held May 31 at the annual conference in Washington, D.C.

Gray was selected to receive the 2018 American Recreation Coalition's Legends Award for "over the past 21 years, Ms. Gray has been a leader

in the promotion of recreational and educational opportunities at the Cape Cod Canal," wrote Jeff Krause, Chief Natural Resource Management, at the Corps of Engineers headquarters. Krause penned a memo announcing Gray's selection.

According to Krause, since the opening of the Canal Visitor's Center in 2001, Gray has been the force behind its transformation, making it the focal point of the Cape Cod Canal's interpretive mission, and a centerpiece of the New England District's natural resource program.

Gray has developed several educational programs at the Cape Cod Canal for children 1-17 years old that inspire them to become stewards of public lands and waters. Some of these innovative programs include Canal Kids, Sandwich Partnership For Families and Exploring Engineering Club.

According to a memorandum

signed by Thomas Smith, Chief, Operations and Regulatory Division for the Director of Civil Works, Gray has been a significant player in the promotion of partnership opportunities at her project and throughout the New England District.

"She was instrumental in the development of the District's partnership policy and standard operating procedures," he wrote. "Her efforts have made it easier for the other projects to cultivate relationships with outside organizations to improve the recreational opportunities of their parks."

Some of the accomplishments that were the result of these partnerships included the Canal Visitor Center Book Store and an Adopt-A-Shoreline Program. She formed a partnership with the Sandwich Arts Alliance that resulted in a photo and artwork display featuring the Cape Cod Canal.

"Ms. Gray's leadership and passion for imparting knowledge has resulted in devoted life-long volunteers, long standing partnerships with key stakeholders and the public as well as a stellar interpretive program," wrote Smith.

Gray thanked the Partnership for the recognition during the awards ceremony. "Thank you to all of the amazing partners I have worked with over the years and my co-workers for taking the time to nominate me."

The American Recreation Coalition is a Washington-based nonprofit organization that was founded in 1979. According to their website, since then the ARC has "sought to catalyze the public/private partnerships to enhance and protect outdoor recreational opportunities and the resources upon which such experiences are based."



Photo by Ed Buczek

Samantha Gray, with the help of Bobber the Water Safety Dog, teaches a child about water safety at the Cape Cod Canal's Visitor's Center.



Judi Johnson prepares to speak during her party.



Judi Johnson cuts her retirement cake during the pizza party.

Photos by Brian Murphy



John Kennelly presents Judi Johnson with a Commander's Award for Civilian Service.



Judi Johnson with Chris Hatfield and Jay Mackay at her pizza party.

Planning's Judi Johnson retires with 39 years of service

After 39 years of federal service, Judi Johnson, Environmental Resource Specialist, Evaluation Branch, Planning Division made the decision to retire.

About 60 friends, co-workers and retirees traveled to the Concord Park cafeteria, April 26 to celebrate Johnson's distinguished career by throwing her a pizza party. Johnson's official retirement date was April 30.

Larry Oliver and Jay Mackay shared the responsibility of hosting the official portion of the retirement lunch. They thanked the audience for coming, discussed Johnson's distinguished career and introduced the retirees in attendance.

Kate Atwood, Grace Moses, retiree Marty Curran and Judy Antonellis all got up to say some words and present Johnson with gifts. Among the gifts were a pair of earrings and a camp folding chair, a gift that reflected Johnson's love for camping and the great outdoors.

Johnson received a Commander's Award for Civilian Service, a Bunker Hill plaque and her retirement certificate – all honoring her 39 years of dedicated federal service.

Retirees that came to welcome Johnson into the retirement community were Joe Bocchino, Greg Buteau, Marty Curran, Sue Holtham, Ken Levitt, Ed O'Leary and Debby Gabrielson.

Johnson served 32 years of her 39 years of federal service with the Corps in New England. Prior to coming to the Corps, she served three years with the Forest Service and four years with the Soil Conservation Service.

During her more than three decades with the Corps, Johnson worked on countless projects. Some of the most notable include the recently completed Bird Island Restoration Project, Mill River and the Stamford Ecosystem Restoration. She did a great deal of work in support of the Natick Soldier Systems Center and the District's Real Estate Division. Early in her career, Johnson also did some work with DERP. She was instrumental in establishing the day care center at the Murphy Federal Building that benefitted many federal employees. Johnson plans to travel and camp, among other things, during her retirement.

Dredging up the past



Col. Sibley salutes during the dedication ceremony of Buffumville Lake on August 15, 1958.

First Class
U.S. Postage
Paid
Concord, MA
Permit No. 494

Public Affairs Office
New England District
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751
Meter Code 40