Yankee Engineer

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Building Strong®

Travel lane restrictions slated for Sagamore Bridge

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Yankee Voices

West Hill Dam Park Rangers Ron Woodall and Viola Bramel

Women's History Month

Women's History is celebrated in March. The observance recognizing women's contributions was established by Public Law 100-9.

This observance runs through the month of March and celebrates the struggles and achievements of women throughout the history of the United States.

The theme for this event changes each year. The DoD theme for 2018 is, "honoring Women Who Fight All Forms of Discrimination."

This year's theme honors the generations of women who have courageously broken down barriers, shattered stereotypes and changed our society. *(DEOMI)*

District contractor Cashman Dredging performs work on the Housatonic River. Photo provided by Erika Mark

Housatonic River dredging finished early

The New England District team and its contractor, Cashman Dredging and Marine Contracting Company, LLC of Quincy, Massachusetts, completed dredging a portion of the Housatonic River Federal Channel in Connecticut two months ahead of schedule. The project, originally estimated to cost $9.3 million, came in under budget. The state of Connecticut is the project sponsor.

"The project was finished in December," said Project Manager Erika Mark. "Our dredge window was October 1 through March 31, so that is the time frame the contractor had to get the work done. They began dredging in mid-October and finished in December so there was plenty of time to spare."

A total of 273,881 cubic yards of clean, fine grain sand was dredged from the channel. As an added benefit, 228,064 cubic yards of that material was placed onto Hammonasset Beach State Park in Madison, Connecticut to nourish the eroding beach, located 33 miles from the dredge site.

Besides project manager Erika Mark, other team members that contributed to the success of this project were retired Project Manager Jack Karalius, Valerie Cappola, Fred Pike, Ray Goff, Megan Cullen, Jeff Preston and Jeff Gaeta.

New England District Team members are familiar with the Housatonic River with the first project occurring in 1871. Since then, the District has made several improvements to facilitate navigation for commercial and recreational vessels.

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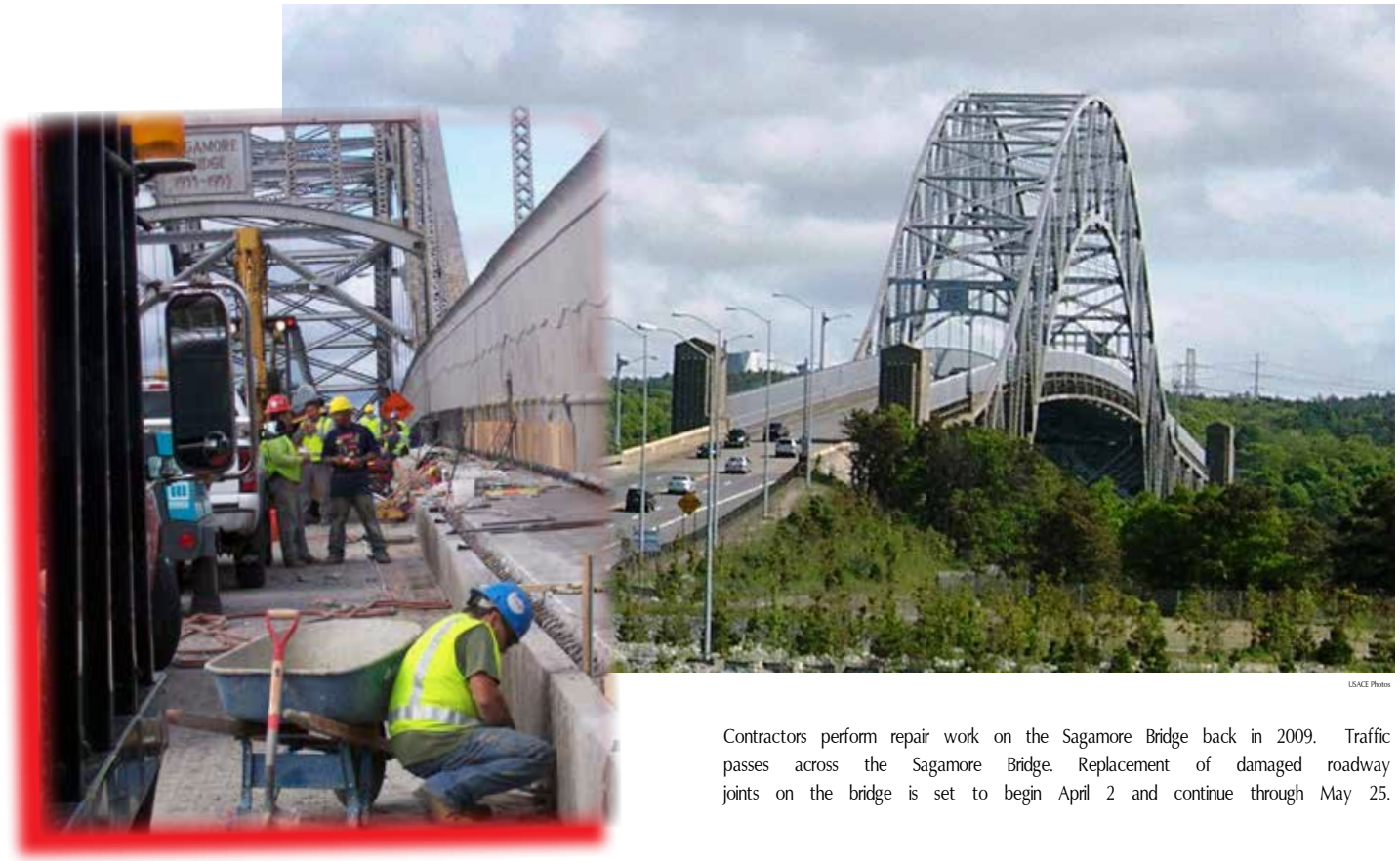


USACE Photos

Contractors perform repair work on the Sagamore Bridge back in 2009. Traffic passes across the Sagamore Bridge. Replacement of damaged roadway joints on the bridge is set to begin April 2 and continue through May 25.

Travel lane restrictions scheduled for Sagamore Bridge

By Timothy Dugan
Public Affairs

Replacement of damaged roadway joints on the Sagamore Bridge spanning the Cape Cod Canal in Bourne, Massachusetts, is scheduled to start April 2 and continue through May 25, according to New England District officials.

During the scheduled times for work, travel over the Sagamore Bridge will be reduced from two lanes in each direction to one wider 12-foot lane in each direction. State and local police will be on duty at all times work is being performed to assist the motoring public.

Motorists planning to use the Sagamore Bridge during this timeframe should be aware that travel delays are likely to occur during the morning and afternoon peak travel periods each day.

The $1,695,000 contract for replacement of damaged and worn roadway joints was awarded to R. Zoppo Corporation of Stoughton, Massachusetts. The contractor will work seven days a week with double shifts in order to complete this work prior to the peak summer travel season. Additionally, similar work on the Bourne Bridge is scheduled for the fall of 2018.

This bridge work is critical to maintaining the structural integrity of the bridges, which are a vital component to the transportation system of Cape Cod, the Islands and southeastern Massachusetts.

Work will include the replacement of bridge joints on the roadway, repair of corroded steel and concrete supports at the affected joints, patching of damaged pavement surfaces, and replacement of deteriorated waterproof membranes along the roadway curbs. In addition, USACE work crews will conduct various periodic maintenance activities on the bridge lighting and structure during this timeframe.

Traffic signs, message boards and bridge work alert emails will be used to help inform motorists about pending lane restrictions and bridge work.

To sign up for bridge work alert emails send an email to CapeCodCanalBridges@usace.army.mil with the subject title, “Bridge Work Alerts.” An email alert is sent when there is a major change to the bridge work status or schedule.

Additionally, updates are available from the Corps’ New England District via Facebook and Twitter: on Facebook: http://www.facebook.com/CorpsNewEngland; on Twitter: http://twitter.com/CorpsNewEngland. Or visit the District website at http://www.nae.usace.army.mil.

Dredging anticipated to start in spring 2018

District awards contract to conduct Boston Harbor improvement dredging

by Timothy Dugan
Public Affairs

Improvement dredging of portions of the Boston Harbor Federal Navigation Project Main Ship Channel in Boston, Massachusetts will be conducted under the terms of a $122,223,000 contract issued recently by the New England District.

Work will be accomplished by Cashman/Dutra, Joint Venture of Quincy, Mass. The contract was awarded on Feb. 15, 2017. The dredging is expected to take approximately three years to complete to deepen the project to its newly authorized depths. Dredging is anticipated to start in the spring of 2018.

The dredging project is to accommodate large container ships that are calling on the U.S. east coast now that the Panama Canal improvements are completed.

Approximately 11.7 million cubic yards of silt, blue clay, till and weathered rock will be dredged to improve the following components of the Boston Harbor Federal Navigation Project: deepening and widening the Broad Sound North Channel to -51 feet Mean Lower Low Water (MLLW); deepening and widening the Main Ship Channel to the Conley Terminal, including the turning basin to -47 feet MLLW; and deepening the President Roads Anchorage and deepening the lower Reserved Channel to -47 feet MLLW.

The material dredged will be placed at the Massachusetts Bay Disposal Site (MBDS) approximately 20 miles offshore of Boston Harbor, with the exception of a small fraction of the material being placed as a cap to the Main Ship Channel Confined Aquatic Disposal (CAD) cell, just downstream of the inner confluence of the Chelsea and Mystic Rivers.

Boston Harbor is the largest seaport in New England and the principal distributing point for regional commerce.

More than 87 percent of Boston Harbor commerce is the receipt and shipment of petroleum products. Principal commercial traffic consists of the import of distillate petroleum products, residual fuel oil, sugar, limestone, and lumber; the receipt and shipment of other petroleum products; and the export of iron and steel scrap.

Initial work in Boston Harbor began shortly after the Civil War. The most recent improvement work was completed in May 1966. The current project includes the harbor proper and four access channels: the Chelsea River, the Fort Point Channel, the South Boston Reserved Channel, and the Weir River at Nantasket Beach. They are described below.

The Harbor Proper Work previously completed by the Corps in the harbor proper consists of:

- A six-mile-long, 40-foot-deep main channel extending from Massachusetts Bay, through Broad Sound, to the entrance of Mystic and Chelsea Rivers. The channel is 900 -1,100 feet wide from the sea, through Broad Sound, to President Roads. The channel is 600 feet wide from President Roads to the entrance of Mystic and Chelsea rivers.
- A 35-foot-deep channel that runs parallel to, and on the northerly side of, the aforementioned 40-foot-deep channel. The 35-foot-deep channel is 600 feet wide and extends from the sea, through Broad Sound, to a point opposite the fish pier.
- A two-mile-long, 35-foot-deep channel that extends from an area abreast of Fort Point Channel to a point almost one mile past the Chelsea Street Bridge. The channel, which has widths varying from 100 to 1,000 feet, starts in the harbor in front of Fort Point Channel and adjacent to the 40-foot-deep channel. It extends down the harbor parallel to the 40-foot

Dredges performing work in Boston Harbor.

channel, past the Mystic River Bridge, except the portion in front of the former Charlestown Navy Yard which was deauthorized by Congress in 1992, and ends at the General Andrew P. McArdle Bridge at the entrance to the Chelsea River. The channel also splits at the Navy Yard and goes down the Charles River before ending at the Charlestown Bridge.

- A two-mile-long channel 30 feet deep and 1,200 feet wide from the sea through Broad Sound to President Roads. This channel is situated south of the 35 and 40-foot-deep Broad Sound channels.
- A three-mile-long channel 27 feet deep and 1,000 feet wide extending from Nantasket Road through the Narrows to President Roads.
- A 550-foot-long stub channel, 15 feet deep and 300 feet wide, located at the northeast head of Long Island in the vicinity of Nix's Mate Shoal.
- An approach channel (not originally built by the Corps) to the former U.S. Navy Dry Dock Number 3 in South Boston that was deepened to 40 feet.
- A 40-foot-deep anchorage along the northern limit of President Road. The anchorage, 350 acres in area, measures 6,200 feet east to west and 2,500 feet north to south.
- A 35-foot-deep area lying west of the anchorage.
- Stone seawalls that protect the harbor's exposed headlands and islands.

Chelsea River Channel - The percentage of traffic passing through the Chelsea River has been increasing over the past several years. A recent study indicated that 46-percent of the traffic in Boston Harbor utilized the Chelsea River.

Corps' work on the Chelsea River includes a main ship channel 1.8 miles long extending from the General Andrew P. McArdle Bridge to the end of the Chelsea River. From the McArdle Bridge to the Chelsea Street Bridge, the channel is 35 feet deep and approximately 225-250 feet wide. From the Chelsea Street Bridge to a point near the river's end, the channel is 250-430 feet wide. At the end of the channel there is a turning and maneuvering basin 35 feet deep and approximately 800 feet wide and 1,000 feet long.

The Boston Skyline overlooking Boston Harbor.

Photos by Brian Murphy

Fort Point Channel - The Fort Point Channel extends from Boston Harbor to the Northern Avenue Bridge in South Boston, a distance of about 1,000 feet. It is 23 feet deep and 175 feet wide.

South Boston Reserved Channel - The Reserved Channel extends from the 40-foot-deep channel in Boston Harbor to the L Street Bridge in South Boston, a distance of about 5,400 feet. It is 35 feet deep and 430 feet wide.

The Weir River at Nantasket Beach - The 1.7-mile-long channel in the Weir River, 12 feet deep and 150 feet wide, provides access to the Nantasket Beach terminal in Hull. The channel extends from Sunset Point on Nantasket Beach, through the Weir River, to Nantasket Pier.

Planned Improvements - The Water Resources Development Act of 1990 passed by Congress authorized a $26.2 million Navigation Improvement Project for Boston Harbor. The project proposes deepening the Mystic River and the Reserved Channel from the existing 35 foot depth Mean Low Water (MLW) to 40 feet and the Chelsea River from 35 feet to 38 feet. In addition, the Inner Confluence, which provides access to the Mystic and Chelsea rivers, and a widened maneuvering area at the entrance to the Reserved Channel would be dredged to 40 feet. The size of the President Road Anchorage will be increased by almost 70 acres at no cost by establishing new channel limits that would extend into naturally deep areas.

The deepening of the channels would primarily benefit local petroleum product importers and scrap exporters, who together account for about 93-percent of all shipping in the Port of Boston. Project benefits would be realized through reduced tidal delays for larger vessels and the capability of Boston Harbor to receive and ship larger cargos.

The Massachusetts Port Authority is arranging the nearly $10 million in local cost-sharing for the project.

For more information on the Boston Harbor Federal Navigation Project visit the website at: www.nae.usace.army.mil/Missions/Civil-Works/Navigation/Massachusetts/Boston-Harbor/. A map is available at: www.nae.usace.army.mil/Portals/74/docs/Navigation/MA/BOS/BOSMap.pdf.

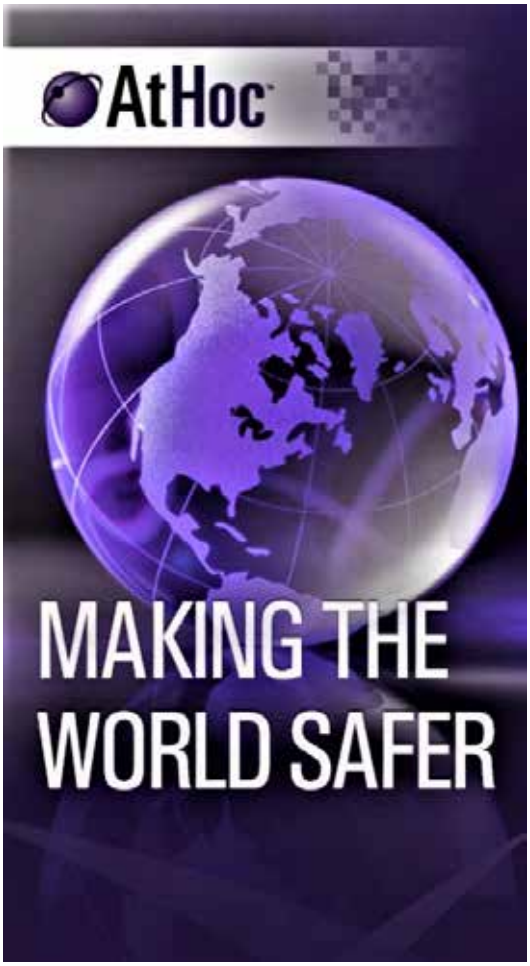
Keeping employees safe

District utilizes AtHoc system for emergency notifications

by Jess Levenson
Public Affairs Office

On Monday, January 11, the federal government's annual spending bill had not yet passed. Millions of federal employees were furloughed and didn't know if they would work the next day, the day after, or during the weeks ahead.

Crises complicate the lives of federal workers and the Americans who depend on them. Fortunately, the New England District's AtHoc emergency notification system provides the information team members need to respond appropriately during crises.



AtHoc is a private company owned by Blackberry, and is a leader in providing modern emergency mass notification and crisis communication systems to worldwide organizations such as the U.S. Air Force, U.S. Army, U.S. Navy, U.S. Marine Corps, U.S. Coast Guard, and the U.S. Army Corps of Engineers.

"In times of uncertainty, AtHoc is an invaluable tool to keep the workforce informed," said Deputy District Commander Maj. Sonny Avichal.

On Monday night at 10:03 p.m., phones buzzed in the homes of furloughed NAE employees. They had received an important AtHoc message.

In any emergency, exchanging critical information is the first priority. AtHoc accomplishes this by alerting all signed-up stakeholders, anywhere, and on any device. Members can then provide real-time status updates to the command to achieve personnel safety and situational awareness.

"AtHoc offers a quick and easy way of broadcasting and receiving information during emergency situations," explained Dave Schafer, NAE Emergency Management Officer.

District employees read the AtHoc memo: "All, a Continuing Resolution was signed tonight. Furlough has ended. Please report to work as normal tomorrow morning. v/r, MAJ Sonny Avichal, DDE."

AtHoc's messaging and distribution capabilities allow the command to immediately disseminate accurate news, for all types of emergencies. AtHoc was used during Japan's Fukushima Daiichi nuclear disaster; during an active shooter situation at Navy Yard, Washington, D.C.; and during furlough and severe weather events in New England.

"AtHoc saves time, energy, and lives," said Schafer. "NAE employees don't need to be logged into a Corps system, they don't need a VPN connection, and they don't need a Corps cell phone to receive updates."

District personnel who submit contact information such as a personal email address or personal mobile number to AtHoc's distribution list will receive breaking news on their devices.

Those who don't sign up will not receive updates and will not be able to contribute to the command's reporting initiatives. "AtHoc is only as useful as people's willingness to put in information," Schafer said.

Albert Collins, Operations Officer at USACE HQ and the USACE POC for AtHoc, believes AtHoc has many safeguards to protect personal information.

"Users must log on to their assigned government issued computer or laptop with their CAC card and personal pin to access their user profile and update personal information," he explained.

"Unit Administrators require CAC authentication as well. Authorized government smart device users must verify their status through email accounts and secure hub.

Lastly, AtHoc instructors who may be given access to USACE's system by authorized USACE employees for training and customer support requirements must access the system with a temporary guest login and password provided by the hosting unit."

New England District employees are encouraged to sign up for AtHoc alerts. To do so, click the purple globe icon at the bottom of your taskbar and select "Self-Service". Log-in with your CAC and click "My Profile" at the top of the page. Click "Edit", fill in your contact information, and click "Save."

Regional High School science students return to Hodges Village

by Park Ranger Nicole Giles
Buffumville Lake/Hodges Village Dam

For the second winter in a row, science students from Shepherd Hill Regional High School worked with Park Ranger Nicole Giles to improve Wood Duck habitat at Hodges Village Dam, Feb. 22. The boxes were made in the summer of 2017 by Hodges Village volunteer park hosts. Historically, a small wetland called Stumpy Pond has had 8-10 pairs of Wood Duck boxes in the middle of the pond but over the years the boxes got destroyed by the weather, flooding or by beavers chewing on them.

Giles wanted to try something new by installing them on galvanized steel pipes instead of using 4x4 PT lumber, but the ice was never safe enough this winter to work on. Using steel pipes would deter predators from climbing up to the boxes and beavers can't chew them down.

Four science students and their professor, Justin Sauvageau volunteered for about three hours during that rainy afternoon. They carried four Wood Duck boxes about one mile down the trail to Stumpy Pond on the North End of Hodges Village. Wood Ducks generally nest in tree cavities along the shoreline of the pond. A group of Wood Ducks are usually spotted every summer in a quiet corner of the pond. Giles wanted to get the boxes out so the ducks could have a chance to check them out this spring. Boxes are of no use being kept in a shed all summer long. She said she can make more duck boxes next summer and try to get them on the pond if the ice is better next year.

Despite the weather, the students had a great time. The group discussed behavioral tendencies for Wood Ducks and how to properly install the duck boxes. Giles picked out trees that looked healthy enough to support a box and the students used teamwork to install them.

Photos provided by Hodges Village Dam.

Park Ranger Nicole Giles, Professor Justin Sauvageau and students from Shepherd Hill Regional High School brave the bad weather to install Wood Duck Boxes.

Each student had their own part in the installation process and a few learned how to properly use hand tools. They even got creative in placing their final box. One small tree was growing out of a small island of roots and organic material creating a mini island. The students were determined to get their last box out on that tree overlooking the water so they used the small step ladder as a bridge to get to the island. Giles is convinced this will be the favorite box among the ducks.

Students work in muddy conditions to install a Wood Duck box.

The students in Professor Sauvageau's classes are part of a national high school challenge called Envirothon. Students extensively study science topics to include water, soil, wildlife, insects and trees, and present their findings to a judgement panel. Experience and volunteering for hands on activities in the field are highly encouraged.

Professor Sauvageau is very active in getting his students to explore the outdoors and applying their knowledge to real world situations because learning doesn't just come from the classroom.

The students are also involved in other projects around Buffumville Lake and Hodges Village Dam. Members of the water team are going to be testing lake water for pH and nutrient values, and looking at soil classifications in wetland areas.

Other students walked the trails at Buffumville doing a survey for invasive species. This information will help Project Staff in determining which areas of the project need the most work in invasive species removal.

The team at Hodges Village looks forward to hosting Shepherd Hill Regional High School students again sometime in the future.

Dredging up the past

Photo by Brian Murphy

Bobber the Water Safety Dog and Park Ranger Natalie McCormack prepare their water safety exhibit for visitors during the New England District Health Fair held in the Concord Park Cafeteria in this June 24, 2015 photo.

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