



US Army Corps  
of Engineers  
New England District

# Update Report for Massachusetts



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## Mission

The missions of the New England District, U.S. Army Corps of Engineers include flood risk management protection, emergency preparedness and response to natural disasters and national emergencies, environmental remediation and restoration, natural resource management, stream bank and shoreline protection, navigation maintenance and improvement, support to military facilities and installations, and engineering and construction support to other government agencies. The six New England states cover 66,000 square miles and have 6,100 miles of coastline, 11 deep-water ports, 102 recreational and small commercial harbors, 13 major river basins, and thousands of miles of navigable rivers and streams. The District operates and maintains 31 dams, three hurricane barriers and the Cape Cod Canal. Through its Regulatory program, the District processes nearly 4,000 applications per year for work in waters and wetlands of the six-state region. We employ about 510 professional civilian employees, with about 300 stationed at our headquarters in Concord, Mass. The other Corps of Engineers employees serve at Corps projects and offices throughout the region. For information on the New England District check the website at: [www.nae.usace.army.mil/](http://www.nae.usace.army.mil/); or on Facebook: <http://facebook.com/CorpsNewEngland>; or on Twitter: <http://twitter.com/corpsnewengland>; or on Flickr: <http://www.flickr.com/photos/corpsnewengland>.

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## Navigation

**BOSTON HARBOR (8th & 9th CDs)** – The New England District and Massport have been examining the feasibility of deepening the major entrance channel and the Main Ship Channel through the harbor up to the Reserved Channel to a depth of between 45 and 50 feet. A Draft Feasibility Report and Supplemental Environmental Impact Statement were released for public review on April 18, 2008. A public meeting to present the project and take questions was held at Massport's Black Falcon Cruise Ship Terminal in South Boston. The report recommends deepening the Broad Sound North Entrance Channel to the harbor to -50 feet at mean lower low water (MLLW), and deepening the President Roads Anchorage, the Main Ship Channel from the Roads up to the Reserved Channel, the lower Reserved Channel and its Turning Area, all to -48 feet MLLW. These improvements would allow larger container ships to call on Massport's Conley Terminal on the Reserved Channel. Three additional minor improvements are also recommended: (1) deepening the reach of the Main Ship Channel above the Reserved Channel and below the Ted Williams Tunnel to -45 feet MLLW to access Massport's Marine Terminal in South Boston for dry bulk cargo shipping; (2) deepening a small portion of the 35-foot lane of the Mystic River Channel to -40 feet MLLW to access Massport's Medford Street Terminal; and (3) deepening the Chelsea River from its current 38-foot depth to -40 feet MLLW.

million cubic yards of rock would need to be removed to deepen these channels. These improvements would cost about \$308 million, of which Massport would be required to contribute about \$130 million. Authorization of the project by Congress would be required. Construction would take about three years to complete. The Corps was requested to perform an additional economic analysis on the project that will include the survey of the various shippers that use both Boston and New York/New Jersey Harbors. That additional effort is underway.

A \$37 million contract was awarded to Great Lakes Dredge & Dock Company for maintenance dredging of the 35- and 40-foot navigation channels inbound of Spectacle Island on Sept. 28, 2007. This dredging contract called for a minimum of dredging sections of the Main Ship Channel, the upper section of the Reserved Channel, and the approach to the Navy Dry Dock. In addition, the contract had options for additional dredging in the Main Ship Channel from the Navy Dry Dock area to the Inner Confluence, a small portion of the 35-foot Mystic Channel near the Medford Street Terminal and a portion of the Chelsea River in the vicinity of the Chelsea Street Bridge. Dredging was initiated in mid-May 2008 and was completed in December 2008. All of the minimum contract items as well as the optional dredging of the Chelsea River were completed.

About 12 million cubic yards of ordinary material and one

Dredge material that was found to be unsuitable for ocean

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placement was placed in two Confined Aquatic Disposal (CAD) cells. One cell was constructed beneath the Mystic River Channel and the other beneath the Main Ship Channel. The dredged material in the CAD cells was allowed to consolidate and capping of the CAD cells was started in early January 2010 and completed on Feb. 2, 2010.

In conducting the dredging operations the Corps identified areas of rock ledge in the Federal channel. These areas were identified for the navigation community and the Corps developed plans and specifications for a contract for rock removal. Borings were conducted to determine the most appropriate method of rock removal. The Massachusetts Highway Department (MHD) issued a contract for the Chelsea Street Bridge replacement. Due to the narrow opening the channel width was only 96 feet through the bridge. After the new bridge was completed, the Corps increased the channel width immediately below, above and through the bridge. The Corps worked with the U.S. Coast Guard, MHW, the harbor pilots, terminal operators and others to identify an implementation plan for the bridge/widening work to minimize disruption to shipping. The rock removal and Chelsea Widening were physically complete in December 2012.

**CAPE COD CANAL BOURNE AND SAGAMORE BRIDGES (10th CD)** – A construction contract to repair and replace deteriorated steel components of both highway bridges over the Cape Cod Canal was awarded in September 2011. Work on this contract was completed in January 2013. A construction contract to de-lead and repaint the Sagamore Bridge was awarded in September 2012 to Atlas Painting and Sheeting Corporation of Amherst, N.Y. for \$12,390,000. Work under this contract is expected to begin in March 2013 and be completed in fall 2014.

**COHASSET HARBOR (9th CD)** – The District completed biological and geological sampling in December 2012 to identify an appropriate dredge material placement site for the proposed channel and anchorage maintenance project. Additional hydrographic survey data was collected in January 2013 to understand and calculate shoaling rates within the federal project. Environmental coordination with state and federal resource agencies is expected to continue through the spring of 2013. The project is not expected to begin until an agreement about the placement area can be reached with the town of Cohasset and the state/federal resource agencies.

**CUTTYHUNK HARBOR (9th CD)** – Maintenance dredging in the outer portion of the authorized 10-foot deep entrance channel into Cuttyhunk Harbor was performed using the Government-owned, special purpose dredge “CURRITUCK” in June 2012. Local officials have reported some re-shoaling of the entrance channel as a result of Hurricane Sandy. A hydrographic survey will be performed in early spring 2013 to determine the extent of shoaling.

**EAST BOAT BASIN, SANDWICH (9th CD)** – The Corps of Engineers, North Atlantic Division approved the New England District’s recommendation for a full-scale feasibility

study and environmental assessment of the expansion of the basin. The Feasibility Cost Sharing Agreement (FCSA) was executed in early January 2005. Initial feasibility study efforts and wetlands delineation within the proposed expansion area were completed in 2005 before the study was suspended pending receipt of additional federal funds. Federal funds were made available under the Corps FY 2007 work plan to resume the feasibility study, and with receipt of matching town funds, studies were re-initiated in November 2007. Additional Federal funds to continue the study were received in FY 2008. Initial screening of alternatives is complete. Layouts and quantities for the remaining alternatives are currently being developed. Economic analysis figures have been updated based on discussions with local fishermen and local officials. A coordinated site visit with federal, state and local regulatory agencies was held in February 2009. Additional Local Sponsor funds are required to complete the Feasibility Study and conduct the necessary reviews. The Corps of Engineers has sent a package to the town presenting the work completed to date and the estimated Local Sponsor’s share of the construction cost to allow the Local Sponsor to decide whether they wish to continue funding the study. The Sponsor does not wish to complete the study. The remaining local cost share was returned to the sponsor.

**LYNN HARBOR, LYNN (6th CD)** – At the request of the city of Lynn, federal funds were made available to examine the feasibility of creating a new federal channel and anchorage along the Lynn Harbor shoreline. The proposed channel would connect the existing Lynn Harbor and Saugus River channels, reducing commercial navigation delays and providing boat access to the commercial properties along the Lynn Harbor shoreline targeted for redevelopment. The initial site visit was conducted on Sept. 29, 2010 by the Corps of Engineers and representatives of the city of Lynn, serving as the Local Sponsor. Information gathered will be used to determine if a complete feasibility study is warranted. That determination will be documented in an Initial Appraisal Report (IAR) and submitted to USACE’s North Atlantic Division for approval to proceed with the feasibility study. Completion of the study would require execution of a Feasibility Cost Share Agreement (FCSA) to share the study costs with the city of Lynn. The study could be completed within about 18 months of FCSA execution.

**NANTUCKET HARBOR (9th CD)** – The District met with Nantucket officials and congressional staff from Senator Kerry and Senator Warren’s offices to hear the town’s concerns over the current condition of the jetty system at the entrance of Nantucket Harbor. The Nantucket officials reported continued issues with vessel collisions to the jetties due to their disrepair and design construction to half-tide height. The District provided historical information on the east and west jetty, as well as recent inspection reports to the Nantucket Emergency Operations Official. The group discussed potential funding streams to complete a repair of project and the District provided information regarding the Corps budgetary process.

**NEW BEDFORD AND FAIRHAVEN HARBOR (4th CD)** –

The District assisted the Massachusetts Office of Coastal Zone Management (MACZM) in preparation of a dredged material management plan (DMMP) for maintenance dredging of the navigation channels in New Bedford and Fairhaven harbors. The main deep-draft channel to New Bedford has an authorized depth of 30 feet, while the shallow draft channels for the fishing fleet at Fairhaven have depths of 15 and 10 feet. A review of navigation traffic information has indicated that the shallower channels on the Fairhaven side of the harbor require maintenance dredging of about 70,000 cubic yards (cy) of shoal material. The deeper channels serving the New Bedford waterfront would require dredging of about 1.3 million cy to restore the authorized project dimensions; however, navigation traffic projections offered by the city do not, at this time, demonstrate a need for dredging those areas. The city, however, has recently indicated that traffic patterns had changed and is developing information to support their claim. Confined Aquatic Disposal (CAD) has been identified as a feasible disposal option through the state's DMMP process.

The city recently indicated that they were proposing to dredge the CAD cells sufficient to accommodate the maintenance material. If this can be accomplished it would significantly accelerate the maintenance process. We have finalized suitability analysis of material in the federal channel. Once we receive the city's information regarding vessel traffic use we can move forward with the project if funding is received.

**NEWBURYPORT HARBOR (6th CD)** – Bids were opened Sept. 24, 2012, and a contract was awarded to HK&S Construction of Newport, on Sept. 27, 2012 for \$3,610,534 for the repair of the South Jetty. Approximately 10,400 tons of stone will be placed for the 1,400-foot-long jetty. *After the contract award, additional Federal funds were received so that an additional 400 tons of stone will be delivered and placed; total contract value is now \$3,750,534.* There are enough funds to repair about 800 feet of the 1,400-foot-long jetty. Armor stone ranges in size from 1 to 12 tons. Work started in late October 2012, and, *due to environmental and regulatory conditions (piping plovers), must be completed by March 31, 2013.* The shoreward end of the jetty has a crest elevation of 19.0 feet mean lower low water (mllw); the seaward end has a crest elevation of 12.0 feet mllw. Crest width is 15 feet. The jetty was last maintained in 1970.

**OAK BLUFFS HARBOR, OAK BLUFFS (9th CD)** – The approved final feasibility report/environmental assessment (FR/EA) recommended adoption of a federal navigation project consisting of dredging a 10-foot entrance channel to Oak Bluffs Harbor with beneficial use of the dredged sand as nourishment on an adjacent town beach (Pay Beach). To reduce project costs the Corps of Engineers proposes to dredge the material with the Corps dredge, Currituck, and to place the sand at a near shore location east of the inlet. A revised EA and approvals for the new method and placement site were completed in 2010. A Project Partnership Agreement (PPA) was approved by Corps headquarters and executed by the town and the Corps on July 7, 2011. The Corps *received* the town's up-front share of project costs. Dredging of the project *was completed by*

*the Currituck on June 18, 2012.*

**PLYMOUTH HARBOR (9th CD)** – The Corps proposes to dredge the Plymouth Harbor Federal Navigation Project (FNP) in Plymouth, Mass. The Congressionally authorized FNP provides for a 200-foot-wide by 18-foot-deep main channel (approximately 2.5 miles in length); a 150-foot-wide by 15-foot-deep channel extension with turning basin; and a 60-acre by 8-foot-deep anchorage. All depths refer to mean lower low water (MLLW). Approximately 220,000 cy of sediment are proposed to be dredged from the project and disposed of at the Massachusetts Bay Disposal Site (MBDS). Project approvals have been obtained and the project Environmental Assessment has been completed. Contract plans and specifications will be developed and a dredging contract will be issued to perform the work when sufficient funds become available.

**WEYMOUTH FORE AND TOWN RIVERS, WEYMOUTH & QUINCY (9th CD)** – A contract to perform several borings to characterize hard areas in the 35-foot-deep channel in the Weymouth Fore River portion of the project was issued and field work was performed in June 2010. We estimate that about 3,000 cubic yards of rock needs to be removed from two areas in the authorized 35-foot-deep channel. A draft Environmental Assessment has been prepared and coordination with the Federal and state resource agencies was done in conjunction with the Boston Harbor rock removal project. No funds were included in the *FY 2013 President's Budget* for this work.

**WOODS HOLE GREAT HARBOR, FALMOUTH (9th CD)** – At the request of the town of Falmouth and NOAA Fisheries, funds were made available in FY06 and FY07 to begin a study examining deepening the entrance channel and harbor basin at Great Harbor in Woods Hole, principally to accommodate new classes of deeper draft research vessels on order by NOAA Fisheries. Preliminary studies were initiated in the spring of 2007, but preparation of an initial appraisal report (IAR) was deferred pending completion of the NOAA project for the same harbor described below.

Concurrently, the New England District is preparing design, regulatory and contract documents in three phases for a project funded by NOAA Fisheries for the Great Harbor channel and basin deepening and construction of a new pier for the NOAA research facility at Woods Hole. Work on this effort is proceeding in advance of the Section 107 study for the same dredging improvements. NOAA desires completion of the project to provide access for its newer class of fisheries research vessels in a quicker timeframe than would be possible under a Corps civil works improvement. All studies are complete and required Federal and state permits for the NOAA project were obtained in August 2008. The first phase of the project, the entrance channel, was constructed under a contract with Cashman Dredging and Marine Contracting Co., LLC. Dredging of the entrance channel began in November 2008 and was completed in January 2009. Work on design of the final phases of the project is underway. Construction of the remaining project features awaits additional funding by NOAA.



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## Shoreline/Streambank Protection

**CHELSEA RIVER, EAST BOSTON (8th CD)** – A Section 14 streambank protection project along the Chelsea River has been requested by the city of Boston. Without permanent erosion protection, the riverbank will continue to erode which will eventually threaten the integrity of the 15-inch sewer main. The city's Department of Water and Sewer is participating as the nonfederal project sponsor. Approximately 500 linear feet of riverbank requires stabilization. The placement of a stone rip rap slope revetment along the bank to stabilize the base of the slope and protect it from scouring during high flows was selected as the preferred protection alternative. Finalization of Plan Formulation documents (Environmental Assessment/ Finding of No Significant Impact) will be completed once funding becomes available.

**NANTASKET BEACH (MDC), HULL (9th CD)** – This investigation examines potential solutions to coastal erosion and backshore flooding at the Massachusetts Department of Conservation and Recreation (MADCR)'s Nantasket Beach Reservation in Hull. Work in response to the deteriorated condition of Massachusetts DCR's seawall prompted emergency construction activity at

Nantasket Beach, changing the without project condition. The Corps has reformulated its plans for shore protection and *has* completed a revised draft report, *which is currently undergoing internal review.*

**SLACK BROOK, LEOMINSTER (2nd CD)** – A Section 14 streambank protection project along Slack Brook has been requested by the city of Leominster. The stabilization is needed to prevent riverine erosion from threatening Exchange Street. The city's Department of Public Works is participating as the nonfederal project sponsor. Approximately 500 linear feet of riverbank requires stabilization. The placement of a gabion wall base along the bank to stabilize the base of the slope and protect it from scouring during high flows was selected as the preferred protection alternative. *Development of contract design documents and application for permits will begin in early 2013.*

For information on the Section 14 Emergency Streambank Protection program visit the website at: <http://www.nae.usace.army.mil/p/services/shore14.htm>.

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## Coastal Storm Damage Reduction

**FIELDSTON AND BRANT ROCK SECTIONS, MARSHFIELD, MA (9th CD)** – A Section 103 feasibility study *has begun* to investigate storm tidal flooding issues in the Fieldston and Brant Rock sections of Marshfield, Mass. The feasibility study will build on the completed reconnaissance efforts to fully evaluate in detail reasonable solutions to the flood problems identified. At the completion of the study a feasibility report will document the results of the investigation and will provide the basis for recommending

a flood damage reduction project. *If an implementable plan is recommended, the study phase will be followed by the design and implementation phase, which will take about 18 months to complete.*

For information on the Corps Hurricane and Storm Damage Reduction program visit the website at: <http://www.nae.usace.army.mil/p/services/Section103.htm>.

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## Flood Damage Reduction

**BLACKWATER RIVER, SALISBURY (6th CD)** – The District conducted studies concerning the feasibility of providing local flood protection along the Blackwater River in Salisbury. Preliminary studies indicated that flood control measures would be economically justified, and further detailed studies were conducted to fully evaluate flood control alternatives and impacts. A draft Detailed Project Report/Environmental Assessment (DPR/EA) that evaluates potential improvements and recommends a plan to reduce flood damages in the low lying area between Ninth Street and Florence Avenue was completed in May 2006. The Project Partnership Agreement (PPA) for the project was signed by the Commonwealth and the District in May 2009 and final design efforts are currently underway.

Commonwealth of Massachusetts developed and proposed a plan called “the Emerald Necklace Environmental Improvements Master Plan, Phase I Muddy River Flood Control, Water Quality and Habitat Enhancement,” dated January 1999. The objectives of the plan are to increase flood control, improve water quality and enhance aquatic/riparian habitat within the Muddy River by dredging accumulated sediment, providing flood damage reduction through improvements to restrictive drainage culverts, removing nuisance vegetation, improving fisheries/wildlife habitat and water quality, bank stabilization and promoting and enhancing recreational use of emerald necklace parklands.

Section 522 of the Water Resources Development Act (WRDA) of 2000 authorized the Corps to, “carry out the project for flood damage reduction and environmental restoration, Muddy River, Brookline and Boston, Mass.,” substantially in accordance with the plans, and subject to concurrence it met federal guidelines. The District prepared the required decision documents and the final report was

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submitted to Corps headquarters for approval in September 2003. The Corps headquarters prepared a Chief's report recommending federal participation and forwarded the report to the Assistant Secretary of the Army (ASA) for Civil Works on Dec. 29, 2003. The ASA has approved federal participation in the flood damage reduction component of the project. However, due to its high unit cost, the environmental restoration portion of the project is not recommended for federal implementation.

The New England District completed design efforts and prepared plans and specifications for the Phase 1 effort. A project partnering agreement was signed with the project sponsors and utility relocations, which are the responsibility of the sponsors, are currently underway. The Corps participated in a city-sponsored public meeting Nov. 3, 2011 to discuss with the public the traffic management plan. The Corps sent out a construction contract solicitation on Jan. 18, 2012. A \$30.9 million contract for Phase I was awarded on Aug. 10, 2012. *A groundbreaking ceremony was*

*held in October 2012. Information updates will be posted at: <http://www.nae.usace.army.mil/projects/muddyRiver/ConstructionActivities.pdf>. Or visit the website at: <http://www.nae.usace.army.mil/projects/muddyRiver.htm>.*

**NORTH RIVER, PEABODY (6th CD)** – An initial appraisal of flooding conditions along the North River, particularly in the Peabody Square area, was initiated at the request of the mayor of Peabody. The feasibility study was initiated with fiscal year 2008 funds. The Corps has determined that there is a Federal interest in Corps participation in widening the North River from downstream of Howley Street to 600 feet downstream of Grove Street. Further feasibility study efforts are now being conducted to identify the National Economic Development (NED) plan and complete an Environmental Assessment. Hydrologic and hydraulic analyses for the various alternatives have been completed. Plan formulation and economic evaluation of various alternatives are currently underway.

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## Ecological Restoration/Watershed Management

**BASS RIVER ECOSYSTEM RESTORATION (9th CD)** – The town of Yarmouth requested Corps assistance with restoring tidal flow to the upper reaches of the Bass River in 2001 under Section 206. Preliminary data suggest that an existing railroad bridge restricts tidal flow. The Corps developed a Preliminary Restoration Plan in 2004 that included various measures to restore approximately 385 acres of tidal wetlands and estuarine habitat. The Corps received funding in 2010 to develop a project management plan, execute a feasibility cost sharing agreement and begin the feasibility study. That work is ongoing.

**BLACKSTONE RIVER (3rd CD)** – *A feasibility study of environmental restoration opportunities was initiated in 1999 with the Commonwealth of Massachusetts Executive Office of Environmental Affairs (MAEOEA). Key components of this study include an assessment of the threat from contaminated sediments, an inventorying of environmental restoration opportunities in the watershed, a determination of the role of impoundment's on water quality and sediment re-suspension, and an inventorying of dams and their condition. An interim report that recommends restorative measures for Fisherville Pond has been prepared. Remaining funding is being used to examine the potential removal of Milbury Dam. Some of the data produced to date can be viewed on the Corps website at: <http://www.nae.usace.army.mil/projects/ma/blackstone/blackstone.htm>.*

**BIRD ISLAND TERN NESTING HABITAT RESTORATION, MARION (4th CD)** – Working with the local sponsor, which is the Massachusetts Executive Office of Energy and Environmental Affairs (Office of Coastal Zone Management and Division of Fisheries & Wildlife, Natural Heritage & Endangered Species Program), the New England District completed a feasibility study under the Section 206 Aquatic Ecosystem Restoration Program that recommended a plan

to restore and protect roseate tern nesting habitat on Bird Island in Buzzards Bay. The northeastern population of roseate terns is listed as endangered at both the federal and state levels of jurisdiction, and Bird Island supports over 20 percent of the Northeastern population. The revetment that protects the island is in poor condition, and coastal storms are eroding the vegetation and sand that roseate terns need for nesting.

The Corps completed the Detailed Project Report and Environmental Assessment in October 2006 and received a letter of support for the project from the sponsor in 2008. The report recommends reconstructing the revetment and restoring substrates for tern nesting. The Corps and the Massachusetts Department of Fish and Game executed a project partnership agreement on June 30, 2011 and *are continuing work on the project design. We plan to complete plans and specifications and obtain permits in 2013.*

**BROAD MEADOWS SALT MARSH RESTORATION, QUINCY (9th CD)** – The District completed a feasibility study and design for the restoration of salt marsh at Broad Meadows Marsh. The city of Quincy is the sponsor for this Section 1135 project. The restored salt marsh will replace the low value common reed (*Phragmites australis*) marsh that occupied the site, restoring estuarine fish and wildlife communities. A construction contract was awarded to an 8(a) HUB-Zone contractor in November 2009. The Corps issued a Notice to Proceed in February 2010 and construction is *nearing completion. We received additional funds from the city in July 2011 to expand the marsh habitat restoration. The majority of the marsh excavation is complete. A major milestone was reached on Dec. 21, 2011 when the marsh was flooded by tidal water for the first time after being buried under dredged material for over 80 years. The contractor seeded a portion of the restoration area and will seed*

the remaining area *in the spring of 2013*. Management of *Phragmites* is on-going.

**CHATHAM STAGE HARBOR SEDIMENT MANAGEMENT (9th CD)** – The town of Chatham requested a study to evaluate beneficial reuse of Stage Harbor channel sediment to lessen impacts of beach erosion and restore endangered bird habitat. The study will require an assessment of long shore transport of sand, the effects associated with jetties and groins, historic and projected erosion rates, and dredging and disposal practices. The Corps will use historic aerial photographs and data collected during targeted field surveys to develop sediment transport models. The project will also evaluate potential habitat improvement alternatives for protected birds and other coastal species on Chatham lands and islands within the Monomoy National Wildlife Refuge. The Monomoy National Wildlife Refuge and other shoreline areas on Cape Cod serve as important habitat to federally protected species such as the piping plover (*Charadrius melodus*) and roseate tern (*Sterna dougallii*). The sediment transport modeling report is currently under review. *We did not receive funds to continue work on the study this fiscal year.*

**COASTAL MASSACHUSETTS ECOSYSTEM RESTORATION STUDY (6th, 7th & 9th, CDs)** – This Congressionally directed reconnaissance investigation was started in February 2001. The purpose was to identify the most significant ecological restoration opportunities that could be accomplished by the Corps in collaboration with the Commonwealth. The study area includes coastal areas from the New Hampshire border to Provincetown. The reconnaissance report was completed in July 2001. Individual scopes of work and budgets were prepared and submitted to the sponsor for 18 sites including the Malden River described below.

**- MALDEN RIVER ECOSYSTEM RESTORATION PROJECT** – In October 2002, the Corps and the Mystic Valley Development Commission (MVDC) executed a Feasibility Cost Sharing Agreement (FCSA) for the Malden River Ecosystem Restoration Feasibility Study. The study considered opportunities to restore wetlands, benthic habitats, and fish passage in the Malden River. North Atlantic Division approved the Detailed Project Report/Environmental Assessment on Nov. 24, 2008. MVDC and the Corps executed the project partnership agreement on Oct. 8, 2009. We are preparing the plans and specifications for the project, which will restore freshwater wetlands on the lower river.

**CONNECTICUT RIVER ECOSYSTEM RESTORATION STUDY** – Authority to conduct an ecosystem restoration study in the upper Connecticut River watershed is provided through a resolution adopted by the Committee on Environment and Public Works of the U. S. Senate on May 23, 2001. A reconnaissance report identified several ecosystem restoration opportunities along the main stem of the Connecticut River. Since then the Water Resources Development Act of 2007 authorized the Corps to partner with The Nature Conservancy (TNC). *A feasibility study was initiated with TNC in 2008.* The study is investigating alternatives to manage flow for the 70 largest dams in the basin with the goal of im-

proving aquatic habitat while maintaining human uses such as flood control, hydropower, water supply and recreation. *Various tools (e.g. operation and optimization computer models) have been developed to assess these management measures. The study is expected to be completed in 2014.*

**GULF OF MAINE INITIATIVE** – The New England District is a member of the Gulf of Maine working group, providing this joint U.S./Canadian committee with water resource planning expertise. Technical support in applications of sediment chemical mapping for Boston Harbor is being provided. District staff members are participating in Gulf of Maine workshops and these workgroups are discussing ways in which the United States and Canada can partner through the Gulf of Maine program.

**MERRIMACK RIVER WATERSHED STUDIES (SECTION 729) (5th & 6th CDs)** – The overall purpose of the watershed assessment study is to conduct a comprehensive field program and data collection effort combined with watershed and river modeling to provide information to stakeholders to guide local water resource management decisions. The assessment of the Merrimack River and its watershed is a multi-phase effort that is being conducted in collaboration with multiple partners and stakeholders. This study is being conducted under the authority provided in Section 729 of WRDA 1986 as amended and entitled “Water Resources Needs of River Basins and Region.” The Section 729 study requires (75 percent federal/25 percent nonfederal) cost sharing. The Lower Merrimack River Assessment Phase 1 efforts were performed at a cost of about \$2 million and cost shared with nonfederal interests in Massachusetts and New Hampshire. The study was initiated in the spring of 2002 and the Phase 1 report was completed in September 2006. Phase II efforts on the Upper Merrimack River Basin efforts began in 2007 and will be completed in 2013. The Phase II report will be available in spring 2013. The estimated cost for the Phase II Merrimack study efforts is about \$1.6 million. In 2013 the Corps will undertake the final phase (Phase III) studies on the Lower Merrimack River Watershed.

**MILFORD POND RESTORATION, MILFORD (2nd CD)** – Massachusetts Department of Conservation and Recreation on behalf of the town of Milford, Mass., requested that the Corps of Engineers investigate alternatives to restore the health of the 120-acre degraded Milford Pond ecosystem. This project is being conducted under the Corps’ Section 206, Aquatic Ecosystem Restoration Program. The recommended plan identified in the final report is to dredge 45 ± acres of Milford Pond to achieve an open water depth of 12 feet. The Corps’ North Atlantic Division approved the project on June 29, 2005. The Plans & Specifications phase was initiated in July 2005. The team developed a lower cost alternative that would reduce the area of dredging and use dredged sediment to restore wetlands. *We are working with the town to execute a project partnership agreement. We anticipate executing the agreement and proceeding with design this winter.*

**MILL POND RESTORATION, LITTLETON (5th CD)** – The town of Littleton requested that the Corps conduct a study



of Mill Pond and its tributaries to investigate alternatives to restore the ecology and health of this 48-acre degraded freshwater pond. This study is being conducted under the Corps' Aquatic Ecosystem Restoration Program, Section 206 of WRDA of 1996. The aquatic habitat of Mill Pond is degraded as a result of sedimentation and excessive nutrient loads into the pond from the surrounding 4,500-acre watershed. An estimated volume of 200,000 cubic yards of soft sediment has accumulated in the pond, reducing its average depth from 6 feet deep to 3 feet. The current shallowness of the pond and excessive nutrient concentrations contribute to extensive growth of aquatic weeds and degraded fish habitat.

The objectives of the restoration study are to address methods to remove and dispose of accumulated sediment from the pond to reduce the recycling of phosphorous, reduce nutrient influx, and increase water depth. The Corps is assessing the environmental benefits and costs of several restoration alternatives to determine the most cost-effective and acceptable solution. In 2008, the town of Littleton completed an investigation of nutrient loading in Mill Pond and is completing documentation of basin-wide best management practices that are now in place or will be implemented to reduce nutrient loads into the pond. Adequate reduction in nutrient loading in the basin is necessary for proposed aquatic habitat restoration alternatives to be effective. The Corps plans to complete the draft Detailed Project Report by incorporating the results of the town's study and additional sediment analysis, and issue a public notice when sufficient funding becomes available. *We did not receive funds for this project this fiscal year.*

**MILL RIVER, NORTHAMPTON (1st CD)** – The Corps initiated a Section 1135 feasibility study to look at restoration of the historic river channel, fish passage and other habitat improvements with funding made available in the Section 1135 program. We provided a project management plan and cost estimate for a feasibility report to the city in 2011. This city is considering the plan *but does not have funding to move forward at this time.*

**NATIONAL ESTUARY PROGRAM** – The District is currently supporting implementation of the comprehensive conservation and restoration plans of the Massachusetts/Cape Cod Bays and the Buzzards Bay National Estuary Programs (NEP). Activities include attendance at committee meetings and transfer of our data to the NEP Geographic Information Systems (GIS). Additionally, we continue to work to identify habitat restoration opportunities.

**NATIONAL MARINE LIFE CENTER, BOURNE (9th CD)** – Working with the National Marine Life Center (NMLC), with support from the MAEOEA, Wetlands Restoration Program, the Corps is undertaking a salt marsh restoration project un-

der Section 1135 of the 1986 WRDA. The project goal is to re-establish tidal flow to a degraded salt marsh by modifying an aging and undersized culvert to the Cape Cod Canal, and grading adjacent upland areas. NMLC seeks to re-establish this salt marsh and develop an open-water pond to allow for rehabilitation of recovering sea mammals prior to their release to the open ocean environment. The planning and design analysis phase was initiated on March 13, 2002. The project is currently on hold because of a shortage of funds in the Section 1135 Program. Future efforts will focus on completing the environmental assessment and plans and specifications.

**NEPONSET RIVER, BOSTON/MILTON (9th CD)** – The New England District is working with the Massachusetts Department of Fish and Game's Division of Ecological Restoration to explore options to restore the degraded aquatic ecosystem of the Neponset River to a less degraded, more natural condition. This work is being conducted under the Corps Aquatic Ecosystem Restoration Program, Section 206 of the WRDA of 1996. The feasibility study will evaluate alternatives for fish passage at the Walter Baker and Tilestone and Hollingsworth dams along the river, as well as examine opportunities for channel improvements and habitat restoration. The Corps' feasibility study was on hold during most of fiscal years 2005 and 2006 because of a shortage of funds in the Section 206, Aquatic Ecosystem Restoration Program. The non-federal sponsor, Massachusetts Riverways Program, worked toward completion of the feasibility study on its own during this time period because of the lack of available federal funds. The Corps is working with the Massachusetts Division of Ecological Restoration to complete the draft feasibility study.

**STEWART'S CREEK, BARNSTABLE (9th CD)** – The town of Barnstable, with strong support of the Massachusetts Wetlands Restoration Program (now Division of Ecological Restoration), submitted an application to restore the Stewart's Creek estuary under the Estuary Restoration Act. The New England District and the town executed a Project Partnership Agreement to complete the work in November 2008. The project involves increasing tidal exchange to the Stewart's Creek salt pond and wetlands. Currently, a 36-inch diameter culvert under Ocean Avenue, which empties into Hyannis Harbor, restricts tidal exchange to this important estuarine resource. Inadequate flushing is contributing to eutrophication and sediment accumulation in the salt pond and decreased habitat value. The restoration plan will restore tidal flows, salt marsh, and benthic habitat to the salt pond/marsh system. We issued a construction contract in September 2012 and will begin construction of the project *in February.*

For information visit the website at: <http://www.nae.usace.army.mil/pservices/eco.htm>.

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## Special Authorities

**COASTAL AMERICA (9th CD)** – The District continues to chair the Northeast Regional Implementation Team (NERIT)

for Coastal America. NERIT has focused its efforts on habitat restoration and, in particular, restoration of tidally constricted

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salt marshes and restoration of rivers for anadromous fish passage. The Corps has assisted these efforts at several sites throughout the state in association with the MACZM

office's Wetlands Restoration Program and the state's dam removal coordinator.

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## Flood Plain Management Services

**WILBRAHAM, MA (2nd CD)** – The New England District is conducting an investigation of the drainage area of Spear Brook to assess the effects of storm runoff contributing to downstream flooding conditions along Main Street and the Woodland Dell area. The study will offer recommendations to reduce the risks and severity of future flooding. The investigation is anticipated to be completed *by the spring* of 2013.

**CHESHIRE, MA (1st CD)** – The New England District is conducting an investigation of the flooding along the Hoosic

River. Frequent precipitation is resulting in overtopping of the river creating septic system backups of approximately 50 private residences and a mobile *home* park. The objective of the study will be to offer recommendations to reduce the risks and severity of future flood damages. The investigation is anticipated to be completed *by the spring* 2013.

For more information on Corps' Flood Plain Management Services visit the website at: <http://www.nae.usace.army.mil/pservices/fpms.htm>.

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## Planning Assistance to States

**PENN'S HILL DRAINAGE STUDY, QUINCY (9th CD)** – The New England District and the city of Quincy have entered into a cost sharing agreement to conduct a drainage analysis of the Penn's Hill area. Alternative measures will be examined to determine the best way of improving the drainage system. A cost estimate of the recommended plan will also

be developed. The study will *be completed in early 2013*.

For more information on Planning Assistance to States visit the website at: <http://www.nae.usace.army.mil/pservices/pas.htm>.

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## Defense Environmental Restoration Program (DERP)

This Congressionally directed effort (PL 98-212) provides for expanded work in environmental restoration. It emphasizes the identification, investigation and prompt cleanup of hazardous and toxic waste; unexploded ordnance (UXO); and unsafe buildings, structures and debris at current and former military facilities. A total of 327 formerly used defense sites (FUDS) have been identified in Massachusetts. Site and project eligibility investigations at 325 sites are now complete, including 206 where no work was found to be necessary. The two remaining sites, two Job Corps facilities in **Chicopee (2nd CD)**, will be scheduled in the future when funding priorities allow. Of the 119 sites where work was needed, the following efforts are underway:

**Hingham Former Burning Ground (Wompatuck State Park, 9th CD)** – The project consists of investigating military explosive munitions and munitions constituents where the Navy formerly burned/detonated explosive materials. Contracts were awarded March 31 and June 30, 2008 and Aug. 27 and Dec. 1, 2009 to conduct additional investigations at the site to fill data gaps. Field work was completed in October 2009. Groundwater, soil and sediment sampling were conducted as well as subsurface soil sampling using multi-increment sampling. Samples were collected at depths of 1-6 feet below ground surface for munitions constituents. Subsurface soil sampling was also conducted in a specific area to characterize diesel contamination and to determine the areal extent of soil that potentially needs to be excavated. Excavation of the diesel contaminated soil has been put on hold pending evaluation of sampling results which will

determine whether excavation is required. All additional data collected was incorporated into the Draft Final RI/FS report. The Draft Final RI/FS Report is being revised and the risk assessments updated to comply with CERCLA. Both the Proposed Plan and Decision Document will be updated accordingly as well. *Additional field work is scheduled for spring, summer and fall of 2013 which includes installing 6 additional wells, surface water, surface and subsurface soil and sediment sampling as well as ground water sampling. All data from this field effort will be incorporated into the Draft Final RI/FS and submitted to MADEP for review.*

**Lonczak Drive Area (LDA) Site of the former Westover Air Force Base in Chicopee (2nd CD)** – Further studies and remediation of the southern portion of LDA included an LNAPL Mass and mobility assessment as well as completion of a Method III risk assessment, the results of which found that NAPL present at the site is not mobile and there is no risk to Human Health or the environment from its presence. CENAE's contractor completed and submitted to the MassDEP a combined MCP compliant Release Abatement Measure (RAM) Completion Report and Response Action Outcome (RAO) statement for the project in fall 2011. In summer 2012, MassDEP responded that approval of site closure would require the following items: 1) a feasibility study be completed at the site to demonstrate that a permanent solution is not feasible, 2) an activity and use limitation (AUL) be completed for the site and 3) additional characterization work be completed to define the extents of impact. CENAE is slated to retain an AE contractor in



FY13 to begin these additional efforts and move the site toward closure.

**Naval Fuel Annex (8th CD)** – Environmental risk at the site was evaluated and found to be negligible. Work is underway to close out this project through a Response Action Outcome (RAO).

**Watertown Arsenal (8th CD)** – There have been 3 separate projects (Mall, Arsenal Park, GSA property) associated with this site. *The Decision Document was signed in June 2012. The remedial action was awarded to Charter Environmental. Remedial action began in fall 2012 and includes building demolition, wetlands mitigation and soil remediation and capping. The remedial action is scheduled to be completed by December 2013.*

**Charlestown Navy Yard, Building 108, (8th CD)** – A work plan was prepared that evaluated several approaches to demolishing Building 108. A structural assessment was completed. Due to limited annual funding, the project was scheduled to remove the asbestos and demolish the building in phases over several years. Currently, the structural risk assessment has been redone to re-assess the structural integrity of the building. The continued deterioration of the building each year warrants a different approach to demolishing the building. The District is currently in the process of re-assessing the approach and cost to demolishing the building.

**Former Westover Air Force Base, Chicopee (2nd CD)** – The Westover Bulk Petroleum, Oil and Lubricant (POL) Terminal and Salvage Yard site is currently being investigated with a Phase I/II Comprehensive Site Assessment. A final report was sent to MADEP in December 2007. Follow-up field efforts took place in fall 2008 to address data gaps and complete the remedial investigation effort. A Supplemental Remedial Investigation/ Feasibility Study was submitted to MassDEP in the summer of 2010, which presented the use of enhanced fluid recovery (EFR) to reduce the amount of LNAPL at the site. EFR field efforts were slated to commence in the winter of 2010; however, due to unfavorable site conditions, EFR events have been postponed indefinitely. In the interim, CENAE's Contractor has been monitoring site conditions through quarterly groundwater gauging events. CENAE has conducted four consecutive quarterly groundwater gauging events in which no LNAPL has been observed in on-site monitoring wells. CENAE is slated to conduct a comprehensive groundwater sampling event at the site in *the summer of 2013*, the results of which will be used to complete a MCP Method III risk assessment and move the site to project close out.

**Camp Wellfleet (9th CD)** – The New England District will continue to work with the National Park Service to establish an awareness program for the identification of ordnance related items as part of the institutional controls for the site.

**Osborne Pond (9th CD)** – The New England District completed field investigations in the Pond in July 2008. The Final Remedial Investigation Report was issued in March

2010. The Feasibility Study was issued in January 2011 and is currently under Regulatory review.

**Camp Goodnews (9th CD)** – The New England District issued the Final Closeout Report to the Regulators in June 2008. No additional action is anticipated. Site closeout is in process.

**Martha's Vineyard Projects (9th CD), (Cape Poge Little Neck, South Beach Moving Target Machine Gun Range, and Tisbury Great Pond):** A Time Critical Removal Action (TCRA) was completed on the Cape Poge Little Neck project and the South Beach Moving Target Machine Gun Range project from April to September 2009. The TCRA resulted in the removal of many inert ordnance items. A Site Investigation was performed at the Tisbury Great Pond project site under the Military Munitions Response Program. All three sites required additional investigation to delineate the extent of the munitions. Due to the close proximity of these sites, coupled with the fact that they are all ordnance related projects, all 3 projects are currently being executed simultaneously under one consolidated RI/FS effort by the New England District. Field work started in November 2010, and ended in March 2012. An Environmental Security Technology Certification Program (ESTCP) Demonstration project using innovative geophysical technology to perform geophysical surveys offshore to locate munitions was conducted in June 2010 at South Beach by Tetra Tech. The data from this demonstration project have been incorporated into the overall RI/FS. *The Draft RI/FS Reports are currently being developed for internal Corps review.*

**Nantucket, Former Tom Nevers Facility (9th CD):** A contract was awarded in September 2011 to conduct a Remedial Investigation on the Former Tom Nevers Facility, an ordnance project under the Military Munitions Response Program. The first Technical Project Planning meeting was held on Nantucket on Oct. 27, 2011. *Field work was conducted from March through June/July 2012. The Draft RI Report is currently under internal Corps review.*

Remedial construction projects are complete at:

**First District**

Westover Light Annex #2, **Granby**  
Westover Light Annex #3, **Amherst**  
New Salem Gap Filler Annex, **New Salem**  
Westover Remote Site, **Shutesbury**

**Second District**

Springfield Armory-Rail, **Springfield**  
Chapman Valve Exp, **Springfield**  
Westover AFB, **Chicopee**  
Westover AFB, **Ludlow**  
**Hadley Nike Site**

**Third District**

**Swansea Nike Site**

**Fourth District**

**Nike Site PR-19, Rehoboth**

**Sixth District**

**Beverly Nike Site**  
**Danvers/Topsfield, Nike Site**  
**Fort Ruckman, Nahant**

Nike Site BO-17, **Nahant**  
Nike Site BO-84, **Burlington**  
Ipswich Data Collection Lab Annex, **Ipswich**  
Fort Ruckman, **Nahant**

#### **Seventh District**

**Lincoln** Nike Site  
Nike Site BO-03, **Reading/Wakefield**

#### **Eighth District**

Fort Strong, **Winthrop**  
**East Boston** Naval Fuel Annex  
**Charlestown** Navy Yard  
**Charlestown** Navy Yard, Tank Removal  
Fort Warren, **Boston**

#### **Eighth & Ninth Districts**

Fort Standish, **Boston**

#### **Ninth District**

**South Boston** Naval Annex  
**Needham** Nike Site  
Camp Candoit, **Cotuit**  
**Martha's Vineyard** Airport  
Hingham School Property, **Hingham**  
Fort Andrews, **Hull**  
**Hingham** Army Reserve Training Center  
**Hingham** Naval Ammunition Depot & Annex  
**Hingham** Nike Site  
**Martha's Vineyard** South Beach Moving Target Machine Gun Range and  
Cape Poge Little Neck  
**Hingham/Cohasset** Naval Ammunition Depot  
**Camp Wellfleet**  
Nike Site BO-37, **Quincy**  
Nike Site BO-40, **Quincy**  
Fort Revere, **Hull**  
**Hingham** Naval Ammunition Depot Annex  
Misham Point Electronics Research Annex, **Dartmouth**

Squantum Electronics Research Center, **Quincy**  
Strawberry Point Fire Control Station, **Scituate**  
Point Allerton Military Reservation, **Hull**  
Point Allerton Surface Craft Detector Site, **Hull**  
Holly Hill Radar Station, **Marshfield**  
**Nantucket** NAVFAC, Tom Nevers Naval Base  
**Hingham** Naval Ammunition Depot  
Camp Edwards, **Sandwich**  
Campbell School, **Bourne**

**FUDS INSPECTIONS** - The Corps is conducting Site Inspections of Formerly Used Defense Sites (FUDS) to determine if any munitions and explosives of concern (MEC) or munitions constituents (MCs) are present. Many of the sites visited during this effort may not have been used since the World War II timeframe, or their use changed when the property was transferred to another branch of the military or other private or public landowners. Alion Science & Technology, Inc. is assisting the Corps' Baltimore District in performing this evaluation at FUDS in the Northeast region. Alion and the District will review historical records and maps, meet with site regulators and key stakeholders, and conduct field inspection activities in the area(s) of interest. The outcome from these Site Inspection activities will be to determine if the project site poses any threat to human health or the environment, and if further work needs to be done either through an RI/FS or some type of removal action. Presently funded site inspections in Massachusetts are as follows: Monomoy Island Gunnery Range (Chatham), Nantucket Beach (Nantucket), Martha's Vineyard Airport (Vineyard Haven), AMTB Site (Nashawena Island), and Ft. Devens (Ayer).

## **Work for the Environmental Protection Agency**

The New England District provides support to EPA's Region I (New England) Superfund program. This includes responsibility for site investigations, design work, construction execution, and some operation and maintenance at Federal lead sites. In addition, the District provides other technical assistance (5 year reviews, real estate support, etc.) at removal and national priority list sites being addressed by EPA Region 1.

### **Superfund Assistance**

**GENERAL ELECTRIC/HOUSATONIC RIVER, PITTSFIELD (1st CD)** – The General Electric (GE) facility encompasses an area of approximately 300 acres along the north bank of the Housatonic River in Pittsfield. Past operations by GE have caused significant contamination with PCBs and other compounds at this facility (soil, groundwater and buildings) and in the Housatonic River. In September 1998, EPA and GE reached an agreement in principle for the environmental and economic restoration of Pittsfield and southern Berkshire County. This agreement was approved by a Consent Decree entered in the U.S. Circuit Court on Oct. 27, 2000.

The New England District has performed over \$100 million in work at the site since that time. Our efforts have included

site investigations, the remediation of a 1.5 mile stretch of the river, risk assessments, modeling and oversight of GE activities. In September 2008, we awarded a new professional services contract (\$25 million in capacity, 5 years in duration) which will be used to support EPA as they work with GE to address the Housatonic River downstream from Pittsfield. Services currently being provided to EPA include the oversight of field activities being conducted by GE as well as the technical review of designs and reports prepared by GE.

**NEW BEDFORD (4th CD)** – The New England District has been supporting EPA at this site since the mid-1980s. Seven separate major dredging projects have been accomplished resulting in the removal of over 252,000 cubic yards of PCB-contaminated sediment. The process involves the hydraulic dredging of sediments, dewatering of the sediments followed by offsite disposal. The 2011 dredging began on June 27, 2011 and ran through Sept. 19, 2011, allowing for 55 days of dredging. The 2011 dredge season utilized a combination of American Recovery and Reinvestment Act and conventional funding to dredge for an additional 10 dredge days.

This is a long-term project with hundreds of thousands of cubic yards of contaminated sediments to be removed if the cleanup goals established by EPA's Record of Decision are to be achieved. EPA's funding constraints currently limit

the project to a \$15 million annual effort. EPA continues to evaluate other approaches to more efficiently address the

remaining contamination at the site and we continue to provide support to these efforts.

## Support to the Military

### MASSACHUSETTS MILITARY RESERVATION (MMR) (9th CD) – Support to the Impact Area Groundwater Study Program

In September 2000, the National Guard Bureau (NGB) announced its decision to use the Corps as supervisory contractor for the Impact Area Groundwater Study Program (IAGWSP). Investigations and remedial actions are being conducted in accordance with Administrative Orders issued by EPA under the Safe Drinking Water Act. The work is estimated to cost \$300 million, take 15 years and involve groundwater and soil investigations followed by remedial actions and the operation and maintenance of treatment facilities. The avoidance and/or removal of ordnance are incidental to all field work conducted at MMR. In December 2002 the Army Environmental Command (AEC) was given responsibility for program management. Their program manager was on site at the Impact Area Groundwater Study Program (IAGWSP) office through August 2011 at which time the program was transitioned back to the National Guard Bureau. The NGB program manager is located on-site. The District's team works in support of the IAGWSP program manager and the IAGWSP office since that time.

The following significant actions have been completed.

\* A significant soil cleanup at the Southeast Ranges and Demolition Area 1 was completed in late 2004. Soil was treated on site in a mobile thermal treatment unit. Contaminated soil from other sites was also excavated and treated at this time. All soil was treated by January 2005 and the treatment unit was demobilized in April 2005.

\* Construction of a temporary treatment system to address the Demo-1 plume began early in 2004 and the Demo 1 interim pump and treat system went on line Sept. 8, 2004 and treated groundwater through June 2007. The permanent Demo 1 groundwater treatment facility came on line in late June 2007. This facility is expected to operate in excess of 10 years. A contingency system to contain plume migration at the base boundary went on line in June 2011.

\* In 2004, the IAGWSP connected three private residences in Bourne to town water. Hook-up was authorized as a result of low-level offsite contamination as a result of past military training at MMR.

\* The construction of 2 groundwater treatment facilities in the Southeast Ranges of MMR began in September 2005. The J3 facility, an upgrade/retrofit of an existing groundwater treatment facility in the J3 Range, has been operational since July 2006 and is expected to operate for approximately 10 years. The second facility was constructed at the J2 North Range. It too has been operational since July 2006.

\* Construction of a groundwater treatment facility at the J1S Range began in June 2007 and was completed in October

2007. An additional extraction well and piping off-site was installed in December 2012. The new extraction well came on line Dec. 17, 2012.

\* The construction of a groundwater treatment facility at the J2 East Range began in September 2007, was completed in September 2008 and is expected to operate for 11 years.

\* A Decision Document for BA-4 Disposal Area and Demolition Area 1 Source Area was signed in September 2009.

\* A Decision Document for the L Range was signed in September 2010.

\* A Decision Document for the J1 Range was signed in May 2011.

\* A Decision Document for the Central Impact Area was signed in March 2012.

The program partnered with the Air Force Research Laboratory (AFRL) to conduct a robotics technology demonstration. The objective of the demonstration was to develop efficient methods to address contamination in an Unexploded Ordnance (UXO) environment while minimizing the safety risk to workers and the cost while maximizing the amount of explosives removed from the environment.

The program recently partnered with the Environmental Security Technology Certification Program (ESTCP) to conduct a classification technology demonstration. The objective of the demonstration was to evaluate the ability of geophysical tools to discriminate between potential UXO items and frag.

Ongoing work consists of site investigations, report preparation and the selection of remedies for several ranges, and operation and maintenance of the groundwater treatment facilities and source removal actions at selected ranges. Source removal actions include the excavation and screening of explosive contaminated soil.

**HANSCOM AIR FORCE BASE (5th CD)** – Members of the New England District team joined their customers, the 66<sup>th</sup> Air Base Group and Hanscom Air Force Base, and their contractor Watermark Environmental of Lowell, Mass., to break ground on May 1, 2012 for the \$2.8 million design-build Mental Health Clinic Addition on Hanscom Air Force Base in Bedford, Mass. The project consists of constructing a single story 4,000-square-foot addition to the existing health clinic. The project is scheduled to be completed in February 2013.

**U.S. ARMY SOLDIER SYSTEMS CENTER, NATICK (9th CD)** – Building repairs and other work at the U.S. Army Natick Soldiers Center in Natick will be completed under



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the terms of a \$1,237,303.13 design-build contract awarded on Sept. 28, 2012 by the New England District. Work will be accomplished by Security Construction Services, Inc., of Hudson, Mass. Work on the design was scheduled to start in *late* 2012. The project is scheduled to be completed by the end of September 2013. The work includes Soldier System Center building 4 roof repairs and replacement of the air handling unit.

**WESTOVER AIR RESERVE BASE, CHICOPEE (1st CD) –** Installation of and upgrades to the mass notification systems in multiple buildings at the Westover Air Reserve Base in Chicopee will be completed under the terms of a \$2,793,745 contract awarded on Sept. 26, 2012 by the New England District. Work will be accomplished by Annese Electrical Service, Inc., of Weymouth, Mass. Work started in 2012 and will be completed by December 2013. The Air Reserve Base

is providing a new complete mass notification system (MNS), upgrades and modifications to existing central control mass notification systems, modifications to existing fire alarm control panels, along with upgrades to the existing central control station to receive, monitor, and control individual building MNS.

The contractor will provide all programming and software as required. Systems will be provided in accordance with all state and local codes and upon completion of work will be tested in accordance with the specification for final acceptance. The work includes, but is not limited to, installation of new mass notification or alarm control systems in existing facilities, upgrades to existing mass notification or alarm control systems in existing facilities, successful electrical renovation work in operating facilities such as offices or similar environments, and programming of mass

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## Base Realignment and Closure (BRAC)

**FORT DEVENS, AYER (5th CD) –** Two design-build contracts were awarded, one to P&S Construction for buildings 693, 694 and 695 and one to Kallidus Technologies for building 967. Both projects have seen their designs completed and construction begin. Both are in the demolition phase.

Fort Devens was selected for closure under the Department of Defense BRAC of 1990 (Public Law 101-50). The fort is located in the towns of Ayer and Shirley (Middlesex County) and Harvard and Lancaster (Worcester County), approximately 35 miles northwest of Boston. In 1991, the District began implementing BRAC 91 related environmental restoration work at Fort Devens (the site is on EPA's National Priority List) for the Army BRAC Office. This work continues with specific actions listed below.

A focused feasibility study for the Shepley's Hill Landfill is being conducted through a contract with Sovereign Consulting, Inc. This effort includes a remedial investigation/feasibility study for Plow Shop Pond which is adjacent to the landfill.

Monitoring of groundwater at numerous locations is performed annually through a contract with Hydrogeologic.

Contaminant levels are monitored as required by the Federal Facilities Agreement between the Army and EPA.

A contract was awarded in September 2010 to Sovereign Consulting, Inc. to complete all soil remediation at the remaining housing areas (Oak, Maple, Spruce, Shirley, Davao and Salerno). Field work commenced in December 2010 at the Shirley Housing Area for backfilling the excavations. Work began in 2011 at Salerno with delineation sampling.

**SUDBURY TRAINING ANNEX (5th CD) –** The District completed environmental cleanup of the site in September 2000 and EPA deleted the site from the NPL on Jan. 28, 2002.

The District conducts annual field sampling and inspections as part of the Army's long term responsibilities at this site. Sampling and analyses of the groundwater from the monitoring wells began in June 1997 and is presently completed annually in the fall. The District also completes spring and fall inspections of the landfill cap to monitor its protectiveness. The Annual LTMM reports prepared by the District capture the annual results of all groundwater monitoring results and site inspections.

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## Regulatory Program

Department of the Army permits are required from the Corps under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The Corps reviews permit applications for work affecting navigable waters under its Section 10 authority and the discharge of fill material into all waters, including inland wetlands, under Section 404. A list of Monthly General and Individual Permit Authorizations is provided at [www.nae.usace.army.mil/Regulatory](http://www.nae.usace.army.mil/Regulatory) under the heading "State General Permits/Permitting" then "Monthly Permits Issued." Relevant environmental documents are available upon written request.

For more information about Corps jurisdiction of wetlands

and whether a permit is required for your work contact the Corps' New England District Regulatory Division at 978-318-8338 or 978-318-8335 or visit the website at: <http://www.nae.usace.army.mil/Regulatory/>.

**REGIONAL GENERAL PERMIT –** The District has comprehensive Regional General Permits (RGPs) in place in each of the six New England states covering work with minimal impact on the aquatic environment. Up to 98 percent of all permits issued in New England are RGPs. Applications eligible under the RGPs are generally approved in less than 60 days. Applicants have commented favorably about the simplicity, predictability and efficiency of the RGPs. The

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Massachusetts General Permit was reissued on Jan. 21, 2010 for five years. The General Permit is available at: <http://www.nae.usace.army.mil/Regulatory/SGP/ma.htm>.

**PLUM ISLAND, COASTAL PROPERTY OWNER'S ASSOCIATION (9th CD)** – Plum Island is a high energy barrier beach with homes facing the ocean and close to the high tide line (HTL). The beach and coastal dunes have experienced increased erosion over the last several years. The ocean front home owners want to move sand from below the HTL and place it in front of the coastal dune in order to have a sacrificial layer of sand protection available for storm waves. This activity is referred to as beach scraping. The Corps issued a permit on Sept. 17, 2012, for a one time beach scraping event in front of five homes. The area of beach scraping was minimized to include only five homes identified by the town as being in danger of losing occupancy permits due to dune erosion and imminent threat to the foundations. Previous proposals by the Association included a much larger area of beach scraping. *Prior attempts to stabilize the shoreline on Plum Island have included soft structures such as sand bags, coir logs, and haybales at specific areas in need of immediate stabilization. Prior to Hurricane Sandy, we issued an emergency permit for beach scraping in front of three additional homes. The beach scraping was completed in mid-December 2012. On Dec. 24, 2012, the homeowners made another request for emergency beach scraping in front of the eight homes where this work was just done.*

**SOUTH COAST RAIL (4th CD)** – The Draft Environmental Impact Statement for the MassDOT South Coast Rail project was noticed in the Federal Register March 25, 2011. The DEIS assesses the potential impacts of this proposed establishment of commuter transit service between Boston, New Bedford and Fall River. Impacts include placement of fill in wetlands which requires a Corps of Engineers permit. The DEIS examined three rail alternatives, a rapid bus (highway) alternative and the “no build” option. As the project is not funded by a federal agency, the Corps is the Lead Federal Agency for purposes of NEPA review. We are coordinating the review with our cooperating agency partners, including EPA, the Federal Transit Administration, Federal Railroad Administration and Federal Highway Administration. *MassDOT has been completing the final technical reports needed for us to produce the Final EIS. MassDOT is asking*

for the FEIS to be completed in spring 2013, assuming all data is provided to us on time. By regulation, the permit decision cannot be made in less than 30 days after the FEIS is available.

**THIRD PARTY MITIGATION** – In April 2008, the Corps and EPA issued regulations (33 CFR Part 332 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule) on mitigation which became effective in June 2008. These regulations established a “soft” preferential order for mitigation types with mitigation banking and in-lieu fee (ILF) programs preferred over permittee-responsible mitigation. This is the reverse of previous guidance, now obsolete. These new regulations have provided impetus to potential sponsors of banks and ILF programs.

On Sept. 26, 2012, the Massachusetts Department of Fish and Game (DFG) submitted a prospectus for an In Lieu Fee (ILF) program to provide an alternative form of compensatory mitigation for permit applicants throughout the Commonwealth of Massachusetts. Applicants would pay a fee for impacts which would be used by the ILF sponsor to develop ecologically suitable and appropriate mitigation sites in the same watershed as the impacts. Currently there is a small program wherein permittees qualifying for a general permit with impacts in Essential Fish Habitat may choose for compensatory mitigation to make a payment to a fund overseen by the Division of Marine Resources (DMR), a division within the DFG. The funds are then pooled to provide a larger project with more ecological benefit than several very small permittee-responsible mitigation projects. A public notice on the prospectus for the expanded program was issued on Oct. 2, 2012. *On Nov. 28, 2012, the Corps authorized DFG to develop a draft ILF instrument.*

*The Essential Fish Habitat ILF program accumulated approximately \$200,000 in fees for approximately 0.38 acre of impact. DMR was required by the Corps to obligate the funds by December 2012. They put out a Request for Responses (RFR) on Sept. 21, 2012. Eight proposals were submitted. A review team scored the projects on a set of evaluation criteria developed prior to the RFR. Three projects were selected for funding. DMR is in the process of developing contracts for the approved projects which will begin work in 2013.*

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## Operating Flood Risk Management Projects & Recreation/Natural Resource Management

The District provides flood risk management project benefits and, working in cooperation with agencies of the Commonwealth of Massachusetts provides diverse quality outdoor recreational opportunity on each of the 11 flood risk management reservoirs it has constructed in the Bay State, the Cape Cod Canal, and the Charles River Natural Valley Storage Area. Information on each is provided below.

For more information on Corps recreation in New England check the website at [www.nae.usace.army.mil](http://www.nae.usace.army.mil) and select

“recreation” or for Massachusetts projects go directly to the link at <http://www.nae.usace.army.mil/recreati/massachu.htm>.

**BARRE FALLS DAM (1st CD)**, on the Ware River in Barre, was completed in 1958 at a cost of \$2 million. The 885-foot-long and 69-foot-high dam can impound a lake, which can store 7.8 billion gallons of water. Barre Falls has prevented \$53.2 million in flood damages. Over 90,000 annual visitors enjoy picnicking, hiking, fishing and hunting at Barre Falls

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Dam. For more information on Barre Falls call (978) 928-4712 or visit the website at [www.nae.usace.army.mil/recreati/bfd/bfdhome.htm](http://www.nae.usace.army.mil/recreati/bfd/bfdhome.htm).

*Winter* recreation is in full swing at the project with *cross country skiing*, fishing, hiking and disc golf available.

Activities available in the 2013 season include canoeing, picnicking, 18-hole disc golf course, fishing, geocaching, hiking, bike riding, wildlife observation and scenic viewing from sunrise to sunset. Hunting during season is permitted. For scheduling events call the office at (978) 928-4712; to arrange a group tour contact Park Ranger Brianna Green, Barre Falls Dam, Hubbardston, Mass.; (phone: 978-318-8263); [brianna.j.green@usace.army.mil](mailto:brianna.j.green@usace.army.mil).

**BIRCH HILL DAM (1st CD)** is situated on the Millers River in Royalston. Completed in 1942 at a cost of \$4.6 million, the 1,400-foot-long, 56-foot-high dam can store 16.2 billion gallons of water. To date, damages amounting to more than \$78.1 million have been prevented. Birch Hill offers many recreational opportunities. The Lake Dennison Recreational Area, managed by the Massachusetts Department of Conservation and Recreation, provides camping, swimming, picnicking, boating and fishing. The Lake Dennison Campground opened for the season on May 25, 2012 and will close on Sept. 3, 2012. The Massachusetts Division of Fisheries and Wildlife manages much of the remaining reservoir as part of the Birch Hill Wildlife Management Area. Popular activities include hiking, hunting, fishing, mountain biking and snowmobiling in season. The Birch Hill Dam and reservoir area attracts more than 293,000 visitors annually.

For more information call 978-249-4467 or 978-318-8267 or visit the website at [www.nae.usace.army.mil/recreati/bhd/bhdhome.htm](http://www.nae.usace.army.mil/recreati/bhd/bhdhome.htm).

*Winter* recreation is in full swing at the project, with *snowmobiling*, *cross country skiing* and fishing, being popular activities.

Polychlorinated Biphenyls (PCBs) were discovered in 1987 in tissue samples taken from fish caught in the Otter and Millers rivers. The Corps is working, in cooperation with the Massachusetts Department of Environmental Protection (MADEP), to determine the extent of the problem and possible source(s). A Phase II site assessment report and ecological risk characterization of PCBs at Birch Hill Reservoir were completed in July 2000 and determined that there are no immediate actions required by the Corps to protect public health, safety and welfare, at Birch Hill, such as closure of a portion or all of the reservoir area. The study and report confirmed that PCB concentrations at Birch Hill remain high enough that they may pose a potential risk to human health and the environment. A significant risk to human health exists, primarily through the consumption of fish from the Millers and Otter rivers and contact with sediment in the Otter River at Birch Hill. A condition of no significant risk to safety and public welfare exists at the site. The Massachusetts Department of Public Health and the Massachusetts Division of Fisheries and Wildlife published

fisheries consumption advisory on the Millers River in 1988 and there are also fish consumption advisories published in the abstracts of the Massachusetts Fish and Wildlife Laws. The Corps' investigations and the study suggest that these advisories should remain in effect. The Corps is not the cause of the contamination. The Corps continues to cooperate in the investigation and has voluntarily initiated a long-term monitoring program to protect the health and safety of visitors to Birch Hill. The initial long-term (baseline) sampling conducted in March 2002 concluded that total PCB concentrations in the Birch Hill hydric soil and sediment do not exceed acute and chronic human health threshold levels at pre-determined locations of high recreational use.

MADEP has identified a PRP responsible party for the PCB contamination and the Corps, the U.S. Department of Justice and MADEP are currently working on a cost recovery action with the PRP.

Birch Hill Dam is normally open between 7 a.m. and 3:30 p.m., Monday through Friday. Contact the park ranger (978-318-8265) for more information on special interpretive programs. A special program can be one that the park ranger has prepared, such as water safety, the water cycle, the history of the Corps, flood damage reduction or junior project manager. Rangers can also prepare a program that deals with the Corps and its missions, water resources or natural resources and tailor it to your needs. The rangers can set up a program for groups to visit the dam or can arrange for a park ranger to visit schools or groups. Contact the park ranger for more information on any of these programs or to schedule a program.

**BUFFUMVILLE LAKE (2nd CD)** on the Little River in Charlton was completed in 1958 at a cost of \$3 million. The 12,700 acre-feet of storage at Buffumville is equal to 3.9 billion gallons of water and is impounded by a 3,255-foot-long, 66-foot-high earthen dam. Buffumville Dam has prevented more than \$128.6 million in cumulative damages, through October 2012. Picnicking, swimming, boating, fishing, hunting, a 27 hole disc golf course, volleyball, horseshoes, two rental shelters and sight-seeing are just some of the fun activities folks can enjoy at Buffumville Lake. Portions of Buffumville Park are handicap accessible.

The team at Buffumville Lake has concentrated on repairing, replacing and revitalizing aging infrastructure with as much in-house labor as possible and writing and executing contracts. Projects *this winter include*: pulling and revitalization of limitorque #2 in the dam; #1 has been *reinstalled and is ready for painting*. Upcoming projects include *bathroom rehab* and a large closet construction.

Upcoming volunteer and interpretive events can be found by going to Buffumville Lake's website at: <http://www.nae.usace.army.mil/recreati/bvl/bvlhome.htm>. Call ahead at (508) 248-5697 as the schedule is subject to change.

*Buffumville Lake had a respectable increase of our on-site interpretive contacts with 920 people attending programs and a decline in the number of off-site contacts at 510 folks*



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in FY 2012. The volunteer numbers were up this year with 128 volunteers performing 3,476 hours of community service for an estimated volunteer worth of \$75,742.

**CAPE COD CANAL (9th CD)** – The Cape Cod Canal, the widest sea-level canal in the world, extends 17.4 miles across the narrow neck that joins Cape Cod to the mainland. The Corps operates and maintains the Canal from a field office in Buzzards Bay, about 50 miles south of Boston. The canal, with a 32-foot-deep by 700-foot-wide approach channel, saves commercial and recreational vessels 65-150 miles (depending on trip origin and destination) from the route on the outer Cape, where shoals and treacherous currents have made navigation hazardous for centuries. The toll-free waterway, with two mooring basins, is open for passage to all boating craft properly equipped and seaworthy. Two-way traffic is routinely maintained. Private interests sold the Canal to the U.S. government in 1921 for \$11.5 million (title obtained in 1928). Responsibility for operating and maintaining the Canal was assigned to the Corps, which has maintained and improved it since then. In 1933, three bridges were authorized and constructed over the Canal – the Sagamore and Bourne highway bridges and the Railroad Bridge at Buzzards Bay. The Corps operates and maintains all three. The Canal is one of New England's most popular recreational areas. More than three million visitors annually enjoy the Canal and its adjacent lands for diverse outdoor activities including participating in interpretive programs run by Corps rangers, or enjoying some of the best saltwater fishing in the country. The service roads are popular for biking, hiking, roller blading and walking. Since November 2007, Corps employees in the Marine Traffic Control Center have implemented tasks associated with the U.S. Coast Guard VMRS Final Rule for Buzzards Bay Control, in accordance with a memorandum of agreement (MOA) between the Corps' Cape Cod Canal and the U.S. Coast Guard. For more information on the Canal call 978-318-8816 or call the Visitor Center at 508- 833-9678 or check the website at [www.capecodcanal.us](http://www.capecodcanal.us).

**CHARLES RIVER NATURAL VALLEY STORAGE AREA (CRNVS) (2nd, 3rd, 4th, 7th, 8th, and 9th CDs)** was authorized by Congress in March 1974. Federal funds totaling \$8.3 million were used to purchase 3,210 acres of fee land and 4,891 acres of restrictive easement. The CRNVS is located in 16 towns (Bellingham, Dedham, Dover, Franklin, Holliston, Medfield, Medway, Millis, Natick, Needham, Newton, Norfolk, Sherborn, Walpole, West Roxbury and Wrentham) and lies within three counties. The CRNVS area acts as a flood control project by using the natural flood attenuation characteristics of the over 8,000 acres of wetlands purchased. The project attracts over 60,000 visitors a year. Visitors can bike, boat and canoe, camp, fish, hike, hunt, view wildlife and partake in other passive recreational uses. The CRNVS area is a wilderness surrounded by development, forever set aside for the enjoyment of all.

*The U.S. Army Corps of Engineers' Charles River Natural Valley Storage Area and staff were recognized internationally by the International River Foundation and*

*local Charles River Watershed Association in Brisbane, Australia. A local recognition USACE ceremony was held at the Concord, Mass. headquarters with Project Manager Merlon Bassett and SCA Interns in attendance.*

*Student Conservation Association (SCA) Interns: Welcome new intern Eva Salinas who teamed up quickly with intern Grainne O'Grady to continue to conduct a surveys of easement and boundary segments using GIS and GPS technology in Norfolk, Franklin and Newton, Mass. Encroachments and public notices/requests are assisted by the GIS interns.*

The West Hill Dam Project Office located in Uxbridge is the field office for the CRNVS Area. Staff patrol, investigate and resolve real estate inquiries, boundary inquiries, and requests for leases, licenses and easements. Staff, also assist town personnel and other agencies for assistance within the CRNVS area. For more information call (508) 278-2511 or visit the website at: [www.nae.usace.army.mil/recreati/crn/crnhome.htm](http://www.nae.usace.army.mil/recreati/crn/crnhome.htm).

**CONANT BROOK DAM (2nd CD)**, on the brook of the same name in Monson, can store 1.2 billion gallons of water behind the 1,050-foot-long, 85-foot-high impoundment. Completed in 1966 at a cost of \$3 million, the project annually attracts around 20,000 visitors to its scenic trails for hiking, horseback riding, and cross-country skiing and for its fine trout fishing. Since it was placed in operation, Conant Brook has prevented damages of more than \$3.3 million. For more information on Conant Brook Dam access the website at <http://www.nae.usace.army.mil/recreati/cbd/cbdhome.htm> or call (508) 347-3705.

**EAST BRIMFIELD LAKE (2nd CD)** on the Quinebaug River in Sturbridge was constructed at a cost of \$7 million. The 520-foot-long, 55-foot-high dam can impound a 29,900-acre-foot reservoir, which is equivalent to 9.7 billion gallons of water. Since it was placed in operation in 1960, it has prevented damages of \$129 million. The reservoir area offers fine recreational opportunities, including swimming, picnicking, fishing, hunting, canoeing, boating, and nature study, and attracts more than 124,000 visitors annually.

For more information on Lake Siog and East Brimfield Lake access the website at <http://www.nae.usace.army.mil/recreati/eb/ebhome.htm> or call 508-347-3705.

The tornado of June 1, 2011 impacted the local communities of Sturbridge, Brimfield, and Holland, Mass., as well as flood control facilities operated by USACE; rough estimates of damages to the East Brimfield Dam forested lands are upwards of 400 acres of downed trees. Several miles of the Quinebaug River were impacted to various degrees, and the river trail is now reopened, as well as up to 5 miles of recreational trails/fire roads, these are also reopened. An estimated 10 miles of boundary lines between public and private lands were impacted. The flood control dam and outbuildings were undamaged and remain fully operable. USACE has made great headway in reclaiming access roads, trails and boundaries utilizing contractors, volunteer

teams and fuel wood sales. USACE has reopened boat ramps for access to East Brimfield Lake this summer and is permitting special events, e.g., fishing derbies, there again. Work will continue as funding and manpower allow.

**HODGES VILLAGE DAM (2nd CD)**, across the French River in Oxford, was constructed at a cost of \$4.4 million. The 2,140-foot-long, 55-foot-high dam can impound a 13,200-acre-foot reservoir, which is equivalent to 4.2 billion gallons of water. Since it was placed in operation in 1959, *it has prevented more than \$153.5 million in cumulative damages, through September of 2011.* The reservoir area offers fine recreational opportunities, including picnicking, fishing, hunting, mountain bike and horseback riding, and nature study to the visitors, it welcomes each year.

The team at Hodges Village Dam has concentrated on repairing, replacing and revitalizing aging infrastructure with as much in-house labor as possible and writing and executing contracts. Projects *this winter include:* revitalization of limiter #2 in the dam; *#1 has been reinstalled and is ready for painting. New double bulletin boards are being constructed and installed to replace 20+ year old single signs.*

Upcoming volunteer and interpretive events are listed on the Hodges Village Dam's website at: <http://www.nae.usace.army.mil/recreati/hvd/hvdhome.htm>. Call ahead to 508-248-5697 to check times and dates as the schedule is subject to change.

*Hodges Village Dam had a large increase in our on-site interpretive contacts with 314 people attending programs and we reached over 3,000 people with our off-site contacts in FY 2012. The volunteer numbers were up this year with 129 volunteers performing 3,134 hours of community service for an estimated volunteer worth of \$68,290.*

**KNIGHTVILLE DAM (1st CD)**, on the Westfield River in Huntington, was constructed at a cost of \$3.4 million. The 1,200-foot-long, 160-foot-high dam can impound a 49,000-acre-foot reservoir (equivalent to 15.8 billion gallons of water). Since its construction in 1941, it has prevented damages of \$335.9 million. More than 53,000 visitors enjoy the variety of recreational pursuits available at Knightville, including picnicking, hiking, fishing, hunting and horseback riding.

For up-to-date information call (413) 667-3430 or visit the website at [www.nae.usace.army.mil/recreati/kvd/kvdhome.htm](http://www.nae.usace.army.mil/recreati/kvd/kvdhome.htm).

The Indian Hollow Group Campground closed for the season on Sept. 9, 2012. The campground includes two group site loops (15 sites, each loop), a waterborne comfort station with hot showers, drinking water, hiking trails and a riverside environment. The North loop may be reserved for a fee of \$90 per night and the South loop for a fee of \$85 per night. Both loops may be reserved for a fee of \$175 per night. Reservations for the 2013 season are on a first-come, first-serve basis and one or both loops may be reserved. Reservations for 2013 may be made through the National

Recreation Reservation Service at <http://www.reserveusa.com> or by calling 1-877-444-6777. The campground will open on May 17, 2013.

*Winter recreation activities, including snowmobiling, cross country skiing, hiking and fishing are popular with visitors.*

**LITTLEVILLE LAKE (1st CD)**, on the Middle Branch of the Westfield River in Huntington and Chester, is 1,360 feet long, 164 feet high and cost \$7 million to construct. The reservoir can hold a 23,000-acre-foot or 7.5 billion-gallons. It has prevented damages totaling \$148.5 million since it was placed in operation in 1965. The reservoir area offers many fine recreational opportunities, including picnicking, fishing, hunting, canoeing, boating and nature study, and attracts more than 32,000 visitors annually.

For more information call (413) 667-3656 or visit the website at [www.nae.usace.army.mil/recreati/lvl/lvlhome.htm](http://www.nae.usace.army.mil/recreati/lvl/lvlhome.htm).

Special interpretive programs are offered and include such topics as water safety, the water cycle, the history of the Corps and flood damage reduction. Rangers can also prepare a program that deals with the Corps and its missions, water resources or natural resources and tailor it to your needs. These programs can be given at the Dam, or we can come to your group or school. Contact the park ranger at (413) 667-3656 for more information on any of these programs or to schedule a program.

*Winter recreation activities, including hiking, snowmobiling, cross country skiing and fishing are popular with visitors.*

**THE NEW BEDFORD-FAIRHAVEN-ACUSHNET HURRICANE PROTECTION PROJECT (4th CD)** was completed in 1966 at a cost of \$18.6 million and provides a gated barrier across New Bedford-Fairhaven Harbor and supplementary dikes in the Clarks Cove area of New Bedford and Fairhaven. The twin sector gates can seal the 150-foot-wide navigation opening in 12 minutes and were operated on 29 occasions in fiscal year 2011. This barrier affords tidal-flood protection to an area of about 1,400 acres. The Project has prevented approximately \$24.1 million in flood damages through the end of FY 2011.

A construction contract to dewater the New Bedford-Fairhaven Hurricane Barrier was awarded in August 2011. This project includes replacement of the steel wheels that the sector gates roll on as well as miscellaneous other repairs, welding and repainting.

For more information visit the website at <http://www.nae.usace.army.mil/water/topic.asp?mytopic=hpbnewbedford>.

**TULLY LAKE (1st CD)**, situated on the East Branch of the Tully River in Royalston, is 1,570 feet long and 62 feet high. Completed in 1949 at a cost of \$1.6 million, the dam has a reservoir storage capacity of 7.1 billion gallons of water. Tully Lake has prevented damages of \$28.1 million. Nearly 40,000 visitors annually enjoy picnicking, hiking, boating,

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fishing and hunting at Tully Lake.

For more information call (978) 249-9150 or visit the website at <http://www.nae.usace.army.mil/tul/tulhome.htm>.

The Tully Campground, operated under a lease by the Trustees of Reservations closed for the season on Oct. 8, 2012. The campground has waterborne restrooms with showers, drinking water, primitive walk-in or boat-in campsites and hiking trails. The campground will be open again on May 17, 2013. For more information, call the Trustees of Reservations at (978) 249-4957 or (978) 840-4446 or visit [www.tullylakecampground.org](http://www.tullylakecampground.org)

The North Quabbin Bioreserve encompasses 64,000 acres of land in the towns of Athol, Erving, New Salem, Northfield, Orange, Petersham, Phillipston, Royalston, Templeton, Warwick, Wendell and Winchendon. The Corps is an active member of the North Quabbin Regional Landscape Partnership and was instrumental in the designation and construction of the 22-mile-long Tully Trail, which passes through the 1,269-acre Tully Lake Reservoir Area, an important segment of the North Quabbin Bioreserve. The Tully Campground and Tully River Canoe Launch Area are popular "jumping off points" for the Tully Trail.

Winter recreation is in full swing at the project, with snowmobiling, fishing, hiking and disc golf available.

**WEST HILL DAM (2nd CD)**, on the West River in Uxbridge, was completed in 1961 at a cost of \$2.3 million. The 2,400-foot-long, 51-foot-high dam can impound a 12,400-acre-foot lake capable of storing four billion gallons of water. It has prevented damages of more than \$96.6 million. More than 90,000 annual visitors enjoy picnicking, swimming, hiking, fishing and hunting at the 1,401-acre facility. For more information and current events, upcoming programs, or shelter reservations, call (508) 278-2511 or visit the website at [www.nae.usace.army.mil/recreati/whd/whdhome.htm](http://www.nae.usace.army.mil/recreati/whd/whdhome.htm).

*November, December and January: West Hill Dam is a Mass-Wildlife Management Area. Safety Always - there were no accidents or incidents for the 2012 Hunting Season. Project Rangers hosted numerous dam tours, a Lewis and Clark Traveling Trunk School Program and four new Eagle Scout candidates and a possible six Girl Scout Gold/Arrow Award candidates will work with project staff for the 2013 season.*

*November: Eagle Scout Jacob Nordquist worked diligently to complete a safety fence and reconstruction of the park horseshoe pits and portable amphitheatre benches. Junior Ranger Level-2 candidates assisted the Commonwealth of Massachusetts with the banding of Saw Whet Owls locally at Lookout Rock. A public tour of West Hill Dam and Wildlife Tracking introduced over 75 visitors to the many year-round opportunities and missions of the U.S. Army Corps of Engineers at West Hill Dam.*

*December: With our first snowfall our traffic meters register*

*about 6,000 visitors monthly for the varied winter activities available at West Hill Dam. Project rangers and staff work year-round to provide for public safety. Junior Rangers along with the public decorated a tree with a variety of high energy food items to support our wildlife during the cold months.*

*January: Ranger Andrew Labonte has worked during his winter break for a variety of cross training and mentoring opportunities at West Hill and Woonsocket Dams.*

*Eagle Scout Honor Court for Christopher Giard was held Jan. 12th, with 178 scouts, prior Eagle Scouts, relatives and parents in attendance. The detachable Solar Lighting system offers educational, practical and ecological opportunities year-round. Christopher was recognized before his parents, peers and guests as West Hill Park joins great national facilities with solar visitor centers.*

*West Hill Rangers were hosted by Barrows Elementary School, meeting Massachusetts Frameworks curriculum requirements with a presentation of the Lewis and Clark Traveling Trunk and Corps Discovery Team contributions to our Nation and U.S. Army.*

**WESTVILLE LAKE (2nd CD)** dam in Southbridge and Sturbridge is 560 feet long and 78 feet high and cost \$5.7 million to construct. Its lake can store an 11,100 acre-foot reservoir, which amounts to 3.6 billion gallons of water. It has prevented damages totaling \$53.7 million since it was placed in operation in 1962. The reservoir area offers fine recreational opportunities, including picnicking, fishing, hunting, canoeing, boating, and nature study and annually attracts more than 55,000 visitors.

For more information on Westville Lake, call (508) 347-3705 or access the website at <http://www.nae.usace.army.mil/recreati/wvl/wvlhome.htm>.

The District has signed a challenge partnership agreement with the town of Southbridge in the amount of \$36,050 to complete a section of the accessible hiking trail at Westville Lake. When finished, the new section of trail, totaling 1,100 feet in length will connect the Town of Southbridge Heritage Trail and the USACE National Recreational Trail – the Grand Trunk Trail. Work includes drainage structures and placement of a 10-foot wide fine gravel surface for full accessibility under the newly proposed ABA guidelines for outdoor recreation areas. Work started in January 2012.

The tornado of June 1, 2011 impacted the local communities of Sturbridge and Southbridge, Mass., as well as this flood control facility operated by USACE; rough estimates of damages to the Westville Dam forested lands are upwards of 100 acres of downed trees. Several thousand feet of the Quinebaug River are impacted to various degrees, as well as an estimated 4 miles of boundary lines between public and private lands. The flood control dam and outbuildings were undamaged and remain fully operable. USACE has made great headway in reclaiming access roads, trails and boundaries utilizing contractors, volunteer teams and fuel



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wood sales. All main trails and access roads are reopened. Work will continue as funding and manpower allow.

Westville Lake Dam has gone through an engineering evaluation to determine whether modifications to the project

are necessary to maintain continued safe operation of the dam. Additional subsurface explorations were conducted and completed last fall to better understand foundation conditions of the dam. A detailed report on the engineering analysis of the dam is being finalized.

