



**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 damage reduction, 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, two hurricane barriers and the Cape Cod Canal. Through its Regulatory program, the district processes about 5,000 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.

Index	
Base Realignment & Closure	13
Defense Environmental Restoration	10
Ecological Restoration/Watershed Mgt.	6
Flood Damage Reduction Projects	16
Flood Damage Reduction	4
Flood Plain Management	9
Formerly Used Site Remediation	12
Interagency and International Support	14
Military Support	12
Navigation	1
Planning Assistance	9
Recreation/Natural Resource Management	16
Regulatory Program	15
Shoreline/Streambank Protection	4
Special Studies	9
Superfund	11

Navigation

AUNT LYDIA'S COVE, CHATHAM (10th CD) – Maintenance dredging of the 8-foot deep, 100-foot wide entrance channel by the Government-owned dredge CURRITUCK is planned. It is estimated that approximately 30,000 cubic yards of sand will need to be removed to return the project to its authorized dimensions. *Hydrographic surveys performed in the spring will determine the need for maintenance dredging.*

BOSTON HARBOR (8th, 9th, & 10th CDs) – The New England District and Massport have been examining a proposal by Massport to deepen 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. The comment period closed on June 2, and a public meeting to present the project and take questions was held on May 20 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 containerships 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 deepening the Chelsea River from its current 38-foot depth to -40 feet MLLW.

About 12 million cubic yards of ordinary material and one 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 documents undergoing review can be downloaded from the District's website using the following link:
http://www.nae.usace.army.mil/projects/ma/BHNIP/BostonHarbor_draft_FeasibilitySEIS.zip

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 includes 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 has 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 is expected to be completed in December 2008.

In addition to the removal of shoaled material in the Federal channel, there are three sections of the channel in which rock removal are being performed. This rock removal effort is being conducted as a separate project in conjunction with rock removal efforts for the Providence River Navigation Project to reduce mobilization costs. A contract was awarded on March 15, 2007 to the RDA Corporation for this rock removal effort. This contract was combined with rock removal in Providence Harbor, RI. The contractor completed the rock removal in Providence and started the rock removal efforts in Boston Harbor in early September 2007. The contractor has indicated that the rock removal effort in the Main Ship Channel and the President Roads Anchorage has been completed. The contractor demobilized for the winter in mid-December 2007 and remobilized in April 2008 to complete the rock removal in the Broad Sound North Channel. *The rock removal project was completed in July 2008.*

CAPE COD CANAL BOURNE AND SAGAMORE BRIDGES (10th CD) – A contract for sandblasting and painting the Bourne Bridge was completed in December 2006. Miscellaneous minor work will continue to be performed as necessary on Sagamore Bridge road surface to keep the bridge open to all lanes of traffic until a more comprehensive project can be scheduled.

CAPE COD CANAL RAILROAD BRIDGE (10th CD) - The District and Massachusetts Executive Office of Transportation (MAEOT) have coordinated the rehabilitation of the Cape Cod Canal Railroad Bridge. The project was accomplished in two phases. Phase I was a \$14.2 million contract, which included steel repairs and painting requiring less than eight consecutive hours of shutdown time. Phase II consisted of all other items, including bearing and cable replacement, which required a bridge outage. The engineering/construction challenge of simultaneously performing structural, mechanical, electrical repairs totaling about \$13.1 million in a 90-day window, while maintaining marine traffic was a significant accomplishment. Both phases are complete. The MAEOT and the Corps executed a Memorandum of Agreement on Dec. 8, 2006 with regard to the operation and maintenance of the Cape Cod Canal railroad bridge, replacing an existing 1935 Agreement. This MOA became effective on Jan. 6, 2008. *Renewal of the signal system by the Corps was included in the MOA. A contract for renewal of the signal system was awarded in June 2008.*

CAPE COD CANAL (10th CD) – Shoaling has been identified in various locations in the Canal. This shoaling has necessitated the placement of draft restrictions on *deep-draft* vessels transiting the Canal. Shoaling, draft restrictions and tidal delays have caused several of the navigation users to opt to transit around the Cape in lieu

of transiting through the Canal. Transiting around the Canal (especially during the winter months) increases the risk-profile for those vessels. A meeting between the Corps, the U.S. Coast Guard and representatives from various shipping interests was held in mid-November 2007 to discuss the various *maintenance dredging and dredged material management plans* for the Canal. Several alternatives are currently being evaluated which include using dredged material from the Canal to cap CAD cells in Boston and using dredged material from the Canal for various beach nourishment projects currently being developed by local communities. A plan for routine, long-term maintenance dredging of the Canal is also being developed *which will encompass these alternatives.* *In FY08, funds in the amount of \$1.9M were appropriated in an emergency supplemental bill for the proposed work. Contingent on receiving the necessary approvals and competitive bids on the project, the Canal could be dredged this winter.*

EAST BOAT BASIN, SANDWICH (10th 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 is planned for December 2008.*

GREEN HARBOR, MARSHFIELD (10th CD) – Maintenance dredging of the 6-foot deep, 100-foot wide entrance channel portion of the Federal navigation project was completed in Fiscal Year 07. The last time that the 6-foot deep, inner harbor anchorage area was maintained was in 1982 and it has shoaled considerably. \$1.968 million was added in FY 08 for continuing work on this project. Recent modeling performed on the previously-used upland disposal area that was prepared by the town of Marshfield indicates that there is insufficient capacity to accommodate the volume of material that needs to be dredged from the Federal project and from potential piggy-backers' projects. A dredging and dredged material management plan is currently being developed which could include use of either Cape Cod Bay Disposal Site or Massachusetts Bay Disposal Site and additional sampling and testing is required. A contract to undertake the *biological* sampling and testing *has been delayed due to a protest of the*

award of the contract. The protest has been sent to SBA headquarters in Washington for review. Award to the second-low bidder will take place if SBA HQ concurs with the regional office. Once we get a contractor on board we can negotiate a contract of the sampling and testing. Once samples are taken and evaluated and the suitability of the material to be dredged determined, we can initiate the coordination process. Dredging will be done once coordination has been completed.

MERRIMACK RIVER (5th & 6th CDs) - The city of Haverhill requested maintenance of the Merrimack River Federal navigation project. The Merrimack River is formed by the Pemigewasset and Winnepesaukee Rivers at Franklin, N.H. It flows southerly through Concord, Manchester and Nashua, N.H., then northeasterly through Lowell, Lawrence and Haverhill, Mass., entering the Atlantic Ocean at Newburyport. Adopted in 1899, the project provides a channel 7 feet deep and 150 feet wide from the Newburyport highway bridge (about 2.5 miles above the mouth), 16.5 miles to the railroad bridge at Haverhill. The proposal would remove about 20,000 cubic yards of material to bring the project to authorized dimensions. The city of Haverhill has offered the city landfill to be used for disposal of the material from the river. Since the landfill is a Superfund site, the Corps will work closely with EPA to determine if this is an acceptable proposal. We have made a few unsuccessful attempts to collect sediments from the channel in the Merrimack. We have used an underwater camera to identify the sediments and have found the bottom contains a significant amount of cobble. Sampling was undertaken in June 2007 and testing of the material is ongoing. The Merrimack River is a shallow navigation project, used almost exclusively by recreational craft and thus a low priority for Federal funding. In coordination with the other resource agencies we learned that the endangered Shortnose Sturgeon are located in the proposed dredge areas. We are working with National Marine Fisheries Service to determine if the proposed work would have significant adverse impacts of this Endangered Species.

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.

OAK BLUFFS HARBOR, OAK BLUFFS (10th CD) - The District received an official letter of support and commitment as local sponsor for the project from the Massachusetts Department of Conservation and Recreation (MADCR). The final Feasibility Report/Environmental Assessment (FR/EA) recommends adoption of a federal navigation project consisting of dredging the entrance channel to Oak Bluffs Harbor with beneficial use of the dredged sand as nourishment on an adjacent town beach. Plans and specifications for the project are substantially complete and state and federal regulatory approvals have been obtained. For the project to proceed to construction, the Corps must execute a project cooperation agreement (PCA) with MADCR to share the cost of constructing the channel. That agreement is currently under review at the office of the Assistant Secretary of the Army for Civil Works. However, due to the funding limitation in the Section 107 Small Harbor Program, lack of priority for maintaining small navigation projects, a moratorium on execution of new project PCAs included by Congress in the Fiscal Year 2006 budget, and lack of funds in the FY07 work plan, approval to execute the PCA has been delayed. Once a PCA is executed and construction funds are available, the Corps will work with the sponsors and other stakeholders to schedule dredging at the earliest opportunity. Dredging of the project would take about one month. While it awaits action on the Federal project, the Town has been conducting emergency dredging to remove shoals to maintain ferry access to the harbor. The Corps conducted a new hydrographic survey of the channel in April 2008 which showed shoaling had been much reduced by the Town's dredging. The Corps will re-survey the harbor next year to determine if shoaling conditions warrant proceeding with the Federal project at that time.

PLYMOUTH HARBOR (10th 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 200,000 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. A

dredging contract will be issued to perform the work when sufficient funds become available.

WESTPORT HARBOR, WESTPORT (4th CD) – In October 2005, the Corps' North Atlantic Division approved the final Feasibility Report. The Project Cooperation Agreement (PCA) with the Massachusetts Department of Conservation and Recreation (MADCR) was executed on Aug. 30, 2007. The contract was awarded to Southwind Construction on Sept. 29, 2007. Dredging operations were completed on Dec. 18, 2007. Dredging uncovered at least two large boulders or outcrops in the channel which require removal before the new channel is accepted. The Corps and State hope to complete that work *in Fiscal Year 2009*.

WOODS HOLE GREAT HARBOR, FALMOUTH (10th 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, and an initial appraisal report (IAR) is under preparation.

Shoreline/Streambank Protection

AGAWAM, MA (2nd CD) – A Section 14 streambank protection project along the Westfield River has been requested by the city of Agawam. The stabilization is needed to prevent riverine erosion from threatening a 24-foot diameter lateral sewer main. The city's Water and Sewer Department is participating as the nonfederal project sponsor. Approximately 100 linear feet of riverbank requires stabilization. A steel sheet pile design was selected to provide low cost protection to the upper slope. Finalization of the design documents was completed during the summer of 2007. Pending execution of the Project Cooperation Agreement between the city of Agawam and the Corps of Engineers, construction could take place as early as *the winter of 2009*, subject to the availability of funds.

CUMMINGTON, MA (1st CD) - This Section 14 streambank stabilization project is located adjacent to Old Route 9 along the Westfield River in Cummington. Erosion of the road embankment from the river has

Pending approval of the IAR, initiation of a feasibility study would require execution of an FCSA with the sponsor and receipt of additional federal and sponsor funds. The study could be completed within 18 months of FCSA execution.

Concurrently, the New England District is preparing design, regulatory and contract documents 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 advertised for construction bids on Aug. 20, 2008 and bids were opened on Sept. 22, 2008. A contract has been awarded to Cashman Dredging and Marine Contracting Co., LLC and dredging is expected to start in November 2008.*

threatened both the roadway and telephone poles. Plans and specifications are scheduled to be completed during the fall of 2008. Pending execution of the Project Cooperation Agreement between the town of Cummington and the Corps of Engineers, construction could take place as early as the fall of 2009, subject to the availability of funds.

NANTASKET BEACH (MDC), HULL (10th 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 MA DCR's seawall prompted emergency construction activity at Nantasket Beach, changing the without project condition. The Corps will reformulate its plans for shore protection and reissue the public notice. Beach characterization fieldwork was performed in the fall of 2005. A study of surf clam populations was performed in the fall of 2006.*

Flood Damage Reduction

ABERJONA RIVER, FEASIBILITY STUDY (7th CD) – The district is completing a Section 205 feasibility study to address the flooding issues associated with the Aberjona River in the town of Winchester. The investigation indicates a 1,200 linear foot channel-widening project just downstream from Winchester Center is economically justified. A public notice announcing the completion of the draft feasibility report and Environmental Assessment was issued in January 2008. The public comment period

was completed in February. The final report will be completed during the *fall* of 2008. Initiation of the final design phase could happen as early as this fall, contingent upon the availability of funds.

BLACKWATER RIVER, SALISBURY (6th CD) - The District is conducting 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 feasibility cost-sharing agreement outlining the scope and cost of these additional studies was prepared and executed between the Commonwealth and the Corps in January 1999 and amended in June 2002. A draft Detailed Project Report/Environmental Assessment that evaluates potential improvements and recommends a plan to reduce flood damages in the low lying area between Ninth Street and Florence Avenue has been completed. This report was released for public review in May 2006. A letter of support from the non-Federal sponsor, the Massachusetts Department of Conservation and Recreation, has been received. The final report has been submitted to the Division office for project approval. A Project Cooperation Agreement is being prepared to initiate the design and implementation phase.

MUDDY RIVER FLOOD DAMAGE REDUCTION AND ENVIRONMENTAL RESTORATION INVESTIGATION (4th, 8th and 9th CDs) – In response to an October 1996 storm event that resulted in severe flooding along and adjacent to the Muddy River as well as several tributary areas, particularly Stony Brook, the city of Boston, town of Brookline and the 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 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 developed a scope and cost estimate for design efforts and the preparation of plans

and specifications. The design agreement for the design of the project was executed between the Corps and the city of Boston, which will represent the other local sponsors, the town of Brookline and the Commonwealth of Massachusetts, on June 13, 2005. The design effort for Phase 1 of the project which includes the installation of two culverts and daylighting of the river, was initiated in September 2005 and is expected to be completed in *December 2008*. The FY 2008 President’s Budget contains funds that could be used to initiate construction of the Phase 1 project.

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 Mayor Michael Bonfanti. A project study team was assembled and a meeting/site visit was held with the Director of Public Services and the city’s consultant (CDM) on Sept. 16, 2004. 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 will now be conducted to identify the National Economic Development (NED) plan and complete an Environmental Assessment. *A draft report is expected to be complete by the fall of 2009.*

ROUGHANS POINT, REVERE, LYNN, SAUGUS and MALDEN (6th & 7th CDs) - Construction on the Roughans Point Project began in October 1997 and is complete. The \$11.9 million coastal flood protection project will relieve the neighborhood from severe flooding like the Blizzard of 1978 and storms in 1991 and 1992. Authorized by the WRDA of 1986, the federal project includes measures for stabilizing and improving existing seawalls, placement of a new rock revetment to reduce wave run-up and storm overtopping, and rehabilitation of an existing pump station. The city of Revere and the MADDEM are sponsors for the project. Construction of the revetment and seawalls was finished in November 1999. Rehabilitation of the pumping station (owned by the Commonwealth’s Metropolitan District Commission) began in May 2000 and was substantially completed by the spring of 2004. The project was turned over to the local sponsors, the MADCR (formerly the MADDEM) and the city of Revere on Sept. 28, 2005 for future operation and maintenance. Subsequently, the city of Revere furnished funds in December 2005 requesting the Corps to prepare a draft application for upgrading FEMA mapping. The draft application was furnished to the city of Revere in February 2006. The Corps responded to FEMA’s letters with regard to the application. FEMA approved the Letter of Map Revision request by their letter dated Sept. 20, 2007. The revised mapping changes the flood zones that benefit from the completion of the Roughans Point Flood Damage Reduction project. The project was financially closed out in December 2007. The final project cost of \$11,887,641 is substantially less than the estimated project amount of \$14,900,00 included in the Project Cooperation Agreement.

TOWN BROOK, BRAINTREE AND QUINCY (9th & 10th CD) - The WRDA of 1986 authorized federal flood protection consisting of Town River channel modifications near the Southern Artery in Quincy, a 12-foot-diameter deep rock relief tunnel over 4,000 feet long under Quincy Center, and reconstruction of the Old Quincy Dam in Braintree. This federal project is part of an overall flood control system for the Town Brook watershed in cooperation with the Commonwealth. The total flood control project is estimated at over \$53 million.

The flood protection works were built in three phases. The first phase was constructed by P. Caliacco Corp. of Rockland and included channel work and new culverts at the downstream end of Town Brook under the Southern Artery. Work on this \$3.3 million phase is complete. The second phase, which is the largest and involves construction of the tunnel under the business district in Quincy, was built by Kajima/Marra-Majestic (joint venture)

of Pasadena, Calif., at a cost of \$24 million. Construction began in November 1993 and is complete.

The first and second phases were transferred to the MDC in January 2002. These phases prevented an additional \$19 million dollars in damages from an Aug.13-15, 2005 storm event. The above-cited damages in addition to the \$25 million dollars in damages prevented from the September 1999 and March 2001 events, represents a total of \$44 million dollars in damages prevented since substantial completion of the above project features. The last phase is the reconstruction of the Old Quincy Dam in Braintree. An \$8.7 million contract for this work was awarded in September 1998 to D&C Contracting Co., Inc., of Rockland. Work on this phase of the federal project is complete. Quincy Dam Reconstruction was turned over to the local sponsor, MADCR (formerly MDC), on June 28, 2004 for future operation and maintenance.

Ecological Restoration/Watershed Management

BLACKSTONE RIVER (3rd CD) - A \$400,000 federally funded reconnaissance study focusing on ecological needs in the Blackstone River watershed was completed in 1997. The study identified the federal interest in environmental restoration plans for the watershed, and determined the type and cost of prototype projects that could potentially be constructed throughout the watershed. An FCSA was signed in 1999 with the Commonwealth of Massachusetts Executive Office of Environmental Affairs (MAEOEA); however, Rhode Island declined further participation. The originally estimated \$2 million cost-shared feasibility study is currently ongoing and is one of the rivers selected as part of the Urban Rivers Restoration Initiative between the Corps and the U.S. Environmental Protection Agency (EPA). 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 resuspension, and an inventorying of dams and their condition. An interim report that recommends restorative measures for Fisherville Pond is currently being prepared. A draft should be complete by the *winter* of 2008. Some of the data produced to date can be viewed on the Corps web site <http://www.nae.usace.army.mil/projects/ma/blackstone/blackstone.htm>.

BIRD ISLAND TERN NESTING HABITAT RESTORATION, MARION (4th CD) - Working with the MA EOE (MACZM and the Division of Fisheries & Wildlife, Natural Heritage & Endangered Species Program), the New England District completed a feasibility study under the Section 206, Aquatic Ecosystem Restoration Authority that considered options to restore and protect roseate and common tern nesting habitat on Bird Island in Buzzards Bay. The northeastern population of the

roseate terns is listed as endangered at both the federal and state levels of jurisdiction and Bird Island supports over 20 percent of the North American population. The revetment that protects the island is in poor condition and coastal storms are eroding the vegetation and sand that roseate and common terns need for nesting. The study recommends reconstructing the revetment and restoring substrates for tern nesting. The Corps completed the Detailed Project Report/ Environmental Assessment (DPR/EA) in October 2006. *We received a letter of support for the project from the sponsor and work on the plans and specifications for the project will begin in October 2008.* Plans and specifications and permitting could be completed in about two years from the start.

BROAD MEADOWS SALT MARSH RESTORATION, QUINCY (10th CD) - The District completed a feasibility study for the restoration of 37 acres of salt marsh habitat, 29 acres of coastal grassland/open space, and 12 acres of saltwater channels and pools 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 occupies the site, restoring estuarine fish and wildlife communities. *The project is currently being advertised to qualified 8(a) HUB-Zone contractors. A contract award is scheduled for November 2008 with construction commencing during the winter of 2009.*

COASTAL MASSACHUSETTS ECOSYSTEM RESTORATION STUDY (6th, 7th, 9th, & 10th CDs) - This Congressionally directed reconnaissance investigation was started in February 2001. The purpose is to identify the most significant ecological restoration opportunities that can be accomplished by the Corps in collaboration with the Commonwealth. The study area includes the coastal waters 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 MA EOE for 18 identified sites including the Malden River and Pilgrim Lake described below.

- MALDEN RIVER ECOSYSTEM RESTORATION PROJECT - In October 2002, the Corps and the Mystic Valley Development Commission executed a Feasibility Cost Sharing Agreement (FCSA) for the Malden River Ecosystem Restoration Feasibility Study. The study is considering opportunities to restore wetlands, benthic habitats, and fish passage in the Malden River. The Detailed Project Report/Environmental Assessment is nearly complete. Upon project approval from North Atlantic Division, the Corps will begin preparing plans and specifications under the Section 206, Aquatic Ecosystem Restoration Program Authority.

- PILGRIM LAKE ECOSYSTEM RESTORATION PROJECT – The Corps and the Massachusetts Office of Coastal Zone Management executed a feasibility study cost sharing agreement for this study on April 1, 2005. This study is considering restoration of the 717-acre Pilgrim Lake estuary by modifying the existing culvert system to restore natural tidal exchange with Cape Cod Bay. The team is developing several alternatives to restore tidal exchange to the estuary and preliminary cost estimates.

CONNECTICUT RIVER ECOSYSTEM RESTORATION STUDY – Authority to conduct an ecosystem restoration study along the Connecticut River in New Hampshire and Vermont is provided through a resolution adopted by the Committee on Environment and Public Works of the United States Senate on May 23, 2001. A feasibility cost sharing agreement and project study plan were signed by the Corps and The Nature Conservancy (TNC) in August 2005. However, that agreement was determined to be inconsistent with current policy. Since then the Water Resources Development Act of 2007 authorized the Corps to partner with The Nature Conservancy. Funding was provided in the Corps 2008 budget to begin the feasibility study, which is currently being expanded to include the entire watershed.

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.

MANHAN DAM AQUATIC ECOSYSTEM RESTORATION (1st CD) - Currently, the Manhan Dam on the Manhan River in Easthampton blocks the upstream migration of anadromous fish. The project involves constructing a fish ladder to enable anadromous fish to access spawning

and nursery habitat upstream of the dam. The District has nearly completed the plans and specifications for the fish ladder. The city of Easthampton is the sponsor for this Section 206 project. The sponsor is seeking their share of the project funds prior to construction contract solicitation. Future efforts would consist of finalizing the plans and specifications and signing a Project Cooperation Agreement (PCA) in preparation for construction when local funding becomes available.

MERRIMACK RIVER WATERSHED STUDIES (SECTION 729) (5th & 6th CDs) - The Corps is performing a watershed study to identify the number and range of water quality issues, ecosystem problems and opportunities along the Merrimack River. The overall 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. Phase I of the Merrimack River Assessment was 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 final PHASE 1 report was completed in September 2006. The Corps in 2008 is working on the PHASE 2 study to assess the upper Merrimack River for water quantity and quality relative to water uses. One of the main issues of concern is maintaining adequate dissolved oxygen in the river to support aquatic life. The nonfederal cost share partner for this effort is the New Hampshire Department of Environmental Services. This effort focuses on the New Hampshire portion of the watershed. *The estimated cost for the Phase 2 study is about \$1.5 million.*

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 conduct a study of Milford Pond to investigate alternatives to restore the ecosystem health of this 120-acre degraded freshwater pond. This project is being conducted under the Corps' Section 206, Aquatic Ecosystem Restoration Program. The National Ecosystem Restoration plan identified in the final report is to dredge 40 ± 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. Plans & Specifications are scheduled to be technically complete in fiscal year 2009. Current efforts are focusing on collecting information about the sediments to be dredged to support the design of construction operations and obtain permits. Future efforts will consist of finalizing the plans and specifications and signing a project cooperation agreement (PCA) in preparation for construction.

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 52-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 5.1 million cubic feet of soft sediment has accumulated in the pond, reducing its average depth from 10 feet deep to 3.6 feet. The current shallowness of the pond and excessive nutrient concentrations contribute to extensive, dense growth of aquatic weeds. The major focuses of the restoration study are to address ways 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.

Work on the project during 2006 and 2007 was delayed due to the shortage of funds in the Section 206, Aquatic Ecosystem Restoration Program. The town of Littleton recently completed an investigation of best management practices to reduce ongoing inputs of nutrients to the pond. Future efforts will consist of completing the draft Detailed Project Report by incorporating the results of the Town's study, obtaining approval by North Atlantic Division, and issuing a public notice.

MILL RIVER, NORTHAMPTON (1st CD) – A preliminary restoration plan (PRP) has been approved for the Northampton Local Protection Project (LPP). The city is interested in opportunities for environmental restoration and improvements to aquatic habitat along the Mill River Diversion and the historic Mill River channel. The Corps will initiate a Section 1135 feasibility study to look at channel restoration, fish passage and other habitat improvements when funding in the Section 1135 program becomes available.

NASHAWANNUCK POND, EASTHAMPTON (1st CD) - The city of Easthampton requested assistance under the Section 206, Aquatic Ecosystem Restoration program authority to restore Nashawannuck Pond's ecosystem structure, function, and dynamic processes to a less degraded, more natural condition. Removal of pond sediments would restore open water habitat for fish and other aquatic resources. The team is *currently developing plans and specifications* to remove the sediments that involve dewatering the pond during construction. The schedule for initiation of construction depends on the results of environmental *permitting*.

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 (10th 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 under 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 re-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 206, Aquatic Ecosystem Restoration Program. Future efforts will focus on completing the environmental assessment and plans and specifications.

NEPONSET RIVER, BOSTON/MILTON (9th CD) -The MAEOEA requested that the Corps conduct a study of the Neponset River to explore the possibilities of restoring a degraded aquatic ecosystem 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. Federal funds were made available this fiscal year and the Corps is working with the Massachusetts Riverways Program to complete the feasibility study.

NORTH NASHUA RIVER, FITCHBURG (1st CD) – The District is preparing a feasibility report under the Section 1135, Project Modifications to Improve the Environment authority for the Fitchburg Local Protection Project. The study is investigating opportunities to restore aquatic habitat and riparian corridors along the North Nashua River. The project team, *with input from stakeholders*, is preparing the feasibility report *that will* identify viable restoration alternatives.

STEWART'S CREEK, BARNSTABLE (10th CD) - The town of Barnstable, with strong support of Massachusetts

EOEA's Wetlands Restoration Program, requested that the Corps undertake a Section 206 Aquatic Ecosystem Restoration Project at Stewart's Creek. 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.

The Corps developed a plan to restore tidal flows, salt marsh, and benthic habitat to the salt pond/marsh system. Work on the plans and specifications for the project was placed on hold during fiscal year 2005 because of a shortage of funds in the Section 206, Aquatic Ecosystem Restoration Program. The town of Barnstable submitted an application in the summer of 2005 to complete the project under the Estuary Restoration Act. The Stewart's Creek Project was selected for implementation under this new authority. The New England District is working with the Town to execute a Project *Partnership* Agreement and complete the project plans and specifications and permitting.

TREAT'S POND RESTORATION, COHASSET (10th CD)

- Working with the town of Cohasset, the District is completing a study under the Section 206, Aquatic Ecosystem Restoration Authority to consider options to restore salt marsh and salt pond habitats in Treat's Pond. The pond and its surrounding wetlands measure approximately 10 acres in area. It is hydrologically connected to Massachusetts Bay by a 1,000-foot culvert and narrow tidal creek that flows into Sandy Cove. Approximately half the creek, including the outlet, is enclosed in a buried 24-inch pipe. Under current conditions, the pond is not flooded by salt water, and freshwater periodically accumulates in the pond flooding surrounding developed uplands.

A planning and design analysis is investigating alternatives to restore salt marsh and related estuarine habitats for shellfish, finfish, and waterfowl by restoring tidal exchange to the pond. The project team has developed alternatives to restore estuarine habitat to the pond and is coordinating with the Town on the identification of a recommended plan. The Corps will begin work on plans and specifications and complete the public review process after the sponsor identifies a recommended plan.

Special Authorities

COASTAL AMERICA (10th 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 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 MADEM's dam removal coordinator.

Flood Plain Management Services

NORTHERN MASSACHUSETTS/NEW HAMPSHIRE HURRICANE EVACUATION STUDY - This study was conducted under a federally funded program cosponsored by the Corps and the Federal Emergency Management Agency (FEMA). The objective of the program provided hurricane surge mapping and a

technical data report from which the state and local communities develop/update preparedness plans for hurricanes. Final inundation maps for New Hampshire and Massachusetts were delivered allowing state and local officials to identify hurricane evacuation areas and the population within those areas.

Planning Assistance

ASSABET RIVER SEDIMENT AND DAM REMOVAL STUDY (3rd, 4th & 5th CDs) - This investigation is being conducted by the New England District under the Planning Assistance to States (PAS) Program. The study is performed under a cost sharing agreement with Massachusetts Department of Environmental Protection (MADEP) and six communities. The study purpose is to identify and assess alternatives for reducing phosphorus loading from sediments to the Assabet River through sediment removal or dam removal. In order to perform the study the six Assabet River Consortium communities, Marlboro, Shrewsbury, Westboro, Northboro, Hudson, and Maynard entered into a MOA with MADEP to cost share the efforts. This memorandum of understanding

(MOU) establishes a study coordination team (SCT) made up of 12 members, six from the communities and six selected by MADEP including EPA and the Organization of the Assabet River (OAR). The study was initiated in July 2005 with initial background data collections. In September 2006 a contract was awarded to CDM Federal Programs Corporation (CDM), of Cambridge, Mass. to conduct hydraulics and water quality modeling for the study effort. The final modeling report was issued in June 2008 to the SCT and findings will be incorporated into the Corps report. Currently, the Corps *is* working on a *report to present* planning level information for the dam removals including sediment management plans, cost estimates and biological evaluations.

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, 10th 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 to conduct additional investigations at the site. Field work is currently ongoing in October 2008. Groundwater sampling was scheduled to be conducted the 2nd week in October, and excavation of diesel contaminated soil is scheduled for this fall based on the groundwater sampling results and lowering of the water table following an extremely wet season.

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 are currently underway and include product recovery wells and gauging of select wells.

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 RAO.

Watertown Arsenal (8th CD) - There have been 3 separate projects (Mall, Arsenal Park, GSA property) associated with this site. Investigations for PCBs and metals at the GSA Property were completed in July 2008. Additional investigations are scheduled for next spring to fully delineate the PCBs. The risk assessment will be updated with the new field data. The risk assessment will be provided to the MassDEP and other stakeholders for review. Future activities will be based on the conclusions of the risk assessment.

Charlestown Navy Yard, Building 108, (8th CD) - A work plan has been prepared that evaluated several approaches to demolishing Building 108. A structural assessment has also been completed. Due to limited annual funding, the project will be executed in phases over several years. On site work is anticipated to start pending funding availability.

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 will take place in fall 2008 to address data gaps and complete the remedial investigation effort.

Camp Wellfleet (10th 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 (10th CD) - The New England District completed field investigations in the Pond in July 2008. The Draft RIFS Report will be issued for regulatory review in November 2008.

Camp Goodnews (10th CD) - The New England District issued the Final Closeout Report to the Regulators in June 2008. Comments are in the process of being resolved. Closeout is delayed pending resolution of Regulatory comments.

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

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

Tenth District

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

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 projects in Massachusetts are as follows: Fort Revere, Fort Standish, Hingham Cohasset NAD, Naval Ammo Depot (Bare Cove), Sandy Neck, Camp Myles Standish, Lowell Ordnance Plant, Nantucket Memorial Airport, Hummock Pond, Fort Ruckman, Tisbury Great Pond, Sheep Pond, Nahant Nike 17, Great Neck, Gull Island Bomb Area, and Quabbin Bomb Range.

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 support 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.*

FAIRHAVEN (4th CD) - The Atlas Tack Corp. Superfund site, located in Fairhaven, is a former industrial manufacturing facility whose soils, sediments, groundwater and surface water were contaminated with heavy metals, volatile organic compounds and other contaminants. The site's wetlands were filled with wastes

from the former manufacturing processes that included electroplating, acid washing, enameling and painting. EPA signed a Record of Decision in March 2000 that called for the excavation, treatment and off-site disposal of contaminated soils and sediments.

Site work began in May 2005 and the remediation and restoration of the site was completed in September 2007. Over 60,000 cubic yards of soil and sediment were excavated and taken off site for disposal at a cost of approximately \$22 million. Monitoring efforts will continue for several years.

LOWELL (5th CD) - The Silresim site is a 4.5-acre area located in an industrial area of Lowell. The New England District designed and constructed a groundwater treatment facility at this site. We have operated this facility since 1995 and transferred long term operations and maintenance to Massachusetts DEP on Sept. 24, 2007. *A Final Cap Design was completed in September 2008. EPA Region 1 has requested funding for construction of the cap. We are also currently involved in designing a soil remediation project that will utilize electrical resistance heating (ERH) to destroy contaminants in the underlying soil at the site.*

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 125,000 cubic yards of PCB-contaminated sediment. The latest effort took place between *May and October 2008* and resulted in the removal of approximately 29,000 cubic yards of *contaminated* sediment from the northern portion of the harbor. *The dredged sediment was dewatered and 85% of the sediment shipped via rail to an out of state disposal facility and the remainder transported to a previously constructed confined disposal facility at Sawyer Street. The annual cost of this work was approximately \$15 million.*

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.

Formerly Utilized Site Remedial Action Program (FUSRAP)

FORMER SHPACK LANDFILL SITE, NORTON/ATTLEBORO (4th CD) - The Shpack site is an eight-acre abandoned domestic and industrial landfill which operated from 1946 to 1965. It is located along the Norton/Attleboro town boundary with approximately 5.5 acres in Norton and 2.5 acres in Attleboro. The town of Norton and Attleboro Landfill, Inc., own the property. The contaminants of concern include radioactive compounds, volatile organic compounds and heavy metals. The District's role at this site focuses on the radioactive contamination, which is believed to have come from Metals and Controls, Inc. (now Texas Instruments) and the local jewelry industry, which used the landfill to dispose of trash and other materials from 1957-1965. The site was also listed on the National Priority List (NPL) in 1986, and EPA signed an administrative order by consent with a group of settling parties (which includes Texas Instruments).

Legislation was passed on Jan. 10, 2002 that directed the Corps to proceed with the cleanup of radioactive waste at the site. EPA issued a ROD for the site on Sept. 30, 2004 which included removal of all radiological waste impacted soils. The Corps will implement this portion of the remedy. A remedial action contract was awarded to Conti Environment & Infrastructure in April 2005. Conti mobilized to the site on Aug. 22, 2005 and demobilized in August of 2006 when project funding was exhausted. During this first phase a total of 7,000 cubic yards of contaminated material was excavated and 2,700 cubic yards of radiologically impacted waste was shipped off site to a licensed disposal facility in Utah. Mobilization for Phase 2 of the remedial action began on June 4, 2007. *Through September 2008, an additional 14,873 c.y. of contaminated waste was excavated and 5,958 c.y. of radiologically impacted waste was shipped off site. Work will continue until project completion currently planned for 2010.*

Support to the Military

MASSACHUSETTS MILITARY RESERVATION (MMR) (10th 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. 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, last 10 to 12 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 is 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 is on site at the Impact Area Groundwater Study Program (IAGWSP) office. The

District's team has been working in support of the AEC 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.

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

* Construction of a temporary groundwater treatment

facility at the J1S Range began in June 2007 and was completed in October 2007. This facility is expected to operate for two years.

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

Ongoing work consists of site investigations, report preparation and the selection of remedies for several of the ranges along with the operation and maintenance of the groundwater treatment facilities. *The program is also partnering with the Air Force Research Laboratory (AFRL) to conduct a robotics technology demonstration. The AFRL technology demonstration will attempt to remove unexploded ordnance (UXO) from various ranges using remotely operated equipment. The Environmental Chemical Corporation and Tetra Tech EC are the prime contractors supporting the site.*

HANSCOM AIR FORCE BASE (5th CD) – *A design-build contract was awarded, in the amount of \$11,087,000, to J&J Contractors/BBIX JV, Inc., of Lowell, Mass., on Sept. 12, 2008, to construct Building 1604. The project is a new two-story administration building that will include approximately 37,000 square feet of floor space.*

U.S. ARMY SOLDIER SYSTEMS CENTER, NATICK (9th CD) – *A contract was awarded, in the amount of \$845,000, to Smart LLC of Chelsea, Mass., on Aug. 19, 2008, to renovate the Building 16 Laser Lab. A design-build contract was awarded, in the amount of \$869,000, to Kallidus Technologies, Inc., of Lowell, Mass., on Sept. 30, 2008, to renovate Building 92. A contract was awarded, in the amount of \$890,000, to P&S Construction, Inc., of Lowell, Mass., on Sept. 30, 2008, to install a generator at Building 1.*

Base Realignment and Closure (BRAC)

WESTOVER AIR RESERVE BASE, CHICOPEE (1st CD) – A \$31,491,408 design-build contract for an Armed Forces Reserve Center at Westover Air Reserve Base was awarded to Consigli Construction Company, Inc. on May 31, 2007. *A groundbreaking ceremony was held March 21, 2008 and construction is scheduled to be completed in October 2009.*

U.S. ARMY MATERIALS TECHNOLOGY LABORATORY, WATERTOWN (8th CD) – From 1990 through 2005 the Corps has provided remedial investigation, design, environmental remediation, cultural resources compliance, and real estate transfer activities associated with the closure of the Materials Technology Laboratory (MTL) in Watertown under the Base Closure and Realignment Act of 1988 (BRAC I). Some of the more significant projects are listed below.

• The District completed an \$18 million project that

removed and properly disposed of low-level radiological waste (LLRW) from the research reactor in 1992 and subsequently completed demolition of the reactor shell in 1994. In 1995, a \$45 million decommissioning effort was completed for the removal and treatment of LLRW from nine research buildings. The NRC issued termination of the nuclear materials licenses in July 1997.

• In 1997, the District completed a \$2.5 million soil remediation effort of the 37-acre MTL parcel. EPA subsequently deleted this parcel from the National Priority List (NPL) in November 1999 following the approval of the final closeout report in 1998. A \$9.3 million environmental restoration contract was also completed that involved the remediation of indoor building surfaces, including removing hazardous and toxic waste (HTW), shock sensitive materials, fume hoods, drains, and addressing lead paint and asbestos.

The 11-acre Charles River Park portion of the former Army Material Technology Laboratory was addressed separately and a \$3 million soil remediation and site restoration effort of the Park was subsequently completed between September 2000 and October 2001. Final closeout documents were completed in April 2002. This 11-acre parcel was transferred to the Commonwealth in spring 2005. MADCR now operates and maintains the Park.

The Charles River operable unit was the final environmental site associated with the Watertown Arsenal BRAC program. The Army completed a \$1 million Baseline Environmental Risk Assessment (BERA) in December 2004 that found that the Army's past activities at Watertown Arsenal had not resulted in significant natural resource injury to the Charles River.

The Army signed a no further action ROD for the Charles River OU as required by Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in September 2005. In lieu of completing a no-action feasibility study, the Army, Regulators and public agreed to an alternative shoreline protection project along the Charles River for the same cost of having to complete a feasibility study. This shoreline restoration project was awarded in early October 2006 for \$230,000 and was completed in early November 2006.

MTL was subsequently de-listed from the NPL in the fall 2007. Restoration of some minor erosion was completed in late April 2007. The District monitored the establishment of the planted trees and bushes through November 2007 at which time the MADCR assumed responsibility for all future maintenance. This project completes the District's involvement in the project. HQDA BRAC will perform annual inspections and to ensure the remedies remain protective of human health and the environment.

FORT DEVENS, AYER (5th CD) - 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. The District has also been preparing real estate documents for the Army to facilitate the transfer of property.

Numerous remedial actions have taken place since that time with several of the more significant being listed below.

- AOC 57 which contained 3 areas totaling 30 acres on the southeast side of Barnum Road where soil and groundwater was contaminated with fuel related compounds. Contaminated soil was removed from this area, the site was restored and long term monitoring of the groundwater is ongoing.

- Six landfill sites were excavated and the waste from these sites was placed in a new consolidated landfill that was constructed at the site of the former golf course driving range.

- Pesticide contaminated soils were removed from the former Grant, Locust and Cavite housing areas.

Ongoing work at the site involves the following significant activities.

- An engineering evaluation of the Shepley's Hill Landfill is being conducted through a contract with AMEC.

- Monitoring of groundwater at numerous locations is performed annually (\$600,000 per year) through a contract with Hydrogeologic. Contaminant levels are monitored for natural attenuation as required by the Federal Facilities Agreement between the Army and EPA.

- A contract was awarded in September 2006 for \$11M to complete all soil remediation at the remaining housing areas (Oak, Maple, Spruce, Shirley, Davao, Buena Vista and Salerno) by fall 2008. Field work commenced in the summer 2007 at the Buena Vista and Shirley Housing Areas and is nearing completion. We are awaiting additional funding to be able to substantially complete this work.

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.

Interagency and International Support

HOUSING AND URBAN DEVELOPMENT - The Corps has entered into an interagency agreement with the Department of Housing and Urban Development. In accordance with the agreement the Corps performs

physical inspections, contract administration reviews, drawings and specifications reviews, and final inspections for Housing Authorities located throughout Massachusetts.

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. *For the period Aug. 1, 2008 to Oct. 31, 2008, the following final actions were taken: 1 resolved compliance action, 2 no permit required, 9 permit modifications, 11 resolved enforcement actions, 4 resolved non-compliance actions, 8 Individual Permits (IP) and 0 IP denied without prejudice. For Programmatic General Permits (PGPs), 10 Category 1 activities were reported and 1 was exempt. For Category 2 PGPs activities, 0 were denied without prejudice, 0 exempted, 0 grandfathered and 43 issued.*

PROGRAMMATIC GENERAL PERMIT - The District has comprehensive Programmatic General Permits (PGPs) 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 PGPs. Applications appropriately covered under the PGPs are generally approved in less than 30 days. Applicants have commented favorably about the simplicity, predictability and efficiency of the PGPs. The Massachusetts PGP was reissued on Jan. 20, 2005 for five years and a modification to the PGP was issued in December 2006. The PGP is located at: www.nae.usace.army.mil/reg/mapgp.pdf.

NANTUCKET SOUND CAPE WIND PROJECT (10th CD) - The District received an application from Cape Wind Associates, LLC in 2001 for a Section 10 individual permit for installation of 130 offshore wind turbine generators in federal waters off the coast of Massachusetts in Nantucket Sound, with the transmission lines going through Massachusetts state waters to Yarmouth.

The Corps determined in December 2001 that an EIS is required for the project, currently the first proposal of its kind in the United States. Public scoping meetings were held in March 2002 in Boston and West Yarmouth. The Draft EIS was issued Nov. 9, 2004. Hearings were held at Martha's Vineyard, Yarmouth, Nantucket and Cambridge. The Energy Policy Act of 2005 provides for Minerals Management Service (MMS) to develop a program for leasing offshore areas for renewable energy projects.

MMS is now the lead federal agency responsible for the EIS and released their Draft EIS Jan. 14, 2008. The Corps is a cooperating agency. The Section 10 permit review will not be completed until the FEIS is available.

TAUNTON RIVER, WEAVER'S COVE ENERGY, LLC AND MILL RIVER PIPELINE LLC, NATURAL GAS PIPELINE AND LNG IMPORT TERMINAL (4th CD) - Weaver's Cove Energy, LLC, and Mill River Pipeline LLC have applied to the Federal Energy Regulatory

Commission (FERC) and to the Corps for authorization to construct a new liquefied natural gas (LNG) import terminal at the site of the former Shell Oil terminal along the Taunton River in Fall River and to install two high pressure natural gas pipelines in Swansea, Freetown, Somerset and Fall River. The applicant is proposing to construct a new offloading pier, install new gas pipelines, build new structures and place fill along the shoreline to develop a LNG import terminal. In order for LNG tankers to access the proposed terminal the applicant will need to conduct maintenance dredging of the existing federal channel and improvement dredging for expansion of the turning basin. These construction activities in the Taunton River as well as fill material placed in the waterway and adjacent wetlands will require Corps permits in addition to the FERC licenses for the facility and pipelines.

The Corps was a cooperating agency with Federal Energy Regulatory Commission, the lead federal agency that completed the Final EIS in May 2005. Two public hearings were held Dec.14-15, 2005 (in Fall River, Mass. and Bristol, R.I.) to solicit comments on the new project elements within Corps jurisdiction, including dredging operations with offshore disposal at the Massachusetts Bay Disposal Site and site 69B located in federal waters off the coast of Rhode Island.

The applicant is revising the permit application to overcome concerns about navigation impacts. FERC has reopened their NEPA review. The Corps is participating in cooperating agency meetings.

WINTHROP SHORES RESERVATION RESTORATION PROGRAM (7th CD) - The District received an application from the Massachusetts Division of Conservation and Recreation (MDCR) in 2003 for a Section 10 and Section 404 individual permit to enlarge Winthrop Beach in Winthrop, Mass., via beach nourishment. The project purpose is the prevention of storm damage. A Public Notice was issued in April 2003. The project will require 500,000 cubic yards of sand and gravel deposition over 37 acres. The MDCR applied for an offshore material source alternative which consists of dredging material from a borrow site 8-miles offshore known as NOMES I.

In 2005, the proposed offshore borrow source was evaluated for environmental impacts including characterization of fisheries resources, the seafloor fisheries habitat, and commercial and recreational fisheries losses. This was achieved through a 12-month biological sampling and monitoring program. Applications for Water Quality Certification, Coastal Zone Management Consistency, and Notice of Intent to local Conservation Commissions were submitted in April 2006.

The federal resource agencies have consistently stated serious concerns over impacts to essential fish habitat

(EFH). EFH Conservation Recommendations provided by the National Marine Fisheries Service (NMFS) state that the offshore mining site should not be utilized for the proposed project. *The applicant has appealed the denial by North Atlantic Division to HQ USACE. HQs remanded the decision back to NAD for additional documentation.*

SOUTH COAST RAIL (4th CD) – *At the request of the applicant, the Massachusetts Executive Office of Transportation, the Corps is undertaking an Environmental Impact Statement (EIS) as part of our permit review of the proposed rail link between Boston and Fall River and New Bedford, Mass. Scoping meetings will be held in late fall 2009.*

Operating Flood Damage Reduction Projects & Recreation/Natural Resource Management

The District provides flood damage reduction benefits and, working in cooperation with agencies of the Commonwealth of Massachusetts provides diverse quality outdoor recreational opportunity on each of the 11 flood damage reduction 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.

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 \$49.7 million in flood damages. Over 90,000 annual visitors enjoy picnicking, hiking, fishing and hunting at Barre Falls Dam. The Barre Falls Dam's website is: <http://www.nae.usace.army.mil/recreati/bfd/bfdhome.htm>.

Activities available in the 2008 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. Contract services for the 2008 Recreation Area ended on the weekend of Sept. 13-14, 2008.

Classic Site Solutions Inc. is replacing the toe drains at Dikes # 2 and 3. This \$176,000 contract is expected to be completed in November 2008.

For scheduling events call the office at (978) 928-4712; to arrange a group tour contact: Ralph Gendron, Project Manager, Barre Falls Dam, Hubbardston, Mass.; (phone: 978-928-4712); ralph.j.gendron@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 \$70.8 million have been prevented. Birch Hill offers many fine recreational opportunities. The Lake Denison Recreational Area, managed by the Massachusetts Department of Conservation and Recreation, provides camping, swimming, picnicking, boating and fishing. 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. Birch Hill Dam's website is: <http://www.nae.usace.army.mil/recreati/bhd/bhdhome.htm>

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 Corps provided copies of the report to the MADEP, the MAEOEA and the Massachusetts Department of Public Health.

The Massachusetts Department of Public Health and the Massachusetts Division of Fisheries and Wildlife published and posted a 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' recent investigations and the study suggest that these advisories should remain in effect. The MADEP has identified possible sources of the PCB contamination. The Corps is not the cause of the contamination and the Potential Responsible Parties (PRPs) have the responsibility for future investigations and resolution of the problem. 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 the hours of 7 a.m. and 3:30 p.m., Monday through Friday. Contact the park ranger (978-318-8267) 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.

Absorption Technologies Inc. is placing a cap over the former Royalston dump site. This \$149,000 contract will be completed by the end of October 2008.

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 \$88.9 million in damages. Picnicking, swimming, boating, fishing, hunting, 27 hole disc golf course, volleyball, horseshoes, two rental shelters and sight-seeing attract more than 63,000 visitors annually. Portions of Buffumville Park are handicap accessible.

For a full list of current events and interpretive programs please visit Buffumville Lake's website at: <http://www.nae.usace.army.mil/recreati/bvl/bvlhome.htm>. As always, call ahead (508) 248-5697 as the schedule is subject to change.

The team at Buffumville Lake has concentrated on repairing, replacing and revitalizing aging infrastructure with as much in-house labor as possible. A concrete pad was poured and a new park shed/garage is being built making storage better and more secure.

CAPE COD CANAL (10th 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. As of November 2007, the recently enacted USCG VMRS Final Rule for Buzzards Bay Control is being implemented at the Marine Traffic Control Center, in accordance with an MOA between USACE Cape Cod Canal and USCG.

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. Visitor's 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 CRNVS Area website is <http://www.nae.usace.army.mil/recreati/crn/crnhome.htm>.

Along the Charles River; efforts are ongoing for requests from local towns and the Commonwealth for water supply and upgrade of bridges crossing the Charles River. Other requests and encroachments are addressed as they occur. Permits and consents often entail construction activities in environmentally sensitive areas.

To protect and maintain the resource area, the Corps (West Hill Dam) and the Student Conservation Association (SCA), a nationwide placement agency, have recruited two interns with technical skills in GIS and Global Positioning Systems (GPS). Their efforts contribute

towards the eventual completion of environmental surveys for CRNVSA. The SCA interns use their skills to locate property boundaries and encroachments. The field data is entered into the database and becomes available to the Corps, towns and other agencies to help manage and protect the CRNVS Area for flood damage reduction and natural resource management. This program gives the interns credible work experience and the Corps a much-needed service.

Accomplished since inception: update of the GIS databases for the towns of Medfield, Millis and Norfolk and resolution of numerous fee and easement encroachments. As an ongoing program interested college students or graduates looking for hands-on experience and references please contact the SCA at www.thesca.org.

Open for your enjoyment is the Forest Road Canoe Launch in Millis. It is a great spot to relax, fish or park for a sunrise or sunset. The Corps and the state Public Access Board (PAB) have provided this recreational opportunity to canoeists and kayakers along the scenic Charles River. Parking is available for seven vehicles. The West Hill Dam Project Office located in Uxbridge (508) 278-2511 is the field office for the CRNS Area. It patrols, investigates and resolves real estate inquiries, boundary inquiries, requests for leases, licenses and easements. It also assists towns and other agencies for all activities within the CRNVS area.

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. 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 \$105.9 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.

A canoe trail, The Quinebaug River Canoe Trail, received 'National Recreation Trail' status in 2007 as part of the National Trails System. In a recent letter from the Secretary of the Interior, Dirk Kempthorne, Mr. Kempthorne states, "The Quinebaug River Canoe Trail is a fine addition to the National Trails System (NRT). It joins 39 other newly designated NRTs across the United States. We are very proud of the NRTs and the spirit of

partnerships that they represent." The canoe trail can be accessed from East Brimfield Lake off of Route 20 east or west bound; the trail can also be accessed off of Pond Bridge Road in the town of Holland, Mass.

Lake Siog Park in the town of Holland, located off of Dug Hill Road, under management by Corps, is open seasonally on a limited basis, Friday, Saturday and Sunday. The open hours are 10 a.m. to 6 p.m. Park rangers, local police and state of Massachusetts conservation officers provide visitor assistance and protection. 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.

A Challenge Cost Share Agreement was signed in December 2007 between the Corps of Engineers and the town of Brimfield, Mass., to work on developing a 5 mile section of the Grand Trunk Trail located in the reservoir area. This trail is a continuation of the trail initiative started at the Westville Lake project in 2000 with the towns of Southbridge and Sturbridge, and now includes three towns and 2 Corps projects. Potentially, this trail could extend up to 25 miles and be a part of a major east west linear trail with connections from Providence, R.I. to Springfield, Mass.

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 damages of \$101.6 million. The reservoir area offers fine recreational opportunities, including picnicking, fishing, hunting, mountain bike and horseback riding, and nature study to the more than 28,000 visitors it welcomes each year.

The ranger in charge is Park Ranger Ken Hester. He can be reached at kenneth.w.hester@usace.army.mil. For a complete list of current events, Hodges Village Dam's website is: <http://www.nae.usace.army.mil/recreati/hvd/hvdhome.htm>. Please call ahead (508-248-5697) to check times and dates as the schedule is subject to change.

The new trail system on the west-side of Hodges Village continues to improve thanks to many volunteers working with the Hodges Village Dam staff. The Ranger staff continues to work closely with the Massachusetts Environmental Police Officers to curb illegal ORV use on the trails. *Several Ranger led saturation patrols are again planned for this spring.*

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 \$192.9 million. More than 53,000

visitors enjoy the variety of recreational pursuits available at Knightville, including picnicking, hiking, fishing, hunting, group camping and snowmobiling. Knightville Dam's website is: <http://www.nae.usace.army.mil/kvd/knvhome.htm>. The Indian Hollow Group 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 2008 season are on a first-come, first-serve basis and one or both loops may be reserved. Reservations may be made through the National Recreation Reservation Service at <http://www.reserveusa.com> or by calling 1-877-444-6777.

The Northeast Mountainmen completed their Annual Rendezvous at Knightville Dam Oct. 3-13, 2008. The group is dedicated to the preservation of the lifestyle of the American mountain man during the period 1825-1840 and has been camping at Knightville for more than 30 years.

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 \$72.8 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. Littleville Lake's website is: <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.

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 25 occasions in fiscal year 2005. This barrier affords tidal-flood protection to an area of about 1,400 acres. To date, \$20.1 million in damages have been prevented.

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 \$25.5 million. Nearly 40,000 visitors annually enjoy picnicking, hiking, boating, fishing, and hunting at Tully Lake. Tully Lake's website is: <http://www.nae.usace.army.mil/tul/tulhome.htm>.

The Tully Campground, operated under a lease by the Trustees of Reservations, has waterborne restrooms with showers, drinking water, primitive walk-in or boat-in campsites and hiking trails. For more information, call the Trustees of Reservations at (978) 249-4957 or (978) 840-4446 or visit www.tullylakecampground.org

The North Quabbin Bioserve 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 Bioserve. The Tully Campground and Tully River Canoe Launch Area are popular "jumping off points" for the Tully Trail.

Classic Site Solutions Inc. completed a \$182,000 contract for repairs to the Spillway and Doanes Road Bridges in September 2008.

Project recreation facilities will be open for the 2008 Recreation Season through the weekend of Nov. 1-2, 2008. Activities include:

The Second Annual Tully Triathlon took place in October 2008; 115 people took part in the canoe, mountain bike and running legs of the event.

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 \$69.7 million. More than 90,000 annual visitors enjoy picnicking, swimming, hiking, fishing and hunting at the 1,401-acre facility.

West Hill Dam and park: *The beach has closed for the 2008 season, but the park and dam were the recent host site for several special events. The Greenway Challenge-8th Annual (Blackstone River Valley) was hosted here on October 4th, with over 300 participants and spectators enjoying a day in their park amongst the fall colors, while competing in this highly competitive marathon. Numerous organizations, including the National Park Service- John H. Chaffee Blackstone River Valley National Heritage Corridor Commission, came together to offer athletic test of one's endurance in running, canoeing, kayaking, and mountain bike and road bike riding. Athletes and their support crews were on the go from Worcester, Mass. all*

the way to Manville, RI.

National Public Lands Day West Hill Dam 2008: "Get Down and Dirty For America's Lands," drew 165 volunteers donating \$12,000 in labor savings accomplishing outdoor improvement projects. Local sponsors contributed food, tools and materials making this our largest National Public Lands Day. West Hill started hosting annual work events in 2001.

Junior Rangers Level-2: The first group of 9 graduates received their embroidered jackets during this year's event. These graduates have worked for over 3 years, contributing over 300 hours of volunteer service, while completing badge work in 5 categories (Cultural Resources, Natural Resources, Fish and Wildlife, Parks and Recreation and Forestry).

These future caretakers and stewards serve as chaperones at level 1 events, staff annual events such as the Family Fishing Fair, maintain an annual greenhouse (they construct it) to raise Glucerala beetles to aid in biological control of Purple Loosestrife and much more.

Bellingham Boy Scout Troop #1 hosted their family day on Oct. 4th with an award ceremony with over 125 in attendance. They tested their scouting skills and cooked all the desserts in reflector ovens to serve family members and guests.

Eagle Scout Andrew Frongilo, Troop # 4, Milford, Mass., designed, constructed and installed an exercise stretch station (family fitness, "No Child Left Indoors") at the Woodland Trail Head (Hartford Avenue entrance of West Hill Dam).

Eagle Scout Nicolas King, Troop #22, Uxbridge, MA designed, constructed, installed a Visitor Life Jacket Loan Station and donated 10 life jackets at West Hill Park. This is a great way to help keep park visitors safe and physically share the Corps of Engineers Water Safety message.

Eagle Scout candidates Gary Nylander, Troop #4, and Robert Kacir, Troop #2, both of Milford, are well on their way with Gary's goal for a toddler swing unit at West Hill Park and Robert with mileage marker, fitness trail and wildlife interpretive panels for the Woodland Trail System. Park Ranger Viola Bramel assisted the above Eagle Scout candidates with coordination of their projects.

West Hill Dam and Park have a meritorious Eagle Scout History, starting in 1993 with the addition of the Woodland Trail. Please read more about these scouts on the Eagle Scout Timeline on our website at: www.nae.usace.army.mil/recreati/recreati.htm.

Annual Event Calendars are available and the Ranger Team offers many more wildlife encounters year-round at West Hill Park and Dam.

Discount Passport/Card Program Changes 2008: Cards are no longer issued through the Corps. All discount cards and passports can be obtained at National Park Service, USDA Forest Service, Bureau of Reclamation, Bureau of Land Management and US Fish and Wildlife Service facilities. U.S. Army Corps of Engineer facilities will honor former Golden Age and Access passports and the new access and age passes.

West Hill Dam Anniversary: 2011 will mark the 50th anniversary. Time Capsule gifts of coins, articles, literature, photos and more continue to arrive at West Hill Dam. Don't let personal stories be lost; a small journal is a great way to enter a rescue, hardship or triumph from the 1955 flooding in the Blackstone River Valley. Still seeking coins with appropriate dates (1955, 1961), Civil Defense or law enforcement patches, milk carrier emblems, etc.

A time capsule and materials are being gathered to share during this anniversary event and to be preserved for future anniversary date celebrations. To share your memories call park ranger Viola Bramel at (978) 318-8417. For upcoming events or more information please visit your website: <http://www.nae.usace.army.mil/recreati/whd/whdinfo.htm>

WESTVILLE LAKE (2nd CD) 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 \$48.4 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.

Since 2001, construction of a 3.5-mile rail trail has been underway. This trail, known as the Grand Trunk Trail, uses the abandoned Grand Trunk rail bed from Route 131 in Southbridge to Route 15 in Sturbridge. Trail committees within the Towns of Southbridge and Sturbridge, and the Corps of Engineers, alongside local government are working towards completion; as additional funds come available trail development will continue.

When this multiuse trail is completed, large areas of federal and town property will become more accessible for recreational opportunities. Estimated completion is 2010 or sooner. The Grand Trunk Trail is designated a National Recreational Trail. The Grand Trunk Trail runs through the Westville Lake Recreational Area which is under the management of the U.S. Army Corps of Engineers.

The town of Sturbridge Trail Committee is currently working with local environmental professionals to ensure protection of wildlife along the section of trail located on Town of Sturbridge property. The Town of Southbridge

Trail committee is working to connect U.S. Army Corps of Engineers property at Westville Dam to an existing ADA (Americans with Disabilities Act) trail, known as the Heritage Trail, previously constructed by the Town of Southbridge. This section of trail, including USACE and town of Sturbridge trail sections are built or being built to

be accessible by all. Design work is underway for town of Southbridge property at this time. For more information on Westville Lake, please call us at (508) 347-3705 or access the website at <http://www.nae.usace.army.mil/recreati/wvl/wvlhome.htm>.



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