



Update Report for New Hampshire



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696 Virginia Road, Concord, Massachusetts 01742-2751
Public Affairs Office, 978-318-8264
Home Page: <http://www.nae.usace.army.mil/>

Mission

The missions of the New England District, U.S. Army Corps of Engineers include flood risk management, 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, 13 deep water ports, 102 recreational and small commercial harbors, 13 major river basins, and thousands of miles of navigable rivers and streams. The District operates and maintains 31 dams, three hurricane barriers and the Cape Cod Canal. Through its Regulatory program, the District processes nearly 4,000 applications per year for work in waters and wetlands of the six-state region. We employ about 510 professional civilian employees, with about 300 stationed at our headquarters in Concord, Mass. The other Corps of Engineers employees serve at Corps projects and offices throughout the region. For information on the New England District visit the website at: www.nae.usace.army.mil/; or on Facebook: <http://facebook.com/CorpsNewEngland>; or on Twitter: <http://twitter.com/corpsnewengland>; or on Flickr: <http://www.flickr.com/photos/corpsnewengland>.

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Navigation

COCHECO RIVER, DOVER (1st CD) – The city of Dover has requested maintenance dredging of the Cocheco River federal channel. Surveys indicate that about 75,000 cubic yards (cy) of material need to be dredged to return the seven-foot-deep, 30-to-75-foot-wide channel to authorized dimensions. Portions of the dredge material are heavily contaminated (including PAH's, chromium, zinc and mercury). The dredge material is being disposed of in an upland Dredge Material Disposal Facility (DMDF) constructed by the city of Dover over an abandoned landfill on Dover city property. All approvals and waivers have been obtained. Since the plan is to route effluent from the DMDF through the city's water treatment facility, no Water Quality Certification is needed. The first year of dredging was completed in April 2005. Phase II dredging was completed in April 2007. Phase III dredging commenced in October 2010 and concluded in December 2010. Due to funding limitations, dredging operations were focused on clearing only those shoals shallower than 5.5 feet at Mean Lower Low Water. Maintenance dredging of the Cocheco River is considered complete, and a total of 40,211 cubic yards of sediment were dredged from the Federal channel. When the city of Dover completes closure of the DMDF, then final disposal fees will be paid to the city for disposal of dredged material at the city's DMDF.

HAMPTON-SEABROOK HARBOR & BLACKWATER RIVER (1st CD) – In response to a request from the New Hampshire Division of Ports and Harbors, the New England District has been working on two projects in Hampton-Seabrook Harbor.

The first project, conducted under authority of Section 227 of the Water Resources Development Act (WRDA) of 1996, involved solving the erosion and channel problem cut at the mouth of the Blackwater River at the south end of the inner harbor in Seabrook. A new channel had eroded across the tidal bar, resulting in erosion of adjacent shorefront properties, loss of shellfish flats and deposition of shoal material in the Seabrook anchorage. This deposition of excessive shoal material into the Seabrook anchorage needed to be eliminated prior to moving ahead with the Hampton Harbor navigation improvement Section 107 feasibility analysis.

Construction under a \$3.1 million contract with Reed and Reed of Woolwich, Maine, started in October 2004 and was completed at the end of April 2005. The project consisted of placement of two composite sheet-pile walls across the east and west ends of the breach channel and filling the area between the walls with sand dredged from the outer end of the Blackwater River channel opposite the Hampton

inlet. The project filled the breach, and restored the south end of the Middle Ground tidal flats, halted the continuing erosion along River Street, and ended the rapid shoaling of the Seabrook anchorage. Monitoring of project performance continued through the end of September 2005 when project authority under Section 227 expired. Surveys conducted in April 2006 indicate that the project is performing as designed. The project will be turned over to the state of New Hampshire for operation, maintenance and continued monitoring.

The second project, under the Continuing Authority of Section 107, is a state request to incorporate inner harbor channels and anchorage basins into the Hampton Harbor federal navigation project, making them eligible for federally funded maintenance dredging. At present, the federal government is responsible for maintenance of the seaward arms of the two jetties at the harbor entrance and maintenance dredging of the channel seaward of the Route 1A bridge, with the state responsible for maintenance dredging of the inner harbor areas.

An August 2002 initial appraisal of federal interest showed that there are economic benefits for the Corps to continue this investigation into the feasibility phase. The state of New Hampshire agreed, and a feasibility cost sharing agreement was executed in October 2003. The start of this feasibility analysis under Section 107 was deferred pending completion of the Seabrook Harbor Section 227 project described above, as the Seabrook project's success is critical to restoring maintainable shoaling rates in the harbor anchorages. With successful completion of the Section 227 project, the Hampton Harbor navigation feasibility study was initiated in April 2006. *The study, which included engineering, economic and environmental evaluations of proposed improvements, was completed in January 2012, and improvements to the inner harbor in Hampton and Seabrook were approved in March 2012. These improvements include extending the existing 8 foot Federal channel into the inner channel with branches to the north and south anchorages, dredging the Hampton anchorages to 8 feet (lower) and 6 feet (upper), and dredging the Seabrook anchorage to 8 feet. Following project approval, the Corps completed detailed Plans and Specifications and the project was advertised for construction bids on July 30, 2012. The Corps awarded a \$3.1 million contract to Southwind Construction Corp., of Evansville, Indiana on Sept. 24, 2012 for maintenance of the entrance channel and improvement dredging of the inner harbor areas. About 172,000 cubic yards of sand will be dredged and pumped to Hampton and Seabrook beaches to be beneficially reused as beach nourishment. The construction window for dredging activities in the harbor is between Oct. 15, 2012 and Jan. 31, 2013.*

NEW HAMPSHIRE COMPREHENSIVE UPLAND DREDGED DISPOSAL SITE EVALUATION (1st & 2nd CDs) – This study was authorized by Congress in the 2004 Energy and Water Development Appropriations Bill (Report 108-212) to identify and evaluate upland disposal sites for dredged material from federal navigation channels

in New Hampshire. Using a portion of the funds provided, the Corps developed a technical report that describes the results of the study efforts. The report summarizes: an updated dredging history in New Hampshire including any existing sediment quality data; a review of pertinent federal, state, or local regulations that apply to upland disposal of dredged material; an explanation of the method used to delineate upland disposal sites (e.g., amounts, size of site, setbacks, etc.); and the results of the analysis used to evaluate potential sites. The report was prepared and sent to the Dredge Task Force listing the potential upland dredged disposal sites. If additional funds become available, these sites will be further screened based on constructability, owners' interest in selling or leasing land, cost of land and other related costs.

PORTSMOUTH HARBOR AND PISCATAQUA RIVER, NEW HAMPSHIRE (1st CD) AND MAINE (1st CD) - This study of Portsmouth Harbor and the Piscataqua River, New Hampshire and Maine was directed by Section 437 of WRDA 2000. The non-federal sponsor is the state of New Hampshire, Pease Development Authority, Division of Ports and Harbors (PDA). The study's purpose is to determine the navigation related needs of the area and is focusing on the upper turning basin in the river near Newington, N.H. The current 800-foot width of the turning basin causes major safety concerns for shippers and limits the efficiency of shipping operations, particularly for large LPG tankers. The §905(B) reconnaissance report was completed and approved by North Atlantic Division in September 2004. A feasibility cost-sharing agreement for the PDA and Corps to share the cost of the \$750,000 feasibility study was executed on June 21, 2006. The feasibility study was initiated in 2006 using funds provided by the PDA and the FY06 E&WDA Act. Using those funds the Corps conducted sonar, sub-bottom and magnetometer surveys of the upper turning basin area in the fall of 2006. The results of these surveys were used to focus further subsurface explorations of bedrock elevations and cultural resource investigations. FY07 and FY08 Federal and state funds were used to conduct additional field investigations (subsurface explorations, benthic sampling and testing, a bathymetric survey and collection of tide and current data), and to conduct engineering, economic and environmental analysis of alternatives. FY09 funds were provided and matching cost sharing funds were received from the PDA in July 2009 and May 2011. These funds are being used to continue detailed studies of the project area, particularly those related to the evaluation of dredged material placement sites, and to prepare drafts of the feasibility report and environmental assessment.

PORTSMOUTH HARBOR AND PISCATAQUA RIVER, NEW HAMPSHIRE (1st CD) AND MAINE (1st CD) - Maintenance dredging of the "Simplex" Reach: The Piscataqua River forms the partial boundary between the states of Maine and New Hampshire. Since the project was improved to 35-feet deep in 1964-65, the Federal project has primarily been self-maintaining with the exception of a small area in the channel adjacent to the former Simplex Wire and Cable Company Dock in Newington. This area has

required maintenance dredging every 7-9 years and was last maintained in 2000. The proposed project involves periodic maintenance dredging of up to 50,000 cubic yards of clean sand and gravel from the channel located upstream of the Interstate 95 Highway Bridge. The dredged material will be placed at a previously-used in-river disposal site located about 3,000 feet seaward of the dredging area. Because the Federal project straddles the border between the two states, regulatory approvals have been sought from both states. Funds in the amount of \$450,000 were added to the FY 2006 budget; a Congressional appropriation of \$500,000 was also included in the FY 2010 budget and funds in the amount of \$500,000 were included in the FY 2012 President's Budget. Approval for advance maintenance dredging in the Simplex Reach was requested and obtained from the USACE North Atlantic Division. Advance maintenance is intended to extend the time-period between maintenance dredging intervals. This authorization will allow NAE to dredge this small portion of the federal project up to -42 feet below Mean Lower Low Water during the next maintenance dredging

event. A hydrographic survey was performed in April 2012 to determine the condition of the channel. Shoaling to a controlling depth of -31.8 feet in the 35-foot deep channel has been identified. The results of these surveys were coordinated with the Port Development Authority and the Portsmouth Pilots and it was determined that maintenance dredging was required. Plans and specifications are being prepared and contingent on receiving favorable bids, work could begin as early as December 2012.

Maintenance dredging of the back channels portion of the Portsmouth Harbor and Piscataqua River FNP (commonly called "Sagamore Creek") is needed to restore the project to authorized dimensions and alleviate shoal conditions that are impacting safe navigation through the channels. Approximately 7,000 cubic yards of sand would be dredged and disposed of at a nearshore site off of Wallice Sands Beach. Dredging will be performed in the year in which funding becomes available.

Flood Plain Management Services

NORTHERN MASSACHUSETTS/NEW HAMPSHIRE HURRICANE EVACUATION STUDY (2nd CD) - This study is being conducted under a federally funded program cosponsored by the Corps of Engineers and the Federal Emergency Management Agency. The objective of the program is to provide a technical data report and coastal flood mapping from which the state and local communities can develop/update preparedness plans for coastal storms. It also will allow state and local officials to identify evacuation areas and routes of evacuation for various coastal events. Inundation maps have been delivered to the state and affected communities. Final census figures have been compiled and delivered to New Hampshire state and local Emergency Management officials.

BEAVER BROOK AND TRIBUTARY E TO LITTLE COHAS BROOK FLOOD ANALYSIS LONDONDERRY, NH (1st CD) - This investigation is being conducted to develop a better understanding of flooding in Londonderry,

New Hampshire. The study will focus on the flooding of the Beaver Brook at Gilcreast Road, where options for modifications to the existing culvert or for installation of a new storm drain will be reviewed. A second area of concern for the town (and for this study) is Tributary E to Little Cohas Brook, where improvements in flood stage reduction could be achieved with a combination of improved box culverts under Stokes Road and under Rockingham Road. *The results of the analysis are scheduled to be provided in a final flood analysis assessment in November 2012.*

LAKE MASSASECUM/WARNER RIVER, BRADFORD, NH (2nd CD) - The purpose of this study is to assess the problem of flooding for residents of Bradford, NH, living near Lake Massasecum and Melvin Brook. This study will look at ways to alleviate the flooding in Bradford. It will be accomplished by modeling current conditions and modified conditions within the affected area to determine what improvements can be made to the system.

Emergency Streambank Protection, Section 14

CHESTERFIELD, NH (2nd CD) - A Section 14 streambank protection investigation along the Connecticut River has been requested by the town of Chesterfield, NH. The site is located along the left bank of the Connecticut River adjacent to River Road. The eroded area consists of approximately 300 linear feet of riverbank. The top of the riverbank ranges

from 8 to 10 feet above normal river stage. Permanent stabilization is needed to prevent the continued erosion from threatening River Road and associated overhead utility lines. Investigations began in April 2011. Completion of the Environmental Assessment is pending the availability of federal funds.

Flood Damage Reduction, Section 205

This program is used to assist communities in identifying flooding problems and to formulate and construct projects for flood damage reduction. The local sponsor is required

to cost-share equally in those feasibility investigations that exceed \$100,000. The Federal expenditure per project limit is \$7,000,000. The local sponsor is required to contribute

35 percent of the cost of plans, specifications and project construction.

For more information on Section 205 Flood Damage Reduction visit the Corps website at: <http://www.nae.usace.army.mil/pserVICES/fldrd205.htm>.

Defense Environmental Restoration Program

This Congressionally directed program (PL 98-212) provides for an expanded effort in environmental restoration. It emphasizes the identification, investigation and prompt cleanup of hazardous and toxic waste; unexploded ordnance; and unsafe buildings, structures and debris at current and former military facilities. Site and project eligibility investigations at 37 sites have been completed in New Hampshire, including 26 sites where no cleanup work was found to be necessary. Of the 11 sites where work was needed, the following efforts are underway:

DESIGN - The former **Grenier Air Force Station, Manchester Airport, Manchester (1st CD)** has been identified as a PRP site. The New England District office,

Manchester Airport, and the state of New Hampshire Department of Environmental Services are discussing the next steps.

REMEDIATION is complete for the **Mt. Washington Test Site (2nd CD)**, the **Mt. Washington Equipment and Experimental Station (2nd CD)**, the Wright Air Development Facility, **Bartlett (2nd CD)**, Icing Research Annex, **North Conway (2nd CD)**, Concord Point Radar Station, **Rye (1st CD)**, Camp Langdon and Fort Constitution, **Newcastle (1st CD)**, Fort Dearborn in **Rye (1st CD)**, and at the Massabesic National Guard Training Range in **Auburn (1st CD)**.

Support to the Environmental Protection Agency

WORK FOR THE ENVIRONMENTAL PROTECTION AGENCY - The New England District is designated as the Corps of Engineers total support agency for the U.S. Environmental Protection Agency's (EPA) Region I (New England) Superfund program for those federal-lead projects assigned to the Corps by EPA. This includes responsibility for design and/or construction execution of remediation projects. In addition, the New England District is providing technical assistance upon request to EPA New England for other federal-lead projects assigned by EPA to private firms as well as for some potentially responsible party (PRP) remediation.

SUPERFUND SITE, MILFORD (2nd CD) - New England District is providing oversight to design activities that are currently underway by the responsible party, including review of the design and participating in meetings with the potentially responsible party (PRP). GE will be initializing certain accelerated Remedial Action Activities in 2012 which are part of the Site Preparation Cleanup Actions, which will include construction of the alternative access for Keyes Drive.

In addition, New England District, through a contract with Watermark Environmental, is assisting EPA in completing a Remedial Investigation and Feasibility Study on OUII for the Souhegan River to assess the need for additional remediation of the river. EPA is anticipating a Record of Decision regarding river cleanup by December 2012.

Superfund

FLETCHER'S PAINT WORKS AND STORAGE FACILITY

Regulatory Activities

STATUS OF PROGRAM - Department of the Army permits are required from the Corps of Engineers under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The Corps reviews permit applications for work affecting navigable waters under its Section 10 authority and the discharge of fill material into all waters, including inland wetlands, under Section 404. A list of Monthly General and Individual Permit Authorizations is provided at <http://www.nae.usace.army.mil/Regulatory/Permits/issued.htm>. Relevant environmental documents are available upon written request.

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

PROGRAMMATIC GENERAL PERMIT - The New England 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 Hampshire are PGPs. The PGPs are based on the state thresholds for most categories of environmental impacts, and applicants generally need only file with the state. The

For more information about Corps jurisdiction of wetlands

federal screening is virtually transparent to applicants, and the PGP approval is either included in the state approval letter or mailed simultaneously. Applications appropriately covered under the PGPs are generally approved in less than 60 days. Applicants have commented favorably about the simplicity, predictability and efficiency of the PGPs. The Corps proposed reissuing the New Hampshire PGP in early 2012. Comments were due by April 28, 2012. The Corps reissued the PGP on Aug. 3, 2012. The PGP is available to view at:

<http://www.nae.usace.army.mil/Regulatory/SGP/nh.htm>.

NEW HAMPSHIRE IN-LIEU FEE PROGRAM (1st & 2nd CDs) – In 2008, the District and the New Hampshire Department of Environmental Services (NHDES) signed a Memorandum of Agreement (MOA) on an In Lieu Fee (ILF) program called the Aquatic Resource Mitigation (ARM) Fund to provide an alternative to project-specific mitigation when the Corps requires mitigation. Site-specific mitigation for many of these projects has had limited ecological value

due to their size, location, and/or permittee's ability to provide appropriate stewardship. The ILF program provides applicants an efficient and workable alternative of paying a fee if the District, in consultation with the federal resource agencies and the state, agrees it is the best alternative. The fees are aggregated by Hydrologic Unit Code within the state of New Hampshire and must be used, within a specified time period, to restore or create aquatic resources and/or preserve aquatic resources and their associated uplands. The *original* program was developed prior to the Federal Mitigation Rule (33 CFR 332) so was required to come into compliance with that rule by July 2012. On April 13, 2012, NHDES submitted a final instrument which was reviewed by the interagency review team (Corps, EPA, USFWS, and NMFS) and signed on May 18, 2012. To date, more than \$5 million total has been approved for funding of projects across the state. The applications for the 2012 round of grants are under review by the Site Selection Committee. The committee will recommend projects for funding to the Corps and the New Hampshire Wetlands Council.

Special Studies

COASTAL AMERICA - The New England District serves as chair of the Northeast Regional Implementation Team for the National Coastal America program. This interagency committee is investigating potential habitat restoration, non-point source control, and contaminated sediment projects throughout the Northeast, with emphasis on habitat restoration and, in particular, restoration of tidally-constricted salt marshes and restoration of anadromous fisheries corridors. The team continues to coordinate its

efforts within New Hampshire to identify potential projects.

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. Corps staff members provide technical assistance in areas relating to our missions. Opportunities for Corps participation in ecosystem restoration are being continually considered.

Other Current Activities

MERRIMACK RIVER WATERSHED STUDIES (SECTION 729) (1st & 2nd CDs) - Over the past several decades, significant improvements have been realized in the overall quality of the Merrimack River due to federal, state, local community, and private investment in water pollution control facilities. However, there are water quality and quantity concerns that still require significant investigation and planning beyond that which individual communities can address.

[merrimack/merrimack.htm](http://www.nae.usace.army.mil/projects/ma/merrimack/merrimack.htm).

In 2002 the Corps, to assist the communities and agencies, began a comprehensive watershed study to identify the number and range of water quality issues, ecosystem problems and opportunities along the lower Merrimack River from Manchester, New Hampshire, to the Estuary in Newburyport, Mass. The Section 729 comprehensive watershed study requires a 75 percent federal/25 percent non-federal cost sharing. The non-federal sponsors for the Lower Merrimack River Basin (LMRB) area study are the communities of Manchester and Nashua, N.H., and Lowell and Haverhill, Mass., and the Greater Lawrence Sanitary District in Massachusetts. Phase I was completed in September 2006. Reports are available at the Corps web site: <http://www.nae.usace.army.mil/projects/ma/>

In August 2006, the Corps extended the study to the Upper Merrimack River Basin UMRB (*Phase II*). The non-federal sponsor of the UMRB Study is the New Hampshire Department of Environmental Services, in partnership with the Southern New Hampshire Planning Commission and many New Hampshire Community Wastewater Treatment and Water Supply Departments. UMRB studies will assess and predict future river quality and quantity conditions from Manchester to Lincoln, N.H. using a *computer* simulation model. Sampling and modeling plans for the UMRB studies are available for download at the Corps project website: <http://www.nae.usace.army.mil/projects/nh/umrwas/upperMerrimack.htm>.

Upper Merrimack River sampling efforts in 2009 included impoundment sampling during the summer. Sampling efforts continued in 2010 and a low flow survey was conducted in July 2010 and September 2010. In the fall of 2011, river cross-section (channel data) for the river was collected to augment existing data for the river model. A draft water quality data report was prepared in January 2011 and updated in January 2012. Also in January 2012 a conceptual loading

model technical memorandum was completed to examine the sources of oxygen demanding substance in the river. In 2012, work included collection of additional water quality data during a high flow event. The water quality data report will be updated to include this information *and will be available on the web site in January 2013*. Work on the UMRB computer model is on-going and the model calibration will be completed in fall 2012. *The calibrated model will be used to test sensitivity and future condition scenarios.*

CONNECTICUT RIVER ECOSYSTEM RESTORATION

STUDY – Authority to conduct an ecosystem restoration study in the upper Connecticut River watershed is provided through a resolution adopted by the Committee on Environment and Public Works of the U. S. Senate on May 23, 2001. The reconnaissance report identified several ecosystem restoration opportunities along the main stem of the Connecticut River. Subsequent to that, The Nature Conservancy (TNC) expressed an interest in expanding the scope of the reconnaissance study to include the entire Connecticut River watershed. Approval to expand the reconnaissance study was obtained and the supplemental reconnaissance information was approved by Corps headquarters in February 2005. A feasibility cost sharing agreement and project study plan were signed by the Corps and TNC in August 2005. However, that agreement was determined to be inconsistent with then 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 has been expanded to include the entire watershed. The study is investigating alternatives to managing flow for the 70 largest dams in the basin with the goal of improving aquatic habitat while maintaining human uses such as flood control, hydropower, water supply, and recreation. Operation and optimization models of the basin have been developed. The alternatives analysis will begin in 2012.

AQUATIC ECOSYSTEM RESTORATION, OSGOOD

POND, MILFORD (2nd CD) – The town of Milford requested that the Corps investigate the potential for an aquatic ecosystem restoration project at Osgood Pond. The Corps is conducting this project under authority of the Aquatic Ecosystem Restoration Program, Section 206 of the Water Resources Development Act (WRDA) of 1996. Osgood Pond is located in Milford on park land owned by the town. The 26-acre pond is surrounded by an additional 24 acres of wetlands. The ecosystem of Osgood Pond has degraded from excess sedimentation as a result of upstream activities, including large-scale quarrying operations. Effects on the pond ecosystem include loss of fisheries habitat and a proliferation of aquatic vegetation and organic material buildup.

The average depth of the pond has been reduced to two to three feet, and average sediment depth is about five feet.

The goal of the project is to restore open water and wetlands to restore their habitat value for fish and waterfowl. The project will restore several acres of open water habitat up to 10 feet deep by hydraulically dredging approximately 80,000 cubic yards of sediments from the pond. Beneficial use of the dredged material will restore wetlands on abandoned quarried lands in the watershed upstream of Osgood Pond.

The Corps completed a feasibility study, prepared an environmental assessment, and signed the finding of no significant impact (FONSI) on Dec. 15, 2004. The project received funds in 2009 to proceed with the project implementation phase. The Corps and the sponsor developed a Project Partnership Agreement (PPA), if executed, we will proceed with plans and specifications. *The town is currently deciding whether to proceed with a smaller project without the Corps.*

AQUATIC ECOSYSTEM RESTORATION, MILL POND,

NASHUA (2nd CD) – The city of Nashua requested that the Corps study restoration of the aquatic ecosystem of the Mill Pond and canal in Mine Falls Park. The Corps is conducting this project under authority of the Aquatic Ecosystem Restoration Program, Section 206 of the Water Resources Development Act (WRDA) of 1996.

The objective of the study is to restore the fish and wildlife habitat associated with the pond and canal system. The canal starts at the Mine Falls historic gatehouse, circa 1888, where water is diverted from the Nashua River. The gatehouse is in need of repair to regulate water flows into the canal and pond. The canal system extends about two miles from the gatehouse, ending in an industrial/mill complex where the canal water drops through conduits through the complex and back into Nashua River. The canal system includes a 20-acre pond called Mill Pond.

We partially completed the feasibility study, but the project was on hold through 2009 because of a shortage of funds in the Section 206, Aquatic Ecosystem Restoration Program. In June of 2010, the Corps received limited funds to continue the study, and is currently developing a strategy with the city of Nashua engineering staff to complete the study. *Future study efforts will depend on the outcome of an analysis of potential aquatic habitat ecosystem benefits.*

For more information on the Corps' Aquatic Ecosystem Restoration Projects visit the website at:

<http://www.nae.usace.army.mil/pservices/206.htm>.

Interagency and International Support

DHS LAND PORTS OF ENTRY -- The Department of Homeland Security (DHS) through the Engineering and Construction Support Office (ECSO) located at the Corps' Fort Worth District, in Fort Worth, Texas, has tasked the New

England District to provide a Land Port of Entry in Pittsburg, NH. The construction at the New Hampshire facility is substantially complete and only punch list items remain to finalize the project. The estimated cost of this project is

approximately \$9 million.

WORK FOR THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT – The Corps of Engineers has entered into an interagency agreement with the

Department of Housing and Urban Development. In accordance with the agreement the Corps of Engineers performs physical inspections, contract administration reviews, drawings and specifications reviews, and final inspections for Housing Authorities located throughout the

Flood Risk Management Dams, Recreation and Natural Resources Management

The New England District has constructed and now operates and maintains seven flood risk management project dams in New Hampshire. All are located in the 2nd Congressional District, and information on each is provided below. In addition, the Corps is responsible for the conservation of natural resources held in public trust at civil works water resources projects. Recreation areas at the 31 federal flood risk management protection projects and the Cape Cod Canal within New England are managed for multiple uses. In some areas, management is delegated to the states for specific purposes, e.g., campgrounds, wildlife management and forestry. Recreation areas at these facilities are generally open from mid-May to mid-September.

For information on Corps recreation in New England check the website at www.nae.usace.army.mil and select “recreation” or for New Hampshire projects go directly to the weblink at <http://www.nae.usace.army.mil/Recreation/newHampshire.htm>.

BLACKWATER DAM on the Blackwater River in Webster and Salisbury was completed in 1941 at a cost of \$1.3 million. The 1,150-foot-long, 75-foot-high dam has a reservoir storage capacity of 14.9 billion gallons of water and has prevented damages of \$77.4 million to date. Recreational opportunities at Blackwater include hiking, biking, boating, fishing, hunting, horseback riding, dog sledding and snowmobiling with several thousand people visiting the reservoir area each year. The forest management program continues to have frequent harvests which maintain and promote healthy successional forest growth. For up-to-date information, call (603) 934-2116 or (603) 648-6028 or visit our website at: www.corpslakes.us/Blackwater.

The five year periodic inspection was completed in November 2012. Also powder coating of the road closure gates in the reservoir has been completed.

The winter months are upon us and staff at the Blackwater Dam have been busy preparing for the season.

Situated on Nubanusit Brook in Peterborough, **EDWARD MacDOWELL LAKE** was completed in 1950 at a cost of \$2 million. Edward MacDowell Lake consists of an earth fill dam with stone slope protection 1,100 feet long and 67 feet high with a capacity of more than four billion gallons of water and has prevented damages of about \$20.8 million to date. There is a conservation pool at Edward MacDowell Lake covering

an area of 165 acres and having a maximum depth of about seven feet. The flood storage area of the project totals 840 acres and covers parts of Hancock, Dublin and Harrisville. The lake and all associated project lands cover 1,469 acres. This is equivalent to 5.4 inches of water covering its drainage area of 44 square miles.

The Corps operates a small recreation area. Amenities include two pavilions, multiple picnic and grill locations throughout the park, beach, volleyball net, horseshoe pits and playground. Canoes, rowboats and other small boats are permitted on Edward MacDowell Lake. Project lands also offer trails for hiking and cross country skiing; snowmobile trails; undeveloped open space for ball playing and other sporting activities; drinking water; and sanitary facilities. More than 80,000 visitors annually enjoy the picnic areas, swimming areas, hiking trails, boating, fishing, hunting and snowmobiling available at Edward MacDowell Lake. For up-to-date information, call (603) 924-3431 or visit the lake’s web site at www.corpslakes.us/EdwardMacedowell.

A contract that was awarded to Portland Glass to replace original cracked and broken glass from the gatehouse tower and replace with more energy efficient glass has been completed. A snow plow service contract for the dam’s paved roadways has been out to the public for bidding and should be awarded shortly. A contract for heating fuel was recently awarded to Cheshire Oil to supply the office and gatehouse.

Project staff members *continue to work on our updated NRM Master Plan.*

Construction of **FRANKLIN FALLS DAM in Franklin** was completed in October 1943 at a cost of \$7.9 million. Situated on the Pemigewasset River in the town of Franklin, the 1,740-foot-long, 140-foot-high dam impounds a permanent pool of 440 acres with a maximum depth of about seven feet. The flood storage area of the project totals 2,800 acres and can store up to 50.2 billion gallons of water for flood risk management purposes. The project has prevented damages amounting to more than \$178.3 million to date. Additionally, more than 100,000 visitors annually enjoy the recreational facilities at Franklin Falls, including designated hiking and snowmobiling trails, picnicking, fishing, boating, wildlife viewing and hunting. For up-to-date information, call (603) 934-2116 or visit our website at: www.corpslakes.us/FranklinFalls.

Knowles has completed all concrete work at the dam. Other

regular maintenance contracts that have been completed this fall include 20 new logs for the log boom, waterproofing of the Smith River Bridge, and replacement of the sheaves and cables in flood control gates 6 and 7.

Now that the winter months are upon us staff at the Franklin Falls Dam are busy preparing the reservoir: clearing trails for snowmobiling and for two upcoming dog sled events.

The **HOPKINTON-EVERETT LAKES** flood risk management project is a two-dam system of flood protection for the Merrimack Valley. **Hopkinton Dam, on the Contoocook River in Hopkinton**, is 790-foot-long and 76-foot-high and can impound a 3,700-acre lake. Nearby **Everett Dam, on the Piscataquog River in Weare**, is 2,000-foot-long and 115-foot-high and can impound a 2,900-acre lake. The lakes have a combined storage capacity of 51 billion gallons of water and are linked by a canal, which allows water to be diverted between the two pools. Construction of the dual facility was completed in 1962 at a cost of \$21.4 million. During the 1987 flood this combined project utilized 95 percent of its storage capacity and prevented \$24.5 million in damages. Since the construction in 1962, the two dams are credited with preventing more than \$217.1 million in damages. In addition, excellent recreational opportunities are available on project lands, including picnicking, swimming, boating, fishing, hunting and snowmobiling. An estimated 450,000 visitors come to the Hopkinton-Everett project annually. For up-to-date information, call (603) 746-3601 or visit the lakes' website at www.corpslakes.us/HopkintonEverett.

Project staff have completed the winter shutdown of Elm Brook Park and are busy preparing for the winter recreation season. Specifications for routine operation and maintenance contracts are being developed and will be sent to area small businesses in the coming weeks. Over the next few months, our visitors will be enjoying hunting, ice fishing, cross-country skiing and snowmobiling. Others will enjoy being out in a beautiful natural setting while our staff will be busy patrolling the property, planning for the 2013

recreation season, and scheduling required maintenance for the next year.

OTTER BROOK LAKE on Otter Brook in Keene was completed in 1958 at a cost of \$4.3 million. The 133-foot-high, 1,288-foot-long dam can impound a reservoir with a storage capacity of 5.7 billion gallons of water. During the 1987 flood, this dam utilized 100 percent of its storage capacity and prevented \$3.6 million in damages. Since the construction in 1958, the dam has prevented flood damages of \$41.5 million. More than 39,000 visitors annually enjoy the swimming, picnicking, boating, fishing and hunting available at the 458-acre facility. For up-to-date information, call (603) 352-4130. The website is www.nae.usace.army.mil/recreati/obl/oblhome.htm.

In 2003, the Corps reevaluated the spillway capacity at Otter Brook, using revised storm data generated by the National Weather Service. As the spillway was determined to be too small, a design to accommodate larger flood flows was completed. This effort resulted in a new concrete spillway weir with mechanical fuse plugs designed to fail prior to exceeding discharge capacity. This project was completed in the summer of 2006.

SURRY MOUNTAIN LAKE on the Ashuelot River in Surry, just north of Keene, was completed in 1941 at a cost of \$2.8 million. The 1,800-foot-long, 86-foot-high dam has a reservoir storage capacity of 10.6 billion gallons of water. During the 1987 flood, this dam utilized 100 percent of its storage capacity and prevented \$8 million in damages. Since construction in 1941, the dam has prevented damages estimated at \$101.3 million. For up-to-date information, call (603) 352-2447 or (603) 352-4130. The website is www.nae.usace.army.mil/recreati/sml/smlhome.htm.

In addition to its flood risk management benefits, Surry Mountain Lake also provides recreational opportunities, such as fishing, swimming and boating to 58,000 visitors annually. Restrooms, drinking water and picnic shelters are also available.

