



**US Army Corps
of Engineers**
New England District

Update Report for Connecticut



Current as of
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Public Affairs Office, 978-318-8264

BUILDING STRONG®

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 protection, emergency preparedness and response to natural disasters and national emergencies, environmental remediation and restoration, natural resource management, streambank 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, with 6,100 miles of coastline, 11 deep water commercial 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, it processes about 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. Other Corps of Engineers employees serve at Corps projects and offices throughout the region. For information on the New England District check the website at: www.nae.usace.army.mil/; 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

BRIDGEPORT HARBOR DREDGE MATERIAL MANAGEMENT PLAN (4th CD) – The city of Bridgeport has requested maintenance dredging of Bridgeport Harbor. In response to this request, the New England District performed a Preliminary Assessment for Bridgeport Harbor, which concluded that continued maintenance of Bridgeport Harbor is likely justified, but that a detailed Dredge Material Management Plan (DMMP) for Bridgeport Harbor should be developed. A Draft DMMP and Draft Environmental Assessment have been prepared and are available on the Corps website for public review. A public notice announcing the availability of the Environmental Assessment and DMMP was released on Feb. 24, 2010. Three public meetings were held to brief the local communities on the project. Meetings were held in April and October 2010 in New Haven and in September 2010. Based on comments from the meetings some additional studies are being conducted. *NAE is working to complete the DMMP and EA and submit to NAD.*

CLINTON HARBOR (2nd & 3rd CDs) – The Federal navigation project in Clinton consists of a channel 8 feet deep, about 1.5 miles long from Long Island Sound up the Hammonasset River to the inner harbor in Clinton. The project also provides for a one-acre anchorage area in the inner harbor. Shoaling has reduced depths in the channel making it difficult for vessel traffic to safely traverse the project. In FY 2011 we received sufficient funds to perform approximately 5 days of dredging of the most shoaled portions of the 8-foot entrance channel. We subsequently dredged about 10,000 cy of sand by the Currituck in June

2011. The material was placed nearshore off Hammonasset Beach State Park. We are now proposing and coordinating the beneficial re-use of about 45,000 cy of predominantly sandy material from the channel by hydraulically pumping onto Hammonasset Beach located in the State Park about 2 miles away. The District worked with North Atlantic Division and USACE Headquarters to put a Memorandum of Agreement (MOA) in place between the Corps and the state of Connecticut, Department of Transportation (CTDOT) to allow the state to fully fund the project. Funding has been provided by the CTDOT and bids were opened on Sept. 5, 2012. *A contract was awarded for \$1 million to Select Transportation, Inc., of Hilliard, Ohio, on Sept. 24, 2012.* Dredging is expected to last approximately 3 months and occur in the dredging window between Oct. 1 and March 31.

HOUSATONIC RIVER (5th CD) – The local community has contacted the Corps to request dredging of the Federal project, the 18-foot channel, in the Housatonic River. A recent survey of the project indicates about 600,000 cubic yards of sand need to be removed to return the project to authorized dimensions. We have conducted sampling and testing of the material to be dredged and have found it suitable for beach nourishment. The state had contacted us and requested we investigate placing the material at some severely eroded beach areas on Hammonasset State Beach. We had informed them that we can place the material onto the beach if the state provides some cost share funding. The state had agreed in principle with this and had conducted additional testing of the material to ensure it meets their

beach standards. Testing has been completed; the material meets state standards. However, the state could not obtain funding for their share of the cost. In addition, taking the present river vessel traffic into consideration, we are trying to confirm that there is a need to dredge the 18-foot channel to its authorized depth and width. We have worked with the project sponsor to determine the estimated depth needed for the existing vessels, and the priority areas to be dredged. In doing so it appears that dredging of about 50,000 cy of material from shoaled portions of the channel, to -14 feet mllw, up to the Route 1 Bridge, will meet the current project users needs. The most practicable disposal site at this time is a nearshore site about 3 miles from the mouth of the river, to the west, off Point No Point. Dredging would be done by the Currituck or similar dredge. Coordination for this dredging and disposal method continues – we have applied for the State Water Quality Certificate. The state of Connecticut will be funding the entire project. We have signed an MOA with the State and received the funds. Dredging is targeted for approximately 30 days in *late* 2012.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN (2nd, 3rd & 4th CDs) – In February 2005 in a joint letter, the Governors of Connecticut and New York requested that the Corps of Engineers participate in the development of a Dredged Material Management Plan (DMMP) for the Long Island Sound (LIS) Region. The Project Delivery Team working on the project is comprised of representatives of the New England and New York Districts, Regions I and II of the USEPA and representatives of Connecticut DEP and Connecticut Department of Transportation, New York Department of State, New York Department of Environmental Conservation and the Rhode Island Coastal Resource Management Council. A series of public scoping meetings were held the week of Nov. 26, 2007. New York meetings were held in New Rochelle, Port Jefferson and Westbury. Connecticut meetings were held in Stamford, New London and New Haven. Information is available on the projects' web page at <http://www.nae.usace.army.mil/projects/ri/LISDMMP/LISDMMP.htm>. The project team has established a project mailbox where people may email questions or comments on the project. The email address is LISDMMP@usace.army.mil.

A significant amount of study effort has been completed to date including a Dredging Needs Assessment, an Inventory of Potential Upland Placement, Beneficial Use Sites and Potential Dredged Material Dewatering Sites, a Cultural Inventory, Follow on Site Characterization for Upland, Beneficial Use and Sediment Dewatering Sites, an Economic Data Update identifying the economic benefits of the navigational industry on local economy, an assessment of various Federal, state and local regulations and Programs and an Environmental Data Report update. All of the completed reports documenting those efforts were placed on the project web page. Additional work is underway related to Air Quality Analysis, Transportation Cost Matrix, Potential Island/Confined Disposal Facility Creation Inventory, Working Group meetings and Initial Screening of Alternatives.

MYSTIC RIVER (2nd CD) – The Federal navigation project

includes a 15-foot deep by 125-foot wide channel; a 15-foot deep by 100-foot wide channel; a 9-foot deep anchorage basin and a 9-foot deep turning basin. The project was last dredged in 1957. Shoaling throughout the project has been making navigation difficult. Maintenance dredging of about 250,000 cubic yards of silt and sand is required to return the project to authorized dimensions. FY08 appropriations were used to complete sampling and testing of the sediments. FY10 appropriations are being used to identify a disposal site, and prepare an Environmental Assessment. Dredging will be performed in the years in which funds become available.

NEW HAVEN HARBOR, NEW HAVEN AND WEST HAVEN (3rd CD) – The existing Federal navigation project at New Haven Harbor consists of a 35-foot deep channel approximately 4.5 miles in length that extends from Long Island Sound to the major wharves in the inner harbor. The Federal navigation project also includes a turning basin, anchorage areas and other smaller navigation features not proposed to be maintained at this point. A project to deepen the port to 40 feet was authorized in WRDA 1986 but was never funded for construction and eventually deauthorized. Resolutions of the U.S. Senate and House call for a study to examine deepening this port's main channels to greater than the 35 feet now authorized. A new study would be required to re-examine the proposed deepening. Funds in the amount of \$100,000 would be required to prepare a reconnaissance report. Periodic maintenance dredging has been performed on various portions of the project since the late 1800s through the most recent maintenance event in 2004 when about 630,000 cubic yards of material were dredged and disposed at the Central Long Island Sound Disposal Site (CLISDS). Current maintenance dredging of the main 35-foot channel would include removal of about 810,000 cubic yards of material with anticipated disposal at the CLISDS, as historically done. The District completed sampling and testing of the dredge material and it has been found suitable for unconfined open water disposal. The District, with the help of the local sponsor, identified potential disposal areas (open water and upland) as a part of the alternatives analysis included in the draft Environmental Assessment (EA). The draft EA was completed on Aug. 7, 2012 and identifies the CLISDS as the most cost effective, environmentally compliant, disposal option for the dredge material. Coordination with the state and Federal resource agencies has begun and once complete we will seek construction funds to complete the project.

NORWALK HARBOR (4th CD) – The federal navigation project consists of 12-, 10-, and 6-foot channels and 10- and 6-foot anchorages. The last full maintenance dredging was in 1980-81. Shoaling throughout the project has been making navigation difficult. Industrial, commercial fishing, and recreational vessels all use the harbor. In 2001, waterborne commerce in Norwalk Harbor totaled 512,000 tons. This includes fuel oil; sand, gravel, and stone; and shellfish. The city of Norwalk has requested maintenance dredging. Due to funding constraints, the work has been divided into phases.

Phase 1 has been completed. The contract was awarded

to Jay Cashman, Inc., of Quincy, Mass., in late September 2005. Work started on the project on Oct. 28, 2005, and was completed Feb. 28, 2006. Phase 1 consisted of the maintenance dredging of about 65,000 cubic yards of material from the 10-foot channel with disposal at the Central Long Island Sound Disposal Site (CLISDS); the excavation/dredging of about 52,000 cubic yards for two in-channel confined aquatic disposal (CAD) cells with disposal of this material at the CLISDS over the previous material; the maintenance dredging of about 30,000 cubic yards of unsuitable material from the 10-foot channel with disposal in the CAD cells; and the capping of the CAD cells with about 4,000 cubic yards of material from the lower harbor.

Phase 2 has now been completed. The contract was awarded to Cashman Dredging & Marine Contracting of Quincy, Mass., on Sept. 29, 2008. Work started on the project around Oct. 25, 2008, and was completed around Feb. 15, 2009. A total of 195,042 cubic yards of material was dredged from the 6-foot East Norwalk channel and turning basin, the 6-foot south anchorage, and portions of the 12-foot main channel, with disposal at the Central Long Island Sound Disposal Site. This material was subsequently capped, by May 31, 2009, with 75,000 cubic yards of dredged material from the North Cove Federal maintenance dredging project.

Phase 3 will consist of the maintenance dredging of about 300,000 cy in order to restore the remainder of the FNP to authorized dimensions – mostly from the 12-foot channel and the 10-foot anchorage. Disposal is anticipated to be at the CLISDS. In addition, it is likely that the CTDEEP will require the material to be capped by a minimum of 75,000 cy of dredged material from another FNP determined to be suitable for unconfined open water disposal at the CLISDS. We have coordinated with the CTDEEP on their requirements for additional sediment sampling and testing to determine suitability and any capping conditions. We presently have funds to dredge about 100,000 cy. The city's priority area is the 12-foot-deep channel below the Washington Street Bridge. We obtained 10 sediment samples from the proposed dredge areas in June 2011 and had them tested. The CTDEEP requires 80,000 cy of cap. This must be obtained from another project, and funded by a non-Federal sponsor. We are currently working with Norwalk and the CTDEEP on this issue. We will be preparing an application for a Water Quality Certificate for the dredging and disposal of about 150,000 cy of material to restore the 12-foot channel to authorized width and depth.

PATCHOGUE RIVER, WESTBROOK (2nd CD) – The community of Westbrook, Conn., contacted us regarding concerns about shoaling in the river. We had surveyed the channel and estimated about 44,000 cy of material needs to be removed to return the project to authorized dimensions. The project (for open water disposal at Cornfield Shoals) has been coordinated with state and Federal resource agencies. In FY 2008, \$95,000 was added to the budget and \$675,000 was added in the FY 09 Omnibus appropriations. Unfortunately, this was still insufficient to complete the entire project. The town of Westbrook outlined the most critically shoaled areas of the entrance channel and requested we

dredge this area using the Government dredge Currituck. We were able to obtain state and Federal approvals and conducted maintenance dredging in the channel from May 6 –16, 2010. This relieved some of the worst shoaling in the entrance channel. In FY2011, we again coordinated with Westbrook and state and Federal resource agencies to obtain all environmental approvals and concurrences for additional dredging. In approximately 13 days in May and June 2011, we removed about 20,000 cy of material from the most shoaled portions of the 8-foot entrance channel by the Currituck, and placed the predominantly sandy material nearshore off Hammonasset Beach State Park, about 7 miles away. About 36,000 cy remain to be dredged from the 8-foot channel and anchorage in order to completely maintain the Federal navigation project. We signed an MOA with the state of Connecticut, and received remaining funds to perform the project. We advertised for bids Aug. 9, 2012, and opened bids Sept. 10, 2012. *A contract for \$842,153 was awarded to Coastline Consulting and Development, LLC, of Madison, Conn.* The dredge window due to environmental and fisheries constraints is Oct. 1 to Jan. 31.

PAWCATUCK RIVER AND LITTLE NARRAGANSETT BAY, RHODE ISLAND (2nd CD) AND CONNECTICUT (2nd CD) – The proposed work involves maintenance dredging of the 10-foot-deep Mean Lower Low Water (MLLW) by 100-foot-wide entrance channel extending approximately 3 miles from Stonington Point, through Little Narragansett Bay to Rhodes Point. Natural shoaling processes in the 10-foot-deep channel, have reduced available depths, making navigation hazardous at lower stages of the tide. Maintenance dredging of approximately 35,000 cubic yards (cy) of sand and 50,000 cy of silt from approximately 35 acres of the authorized project area will restore the channel to authorized dimensions. FY10 appropriations are being used to develop an Environmental Assessment and then contract plans and specifications. Dredging will be performed in the years in which funds become available.

STONINGTON HARBOR, CONNECTICUT (2nd CD) – Funding has been provided in the Disaster Relief Appropriations Act of 2012 to repair the Stonington East Breakwater which was damaged during Tropical Storm Irene in August of 2011. The proposed work involves repairing damaged sections of the breakwater to pre-storm conditions. Funds are being used to coordinate with various State and Federal environmental resource agencies, develop contract plans and specifications, and conduct the work under contract. A \$760,500 construction contract was awarded to *Blakeslee Arpaia Chapmen, Inc. of Branford, Conn.*, on Aug. 8, 2012. The work will be performed between October 2012 and March 2013.

TREATMENT OF DREDGED MATERIAL FROM LONG ISLAND SOUND DEMONSTRATION, BRIDGEPORT (2nd, 3rd, & 4th CDs) – The Corps has been working with the Bridgeport Port Authority, the Connecticut Department of Environmental Protection and the Connecticut Department of Transportation on an Innovative Technologies for Dredged Material Demonstration Project under the provisions of Section 345 of the Water Resources Development Act of 2000 (WRDA 2000). This authority requires that material

treated under this authority be considered for a beneficial reuse. Dredged material that was treated using a soil washing technology is being used in a blending operation that hopefully will result in a material that can be used in an unrestrictive manner to meet landscaping needs. The Demonstration effort was initiated with sampling performed on treated material. The sampling results were provided to the project sponsors and the processors cooperating in the project. The treated material was provided to processors for additional treatment and blending. Post processing testing

has been completed and the samples were analyzed. The results of the additional treatment were disappointing since the blended material still does not meet unrestricted use. Additional blending activities have been conducted. After the additional blending was conducted the material was again sampled and analyzed. The blended material has been moved to a location in Silver Sands State Park and seeded to determine the viability of the material to grow vegetation.

Shoreline/Streambank Protection

MIDDLETOWN, CT (2nd CD) – A Section 14 streambank protection project along the Connecticut River has been requested by the city of Middletown. The stabilization is needed to prevent riverine erosion from threatening a city-

owned water supply well field. Design efforts are underway. Pre-solicitation contract advertisement is scheduled for *the spring of 2013*.

Beach Erosion, Storm Damage Reduction

ENDERS ISLAND, MYSTIC (2nd CD) – St. Edmund's Retreat, Inc., a non-profit organization operating on Enders Island, requested the Corps of Engineers assistance in protecting property and resources on the island from storm damage and erosion in 2008. Enders Island is a 12-acre island located in Fishers Island Sound. The island is connected to Mystic, Conn., via a causeway and is protected by a seawall constructed in the early 1900s. The seawall is

in poor condition and no longer provides protection against waves and erosion during large storms. The Corps received funds in 2010 to initiate a feasibility study to determine the Federal interest in assisting the Retreat with protection alternative analysis and construction. *The seawall was further damaged during Hurricane Sandy. We are assessing the damage and adjusting the preliminary alternative plans. We will submit an initial appraisal of our findings in 2013.*

Ecological Restoration

CONNECTICUT RIVER ECOSYSTEM RESTORATION STUDY (1st & 2nd CDs) – 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.

MILL RIVER RESTORATION, STAMFORD (4th CD) – The city of Stamford and the Corps are partnering in a project to restore the aquatic ecosystem of the lower two miles of the Mill River (also known as Rippowam River) under the Corps Aquatic Ecosystem Restoration Program (Section 206 of the Water Resources Development Act of 1996). Degradation of this urban river resulted from two dams and channel modifications and excess sedimentation related to urban storm water runoff. The project involves removal of Main Street Dam and over 1,000 feet of concrete retaining walls, restoration of ¼-mile of the river channel and floodplain impacted by the dam, restoration of the riparian corridor along portions of the lower two miles of river, removal of a concrete impoundment structure under Pulaski Street Bridge to restore the river channel, and restoration of approximately one acre of tidal marsh habitat. In addition to restoring river and salt marsh habitats, this project has opened the lower Rippowam River to anadromous fish passage. Construction started in March 2009 and was completed in October 2011. The Corps will continue to monitor the project for four more years to ensure restoration success.

Special Studies

COASTAL AMERICA - The Coastal America Northeast Regional Implementation Team has several new projects

scheduled including the above-mentioned Mill River restoration in Stamford. Connecticut has a very active

Corporate Wetlands Restoration Partnership that has allocated funding for projects throughout the state. Collaboration with the Mystic Aquarium and Institute for Exploration on education and outreach activities is a team priority.

LONG ISLAND SOUND NATIONAL ESTUARY

Conservation and Environment

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM (DERP) – This congressionally directed program (PL 98-212) provides for environmental restoration. It emphasizes the identification, investigation and cleanup of hazardous and toxic waste; unexploded ordnance; and unsafe buildings, structures and debris at current and former military facilities. Fifty-five formerly used defense sites (FUDS) have been identified in Connecticut. Site and project eligibility investigations at 54 sites are now complete, including 37 where no work was found to be necessary. The remaining site, the **University of Connecticut Bachelor Housing Site (2nd CD)**, will be studied in the future when priorities and funding allow. There currently are no active FUDS projects in Connecticut.

Environmental restoration projects at **Fort Griswold and Pine Island Battery, Groton (2nd CD); Pratt & Whitney, Southington (1st CD); and Fort Hale, New Haven (3rd CD)** will be performed when priorities and funding allow.

A study to determine the responsible parties at the former **Air Force Plant #62, Middletown (3rd CD)**, found no federal responsibility, based on the indemnification clause contained in the real estate transfer documents.

An archival search report under the Corps ordnance and

Support to the Environmental Protection Agency

SUPERFUND ASSISTANCE – The New England District provides support to EPA Region I's (New England) Superfund program. This includes responsibility for site investigations, design work, construction execution, and some operation and maintenance at Federal lead sites when

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. For more information about Corps jurisdiction of wetlands and whether a permit is required for work that is being considered contact the Corps'

PROGRAM – The District is actively participating in the Long Island Sound National Estuary Program by attending meetings and providing water resource planning support and expertise. A paper entitled "Remediation Techniques for Contaminated Sediment in Long Island Sound" has been provided to the Long Island Sound National Estuary Program for its use in decision-making.

explosive waste investigation program has been done for **Rentschler and Brainard fields, Hartford (1st CD)**, by the Army Engineering and Support Center in Huntsville, Ala. No evidence has been found that ordnance still exists, and additional investigation is not warranted at this time.

Construction projects totaling \$1,373,434 have been completed at the following locations:

First District

Cromwell Nike Site, Tank Removal
East Windsor Nike Site, Tank and Transformer Removal
Manchester Nike Missile Site
Bradley International Airport, Tank Removal

Second District

Groton Pine Island, Pit Closure

Third District

New Haven Army Airfield, Transformer Removal
Ansonia Nike Site, Tank/Transformer Removal, Silo Closure

Fourth District

Fairfield Nike Site, Tank Removal & Silo Closure
Westport Nike Site, Tank Removal and Silo Closure

Fifth District

Waterbury Naval Reserve Rehab Center, Tank Removal
Farmington Nike Site, Tank Removal & Silo Closure

our support is requested. 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 I.

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/>.

GENERAL PERMIT – The New England District has comprehensive General Permits (GPs) 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 GPs. The GPs are based on the state thresholds for most categories of environmental impacts, and applicants may need only file with the state (coastal Connecticut projects). For coastal Connecticut projects, the federal screening is virtually transparent to applicants, and the GP approval is either included in the

state approval letter or mailed simultaneously. Inland project applications are sent to the Corps as the Connecticut inland wetlands program is handled by the towns. Applications appropriately covered under the GPs are generally approved in less than 60 days. Applicants have commented favorably about the simplicity, predictability and efficiency of the PGPs. The Connecticut GP can be viewed at: <http://www.nae.usace.army.mil/Regulatory/SGP/CT/PGP.pdf>. A public notice was issued on Jan. 25, 2011 seeking comments on the draft of the proposed new Connecticut General Permit. The public notice expired on March 14, 2011. The new CT GP became effective July 15, 2011.

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

On Jan. 27, 2011, the National Audubon Society – Connecticut Chapter (NAS-CT) submitted a prospectus for an In Lieu Fee (ILF) program to provide an alternative form of compensatory mitigation for permit applicants in the state of Connecticut. Applicants would pay a fee for

impacts which would be used by the ILF sponsor to develop ecologically suitable and appropriate mitigation sites in the same watershed as the impacts. A public notice on the prospectus was issued on Feb. 8, 2011. After review of the public and Interagency Review Team (IRT) comments, on March 25, 2011 the Corps notified NAS-CT that they could proceed to develop a draft ILF instrument. Several suggestions for ensuring a complete and quality instrument were included. *A formal draft instrument was submitted to the Corps on Sept. 11, 2012. It has been reviewed by the Interagency Review Team (IRT) and concerns and issues are being coordinated with the sponsor.*

The Connecticut Yankee Council of the Boys Scouts of America (BSA-CT) submitted a prospectus for an umbrella mitigation bank for the state of Connecticut to the Corps on April 26, 2011. The sponsor, BSA-CT, proposes to start the bank with a “deposit” of environmental credits generated by a parcel they own in Redding. Applicants would purchase environmental credits to compensate for environmental debits resulting from impacts. The prospectus was put out on Public Notice on May 3, 2011. On June 15, 2011, BSA-CT was authorized to develop a draft banking instrument. It has not yet been submitted to the Corps. On July 12, 2012, the Corps made a site visit to verify the wetland and stream delineations. *Currently the Corps is waiting for documentation of the boundaries of the area proposed for the bank to determine if it will provide an acceptable level of ecosystem protection.*

Operating Flood Risk Management Projects and Natural Resource Management

The New England District has constructed 12 flood risk management protection dams and three hurricane protection projects in Connecticut. Information on each is provided below. The Corps, working with agencies of the state of Connecticut, provides quality outdoor recreational opportunities at each of the seven Corps-operated flood risk management reservoirs located within the state. The lands and waters of these civil works water resource projects are managed to conserve the natural resources as well as for the primary authorized purpose of flood risk management.

For more information on Corps recreation in New England check the website at www.nae.usace.army.mil and select “recreation” or for Connecticut projects go directly to the link at <http://www.nae.usace.army.mil/recreati/connecti.htm>.

BLACK ROCK LAKE (5th CD) on Branch Brook in Thomaston and Watertown was completed in 1971 at a cost of \$8.2 million. More than 2.8 billion gallons of water can be stored behind the 933-foot-long, 154-foot-high dam. To date, \$217.1 million in damages have been prevented. An estimated 150,000 visitors annually enjoy hiking, fishing and hunting on the 319 acres of land and water at Black Rock Lake. Visitors spend an estimated \$0.95 million within 30 miles of the lake. An estimated 27 jobs in the local community are supported by visitors to Black Rock Lake.

For more information call (860) 283-4900 or (860) 283-5540 or check the website at www.nae.usace.army.mil/recreati/brl/brlhome.htm.

COLEBROOK RIVER LAKE (1st CD) on the West Branch of the Farmington River in Colebrook was completed in 1969 at a cost of \$14.3 million. At capacity, the 1,300-foot-long, 223-foot-high dam can impound a lake of 1,185 acres containing 16.5 billion gallons of water. To date, the project has prevented damages of \$92.7 million. Recreational opportunities abound at Colebrook and include boating (with a launching ramp), fishing, ice fishing and hunting. Nearly 158,000 visitors enjoy the recreational pursuits at Colebrook River Lake each year. Visitors spend an estimated \$1.86 million within 30 miles of the lake. An estimated 52 jobs in the local community are supported by visitors to Colebrook Lake.

For more information call (860) 379-8234 or check the website at www.nae.usace.army.mil/recreati/crl/crlhome.htm.

EAST BRANCH DAM (1st & 5th CDs) is situated on the East Branch of the Naugatuck River in Torrington. The 700-foot-long, 92-foot-high earthfill dam was completed in 1974 at a cost of \$1.9 million. With a storage capacity of 1.4

billion gallons of water, the dam can impound a 158-acre lake. To date, more than \$30.6 million in damages have been prevented by East Branch Dam. The state of Connecticut is responsible for operation and maintenance of the 158-acre facility.

HALL MEADOW BROOK DAM (1st & 5th CDs), located on the brook of the same name in Torrington, was completed in 1962 at a cost of \$2.6 million. The 1,200-foot-long, 73-foot-high earthfill dam can impound a 372-acre lake capable of storing 2.8 billion gallons of water. The facility has prevented damages of \$105.7 million to date. The state of Connecticut is responsible for operation and maintenance of the 9.4-acre facility.

HANCOCK BROOK LAKE (5th CD), on the brook of the same name, was constructed at a cost of \$4.2 million in Plymouth. The 630-foot-long, 57-foot-high earthen dam can create a lake of 266 acres capable of holding 1.3 billion gallons of water. Since it was placed in operation in 1966, it has prevented \$52.5 million in flood damages. More than 110,000 visitors annually enjoy the hiking, fishing and hunting opportunities available at Hancock Brook Lake's 663 acres of land and water. Visitors spend an estimated \$0.13 million within 30 miles of the lake. An estimated four jobs in the local community are supported by visitors to Hancock Brook Lake.

For more information call (203) 729-8840 or visit the website at www.nae.usace.army.mil/recreati/hnk/hnkhome.htm.

HOP BROOK LAKE (3rd & 5th CDs), situated on the brook of the same name in the towns of Middlebury, Waterbury and Naugatuck, was completed in December 1968 at a cost of \$6 million. The 520-foot-long, 97-foot-high embankment can hold back 2.2 billion gallons of water in a 270-acre pool extending 1.5 miles. Hop Brook Lake has prevented damages amounting to \$108.4 million. The year-round, 21-acre conservation pool annually attracts nearly 200,000 visitors who enjoy a variety of recreational pursuits including picnicking, swimming, hiking, fishing, and special permit group events. Visitors spend an estimated \$2.05 million within 30 miles of the lake. An estimated 58 jobs in the local community are supported by visitors to Hop Brook Lake. Hop Brook Lake has received an estimated \$6.4 million in funds for construction of Hop Brook Dam safety improvements.

A seepage reduction project consisting of the construction of a triple-line grout curtain extending down from the bottom of the embankment 65 feet into the underlying bedrock began in April 2010 and was completed in January 2011. The lateral extent of the grout curtain runs from abutment to abutment, and follows the alignment of the original grout curtain that was installed during construction. The grout curtain blocks underseepage and improves public safety.

In April 2011, the project conservation pool was raised to 47 feet, normally 19 feet, to determine the effectiveness of the repairs. Due to heavy spring rains and snowmelt which occurred during this period, the project pool elevation reached 58 feet, and yielded highly successful results.

For more information call (203) 729-8840 or visit the website at www.nae.usace.army.mil/recreati/hbl/hblhome.htm.

The 940-foot-long, 178-foot-high **MAD RIVER DAM (1st CD)** is situated on the Mad River in Winchester. Construction of the \$7 million earthen dam was completed in 1963, and since that time the project has prevented an estimated \$16.0 million in damages. When full, the lake behind the dam covers 188 acres and can store more than three billion gallons of water. The state of Connecticut operates and maintains Mad River Dam.

MANSFIELD HOLLOW LAKE (2nd CD), on the Natchaug River in Mansfield Hollow, was constructed at a cost of \$6.4 million. The 14,050-foot-long, 68-foot-high dam can impound a 49,200-acre foot reservoir, which is equivalent to 16 billion gallons of water. Since it was placed in operation in 1952, it has prevented damages of \$101.6 million. The reservoir area offers fine recreational opportunities, including picnicking, fishing, boating, hunting, and nature study and annually attracts more than 574,900 visitors. Visitors spend an estimated \$8.45 million within 30 miles of the lake. An estimated 237 jobs in the local community are supported by visitors to Mansfield Hollow Lake.

For more information call (860) 923-2982 or visit the website at www.nae.usace.army.mil/recreati/mhl/mhlhome.htm.

The 810-foot-long, 118-foot-high **NORTHFIELD BROOK DAM (5th CD)** was completed in 1965 at a cost of \$2.8 million. Situated on Northfield Brook in Thomaston, the dam, which features an eight-acre recreation pool, can store an estimated 766 million gallons of floodwater and has prevented damages to date of \$75.8 million. More than 71,000 visitors annually enjoy fishing, picnicking, swimming, and hiking at Northfield Brook Lake. Visitors spend an estimated \$0.53 million within 30 miles of the lake. An estimated 15 jobs in the local community are supported by visitors to Northfield Brook Dam.

For more information call (860) 283-5540 or visit the website at www.nae.usace.army.mil/recreati/nbl/nblhome.htm.

SUCKER BROOK DAM (1st CD), on a brook of the same name in Winchester, was completed in 1971 at a cost of \$2.4 million. The 1,160 foot long, 68 foot-high earthen dam can impound a lake covering 53 acres capable of storing 482 million gallons of water. The state of Connecticut is responsible for the operation and maintenance of Sucker Brook Dam.

THOMASTON DAM (5th CD) is situated on the Naugatuck River in Thomaston. Completed in 1960 at a cost of \$14.3 million, the 2,000-foot-long, 142-foot-high earthen dam can impound a lake covering 960 acres capable of storing 13.7 billion gallons of water. Thomaston has prevented more than \$828.9 million in flood damages. An estimated 200,000 visitors annually enjoy picnicking, fishing, hunting, dirtbiking and snowmobiling at Thomaston Dam's more than 849 acres of land and water. Visitors spend an estimated \$1.33

million within 30 miles of the lake. An estimated 37 jobs in the local community are supported by visitors to Thomaston Dam.

For more information call (860) 283-5540 or visit the website at www.nae.usace.army.mil/recreati/tmd/tmdhome.htm.

WEST THOMPSON LAKE (2nd CD) is located on the Quinebaug River in Thompson. Construction of the \$7 million facility was completed in 1965, and since that time the facility has prevented more than \$56.4 million in flood damages. The 2,550-foot-long, 70-foot-high dam can impound a 1,250-acre pool capable of storing 8.3 billion gallons of water. Picnicking, hiking, boating, fishing, camping and hunting are enjoyed by over 96,300 visitors annually spending an estimated \$1.51 million within 30-miles of Thompson. Visitor trip spending supports 42 jobs in the communities surrounding the lake. The Corps manages 2,059 acres of land and water at West Thompson Lake stretching six miles from Putnam to the Massachusetts border. Three picnic shelters are very popular for outdoor weddings, family reunions and other group functions.

For more information call 860-923-2982 or visit the website at www.nae.usace.army.mil/recreati/wtl/wtlhome.htm.

At **NEW LONDON (2nd CD)** facilities to provide hurricane protection to the Shaw Cove area of this northern Long Island Sound community were completed in 1984 at a cost of \$11 million. The project, operated and maintained by the city of New London, provides protection both from high tides caused by coastal storms and hurricanes, and from interior flooding caused by Truman Brook in the industrial and commercial area in the vicinity of Shaw Cove and New London Harbor. Rock protected earthfill dikes, concrete floodwalls, a pumping station and a pressure conduit to evacuate interior drainage are features of the project. In a storm of the magnitude of the 1938 hurricane, New London would afford \$9.6 million in damage prevention.

For more information visit the web link at: <http://rsgisias.crrel.usace.army.mil/nae/cwmsweb.cwmsindex>.

In Stonington, the **PAWCATUCK-STONINGTON HURRICANE PROTECTION PROJECT (2nd CD)** is located on the West Bank of the Pawcatuck River at the Rhode Island - Connecticut state line. The \$920,000 project was completed in 1963. The project consists of 1,915 feet of earthen dike, 940 feet of concrete wall, two vehicular structures, and a pumping station. The works afford protection to a 31-acre industrial area and are operated and maintained by the town of Stonington.

For more information visit the web link at: <http://rsgisias.crrel.usace.army.mil/nae/cwmsweb.cwmsindex>.

Construction of the **STAMFORD HURRICANE PROTECTION BARRIER (4th CD)** at Stamford was completed in 1969 at a cost of \$14.5 million. The project consists of three principal features. The West Branch Barrier, which protects the area between the West and East Branches, includes a 1,340-foot concrete wall and a 1,950-foot-long, rock-faced earthen dike. The East Branch Barrier, which connects to the West Branch and extends across the mouth of the East Branch, includes 2,840 feet of rock-face earthen dike and a 90-foot-wide navigation gate. The Westcott Cove Barrier, which protects the residential area of Rippowam Street and skirts Westcott Cove in Cummings Park, includes 4,200 feet of rock faced earthen dike. Damages amounting to \$38.4 million have been prevented to date.

For more information call 203-348-8955 or visit the web link at: <http://rsgisias.crrel.usace.army.mil/nae/cwmsweb.cwmsindex>.

