Update Report for Connecticut

US Army Corps of Engineers
New England District

Current as of March 31, 2019

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Mission

The missions of the New England District, U.S. Army Corps of Engineers include flood risk management protection, emergency preparedness and response to natural disasters and national emergencies, environmental remediation and restoration, natural resource management, 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, 170 federal navigation projects (13 deep draft commercial waterways), 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 nearly 2,500 applications per year for work in waters and wetlands of the six-state region. We employ about 500 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/; on Facebook: facebook.com/CorpsNewEngland; on Twitter: twitter.com/corpsnewengland; or on Flickr: www.flickr.com/photos/corpsnewengland.

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. The state and city of Bridgeport have requested that dredging of the Black Rock Harbor Federal navigation project (in Bridgeport, Conn.) be included in the Bridgeport DMMP. Investigations are being conducted and the current draft DMMP and EA will be revised to include Black Rock Harbor. The revised draft DMMP and EA will then be sent out for Public Notice, coordinated with resource agencies, and then submitted for approval.

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 mean lower low water channel approximately 5 miles in length that extends from deep water in Long Island Sound to the terminals at the north end of the inner harbor. The Federal navigation project also includes a turning basin, anchorage areas and other smaller navigation features. In terms of total tonnage shipped and received, the Port of New Haven was the largest port in Connecticut and the second largest port in New England in 2016, ranking only behind the port of Boston. In 2016, its total freight traffic of 8.8 million *metric* tons represented about 24 percent of all waterborne commerce in New England and about 81 percent of all waterborne commerce in Connecticut. Commodities received at the port include petroleum and petroleum products and various dry bulk and break-bulk commodities. Petroleum products imports have historically constituted approximately 80 percent of the channel tonnage. Salt, sand, and cement imports are the dominant bulk cargoes and virtually all volumes are for immediate local use. Scrap metal is Connecticut's largest single export commodity by weight.

Inadequate channel depths result in navigation inefficiencies in transporting goods into and out of the harbor. To reach the terminals, large ships must lighter outside the breakwaters, or be light-loaded at their port of origin, and/or experience delays while waiting for favorable tide conditions, or some combination of all three. Deeper and wider navigation features (main channel and turning basin) are needed to increase the navigation efficiency and safety of New Haven Harbor.

Resolutions of the U.S. Senate in 2007 called for a *feasibility* study to examine navigation improvements at New Haven Harbor. The USACE and the New Haven Port Authority signed a feasibility study cost sharing agreement in December 2015 to conduct the requested study. The feasibility study is on-going. *Navigation improvement alternatives evaluated included project depths from 37 to 42 feet. The result of this evaluation identified the 40-foot*

depth plan as the recommended plan. The other navigation improvement alternatives considered also contribute to the national economy but to a lesser extent. The recommended plan will deepen the existing Federal main ship channel, turning basin, and maneuvering area from a depth of -35 feet to -40 feet MLLW with incidental widening of the channel, turning basin, and bend easing.

In addition, the study evaluated *and recommended* various dredged material disposal alternatives including beneficial use (e.g., oyster habitat and marsh creation, historic disposal mound capping, filling seafloor borrow pit, *rock reef creation*), and open water placement. The Draft Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) was completed in *September* 2018 and the draft report was released for public review. Public comment *closed on Nov. 15, 2018 and comments* are being addressed. The final report will be completed *in October* 2019.

The Draft IFR/EIS and additional information on the New Haven Harbor Improvement study is available on the Corps website at: http://www.nae.usace.army.mil/Missions/Projects-Topics/New-Haven-Harbor/.

NORTH COVE, CONNECTICUT RIVER BELOW HARTFORD, OLD SAYBROOK (2nd CD) – The state of Connecticut is the sponsor for the maintenance dredging of about 286,000 cubic yards of silty material from the 11-foot entrance channel, 11-foot anchorage, and 6-foot anchorage. Dredging was completed using a mechanical dredge. Environmental approvals/permitting were obtained in June 2017. The work window was Oct. 1, 2017 to Jan. 31, 2018, for the 11-foot channel and anchorage, while the 6-foot anchorage could be dredged from Oct. 1, 2017 to March 31, 2018. The contract was advertised for bid on July 21, 2017. Bids for the work were opened Aug. 24, 2017. The contract was awarded on Sept. 20, 2017 for $4,283,562.50 to DonJon Marine Company, Inc., of Hillside, N.J. Mobilization and dredging work began on Nov. 12, 2017. Work on the 11-foot channel and anchorage was completed on Jan. 31, a requirement of the environmental coordination. A silt curtain was used on all areas of the 6-foot anchorage starting Feb. 1 through the completion of the dredging activities. All dredging work was completed on March 19, 2018 with a total of 298,478 cy removed from the 11-foot channel and anchorage, and 6-foot anchorage. Two previously identified missing moorings were retrieved and returned to the harbormaster for future use.

TREATMENT OF DREDGED MATERIAL FROM LONG ISLAND SOUND DEMONSTRATION, BRIDGEPORT (2nd, 3rd, & 4th CDs) – The Corps has been working with the Bridgeport Port Authority, CT DEEP and CT DOT 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 beneficial reuse. Dredged material that was treated using a soil washing technology was used in a blending operation so material could be used in an unrestrictive manner to meet landscaping needs. The demonstration effort was initiated with sampling performed on treated material. Sampling results were provided to project sponsors and the processors cooperating in the project. Treated material was provided to processors for additional treatment and blending. Post processing testing was completed and samples analyzed. Results of additional treatment were disappointing since blended material did not meet unrestricted use. After additional blending was conducted the material was again analyzed. Blended material has been moved to Silver Sands State Park and seeded to determine the viability to grow vegetation. A report documenting the demonstration project and results is being prepared.

Beach Erosion and Hurricane and Storm Damage Reduction

BROADWAY AND BAYVIEW BEACHES, MILFORD (3rd CD) – An initial appraisal of storm damage reduction along these two shoreline areas in Milford has been initiated. Funding for the analyses was provided through the Disaster Relief Appropriations Act of 2013. The initial appraisal for Bayview Beach was completed in 2014 and approved by North Atlantic Division (NAD) in January 2015. Both problem areas initially appear to support a project from a Benefit-Cost Ratio (BCR) standpoint, as they both include a high density of impacted residential buildings. However, the proposed solutions for both areas carry a high risk of exceeding the federal expenditure limit, failing the BCR test when factoring long term maintenance and beach nourishment costs, as well as being challenged from a real estate acquisition standpoint. Consequently, we do not intend to pursue *further* study at this time.

COSEY BEACH, EAST HAVEN (3rd CD) – An initial appraisal of storm damage reduction along the Cosey Beach area has been initiated. Funding for the analysis was provided through the Disaster Relief Appropriations Act of 2013. The initial appraisal for Cosey Beach was completed in 2014 and approved by North Atlantic Division in January 2015. The proposed solutions for this area carries a high risk of exceeding the federal expenditure limit, failing the BCR test when factoring long-term maintenance and beach nourishment costs, as well as being challenged from a real estate acquisition standpoint. Consequently, we do not intend to pursue *further* study at this time.

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. A public notice on the proposed shoreline erosion protection project was issued on July 6, 2017 with a public comment period ending Aug. 6, 2017. A significant number of comments were received from nearby residents about the project. St. Edmunds is currently addressing a real estate issue that was raised. Once addressed, the District will then work with St. Edmunds on addressing the other remaining comments. The public notice, draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI), with more detailed information, are available on the Corps website at http://www.nae.usace.army.mil/Missions/Civil-Works/Shore-Bank-Protection/Connecticut/Enders-Island/.

FAIRFIELD AND NEW HAVEN COUNTIES COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY (3rd, & 4th CDs) – The U.S. Army Corps of Engineers, New England District, in partnership with the Connecticut Department of Energy and Environmental Protection (DEEP) is actively engaged in a cost-shared study to analyze the feasibility of a Federal project to reduce the risk of coastal storm damage in Fairfield and New Haven counties, Connecticut. The study is authorized under a Resolution by the Committee on Transportation and Infrastructure of the U.S. House of Representatives dated April 29, 2010. The study began in 2016 and following an intensive scoping process, efforts are focused on potential projects within the communities of Fairfield, Stratford and New Haven. The study is expected to be completed in 2020.

FAIRFIELD BEACH, FAIRFIELD (4th CD) – An initial appraisal of storm damage reduction along the Fairfield Beach area has been initiated. Funding for the analysis was provided through the Disaster Relief Appropriations Act of 2013. The initial appraisal for Fairfield Beach was completed in 2014 and approved by North Atlantic Division in January 2015. Although there is a chance that a separable and constructible project could be supported through the Section 103 process, the likelihood of doing so is relatively low, especially when considering the large-scale, comprehensive nature of the coastal storm risk problem in this area. A comprehensive solution would far exceed the federal expenditure limit of the program. Due to the study area overlap and more robust project potential of the ongoing New Haven/Fairfield County General Investigation, the problems identified in Fairfield are currently being investigated under that authority. Consequently a Feasibility Cost Sharing Agreement is not being pursued under Section 103 of the Continuing Authorities Program for this area at this time.

Ecological Restoration/Watershed Projects

CONNECTICUT RIVER ECOSYSTEM RESTORATION STUDY (1st & 2nd CDs) – The Water Resources Development Act of 2007 authorized the Corps to partner with The Nature Conservancy (TNC). A feasibility study was initiated with TNC in 2008. The study investigated alternatives to manage flow for the 73 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. Various tools (e.g. operation and optimization computer models) have been developed to assess these management measures. The final report was released for public use on June 12, 2018. It is available at http://www.nae.usace.army.mil/Missions/Projects-Topics/Connecticut-River/.

Special Studies

LONG ISLAND SOUND NATIONAL ESTUARY 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.

The Long Island Sound National Estuary Program and its partners have made significant strides in implementing the Long Island Sound Comprehensive Conservation and Management Plan, giving priority to reducing nutrient (nitrogen) loads, habitat restoration, public involvement and education, and water quality monitoring.

SILVER JACKETS ICE JAM STUDY & OUTREACH – In January 2018, large ice jams formed in the Housatonic and Connecticut Rivers causing flooding in nearby communities. Both the towns of Kent and Haddam declared a state of emergency due to the flooding.

The Connecticut Silver Jackets team is dedicated to providing technical and outreach assistance relating to flood hazards statewide.

The January 2018 ice jams raised many questions among state and local officials about ice jam mitigation and response. Through this project the Corps' Cold Regions Research and Engineering Laboratory, state and local officials will be able to increase their understanding of ice jam science and the causative mechanisms leading to their formation.

The project proposal which consists of conducting five workshops and one webinar will provide greater understanding of ice jams, possible methods for mitigation and response.

Interagency and International Support

SUPPORT TO THE U.S. DEPARTMENT OF VETERANS AFFAIRS – The New England District has teamed up with a sister federal agency in an effort to improve the care Soldiers are receiving at military hospitals. The U.S. Department of Veterans Affairs (VA) and the Corps of Engineers entered into an interagency agreement in 2001 for the goods and services the Corps may provide to the VA when needed. These include project management, design services, construction management services, environmental services, preliminary technical investigations, surveying, and historical presentation compliance at VA facilities.

In 2008, the VA started exercising its agreement with the Corps in New England and NAE is now supporting the VA with services at several VA facilities in New England. In Connecticut, NAE has VA rehabilitation projects underway. The Inpatient Unit on the 6th floor of the West Haven Medical Center has been completed. In addition, the Phase I of the Mental Health Corrections on the 8th floor was completed in September 2013. The modified Phase II of the 8th floor was completed in October 2015.

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 site (FUDS) properties have been identified in Connecticut. Thirty-three (33) eligible projects were identified as FUDS properties; 32 of the 33 eligible projects are complete. The remaining project, Bombing Area, Barn Island MMP will be completed when priorities and funding allow. There currently are no active FUDS projects in Connecticut.

In the past number of years, dating back to the program's start in the mid-1980s, work has 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 and Silo Closure
Westport Nike Site, Tank Removal and Silo Closure

Fifth District
Waterbury Naval Reserve Rehab Center, Tank Removal
Farmington Nike Site, Tank Removal and Silo Closure

Base Realignment and Closure

STRATFORD ARMY ENGINE PLANT (3rd CD) – Stratford Army Engine Plant was selected for closure under the Department of Defense Base Realignment and Closure (BRAC) of 1995 (Public Law 101-510). The facility is located in the town of Stratford. On behalf of the Army BRAC Office, USACE has implemented a focused feasibility study to develop alternatives for the remediation of the contaminated tidal flats and Outfall 0008 adjacent to the Site. The volume of sediment requiring remediation is approximately 300,000 cubic yards. A Focused Feasibility Study was completed in October 2018. Due to on-going discussions between Army and the developer (Point Stratford Renewal), the Proposed Plan and design work is on hold.

Support to the U.S. Environmental Protection Agency (EPA)

SUPERFUND ASSISTANCE – The New England District provides support to the U.S. Environmental Protection Agency (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 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.

DURHAM MEADOWS SUPERFUND SITE, DURHAM (2nd CD) – The Durham Meadows Superfund Site is located in the town of Durham, Middlesex County, Conn. The Site is centered around the currently operating Durham Manufacturing Company (DMC) and the former locations of Merriam Manufacturing Company (MMC), which was destroyed by fire in 1998. Both companies manufactured metal cabinets, boxes and other items. During their respective operating histories, both companies used various solvents, including trichloroethene (TCE), 1,1,1-trichloroethane, and methylene chloride.

The companies' past disposal of wastewater in lagoons or sludge drying beds, spills at both facilities, and inadequate drum storage practices at MMC contributed

to the contamination at each facility and in the overall area of groundwater surrounding both facilities. Although soil cleanup has been completed, contaminants that continue to be detected in residential drinking water wells include TCE, 1,4 dioxane; dichloroethene; vinyl chloride; tetrachloroethene; trichloroethane; and dichloroethane. In 2005, EPA signed a Record of Decision declaring the drinking water contamination in Durham an unacceptable threat to human health that requires a cleanup response. A key component of the cleanup plan is to provide a new water supply for the contaminated area of Durham, which will be accomplished by extending the municipal water from the neighboring city of Middletown.

The Corps of Engineers, New England District (CENAE) assisted the EPA with water distribution system design reviews and city of Middletown public hearings, leading to a Middletown Zoning Board approval of the construction plans in January 2018. Since that time CENAE, through a contract award to Koman Government Solutions, an Alaskan Native Small Business, has completed the installation of groundwater wells to assess impacts of the new water distribution system operation. Procurement of the water distribution system construction contractor was also recently completed with a $24.4 million award to Ludlow Construction on Nov. 26, 2018. Construction is expected to start in spring 2019 and take approximately three years to complete.

RAYMARK INDUSTRIES, INC. SUPERFUND SITE, STRATFORD (3rd CD) – *In 2016 the* U.S. EPA approved one Record of Decision (ROD) that specified the selected remedies for operable units (OUs) *OU3, OU4, and OU6* of the Raymark Superfund Project located in the town of Stratford, Conn. The Raymark Industries, Inc. Superfund Site includes areas that have been contaminated as a result of the manufacturing processes and presents a threat to human health and the environment. In accordance with the objectives of the ROD, the remedial action requires the excavation and transportation *of approximately 100,000 cubic yards* of Raymark waste material for consolidation and capping. The New England District *awarded the Remedial Action Contract in March of 2019 and initial construction is tentatively scheduled for summer 2019. Concurrent project activities include the completion of the comprehensive remedial design for OU3, OU4 and OU6, including a stormwater conveyance system and pump station design. Substantial remedial action, including the completion of the landfill cap, is expected to be complete by 2023.*

Regulatory Activities

STATUS OF PROGRAM – Department of the Army permits are required from the Corps under Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection, Research and Sanctuaries Act. The Corps reviews permit applications for work affecting navigable waters under its Section 10 authority and the discharge of fill material into all waters, including inland wetlands, under Section 404. A list of Monthly General and Individual Permit Authorizations is provided at www.nae.usace.army.mil/Missions/Regulatory/PermitsIssued.aspx. Relevant environmental documents are available upon written request. For information about Corps jurisdiction of wetlands and whether a permit is required for your work contact the Regulatory Division at 978-318-8338 or 978-318-8335 or by email to cenae-r@usace.army.mil or visit the website at: www.nae.usace.army.mil/Missions/Regulatory.aspx.

GENERAL PERMITS – The District has comprehensive Regional General Permits (RGPs) in place for each of the six New England states that authorize work with no more than minimal adverse effect on the aquatic environment. Up to 98 percent of all permits issued in New England are RGPs. Work eligible under the RGPs is generally approved in less than 60 days. The Corps has issued the statewide Connecticut GPs for minimal impact activities to U.S. waters with a series of multiple GPs covering activity-specific categories. These GPs became effective on Aug. 19, 2016. The previous GP expired on July 15, 2016. The new GPs are organized into 21 activity-specific GPs. To view the public notice and the new GPs visit the website at http://www.nae.usace.army.mil/Missions/Regulatory/PublicNotices.aspx.

CONNECTICUT IN-LIEU FEE PROGRAM – In April 2008, the Corps and EPA issued regulations (33 CFR Part 332 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule) on mitigation which became effective in June 2008. These regulations established a “soft” preferential order for mitigation types with mitigation banking and In-Lieu Fee (ILF) programs preferred over permittee-responsible mitigation.

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. On Aug. 21, 2013, the New England District commander signed the ILF Instrument, along with the sponsor, NAS-CT. The first payment to the program was received in November 2013.

In 2016, the program approved five projects in four service areas totaling $680,825. The projects included tidal wetland restoration, stream enhancement, and preservation of aquatic resources and their upland buffers. In 2017, the program approved nine projects in five service areas totaling $1,046,931. The projects included fish passage and preservation of aquatic resources and their upland buffers. In 2018, the program approved three projects in three service areas totaling $306,841. The projects will preserve 148 acres of wetlands and their associated upland buffers.

Operating Flood Risk Management Projects and Natural Resource Management

The 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 in the state. 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 Connecticut visit the link at www.nae.usace.army.mil/Missions/Recreation/Connecticut.aspx.

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. For more information call 860-283-4900 or 860-283-5540 or visit www.nae.usace.army.mil/Missions/Recreation/BlackRockLake.aspx.

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. A contract to perform dam tower electrical upgrades has been awarded to Swan Contracting from Millis, Mass. in the amount of $95,623.00. For more information call 860-379-8234 or visit www.nae.usace.army.mil/Missions/Recreation/ColebrookRiverLake.aspx.

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 1964 at a cost of $3.3 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 $3.1 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 689 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 www.nae.usace.army.mil/Missions/Recreation/HancockBrookLake.aspx.

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 $6.2 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 on 536 acres including picnicking, swimming, hiking, fishing, and special permit group events. For more information call 203-729-8840 or visit www.nae.usace.army.mil/Missions/Recreation/HopBrookLake.aspx.

The 940-foot-long, 178-foot-high **MAD RIVER DAM (1st CD**) is situated on the Mad River in Winchester. Construction of the $5.4 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, was constructed at a cost of $6.5 million. The 14,050-foot-long, 78-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 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. The hydraulic gate operator valves were replaced in the control tower by Dependable Hydraulic Repair, Inc. for $57,450. For more

information call 860-923-2982 or visit www.nae.usace.army.mil/Missions/Recreation/MansfieldHollowLake.aspx.

The 810-foot-long, 118-foot-high **NORTHFIELD BROOK DAM (5th CD)** was completed in 1965 at a cost of $2.9 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, 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 www.nae.usace.army.mil/Missions/Recreation/NorthfieldBrookLake.aspx.

SUCKER BROOK DAM (1st CD), on a brook of the same name in Winchester, was completed in 1971 at a cost of $2.3 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. *A contract to upgrade the project office and dam electrical systems was awarded to Pro Electric Incorporated from Bethlehem, Conn., in the amount of $247.960.00, and is scheduled for completion in June 2019.* For more information call 860-283-5540 or visit www.nae.usace.army.mil/Missions/Recreation/ThomastonDam.aspx.

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 more than 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 popular for outdoor weddings, family reunions and other group functions. West Thompson Lake Campground offers 24 campsites (11 basic sites, 11 premium sites with electrical and water hookups, and two lean-to shelters) in a quiet, wooded environment. For more information call 860-923-2982 or visit www.nae.usace.army.mil/Missions/Recreation/WestThompsonLake.aspx.

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 $12 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.

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 $859,000 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.

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 $39.4 million have been prevented to date. A contract for Underwater Repairs *was completed in November 2018* by Specialty Diving Services of North Kensington, Rhode Island for $155,200.00. *A contract for concrete repairs has been awarded to Trident Waterproofing, Inc., from Tiverton, Rhode Island in the amount of $20,000.00. Work is expected to be completed in May 2019. A contract for sump discharge repairs was awarded to Chas G. Allen, Inc., from Barre, Mass., in the amount of $36,700.00. Work is expected to be completed in June 2019.* For more information call 203-729-8840 Ext. 370 or visit www.nae.usace.army.mil/Missions/CivilWorks/FloodRiskManagement/Connecticut/StamfordHurricaneBarrier.aspx.