USACE Update Report

Connecticut

US Army Corps of Engineers®
New England District

U.S. ARMY

Current as of January 31, 2024

BUILDING STRONG®

Mission

The missions of the New England District (District) of the U.S. Army Corps of Engineers (USACE) 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, the District processes nearly 2,500 applications per year for work in waters and wetlands of the six-state region. The District employs about 500 professional civilian employees with about 300 stationed at our headquarters in Concord, Massachusetts. Other USACE employees serve at project sites and offices throughout the region.

For more information on the New England District, visit our website at www.nae.usace.army.mil or check us out on X (formerly known as Twitter) at twitter.com/corpsnewengland or on Facebook at facebook.com/CorpsNewEngland.

Navigation

BRIDGEPORT AND BLACK ROCK HARBORS DREDGE MATERIAL MANAGEMENT PLAN (4th CD) – The city of Bridgeport has requested maintenance dredging of Bridgeport Harbor. In response to this request, the District performed a Preliminary Assessment, which concluded that continued maintenance of Bridgeport Harbor is likely justified, but that a detailed Dredge Material Management Plan (DMMP) should be developed. The state and city of Bridgeport have requested that dredging of the Black Rock Harbor Federal Navigation Project in Bridgeport be included in the Bridgeport DMMP. Investigations are being conducted and the current draft DMMP and Environmental Assessment (EA) are being revised to include Black Rock Harbor. Additional work was completed in 2022 and 2023. A draft DMMP and EA are being prepared and will be sent out for public notice in the summer of 2024, coordinated with resource agencies, and then submitted to the USACE NAD office for approval.

CLINTON HARBOR (2nd & 3rd CDs) – The Federal Navigation Project in Clinton consists of a channel 8 feet deep and 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 to less than 2 feet MLLW in some parts making it difficult for vessel traffic to safely traverse the project. The District received funding in FY2017 and FY2018 for a total of $306,000 to undertake dredging of approximately 15,000 cubic yards of material from the 8-foot entrance channel. Environmental coordination supporting the project was completed and a water quality certification permit received in March 2019. The government dredge CURRITUCK started dredging operations on June 10, 2019, and completed maintenance activities on June 25, 2019. The material was placed at the previously used nearshore environment off Hammonasset Beach State Park.

NEW HAVEN HARBOR, NEW HAVEN AND WEST HAVEN (3rd CD) – The existing deep draft 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, petroleum products and various dry bulk and break-bulk commodities. Imports of petroleum products 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 District and the New Haven Port Authority signed a feasibility study cost sharing agreement in December 2015 to conduct the requested study. The feasibility study evaluated navigation improvement alternatives and identified the 40-foot depth plan as the recommended plan. 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 final Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) was completed and posted to the Federal Register on Feb. 28, 2020, for a 30-day review. The Chief of Engineers' report recommending the improvement project was also circulated for state and agency review for 30 days. Reviews closed on March 30, 2020, and the Chief of Engineers' Report was signed on May 7, 2020. Project information is available at http://www.nae.usace.army.mil/Missions/Projects-Topics/New-Haven-Harbor/.

West River: Under a separate effort, the West River shallow draft federal channel is being evaluated for maintenance dredging. A hydrographic survey and physical/chemical sampling and testing were undertaken in the West River, during the fall of 2018 and in March/April 2019, to determine the need for maintenance dredging. The District is currently evaluating the results and working on early environmental analysis needed for NEPA coordination with state and federal resource agencies for the future West River maintenance dredging.

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 (CY) 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, New Jersey. Mobilization and dredging work began on Nov. 12, 2017. Work on the 11-foot channel and anchorage was completed on Jan. 31, 2018, a requirement of the environmental coordination. A silt curtain was used on all areas of the 6-foot anchorage starting Feb. 1, 2018, 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. An environmental monitoring report confirming the validity of using the silt curtain during construction is expected to be completed in 2019. Project close out has begun and approximately $2.7 million of excess funding returned to the non-federal sponsor.

PATCHOGUE RIVER (2nd CD) – The government-owned special purpose dredge CURRITUCK removed approximately 9,400 cubic yards of sand from shoaled portions of the 8-foot-deep entrance channel June 1 to 9, 2019, and placed the sand in a nearshore environment off Hammonasset Beach State Park in Madison.

Disposal Area Monitoring System (DAMOS) Program

The DAMOS program supports the District's navigation mission by providing monitoring and management of dredged material disposal sites in New England waters to document compliance with the environmental and operational conditions placed on aquatic disposal of dredged material. The program

also supports the beneficial use of dredged material through the development of placement techniques and monitoring. In Connecticut, program responsibilities include the management of three regional disposal sites in Long Island Sound, monitoring confined aquatic disposal (CAD) cells in two Connecticut harbors, and monitoring several nearshore placement sites for beneficial use of dredged material. The DAMOS Program monitors the disposal sites in Long Island Sound on a regular basis with the most recent survey performed at the Central Long Island Sound Disposal Site in 2021. Reports are posted to the DAMOS website at http://www.nae.usace.army.mil/Missions/Disposal-Area-Monitoring-System-DAMOS/.

In addition, the DAMOS Program launched a new webpage with information on the beneficial use of dredged material and a new interactive online mapping tool to facilitate matching dredging projects with potential beneficial use sites: https://www.nae.usace.army.mil/missions/disposal-area-monitoring-system-damos/beneficial-use-of-dredged-material/.

Inland Flood Risk Management & Coastal Storm Damage Reduction

ENDERS ISLAND, MYSTIC (2nd CD) – St. Edmund's Retreat Inc., a non-profit organization operating on Enders Island, requested the District's 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, Connecticut, 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 District received funds in 2010 to initiate a feasibility study to determine the federal interest in assisting St. Edmund's with protection alternative analysis and construction. A public notice on the proposed shoreline erosion protection project was issued on July 6, 2017. A significant number of comments were received from nearby residents about the project. St. Edmund's is currently addressing a real estate issue that was raised. Once addressed, the District will then work with St. Edmund's 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 District 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 District, in partnership with the Connecticut Department of Energy and Environmental Protection (DEEP), has completed 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 was 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 were focused on potential projects within the city of New Haven. A draft report was released for public comment in December 2019. The study was completed in January 2021 with the signing of the Chief's Report. The authorized plan includes construction of a 5,800-linear-foot floodwall system parallel to the existing I-95 embankment. The project will include numerous

deployable road closure gates and a large stormwater pump station. Estimated project cost is $133 million which will be cost shared 65 percent federal and 35 percent non-federal. The project is currently in the final design phase.

STILL RIVER, DANBURY, FLOOD RISK MANAGEMENT FEASIBILITY STUDY (5th CD) – The District, in partnership with the city of Danbury, has initiated a detailed feasibility study to investigate flood risk management measures along the Still River corridor upstream of Rose Street in the city of Danbury. This study is being conducted under the authority of Section 205 of the 1948 Flood Control Act, as amended. A Federal Interest Determination Report was completed in June 2021. The District, working with the U.S. Geological Survey agency, is conducting a detailed stream survey of the Still River, to be completed in February 2024. The District will then develop a hydrologic and hydraulic model to predict flooding and to help develop and analyze flood risk management measures. A draft detailed project report and environmental assessment is planned to be available for public review in February 2026.

Special Studies

LOWER CONNECTICUT RIVER HYDRILLA RESEARCH & DEMONSTRATION PROJECT -- The District is working closely with the USACE Engineer Research and Development Center (ERDC), and in partnership with local non-federal stakeholders (CT Agricultural Experiment Station and the Lower Connecticut River Valley Council of Governments), to develop a demonstration project to show best management practices to control and reduce the spread of a new strain of an invasive aquatic hydrilla plant. This unique strain of the plant is choking out shallow water areas, habitat, and boat basins/piers within the lower Connecticut River. The District will lead NEPA scoping and permitting requirements, NEPA document, plan/organize dye studies, bathymetric surveys, T&E species surveys, and manage public outreach and scoping meetings. ERDC executed a contract to conduct herbicide application. Eight sites were refined down to five for inclusion in the study's NEPA document to be treated with an aquatic herbicide. ERDC will lead research on herbicide treatment and chemicals to be used and develop a plan for post treatment monitoring and hydrilla management.

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/education, and water quality monitoring.

SILVER JACKETS FY2023 FLOOD HAZARD WORKSHOPS -- The state of Connecticut DEMHS and DEEP, in coordination with FEMA, USGS, NOAA NWS and USACE, propose to implement a public awareness campaign using state-of-the-art GIS and AI tools to demonstrate the damage that can occur during a Category II or Category III hurricane in actual Connecticut coastal neighborhoods. Outreach and education in the communities of Bridgeport, New Haven and New London will be incorporated into the

campaign. Connecticut Silver Jackets partner agencies will provide technical expertise while directing communities to the CT Flood Toolkit Dashboard, which provides tools available for flood preparation, response, recovery and mitigation, increasing resiliency from floods.

PLANNING ASSISTANCE TO STATES PROGRAM, DREDGED MATERIAL PLACEMENT PLANNING STUDY -- The Connecticut Port Authority (CPA) and USACE are partnering, through the authority provided in Section 22, Water Resources Development Act of 1974, as amended and commonly known as the Planning Assistance to States (PAS) program under the "comprehensive plan" category, to conduct analysis of dredge material needs and placement sites in support of overall statewide coastal dredged material management planning.

The goal of the study is to provide information to support long-term safe and efficient commercial and recreational navigation for ports and harbors in Connecticut. The study will build on the recommendations made in the December 2015 Regional Dredge Material Management Plan for Long Island Sound. Objectives are to compile a detailed characterization and mapping of dredging needs along the Connecticut coastline over the next 25 years, focusing on non-federal needs, and to identify potential dredged material placement sites and facilities to accommodate those dredging needs.

An agreement was executed in March 2023 to conduct the PAS study. The total estimated study cost is $1.5 million. The schedule is to complete the study and a study report by December 2025.

Interagency and International Support

SUPPORT TO THE U.S. DEPARTMENT OF VETERANS AFFAIRS – The District has teamed up with a sister federal agency in an effort to improve the care servicemembers are receiving at military hospitals. The U.S. Department of Veterans Affairs (VA) and the U.S. Army Corps of Engineers entered into an interagency agreement in 2001 for the goods and services USACE 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 the agreement and the District is now supporting the VA with services at several VA facilities in New England. In Connecticut, the District 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) / FORMERLY USED DEFENSE SITES (FUDS) – 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 FUDS properties have been identified in Connecticut. Thirty-three 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) – The Stratford Army Engine Plant (SAEP) was placed on the Base Realignment and Closure (BRAC) list in October 1995. Pursuant to the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510), the BRAC Environmental Restoration Program mandates that environmental contamination on U.S. Army BRAC properties be investigated and remediated, as necessary, using Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) standards prior to divestiture or reuse. In accordance with the CERCLA process, a Decision Document dated February 2021 was signed by the U.S. Army Deputy Chief of Staff, G9/BRAC on 13 March 2021 to remediate the Tidal Flat and Outfall 008 drainage ditch adjacent to SAEP by means

of excavating, treating, testing, transporting, and disposing of approximately 145,000 cubic yards of contaminated marshland and sediment.

In March 2022, at the request of G9/BRAC, USACE prepared draft design documents to be included as part of a solicitation package for competitive acquisition of an environmental remediation services contractor to perform environmental remediation dredging. Environmental remediation of the Outfall 008 drainage ditch was performed in 2022 and completed in April 2023. The Draft Remedial Action Report for the Outfall 008 drainage ditch summarizing remedial activities was submitted to CTDEEP for their review on Jan. 12, 2023. G9/BRAC is currently negotiating remediation of the Tidal Flat with a prospective purchaser.

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

SUPERFUND ASSISTANCE – The 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, Connecticut. 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. Soil cleanup at the MMC was completed in 2012.

Contaminants detected in residential drinking water wells included 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 was to provide a new water supply for the contaminated area of Durham, accomplished by extending the municipal water from the neighboring city of Middletown.

The District 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. Through a June 2018 contract award to Koman Government Solutions, an Alaskan Native small business, the District completed the installation of groundwater wells to assess impacts of the new water distribution system operation. The water distribution system construction contract was awarded to Ludlow

Construction, Ludlow, Massachusetts, on Nov. 26, 2018. After significant stakeholder coordination and a lengthy submittal review and approval process, a groundbreaking ceremony was held Sept. 17, 2019, in Durham. On July 18, 2022, the $29 million Water Distribution System was accepted by the Connecticut Department of Public Health and began providing potable water to Durham residents. The new system includes a 790,000-gallon water tank, Booster Station, Meter Vault, Pressure Reducing Vault, 49 new fire hydrants, six miles of waterline, and 26,000 feet of copper pipe installed into residential homes and public schools. Minor punch list items remain.

The removal of contaminated soils at the DMC facility is currently in the procurement phase. The successful contractor will remove contaminated soils down to bedrock at several locations at the DMC facility, reducing the contamination load to groundwater. Work is expected to begin in 2024.

RAYMARK INDUSTRIES INC. SUPERFUND SITE, STRATFORD (3rd CD) – In 2016, the EPA approved one Record of Decision (ROD) that specified the selected remedies for operable units (OUs) OU3, OU4 and OU6 for the Raymark Superfund Project (the Site) located in the town of Stratford, Connecticut. The Site includes areas that have been contaminated as a result of manufacturing processes and present a threat to human health and the environment. In accordance with the objectives of the ROD, the remedial action requires the excavation, transportation, consolidation and capping of approximately 100,000 cubic yards of Raymark waste material in town. The District awarded the Remedial Action Contract in March 2019, and the remedial action began in July 2020.

Completed project activities include the construction of a visual/sound barrier and haul road to be utilized for the consolidation effort and the completion of a comprehensive remedial design for OU3, OU4 and OU6, including a stormwater conveyance system and pump station design. The cleanup is well underway with approximately 25 properties fully remediated, and approximately 75,000 cubic yards of hazardous soil safely placed at the ballfield consolidation area.

In addition to the cleanup activities, the stormwater system improvement contracts have been awarded and construction is underway. Substantial remedial action, including the completion of the consolidation area cap, is expected to be complete by 2024.

Regulatory Activities

STATUS OF PROGRAM – Department of the Army permits are required from USACE 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. USACE reviews permit applications for work affecting navigable waters of the United States under its Section 10 authority, and the discharge of fill material into all waters of the U.S., including inland wetlands, under Section 404. A list of certain permits and other actions is available at https://www.nae.usace.army.mil/Missions/Regulatory/permits-Issued/. Relevant environmental documents are available upon written request.

For information about USACE jurisdiction of waters of the U.S. and whether a permit is required for your work, contact the Regulatory Division at 978-318-8338, 978-318-8335, email cenae-r@usace.army.mil, or visit the District website at https://www.nae.usace.army.mil/Missions/Regulatory/.

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 District 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 Dec. 15, 2021. The previous GP expired on Aug. 19, 2021. The 2021 GPs are organized into 23 activity-specific GPs. To view the public notice and the GPs, visit https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/.

CONNECTICUT IN-LIEU FEE PROGRAM – In April 2008, the District and the 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 District notified NAS-CT that they could proceed to develop a draft ILF instrument. On Aug. 21, 2013, the 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.

In 2019, the program approved seven projects in four service areas totaling $584,178. The projects include preservation of over 100 acres of wetlands and their associated buffers.

In 2021, the program approved six projects in four service areas totaling $179, 070. The projects include stream restoration, tidal wetland rehabilitation, and preservation of wetland and their associated buffers.

In 2023, the program received two proposals to restore tidal wetlands.

Operating Flood Risk Management Projects and Natural Resource Management

The District constructed 12 flood risk management protection dams and three hurricane protection projects in Connecticut. Information on each is provided below. The District, working with agencies of the state of Connecticut, provides quality outdoor recreational opportunities at each of the seven District-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 USACE recreation in New England, visit https://www.nae.usace.army.mil/Missions/Recreation/ or for Connecticut projects, visit https://www.nae.usace.army.mil/Missions/Recreation/Connecticut/.

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. A contract to make repairs to the concrete at the dam intake and on the spillway crest was completed in the fall of 2022. Upcoming work at the project includes replacement of the dam tower lightning protection system and removal of eroded sediment from the reservoir area. For more information, call (860) 283-4900/5540 or visit the District website at https://www.nae.usace.army.mil/Missions/Recreation/Black-Rock-Lake/.

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 replace and improve the heating system in the dam tower has been awarded, with work to be completed in the summer of 2023. For more information, call (860) 379-8234 or visit the District website at https://www.nae.usace.army.mil/Missions/Recreation/Colebrook-River-Lake/.

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 the 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. A contract has been awarded to replace the intake weir stop logs with more durable aluminum logs. Work is expected to be complete in the summer of 2023.

For more information about Hancock Brook Lake, call (203) 729-8840 or visit the District website at https://www.nae.usace.army.mil/Missions/Recreation/Hancock-Brook-Lake/.

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. 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. A $383,000 contract for the repaving of the public parking lot at the Hop Brook Park Beach reached substantial completion in November 2022. Finish work will be wrapped up before the park opens for the 2023 season in May. In addition, a contract has been awarded to replace the damaged roof of the West Lawn Picnic Shelter, which was damaged by Tropical Storm Ida in 2021. For more information about Hop Brook Lake, call (203) 729-8840 or visit the District website at https://www.nae.usace.army.mil/Missions/Recreation/Hop-Brook-Lake/.

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 the 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 $125.5 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. For more information, call (860) 923-2982 or visit the District website at https://www.nae.usace.army.mil/Missions/Recreation/Mansfield-Hollow-Lake/.

NORTHFIELD BROOK DAM (5th CD), the 810-foot-long, 118-foot-high dam 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. Work to upgrade the recreation facilities will continue in 2023, with replacement of the lower restroom facility and improvements to the park water system. For more information about Northfield Brook Dam, call (860) 283-5540 or visit https://www.nae.usace.army.mil/Missions/Recreation/Northfield-Brook-Lake/.

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 the 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, dirt biking 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, which features the only public off-highway motorbike trail system in Connecticut. A contract has been awarded to Lanterra Corp. for repairs and improvements to the roof of the dam control tower. In addition, work is underway by Baltimore Hydraulics Inc. for maintenance and repairs on the flood gate hydraulic operating system. For more information, call (860) 283-5540 or visit https://www.nae.usace.army.mil/Missions/Recreation/Thomaston-Dam/.

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 $67.9 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, disc golf 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. USACE 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 the District website at https://www.nae.usace.army.mil/Missions/Recreation/West-Thompson-Lake/.

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 an estimated $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)** in 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 $1.4 million contract to replace and upgrade the barrier's emergency back-up power system was awarded in September 2022, with work expected to be completed by the summer of 2024. For more information about the Stamford Hurricane Protection Barrier, call (203) 729-8840 Ext. 370 or visit the District website at https://www.nae.usace.army.mil/Missions/CivilWorks/Navigation/Connecticut/Stamford-Harbor/.