



US Army Corps
of Engineers®
New England District

696 Virginia Road
Concord, MA 01742-2751

Public Notice

In Reply Refer to: Mr. Michael Narcisi
nae-pn-nav@usace.army.mil

Planning Division

Date: January 17, 2019

Comment Period Closes: February 15, 2019

30-DAY PUBLIC NOTICE EMERGENCY STREAMBANK PROTECTION PROJECT Connecticut River Lyme, New Hampshire

Interested parties are hereby notified that the U.S. Army Corps of Engineers (Corps), New England District (NAE), plans to perform a riverbank protection project to stabilize approximately 500 linear feet of riverbank along the Connecticut River in Lyme, New Hampshire (Figure 1) involving work in the navigable waters of this District, under the provisions of Section 404 of the Clean Water Act of 1977 (P.L. 95-217) and to authorize such work in accordance with Title 33, Part 230 of the Code of Federal Regulations. Attachment No. 1 lists pertinent laws, regulations, and directives.

Purpose of Work: Erosion is occurring at a section of bank along the western side of River Road, just south of North Thetford Road in Lyme (Figure 2), where the bank is being undermined (Figure 3). The erosion is threatening the integrity of adjacent sections of River Road that immediately abut the riverbank and will ultimately threaten the utilities and residential properties adjacent to the roadway itself. Although much of the riverbank along the eroded sections is vegetated with shrubs and trees, in some locations the forested banks have been undercut creating cavities that extend back into the bank approximately four to six feet. Above the eroded banks, tension cracks have appeared on River Road running parallel to the river. The unstable areas are heavily undercut, and the bank above it (approximately 30-foot high) consists of unstable fill material. The slope ranges from 1 foot vertical to 1-2 feet horizontal. Presently, very little distance exists between the road and the undercut bank. The town estimates that the active erosion experienced is at a rate of 2 feet per year. If left unchecked, the continued long-term erosion of the riverbank will continue to endanger the roadbed and associated utilities to where they could collapse into the river limiting access to and use of the residential properties located along the eastern side of the road.

The proposed project is to provide streambank protection for this area and is being conducted under Section 14 of the Flood Control Act of 1946, as amended. Section 14 provides for the U.S. Army Corps of Engineers to participate in the planning and construction of economically justified stream/river-bank erosion control projects in situations where public facilities are threatened. The feasibility study is currently being completed and upon its approval by Corps

Division staff and subject to obtaining Federal and local funding, the District will commence final design and construction activities. Section 14 requires a complete and comprehensive solution that solves the immediate erosion problem in a manner that does not obligate or imply future Federal participation. Once Section 14 projects are completed, they are relinquished to the local non-Federal sponsor for operation and maintenance. The goal of the process is the protection of public infrastructure from present and future erosion with minimal ecological consequences. Attachment 1 includes a list of pertinent laws, regulations, and directives considered in project planning. The project location, a photograph depicting existing conditions, and the proposed plan are detailed in Figures 1-4.

Project Description: The proposed action consists of placing a stone revetment along a 500 linear-foot section of eroding Connecticut River bank located south of North Thetford Road, and running parallel to River Road (Figure 2). The stone revetment was considered to be the most practical solution to alleviate the erosion problems affecting the area. The stone revetment alternative will armor the slope and toe of the riverbank, while allowing the river itself to remain largely undisturbed (Figure 4). Above the revetment, all trees and shrubs will be cleared due to the narrowness of the roadway shoulder before the steep slope down to the river. Access will be required all along the shoulder for the placement of stone.

To construct the revetment, approximately 5,100 cubic yards of interlocking, 18-inch riprap stone will be placed along the 500-linear foot segment of eroding bank. The initial phase will involve the excavation of the eroding bank to create a constant slope, as well as to establish a stable foundation for the riprap slope. The bedding material will be composed of an initial 1-foot layer of sand followed by another 1-foot layer of gravel before the larger stone is placed. The interlocking riprap will extend between 20-60 feet up the embankment (approximately 1:2 slope) and towards River Road (Figure 4). Excavated topsoil will be retained and placed at the top of the bank for re-use. Once the revetment is complete, native shrubs and a grass seedmix will be planted as cover to reduce erosion and to stabilize the upper bank. No trees will be allowed to grow within or near the engineered slope as their rootballs are capable of destabilizing the revetment, which would ultimately lead to its failure over time.

Waterward of the river's ordinary high water mark, the riprap will extend 2-5' beneath the water's surface leading to a permanent discharge of fill material over 2,600(+/-) square feet of river bottom. Subsequently, this will change the unconsolidated river bottom habitat to riprap stone. The work will be performed behind a cofferdam, which will reduce potential increased turbidity levels downstream and protect aquatic habitat. The temporary cofferdam will encompass 100-foot segments of the work area to allow for work "in the dry" and advance downstream as the work progresses and removed upon its completion. To enhance the quality of in-stream fish habitat along the revetment, artificial undercuts, or bendway weirs, may be constructed along the toe of the riverbank to provide habitat features. Appropriate erosion control measures such as silt fence, silt socks, or straw wattles will be implemented throughout construction.

Construction is planned to begin during fall of 2020 and take up to two months to complete. A private construction company under contract to the Government will perform the work.

Project Alternatives: The following proposals were considered as solutions to stabilize the stream bank as part of the alternative analysis process.

No Action - The No Action Alternative, or without project condition, serves as a baseline against which the Proposed Action and alternatives can be evaluated. Evaluation of the No Action Alternative involves assessing the environmental effects that would result if the proposed action did not take place. If no action is taken to protect the riverbank in the area, continued erosion will cause the failure of River Road and its associated utility poles. Significant damage to the road would follow and would eventually lead to additional areas becoming undermined and thus further collapsing of the riverbank. Therefore, 'No Action' would not be an acceptable solution in this case.

Road Relocation - In this alternative, the road as well as the adjacent utilities would be relocated to the east (landward) of their existing location. This would require that sufficient vacant land exist along the roadway's eastern shoulder to accommodate the new road realignment. However, residential properties with structures are located directly adjacent to River Road. These would also need to be moved to create space for the new road section. The cost involved with this alternative would be prohibitive. Therefore, road relocation was not considered to be an acceptable alternative.

Sheet-Pile Wall - In this alternative, a sheet-pile wall would be constructed at the toe of the embankment to prevent further erosion. However, boring logs near the river's edge encountered shallow bedrock, thus would allow only 12-20 feet of sheeting embedment to support heights of 20 feet or more, depending on the location. Typically, sheet piles require embedment of 1.5 to 2 times the unsupported height. Therefore, this was not considered to be an acceptable alternative.

Gabions - In this alternative, gabions (stone-filled rectangular shaped wire baskets) would be placed along the toe of the bank and stacked to form a steep near vertical stepped wall to stabilize the bank and to protect it from further erosion. However, the instability and steepness of the toe and shoreline would prevent the gabions from resting on a stable foundation. Therefore, this alternative was also rejected.

Precast Modular Block Retaining Wall – This alternative is similar to the stone slope revetment (described above). However, in this alternative a precast concrete modular retaining wall would be placed at the base of the toe and extend vertically above the water (and backfilled from the bank) to stabilize the bank from further erosion. Installation of this type of wall would require significant more excavation and stabilization of the toe to provide sufficient bearing capacity in the loose embankment soils. This alternative may be implemented instead of, or in combination with the stone slope revetment if a significant rate of erosion in the near future continues to erode the toe of slope, which would render the stone slope design impracticable due to the loss of support material.

Additional Information: Additional information may be obtained from the Planning Division of the U.S. Army Corps of Engineers, Mr. Christopher Hatfield, the Project Manager, and Mr. Michael Narcisi, of the Environmental Resources Section at the address shown above. These individuals may also be reached by phone or email, Mr. Hatfield at 978-318-8520 or email at Christopher.L.Hatfield@usace.army.mil and for Mr. Narcisi at 978-318-8454 or email at Michael.J.Narcisi@usace.army.mil.

Coordination: The proposed work is being coordinated with the following Federal, State, and local agencies:

Federal

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

National Marine Fisheries Service: Protected Resources Division and Habitat Conservation Office

State

New Hampshire Fish and Game Department: None-game and Endangered Wildlife Program, and Inland Fisheries Division

New Hampshire Department of Environmental Services – Water Quality Certification Program

New Hampshire State Historic Preservation Office

Local

Town of Lyme

Other Information: Local sponsor(s): Town of Lyme, New Hampshire is the local sponsor for the proposed project.

Purpose and Need for Work: The purpose of the proposed project is to stabilize and to protect the 500 linear foot section of severely eroding riverbank that is threatening the integrity of River Road, its underlying public utilities, private property east of the road, and access to private properties.

Floodplain Management: In accordance with Executive Order 11988, the Corps of Engineers has determined that the proposed project will not contribute to negative impacts or damages caused by floods.

Cultural Resources: The proposed riverbank protection project will not impact any structures or sites of historic, architectural or archeological significance as defined by the National Historic Preservation Act of 1966, as amended. The New Hampshire State Historic Preservation Officer (SHPO) concurred with this finding.

Endangered Species: The proposed project will have no permanent negative impacts on any state or Federally-listed rare, threatened, or endangered species. The National Marine Fisheries Service, Protected Resources Division, concurred that the construction of the described project,

proposed project will have no effects on the Federally endangered Dwarf wedgemussel, also that the work activities are not likely to adversely affect the Federally-threatened Northern Long-eared bat. The completion of this project will not have any impacts to any state-listed threatened, endangered, or species of special concern in the State of New Hampshire.

Essential Fish Habitat: The proposed project will not negatively impact Essential Fish Habitat (EFH) for species listed under the Magnuson Stevens Conservation Act.

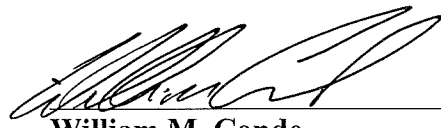
Federal Permit Requirements: An application will be submitted to the New Hampshire Department of Environmental Services - Water Quality Certification Program, under Section 401 of the Clean Water Act of 1977. A Clean Water Act Section 404(b)(1) evaluation is provided as an attachment to the draft Environmental Assessment.

Environmental Impacts: An Environmental Assessment of the proposed work has been prepared and will be available upon request to either Mr. Hatfield, or Mr. Narcisi at the telephone numbers noted above.

I have made a preliminary determination that an Environmental Impact Statement for the proposed riverbank protection project is not required under the provisions of the National Environmental Policy Act of 1969. This determination will be reviewed in light of the facts submitted in response to this notice, and if appropriate, a Finding of No Significant Impact (FONSI) will be developed.

Comments: Comments are invited from all interested parties and should be directed to me at, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts, 01742-2751, ATTN: Planning Division, within 30 days of this notice.

15 JAN 2019
Date



William M. Conde
Colonel, Corps of Engineers
District Engineer

Attachments

Attachment 1

PERTINENT LAWS, REGULATIONS AND DIRECTIVES

American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996.

Clean Air Act, as amended (42 U.S.C. 7401 et. seq.)

Clean Water Act, as amended (33 U.S.C. 1251 et. seq.)

Endangered Species Act of 1973 as amended (16 U.S.C. 1531 et seq)

Federal Water Project Recreation Act, as amended (16 U.S.C. 460L-12 et. seq.)

Fish and Wildlife Act of 1956 (16 U.S.C. 472a et. seq.)

Fish and Wildlife Coordination Act (16 U.S.C. 661-667e)

Land and Water Conservation Fund Act of 1965, as amended (16 U.S.C. 460L-4 et. seq.)

Magnuson-Stevens Fishery Conservation and Management Act, (16 U.S.C. 1801 et. seq.)

National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347)

National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.)

Preservation of Historic and Archaeological Data Act of 1974, as amended, 16 U.S.C. 469 et seq.
This amends the Reservoir Salvage Act of 1960 (16 U.S.C. 469).

Watershed Protection and Flood Prevention Act, as amended, 16 U.S.C. 1001 et seq.

The Wild and Scenic Rivers Act (16 U.S.C. 1271 et. seq.)

Executive Order 11988, Floodplain Management, 24 May 1977

Executive Order 11990, Protection of Wetlands, May 24, 1977

Executive Order 11593, Protection and Enhancement of the Cultural Environment, 13 May 1971

Executive Order 13007, Accommodations of Sacred Sites, 24 May 1996.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority

Populations and Low-Income Populations, 11 February 1994.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, 21 April 1997.

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, 6 November 2000.

White House Memorandum, Government-to-Government Relations with Native American Tribal Governments, 29 April 1994.

Figure 1. Project Locus Map

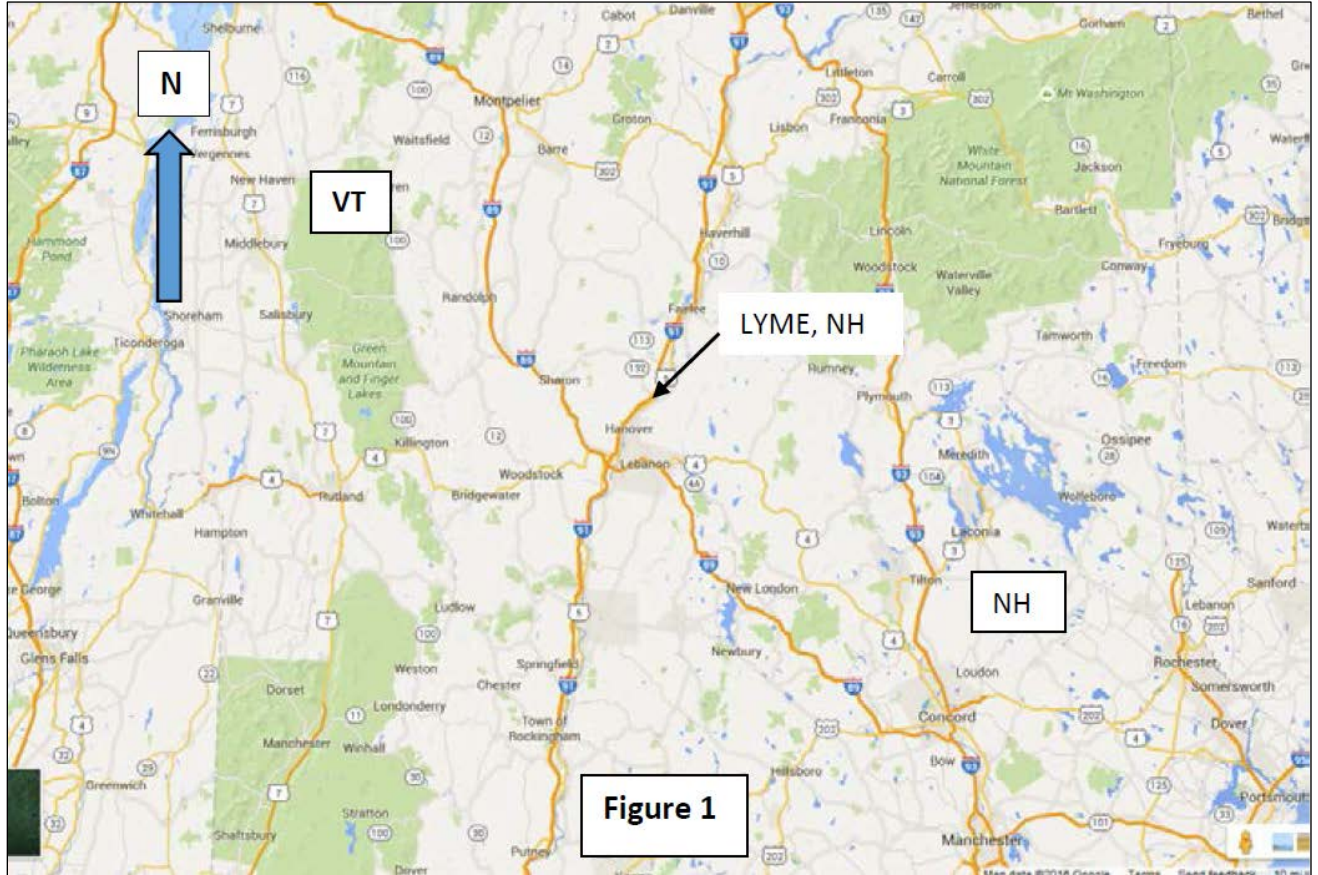


Figure 2. Work site location of the proposed 500 linear foot riverbank protection project, Lyme, NH

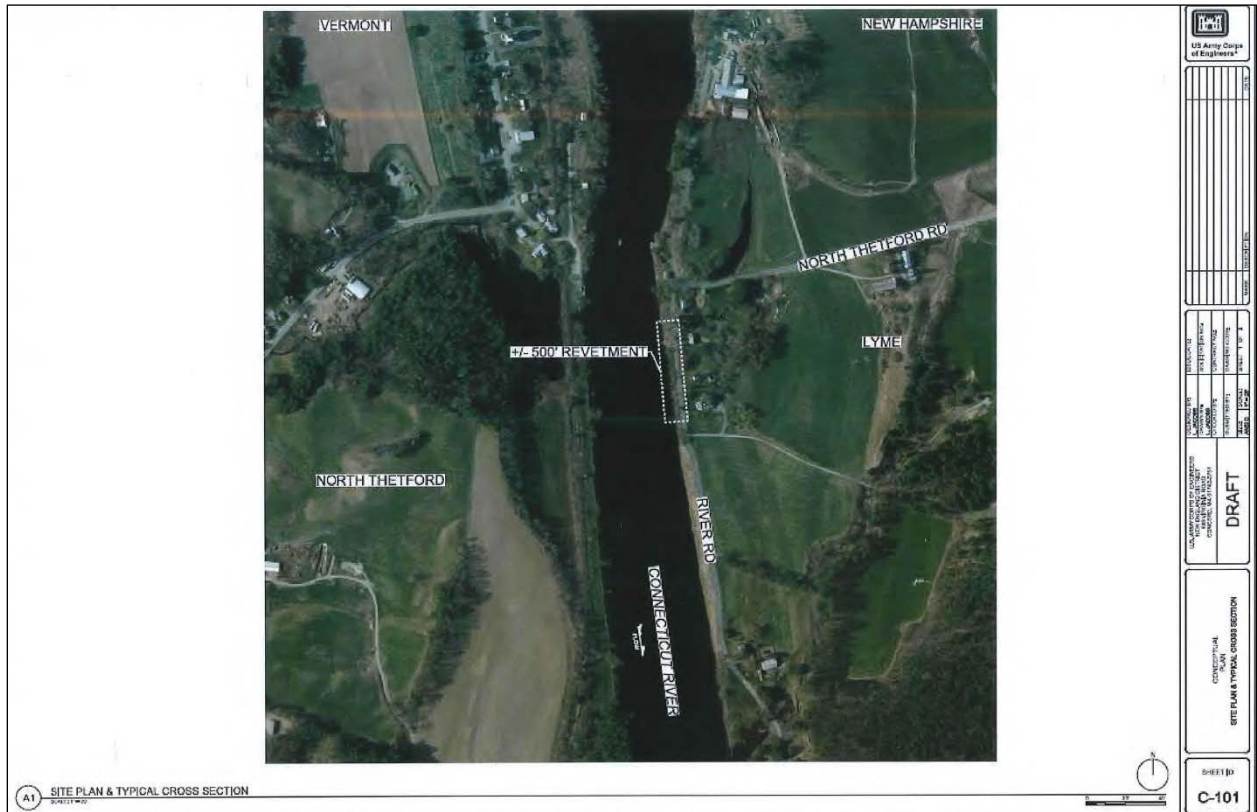


Figure 3. Severely eroding Connecticut River bank



