



FEMA

FINDING OF NO SIGNIFICANT IMPACT

VERMONT ROUTE 9 WHETSTONE BROOK FLOOD MITIGATION PROJECT
VERMONT AGENCY OF TRANSPORTATION – BRATTLEBORO/MARLBORO
WINDHAM COUNTY, VERMONT
PDMC-PJ-01-VT-2018-002

INTRODUCTION

Vermont Emergency Management, the grant applicant, submitted to the Federal Emergency Management Agency (FEMA) a Pre-Disaster Mitigation (PDM) grant application on behalf of the Vermont Agency of Transportation (VTans), the grant subapplicant. The PDM Grant Program is authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 United States Code (U.S.C.) 5133 and provides assistance to eligible state, territory, and local governments, as well as federally recognized tribal governments to help implement sustained pre-disaster natural hazard mitigation programs.

Under the Proposed Action, a combination of standard flood and erosion mitigation practices would be employed to protect Vermont Route 9 and adjacent properties along a 3.7-mile segment of the Whetstone Brook in Brattleboro and Marlboro, VT. These mitigation measures would include: construction of flood benches to increase flood storage and reduce flood velocities, repair and reinforcement of road embankments where past armoring is failing, removal of berms that currently channel flood waters towards the road and increase the risk of road failure from erosion, restore connectivity to the floodplain by removing sediment bars that prevent flood waters from accessing the floodplain, restore flood chutes to divert flood waters away from Vermont Route 9 and minor road grade adjustments to raise portions of Route 9 slightly above floodplain elevation. Incidental work required to complete the project would include approximately 4 acres of clearing and grubbing, to include the removal of individual trees, temporary utility relocation, temporary traffic barriers and traffic control

Flood mitigation measures would be conducted at five sites along Vermont Route 9 and the Whetstone Brook in Marlboro and Brattleboro, VT:

1. **Site 1** is located near an automotive garage in Marlboro where the Whetstone Brook bends around a parking lot built on historic fill placed in the floodplain and then heads directly toward the Route 9 Road embankment. Work at this location would include constructing a combination of stacked stone toe walls (Riprap, Heavy Type) along the river's edge and a stone fill/riprap (Type IV) sloping embankment. The riprap wall is appropriate at narrower sections where a sloping embankment would constrict the channel or encroach on the available space of the existing park lot. The sloping embankment of stone fill/riprap is appropriate for sections where adequate space exists, and this approach would not encroach on the bankfull channel. For both the wall and slope sections, vegetation would be planted in between the stone joints to resist erosion and add riparian vegetation.
2. **Site 2** is located near the Marlboro-Brattleboro town line where the waterway is currently in a confined condition from past actions and events. Work at this location would include the removal of berms and historic fill from the floodplain, construction of four sections of stacked stone toe wall (1,075 LF), repair and reinforcement of road embankment with riprap where existing armoring is failing, creation of flood benches

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at several locations to match elevations on nearby bars, removal and resetting of guardrails, replacement of existing 18-inch corrugated polyethylene pipe (CPEP) cross-drain with 24-inch CPEP, and minor roadway grade adjustments to raise Vermont Route 9 slightly above floodplain elevation. This site will require some tree removal. Like Site 1, the riprap wall is appropriate at narrower sections where a sloping embankment would constrict the channel or encroach on the available space of the existing park lot. The sloping embankment of stone fill/riprap is appropriate for sections where adequate space exists, and this approach would not encroach on the bankfull channel. For both the wall and slope sections, vegetation would be planted in between the stone joints to resist erosion and add riparian vegetation.

3. **Site 3** is located immediately downstream of Stark Road; previous armoring at this site is failing where repairs were performed following past flood damages. Work at this location would remove and replace the existing failed stacked stone toe wall but would pull back the newly constructed wall to restore bankfull width of the river channel. Traditional sloping riprap is not proposed at this location because space does not exist without filling in the channel. Vegetation would be planted in between the stone joints of the wall to resist erosion and add riparian vegetation. The guardrail at this location would also be replaced.
4. **Site 4** is located across from a used car dealer in Brattleboro where the river is very narrow, and the banks are eroding. Work at this location would construct a stacked stone toe wall. Traditional sloping riprap is not proposed at this location because space does not exist without filling in the channel. Vegetation would be planted in between the stone joints of the wall to resist erosion and add riparian vegetation. Work at this location would also include installing a guardrail and placing fallen trees in the stream (parallel to stream flow) to add roughness and provide habitat.
5. **Site 5** is located upstream of and under Bridge 51 where the Whetstone Brook passes under Route 9. Work at this location would include repairing voids in the bridge abutment armor, removing the accumulated sediment upstream of the bridge, reforming a flood chute and creation of a flood bench. Work would also include installing a section of riprap with vegetation in the joints of the stone to protect a house as flows approach the bridge.

Besides the Proposed Action and the No Action Alternative, two alternative courses of action were considered and dismissed in the EA.

Relocation of Vermont Route 9 to a new alignment beyond the floodplain and river corridor of Whetstone Brook was dismissed as not feasible. Although this would be the ideal alternative to reduce risk, it is not feasible due to the narrow and steep valley topography and existing developed land use within the corridor.

A vegetative-only solution was considered but dismissed since it is not technically feasible. At all sites, the erosive forces are too strong for vegetative practices alone to reduce erosion and protect public infrastructure; therefore, this alternative would not meet the purpose and need.

Under the No Action alternative, there would be no federal financial assistance provided for repairs or measures to mitigate against future flood damage along Vermont Route 9. During storm events, the Whetstone Brook corridor would continue to experience erosion of the stream banks, the stream bottom, and Route 9 and would remain vulnerable to flood damage. Under this alternative, Route 9 would likely be subject to continued flood damage and require intermittent repairs resulting in the disruption of travel, including the passage of essential public services, along the Route 9 corridor. The No Action alternative does not meet the purpose and need for the project.

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ENVIRONMENTAL IMPACT EVALUATION

FEMA prepared the Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321–4347 (2000), as implemented by the regulations promulgated by the President’s Council on Environmental Quality (40 C.F.R. §§ 1500–1508) and in accordance with FEMA Instruction 108-1-1, *Instruction on Implementation of the Environmental Planning and Historic Preservation Responsibilities and Program Requirements*, and DHS Instruction Manual 023-01-001-01 *Implementation of the National Environmental Policy Act*.

The Proposed Action is anticipated to have long-term beneficial effects (moderate to major) on floodplains, transportation, and public health and safety.

The Proposed Action, as described in the EA, would not result in any significant adverse impacts on the natural and human environment. Negligible to minor impacts are anticipated on geology and soils, air quality, water quality, vegetation, wildlife and fish, threatened and endangered species, noise levels, public services and utilities, and environmental justice. Whenever necessary, conditions are required to avoid, minimize, and mitigate potential adverse effects. With the implementation of these conditions, none of the potential effects would be significant.

MITIGATION COMMITMENTS AND PROJECT CONDITIONS

VTrans is responsible for obtaining all required federal, state, and local permits and clearances. While a good faith effort was made to identify all necessary permits in the EA, the following list may not include every approval or permit required for this project.

1. Before construction begins, VTrans must obtain any required Clean Water Act Section 404 and 401 permits from the U.S. Army Corps of Engineers (USACE), Angela Repella (angela.c.repella@usace.army.mil, 802-872-2893), and the Vermont Agency of Natural Resources (ANR) Watershed Management Division (ANR.WSMD401@vermont.gov, 802-828-1115), respectively, and comply with all terms and conditions of the issued permits. VTrans must provide a copy of the approvals/permits, or documentation from the permitting agencies that approvals/permits are not required, to the State and FEMA for inclusion in the administrative record at or before closeout.
2. Before construction begins, VTrans must obtain any required permits from the VT ANR River Management Program, Scott Jensen (scott.jensen@vermont.gov, 802-490-6962). VTrans must comply with all terms and conditions of the issued permit. VTrans must provide a copy of the approval/permit, or documentation from the permitting agency that an approval/permit is not required, to the State and FEMA for inclusion in the administrative record at or before closeout.
3. Before construction begins, VTrans must coordinate with the Vermont Department of Environmental Conservation, Megan McIntyre (megan.mcintyre@vermont.gov, 802-490-6110), to determine if a Construction Stormwater Discharge Permit is required to comply with the National Pollution Discharge Elimination System requirements under Section 402 of the Clean Water Act. VTrans must comply with all terms and conditions of the issued permit. VTrans must provide a copy of the approval/permit, or documentation from the permitting agency that an approval/permit is not required, to the State and FEMA for inclusion in the administrative record at or before closeout.
4. Before construction begins, VTrans must obtain approval from the local permitting official responsible for floodplain development to demonstrate that the Proposed Action is consistent with the criteria of the National Flood Insurance Program. VTrans must comply with all terms and conditions of the issued permit. VTrans must provide a copy of the approval/permit, or documentation from the permitting agency that an approval/permit is not required, to the State and FEMA for inclusion in the administrative record at or before closeout.

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5. Before construction begins, VTrans must obtain any required approval from the VT ANR Flood Hazard Area and River Corridor Permit Program, John Broker-Campbell (john.broker-campbell@vermont.gov, (802) 490-6196). VTrans must comply with all terms and conditions of the issued permit. VTrans must provide a copy of the approval/permit, or documentation from the permitting agency that an approval/permit is not required, to the State and FEMA for inclusion in the administrative record at or before closeout.

Additionally, FEMA would require the subapplicant to adhere to the following conditions during project implementation. Failure to comply with grant conditions may jeopardize federal funds.

1. In the event of the discovery of archaeological deposits (e.g. Native American pottery, stone tools, shell, old house foundations, old bottles) VTrans and their contractor must immediately stop all work in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. VTrans and their contractor must secure all archaeological discoveries and restrict access to discovery sites. VTans must immediately report the archaeological discovery to the applicant (Vermont Emergency Management (Stephanie A. Smith, State Hazard Mitigation Officer, 802-989-6793)) and the FEMA Deputy Regional Environmental Officer (Mary Shanks, 617-901-2204); FEMA will determine the next steps.
2. In the event of the discovery of human remains, VTrans and their contractor must immediately stop all work in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. VTrans and their contractor must secure all human remains discoveries and restrict access to discovery sites. VTrans and their contractor must follow the provisions of applicable state laws, including 13 VSA 3761 (Unauthorized Removal of Human Remains), 13 VSA 3764 (Cemeteries and Monuments – Grave markers and historic tablets) and 18 VSA 5212 (Permit to Remove Dead Bodies), or any amendments or supplanting laws and regulations. Violation of state law will jeopardize FEMA funding for this project. VTrans will inform the Office of the Chief Medical Examiner (Dr. Steven Shapiro, 802-863-7320), the State Archaeologist (Dr. Jess Robinson, 802-272-2509), the applicant (Vermont Emergency Management (Stephanie A. Smith, State Hazard Mitigation Officer, 802-989-6793) and the FEMA Deputy Regional Environmental Officer (Mary Shanks, 617-901-2204). FEMA will consult with the SHPO and Tribes, if remains are of tribal origin. Work in sensitive areas may not resume until consultation is completed and appropriate measures have been taken to ensure that the project is compliant with the National Historic Preservation Act.

PUBLIC AND AGENCY INVOLVEMENT

To solicit input on the project and its potential impacts, FEMA distributed an EA scoping document to the following entities on February 04, 2020:

- U.S. Army Corps of Engineers, New England District, Vermont Project Office
- U.S. Department of Housing and Urban Development, Region 1 Environmental Office
- U.S. Fish and Wildlife Service, New England Field Office
- Vermont Agency of Natural Resources, Rivers Program
- Vermont Agency of Natural Resources, Wetlands Program
- Vermont Agency of Transportation
- Vermont Emergency Management
- Vermont Fish and Wildlife Department

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Following the distribution of the scoping checklist, FEMA received correspondence from two stakeholder agencies:

- **USACE:** On April 10, 2020, requested a copy of the project plans for their reference and an anticipated timeline of FEMA project review and VTrans permit applications.
- **VT ANR, Wetlands Program:** On February 04, 2020, VT ANR Wetlands Program provided comments that included the following notes:
 - Any wetland adjacent to surface water is automatically jurisdictional (as Class II) until determined otherwise by the Wetlands Program.
 - Class II wetlands have a regulated buffer zone of 50 ft.
 - Recommended a wetland consultant field review the project area (including buffer zone) during the growing season and portray the wetlands and assessment area on site plans.
 - Recommended that a site visit by the Wetlands Program may be an expedition review plan.
 - Wetlands Program would be able to review plans when complete.
 - The project was assigned Wetlands Program #2020-076 for tracking purposes.

FEMA made the draft EA available to agencies and the public for a review and comment for a period of 15 days from January 14, 2022 through January 28, 2022. Public notice of the draft EA's availability for review was published in the Brattleboro Reformer and the EA was made available electronically on the Vermont Agency of Transportation's website at <https://vtrans.vermont.gov/highway/project-delivery-environmental/permitting-review> (direct link at https://vtrans.vermont.gov/sites/aot/files/highway/documents/environmental/VAOT%20Whetstone%20Brook%20DRAFT%20EA%20508_2022.01.05.pdf) and FEMA's website at [Region 1 - Environmental Documents and Public Notices | FEMA.gov](#). A hard copy of the draft EA was provided at the Brattleboro Town Clerk's Office, Brattleboro Municipal Center, 230 Main Street, Suite 108, Brattleboro, VT 05301. No substantive comments were received during the public comment period on the draft EA.

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Based upon conditions and information contained in the PDMC grant application and the EA, and in accordance with the FEMA Instruction 108-1-1, *Instruction on Implementation of the Environmental Planning and Historic Preservation Responsibilities and Program Requirements*; the DHS Instruction Manual 023-1-1; CEQ regulations in Title 40 C.F.R., Parts 1500-1508 National Environmental Policy Act Implementing Regulations; Executive Orders (EOs) addressing floodplains (EO 11988), wetlands (EO 11990), and environmental justice (EO 12898); and VTrans's anticipated adherence to the prescribed standard and special conditions, FEMA has determined that the Proposed Action would not have significant impacts on the quality of the natural and human environment. As a result of this FONSI, an environmental impact statement will not be prepared and the project, as described in the grant application and the EA with the conditions listed above, may proceed.

FEMA APPROVAL AUTHORITY:

Eric Kuns, FEMA Region 1 Senior Environmental Protection Specialist

HAZARD MITIGATION PROGRAM ENDORSEMENT:

Richard Verville, FEMA Region 1 Hazard Mitigation Branch Chief