

Town of Plainfield, Vermont
Hazard Mitigation Grant Program

Supplemental Filing
September 4, 2024

Action Plan

The Town of Plainfield has been encouraged to submit a Hazard Mitigation grant pre-application (HMGP)¹ through VEM to resolve and mitigate impacts associated with a long history of continuous, severe flooding in the Great Brook watershed, causing major damage and threat to human life as evidenced in our pre-application.

It has become clear that we cannot rebuild in the same manner as before and expect a different outcome. Therefore, it is our desire to become a more resilient community by pursuing “nature-based solutions” in strict conformance with FEMA Rules, Regulations and Guidelines for “Hazard Mitigation” (HMA)² in the entire Great Brook Watershed. This will be combined with two major structural improvements in the Village of Plainfield:

- a) Removal of Bridge #21 on Brook Road allowing a more naturalized alignment of the Brook as it enters the Village, creation and restoration of flood plain areas throughout the Village, made possible by the buyout/removal of a significant number of homes and structures in the path of the last flood.
- b) Replacement of the temporary Mill Street Bridge (#20) with a larger structure designed and engineered to accept the larger flows experienced in the July 10th flood without posing further risk to property and human life. This will only succeed with the buyout/removal of several homes in the immediate vicinity of the bridge crossing and the creation/restoration of a normalized stream channel and associated floodways beginning just above Bridge #21, continuing through the Village and ending at the Brook’s confluence with the Winooski River. Twenty-five (25) homes have applied for buyout, filed separately in a VEM pre-application on August 30, 2024.

¹ *HMGP ensures that state, local, tribal and territorial governments have the financial opportunity to plan for and implement hazard mitigation measures that reduce the risk of loss of life and property from future natural disasters during the reconstruction process following a disaster. HMGP is authorized by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.....(emphasis added) Hazard Mitigation Assistance Program and Policy Guide, Effective July 30, 2024, Version 2.0*

² *FEMA Hazard Mitigation Assistance (HMA) programs support hazard mitigation activities that reduce or eliminate potential losses to state, local, tribal and territorial governments, fostering resilience against the effects of disasters. Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to people and property from natural hazard events and their effects. The long-term impact of hazard mitigation actions can be distinguished from those more closely associated with immediate preparedness, response and recovery activities because hazard mitigation is the only emergency management phase specifically dedicated to breaking the cycle of damage, reconstruction and repeated damage. (emphasis added) Hazard Mitigation Assistance Program and Policy Guide, Effective July 30, 2024, Version 2.0*

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Great Brook Watershed Planning Initiative

There are 15 stream crossings on Brook Road consisting of 8 bridges and 7 culverts. The majority are wholly inadequate to handle historic and recent flood events.

In addition to existing studies of the Village and the watershed, the Town of Plainfield is entering a new planning stage for the upper and middle Great Brook watershed to determine which stream crossings should be permanently removed, allowing the Brook to seek and create its own natural stream channel and associated floodplains along the entire 8-mile corridor. This needs to be combined with the proposed buyout/removal of approved homes that were heavily damaged, swept away or in significant danger of being damaged or swept away in the next major flood. Some heavily damaged bridges in the middle and upper watershed will need to be redesigned and reconstructed to accept larger flows and provide adequate service to those homes that can safely remain, thus providing viable alternative routes for ingress and egress. To achieve this objective in the middle and upper watershed, we are seeking “Hazard Mitigation Assistance” for planning, design and engineering studies in advance of preparing an implementation plan.

It is our hope that the Master Plan for the “Great Wood Watershed” will be approved for phasing as described below in the Guide since some elements of the Master Plan require further scoping, and others are further along in the scoping and planning process which include proposed actions related to the two major bridges in the Village. Bridge #21 has already been approved for replacement pursuant to FEMA’s “hazard mitigation” authority, HMPG has been awarded for \$1.7 million. It is our understanding that this money has already been allocated in accordance with the Award Certification (attached to our pre-application). However, we will seek to amend that award to include complete removal of Bridge#21 with associated nature-based improvements as noted in our pre-application submittal.

If approved, it is our intention to follow Section D.3 for “Phased Projects” in FEMA’s Hazard Mitigation Assistance Program and Policy Guide, Effective July 30, 2024, Version 2.0 (pages 51 through 56)

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Section D.3. Phased Projects

Phased projects are allowable under HMGP, HMGP Post Fire, BRIC and FMA, unless otherwise noted in the applicable NOFO. The purpose of a phased project is to support the development of subapplication materials when it is beyond the subapplicant's technical and financial resources to produce the required technical information. Phased project activities must provide the information necessary to complete a full subapplication (including EHP review for the selected project alternative) and demonstrate cost effectiveness. During Phase I, FEMA will work with the subapplicant and applicant to identify the technical information required to determine project eligibility. This information may consist of a combination of engineering or feasibility studies, preliminary engineering design, a Benefit-Cost Analysis (BCA) or documentation of an EHP review. Phased projects are used when a subapplicant has a preliminary plan or concept where FEMA can determine initial eligibility. The preliminary plan or concept provides a guideline that the subapplicant can use during Phase I to develop cost estimates and final construction plans and other required analyses to determine eligibility (such as BCA or to meet EHP compliance requirements) before moving forward to Phase II construction. If the results of the Phase I deliverables indicate the project meets HMGP, HMGP Post Fire, BRIC or FMA requirements, the project may then be approved for construction under Phase II. Phase I assistance is part of the project's total estimated cost and is subject to HMGP, HMGP Post Fire, BRIC or FMA cost-share requirements. The subrecipient is encouraged to complete Phase I within 24 months to allow for both Phase I and II to be completed within the award period of performance. All applicants and subapplicants must follow the requirements under procurement regulations. If applicants and subapplicants propose to use contract support for subapplication development and/or design and construction phases, they should review procurement and conflict of interest regulations to ensure they can comply with those requirements. More information about procurement can be found in Part 4.

D.3.1. Phased Project:

Pre-Screening Process to Determine Eligibility Before approving funding for Phase I, FEMA may use the pre-screening process to collect data needed to determine the eligibility of the project before committing additional funding for project design. The recipient must submit a subapplication, using the project specific information in Part 12, that provides all available preliminary design and site data. While a phased project may not have all the required information, the scope of work must address how any gaps will be addressed in Phase I. The applicant and subapplicant must select the appropriate project code for the Phase I deliverables within the electronic application system for proper project tracking. The project must meet the following pre-screening criteria for a conditional Phase I approval to verify they meet the following criteria:

- *Hazard mitigation plan: The proposed project must be in conformance with the mitigation plan.*
- *Justification for selection of the proposed project: Justification must be provided for the selection of the proposed solution after consideration of a range of options. Minimum criteria for a solution include:*

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- *Analysis on why the selected approach was selected and at least two alternative proposals and why they were not selected.*
- *Performance based criteria establishing the level of protection for the long-term solution along with the anticipated remaining risk after the proposed project is complete. o List of missing technical data to be collected and developed during Phase I, including a vulnerability assessment, engineering practices, established codes, standards, modeling techniques and best practices to which the design will conform. o Proposed conceptual drawings or design. o List of minimum deliverables and milestones to be completed during Phase I.*
- *Scope of work: The scope of work must identify the steps and deliverables needed to complete Phase I and preliminary actions to complete Phase II. Based on the pre-screening review, FEMA may use the Request for Information procedures to adjust the scope of work to ensure all program requirements can be addressed. The Phase II scope of work can be adjusted as part of the Phase II approval process.*
- *Budget: A detailed budget must be included in the subapplication. The estimated costs within this budget must identify all line items associated with the Phase I deliverables and an estimate for the Phase II costs. The Phase II estimate can be adjusted based on the findings of the Phase I deliverables through the budget amendment process.*
- *Potential schedule and milestones: The project demonstrates that it can likely be completed within the period of performance allowed by the program.*
- *Potential cost-effectiveness: The project must demonstrate potential cost-effectiveness based on a preliminary assessment of anticipated project benefits and cost. The subapplicant must be aware that this preliminary assessment is solely for the purpose of the Phase I pre-screening process and is not the final cost-effectiveness determination. A preliminary BCA is required at the time of subapplication. This must be based on feasible assumptions and available data regarding risk and must be determined by using the latest version of the BCA Toolkit.*
- *Other relevant technical data: The subapplicant must provide available data, including hydrologic and hydraulic data, based on existing models and other relevant technical data, as appropriate.*