

Hazard Mitigation Grant Program Pre-Application  
August 30, 2024 Summary

PROJECT NAME: THE GREAT BROOK WATERSHED PROJECT, Plainfield, Vermont including the following action elements are inextricably intertwined and fully dependent on each other:

Actions

1. Removal of Bridge #21 in the Brook Road; creation of new river channel and expanded flood plains at that location, upstream and downstream of the bridge site. May be ready for final design having already gone through the HMPG process receiving approval for bridge replacement at that site. Now RFP ready for "replacement action" but the plan now needs to be modified to accommodate proposed removal of the bridge
2. Removal of the temporary bridge on Mill Street and replacement with new construction, a clear span bridge to be engineered and designed to handle present flood flows with up-to-date knowledge gained by the disastrous flood of July 10, 2024. Conceptual design has been completed and may be ready to begin some elements of final design.
3. Complete removal of and compensation for at least 25 structures in "Great Brook Drainage Basin" which have either: a) been washed away in the most recent flood, b) are in danger of being immediately washed away in future major flood events, c) cannot be habituated in accordance with current condition of the home, or d) because of their precipitous location on eroding and collapsing sand and silt laden cliffs close to the Brook throughout the Great Brook Basin.
4. Creation of several extensive, contiguous food plain areas in the lower Plainfield Village and on both sides of the Great Brook as it travels through the Village, starting near Creamery Street and ending with its confluence with the Winooski River. The lower area of the Village east of Mill Street will become a natural river delta where the Great Brook meets the Winooski. Directly connected to the achievement of No. 1 and 2 above.
5. Creating vegetated parks in the newly created floodplain areas to be designed in accordance with current science and FEMA standards resulting in natural features and usable open space for residents. Directly connected to the creation/restoration of those floodplains in the lower Village.

Watershed Planning Initiative:

6. Develop a quantitative watershed model for Great Brook drainage basin and its tributaries. This will model how much flow would pass different points along the Brook for a range of likely rain events. This will be very useful in our overall planning for the watershed. It would focus primarily on the middle and upper sections of the watershed since the lower watershed (Village) has already received a great deal of scientific analysis and conceptual engineering design for replacement of the two major bridges - Mill Street and Bridge #21.

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7. Develop a detailed stream channel and floodplain management plan for the brook starting from the upper watershed near Gore Road and continuing to its confluence with the Winooski. The plan could incorporate modern stream geomorphology analysis so that newly created stream channels and floodplains can be managed and protected in accordance with the latest science and current data.