

Resilience Initiative for Vermont Empowerment and Recovery (RIVER): Ludlow Project Recommendations for Conceptual Design Phase



Recommended Project to Advance Through RIVER Program

Project Name: Black River Floodplain Reconnection for Flood Mitigation in Ludlow

This project concept has four main components combined into one HMGP application:

1. Floodplain reconnection (i.e., benching, lowering, berm removal, or flood chute) at the Little League Field, former Timber Inn property, and Brookhaven Condominiums open field (pending landowner approval). The possibility to include walking trails, parking, and other floodplain compatible recreation at the former Little League Field will be explored. Potential benefits include reduced flooding at upstream parcels along Route 103 and increased flood storage upstream of Ludlow's Wastewater Treatment Facility.
2. Floodplain reconnection at 108 Pleasant Street to mitigate flooding at the Black River Mobile Home Park and other adjacent properties. Pending landowner approval.
3. Floodplain reconnection at 18 Mill Street, including the portion of the property between the north bank of the Black River and parcels on Meadow Street, with the goal of reducing flood levels upstream along Main Street and Meadow Street, as well as reducing flood velocities. Removal of the small weir/dam at the Mill St bridge will be explored. This could include 5 Meadow Street and 98 Main Street, pending landowner approval, as well as riparian plantings and other restoration components.
4. Floodplain bench with retaining wall along Smith Street to provide more space for floodwaters and alleviate flooding along Main Street. This concept involves multiple private landowners, increasing the complexity and potentially limiting feasibility given the current HMGP application deadline.

Next steps for evaluating the costs and benefits of this project include:

1. Outreach to private landowners
2. Fieldwork to collect topographic and stream geomorphic survey data
3. Hydraulic modeling extending from upstream of Depot St to downstream of the Ludlow WWTF to assess existing conditions and the feasibility of components 1-4 above. The Depot St, Main St, and Mill St bridges will be evaluated in this model.
4. Preliminary FEMA Benefit-Cost Analysis (benefits must be greater than costs)
5. Conceptual drawings of effective project(s) for Selectboard, Trustees, and stakeholder review

Potentially Viable Projects
Not Immediately Prioritized for RIVER Program HMGP Funding Applications

Project Name	Description
Commonwealth Ave Culvert Replacement and Upsizing	The most recent designs for this project completed by Weston and Sampson did not pass the FEMA Benefit-Cost Analysis. While damage costs have increased with the July 2023 flood, it is also likely that project costs have increased. Revisiting the designs to develop a cost-effective solution may not be feasible on the current HMGP timeline. Since the project must pass a BCA for FEMA HMGP funding, we recommend putting this project in the RIVER “non-FEMA” project bucket and pursuing alternate funding, possibly through VTrans.
Relocate Select WWTF Structures	The idea of relocating select WWTF buildings to a higher portion of the existing WWTF parcel was discussed during a site visit. This may be possible under HMGP but might not pass a BCA as a standalone project.
Buttermilk Falls Road Culvert	Idea from public brainstorm, recommend pursuing alternate funding for replacing and upsizing.
Ghai Farm Road Culvert	Idea from public brainstorm, recommend pursuing alternate funding for replacing and upsizing.

Other Project Ideas Reviewed for RIVER

The following project ideas were discussed during initial site visits or the public brainstorming forum and are included here to document the ideas reviewed in earlier phases. For various reasons the projects are not included in the recommendations above. These reasons include feasibility concerns, cost-effectiveness concerns, ineligibility for HMGP, availability of more appropriate funding source, needing more time to develop than available under the current HMGP application deadline, and/or uncertainty around landowner support.

- Jewell Brook bank armoring at Dorsey Park
- Reservoir Pond Dam spillway retrofit to reduce flooding on Rt 100 and E Lake Road
- Floodproofing of commercial buildings
- Stormwater infrastructure assessment
- Relocating Ludlow Fire Station
- Amherst Lake Dam condition
- H&H study or LOMR to remap Jewell Brook, currently mapped as “BFE contained within structure” in FIRM.
- Address runoff from railroad tress and culvert on tributary along Mountain Road
- Floodplain and/or channel restoration along Fox Run Golf Course
- Floodplain reconnection upstream of Shaws and car dealership
- Drainage improvements and erosion mitigation along East Lake Road