



Brattleboro Planning Services

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Date: October 19, 2023
To: Senate Committee on Economic Development, Housing, and General Affairs
From: Sue Fillion, Planning Director
Brian Bannon, CFM, Zoning Administrator
Re: Town of Brattleboro Post-Irene Climate Resilience Infrastructure

Overview

Hazards cannot be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe and identify local actions that can be taken to reduce the severity of the hazard.

Brattleboro is taking a holistic approach to hazard reduction; we are focusing on social equity, preservation of natural, cultural, and historic resources, and community resilience. We are using a combination of strategies to make our community more resilient:

1. Regulatory approaches – Brattleboro is a member of the National Flood Insurance Program (NFIP). We enforce Flood Hazard Regulations. Several of our standards are higher than the NFIP requirements, particularly a ban on housing in the regulatory floodway, first floor elevation to 1 foot above the 100-year flood elevation, no fill in Special Flood Hazard Areas except for elevating buildings, and calculating substantial damage and improvements cumulatively over 3 years.
2. Upsizing our Infrastructure – Bridges, culverts, and roadside swales.
3. Planning for housing out of harm's way – The challenge of finding new locations for housing following the damage to Melrose Terrace was eye opening. Regulations we thought enabled housing blocked proposed replacement housing instead. We now target sites outside of the floodplain for denser development and have worked on zoning amendments to enable the kind of safe, walkable, mixed-use development that we want to see. We also used a Bylaw Modernization grant to reduce other barriers to housing in our zoning bylaw. We are pursuing an expansion of our existing Downtown Neighborhood Designation Area (NDA) and a new NDA for West Brattleboro Village.
4. Improving stormwater management and roads – Upgrading storm water systems is helping reduce road flooding during intense rainfalls, reducing wash outs, and improving water quality.
5. Analyzing Risk – the town has identified repetitive loss areas as part of our Hazard Mitigation Plan. These are areas of highest flood and erosion risk with higher returns on mitigation projects and favorable access to federal grants.
6. Selective Retreat and Restoration: Ecosystem restoration is an effective strategy to reduce flood hazards, improve water quality, increase access to nature for underserved neighborhoods, and restore wildlife habitat and corridors.

Other Major Climate Resilience Infrastructure Projects

250 Birge Street Floodplain Restoration

Tropical Storm Irene decimated Brattleboro, flooding downtown homes and businesses. In Irene’s aftermath, local and state leaders put their heads together to figure out how to prevent the next giant flood. The solution? Restored floodplains – areas where a river can gradually overflow, spilling its water over undeveloped land, where the water is slowed, debris and pollution are filtered out, and water can be stored during the highest floods.

Local and state leaders identified a 12.5-acre parcel along the Whetstone Brook at 250 Birge St. as the number one priority to protect Brattleboro homes and businesses. Vermont River Conservancy stepped up to help and purchased the parcel in 2017. Unfortunately, even though there aren’t any buildings on the site, it doesn’t work the way a flood plain should — that’s because 100+ years of industrial use and waste have built up the land, making it nearly impossible for a flooding Whetstone Brook to access its natural floodplain.

The Town of Brattleboro is actively working to restore the site to a working floodplain. Working closely with the VT River Conservancy, Federal Emergency Management Agency (FEMA), US Environmental Protection Agency (EPA), and Vermont Emergency Management (VEMA) we’ve completed archeology studies, soil testing, and engineering. Construction began on the project in September 2023.

When complete, the 12.5-acre site will be restored to a functional floodplain to provide critical flood protection to downtown Brattleboro homes and businesses and provide a passive recreational and environmental educational area within the town. The project includes removing nearly 40,000 cubic yards of gravel fill, regrading the site, then planting a 100’ wide riparian buffer of native trees and shrubs.

Funding Source	Total
Flood Resilient Communities Fund	\$298,738.52
FEMA Hazard Mitigation Grant	\$896,215.56
US EPA Brownfields Clean Up Grant	\$200,000

*Project costs do not include the cost of acquisition and environmental site assessment

Tri-Park Cooperative Housing Infill Project

The Tri-Park Cooperative Housing Corporation (The Cooperative) was founded in the mid 1950’s and incorporated as a mobile home Cooperative in 1989. It is one of the largest privately owned, unsubsidized providers of affordable housing in the state of Vermont. Prior to Tropical Storm Irene, TriPark was home to 333 mobile home sites and nearly 1,000 residents, almost 10% of the total population of Brattleboro.

As with many mobile home parks in Vermont, portions of Tri-Park’s properties are located by a stream (in this case, Halladay and Whetstone Brooks) and its designated floodplain. In fact, multiple homes are located in the FEMA designated floodway, the fastest moving portion of the Flood Hazard Area. Homes in this area are at the highest risk due to the velocity of flood waters. This presents a significant risk to residents, many of whom are considered vulnerable populations. When a significant flooding event occurs, homes can easily be damaged or destroyed. Or, in the case of extreme inundation where homes

are surrounded by water, residents may become stranded by floodwaters, unable to get to safety. The Cooperative itself has limited resources to rescue stranded residents, relying largely on Brattleboro’s Emergency Services (Fire EMS, Police and Public Works) to assist.

During Tropical Storm Irene a number of residences at Mountain Home suffered substantial damage, resulting in the initial removal of 16 homes. An additional 6 homes were removed in subsequent years. While many homes on Valley Road are in the floodplain but elevated above Base Flood Elevation, homes closer to Whetstone Brook are more prone to flooding due to changes in topography. It has been necessary for residences located within the area of Flood Hazard to be evacuated due to the potential threat of flooding, from both significant rain events and from ice jams downstream from the Mountain Home Park.

One of the challenges to relocation of homes relates to the condition of the properties themselves. A large number of the homes in the floodplain were built prior to 1976 when HUD standardized the requirements for mobile home construction. In addition, many homes have had modifications over time making it so that they cannot be moved without structural damage.

In February 2020, the Tri-Park Master Plan was completed. This project was funded in large part by a Community Development Block Grant from the VT Community Development Program. Additional funding was provided by the Town of Brattleboro and VHCB.

The purpose of the Master Plan was to guide relocation/removal of mobile home homes located in the floodway or high-risk sections of the floodplain; develop a feasible relocation/removal strategy to mitigate risk to life and property; assess the capacity of Tri-Park to manage changes while maintaining financial and operational viability and mitigate impacts of relocation/removal on resident Shareholders.

TriPark Cooperative is working with a development consultant to implement the Master Plan. Working with M&S Development, the following funding has been secured:

Funding Source	Total
VCDP	450,000
Flood Resilient Communities Fund	2,000,000
VHCB	1,250,000
Congressionally Directed Spending	1,277,000
CRRP	500,000
VT Homeowner Tax Credits	754,000
Construction Loan to bridge various grants	Approx.600,000
Capital Reserves	350,000

Observations

1. These large projects take time (as in years!). They are complicated and involve multiple funding sources. Smaller communities will need assistance in putting together grant applications and managing projects.
2. The Flood Resilient Community Fund is a flexible and responsive funding source. It has been our experience that project costs can be unpredictable at the restoration stage. This fund has been

important to making projects work and to reduce the risks on towns and organizations taking on projects.

3. Permitting the projects can take time and there can be duplication of efforts, particularly between federal environmental review (if using FEMA funds) and state Act 250 permitting.
4. Planning is key to be able to take advantage of funding. Brattleboro was well positioned to undertake these projects due to various studies including stream geomorphic assessment of the Whetstone Brook, VT Economic Resiliency Initiative, EPA Design for Resilience study, and the Tri-Park Master Plan.
5. It is important to get project partners, funders, and regulators around the table early in the project to commit to working together as projects are designed, funded, permitted and built.