



Before



After

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Living with Roaring Branch

Bennington Case Study

As in most Vermont communities, Bennington's Roaring Branch River flows through its downtown. Dan Monks, Bennington Planning Director described the river aptly, saying, "When there are big storms, it's terrifying and it's loud, that's why they call it the Roaring Branch; so people who live near it are well aware of the destructive power of the river."

Like many towns across Vermont and the nation, Bennington's strategy to manage the Roaring Branch was to build berms, and deepen, narrow and straighten the river channel to make its downtown safe for economic development. Frequent floods and millions of dollars later in damage and reconstruction costs, Bennington began to see that these methods to control the river to protect life and property only made matters worse.

Thanks to the proactive leadership of Bennington's town officials and the State of Vermont; however, Bennington has successfully reduced flood risks to roads and bridges, residential properties, and the commercial center, saving the town and taxpayers' money and staying open for business when flooding occurs.

The New Approach

Beginning with a public involvement process led by the Bennington Planning Department, the Vermont Agency of Natural Resources, and consultants Milone & MacBroom, residents agreed that work to protect the town's economic center and public safety was needed and long overdue.

First, Bennington identified areas of economic activity that might be impacted by a major flood, noting key employers, infrastructure and support functions such as fire, police, and town offices. They then analyzed the flood risks in specific locations in their community. Next, Bennington listed changes that could reduce or eliminate risk to key areas by reducing the river's energy during flooding and spreading river water out on open land. Changes included updating policies and regulations, removing levees, identifying key culvert upgrades, and land that could return to use as a floodplain.

Putting this plan into action, Bennington initially adopted new flood hazard zoning regulations to keep new buildings and people out of harm's way. Since no buildings would be permitted within the Roaring Branch's floodplain, the Town became eligible for increased funding from the State of Vermont, and they took advantage of these funds for floodplain restoration work that would follow.

Next came floodplain restoration activities. A four-foot rock wall was constructed to stabilize the riverbank. Thirteen acres of floodplain were reconnected to the river channel, and the river was given more room in which to flow and flood. Together these actions serve to reduce flood risk by slowing the river and lessening its destructive power – protecting existing properties and minimizing mud and silt build-up on roads.

For more information:

http://accd.vermont.gov/strong_communities/opportunities/planning/resiliency/VERI



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Bennington's Economic Returns

Bennington realized the benefits of their actions in the aftermath of Tropical Storm Irene. Irene destroyed a bridge on Route 9 spanning the Roaring Branch, the only direct link from Bennington's commercial center to Woodford and other eastern Vermont towns. The bridge collapse damaged a town water line, causing area businesses and residents to need to conserve drinking water. About 30 guests at a local hotel had to evacuate suddenly and quickly. The shopping plaza in town was flooded by muck from the rising rivers, and countless businesses were without power, interrupting operations and the revenues they produce.

However, Bennington's Park Street Bridge – and the urbanized area of the downtown downstream from it - were saved by floodplain recovery work conducted before Irene. Dan Monks opined later, "Without the floodplain restoration in that area, the bridge would've likely been destroyed."

The Town estimated the floodplain restoration project costs at about \$725,000. The avoided costs of Bennington's work were calculated at a mind boggling \$93 million. This estimate includes \$62.4 million in public and private property, \$28.3 million in bridges, \$420,000 in water and sewer infrastructure tied to bridges, \$1.6 million for road paving (not reconstruction), and about \$380,000 for sidewalks. Not included in this estimate were the potential costs from lost water, sewer, power and telecommunication services, debris removal, and utility repairs – costs the Town was simply unable to calculate.

Through the process of flood risk analysis and the implementation of key changes, Bennington has protected properties at risk that are key to their local economy. These properties include a high tech manufacturing facility, two shopping malls, a nursing home, five bridges, more than three miles of public road, two miles of sidewalk, and hundreds of private homes. Most important, Bennington took steps to break the cycle of business closure, job loss, inventory loss, and costly repairs and building retrofits by adapting and leaning to live with its river.

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