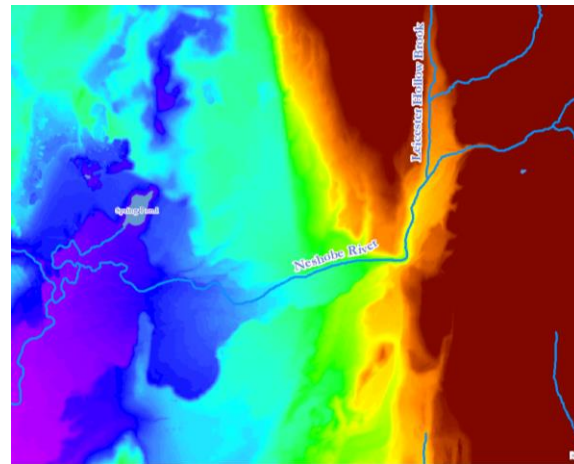


Neshobe River Overview

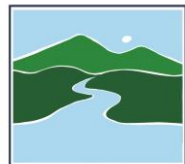
And Explanation of River Corridor Easements



Ethan Swift 8-28-17

Lesson Learned from Irene

- Historical photos courtesy of UVM Landscape Change Program



VERMONT DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

**WATERSHED
MANAGEMENT DIVISION**

RIVERS PROGRAM

Historic and Geologic Context



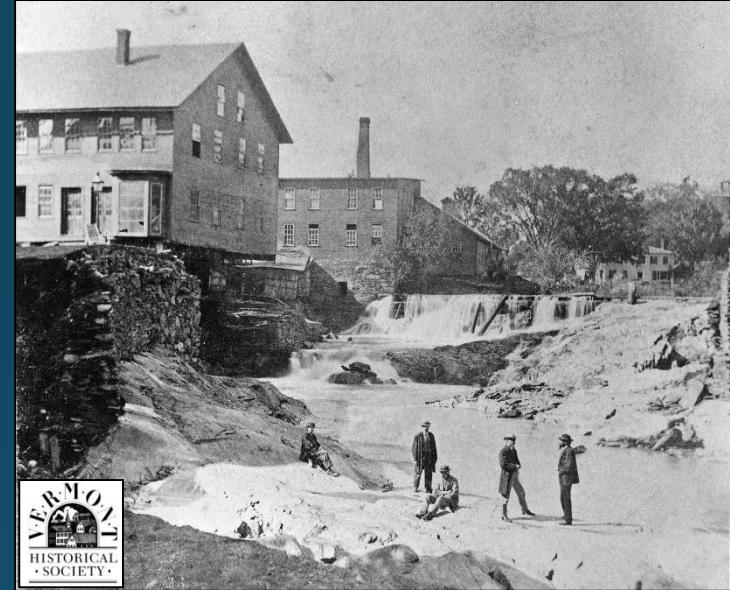
Happy (?) Anniversary Irene – photo credit Lars Gange, Mansfield Heliflight

Vermont's History of River Management

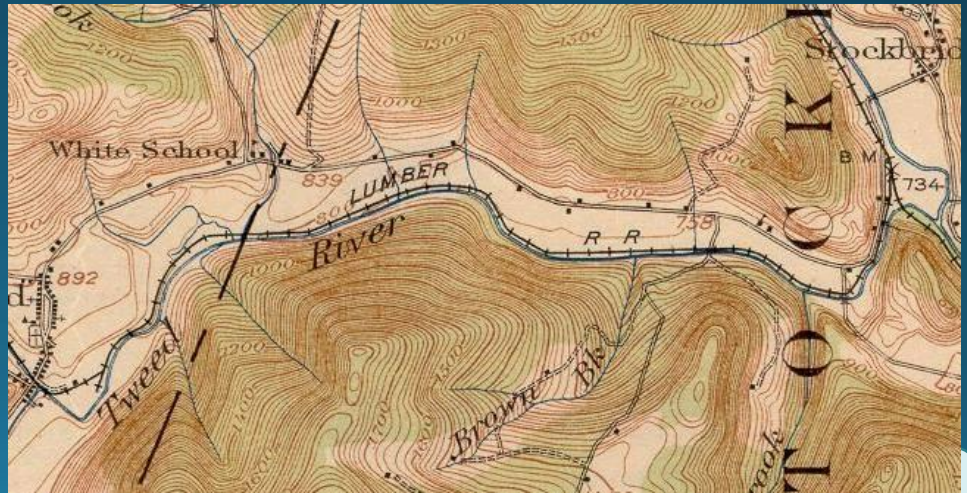
Transportation



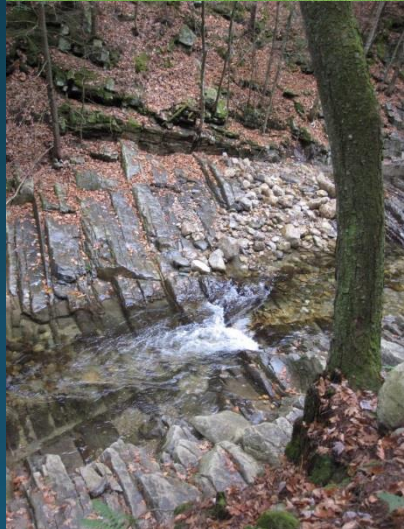
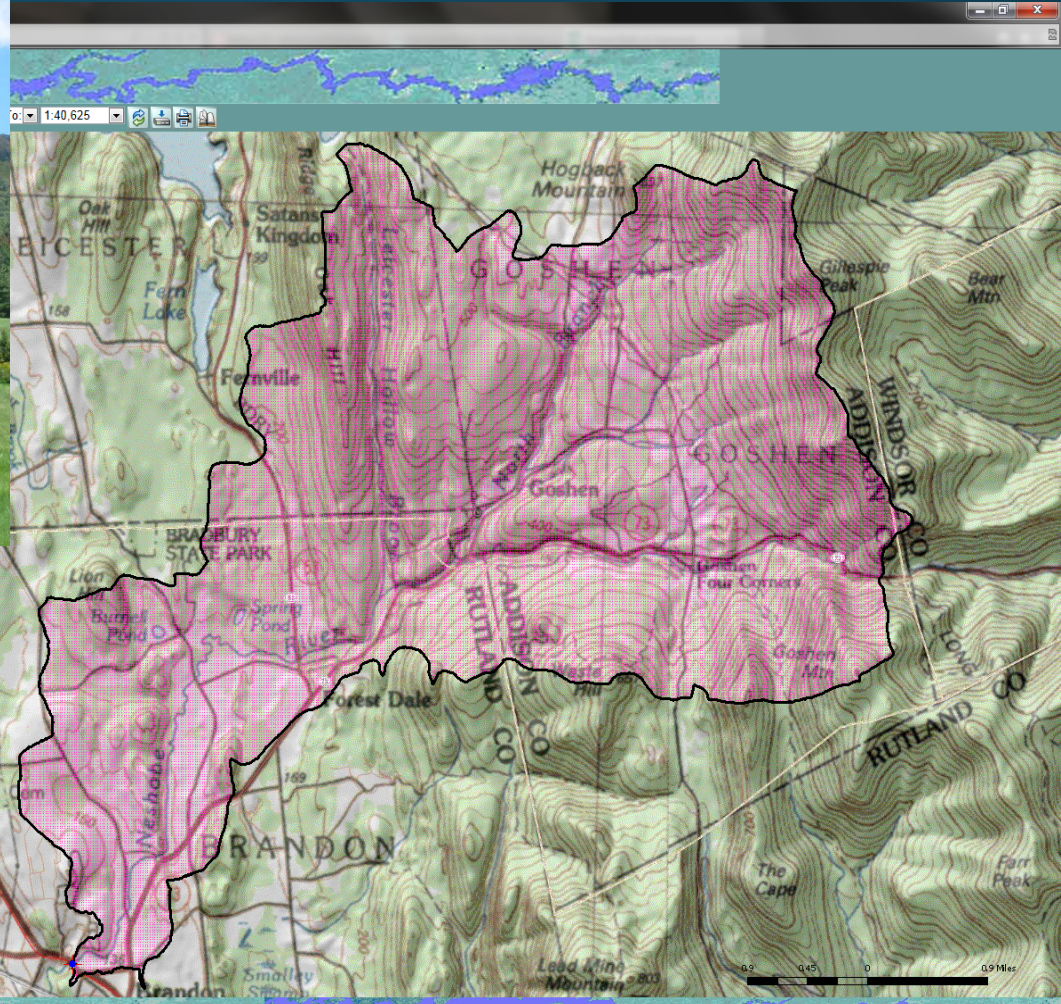
Power



Agriculture



Geologic Setting



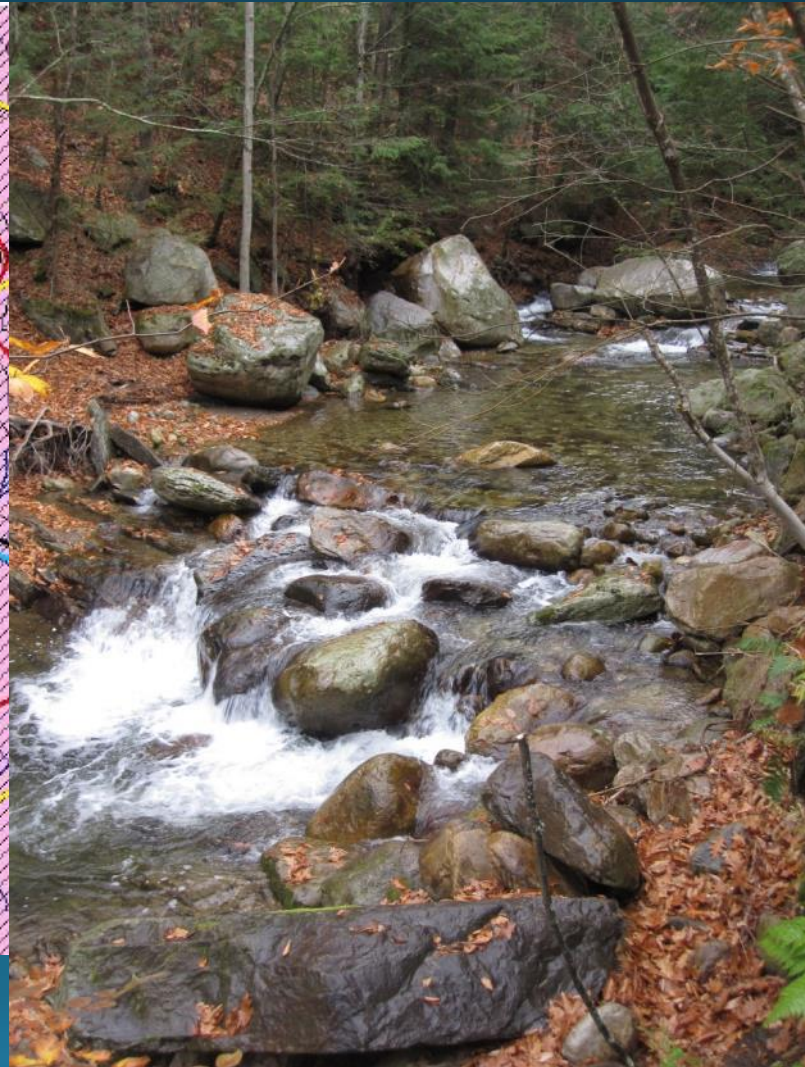
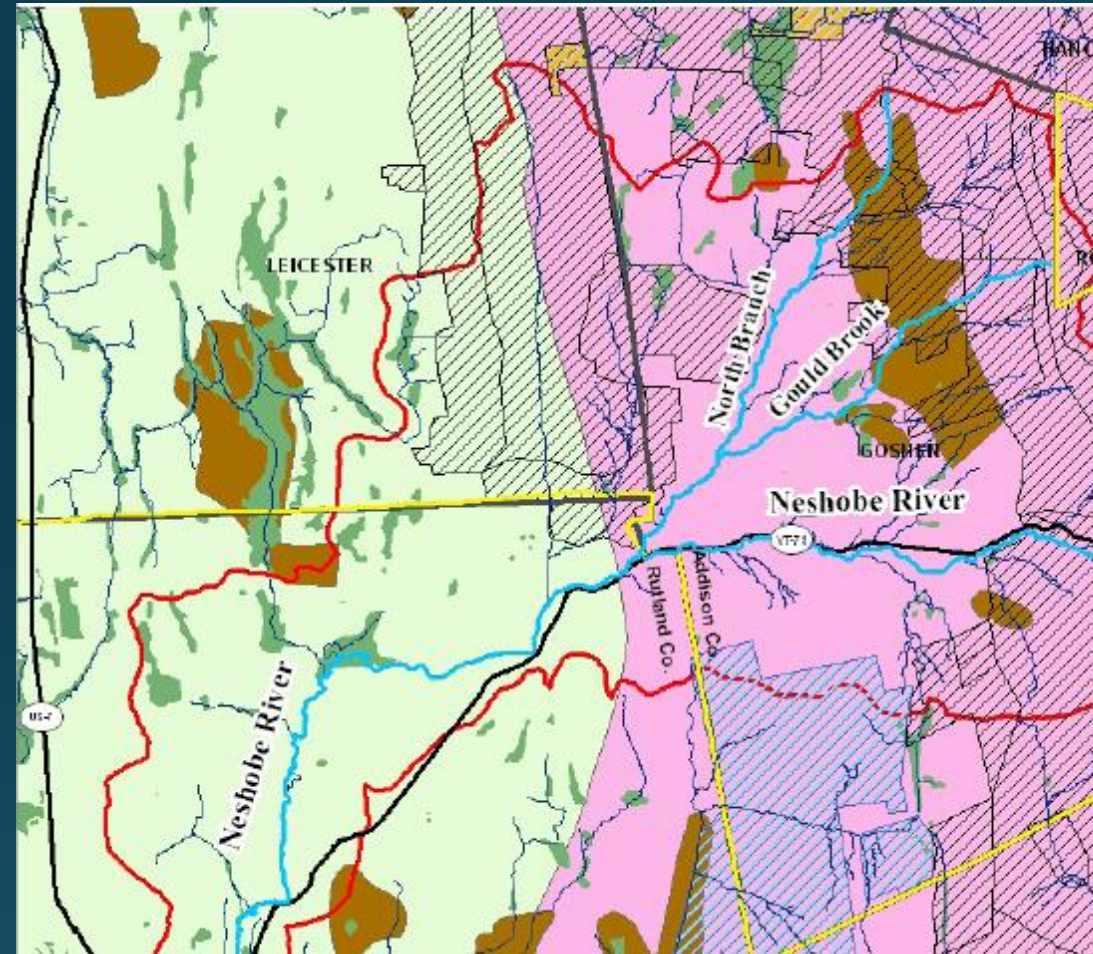
USGS some base map material provided by Maptech, Inc. (Copyright © 2008)

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[Streamstats Status](#)

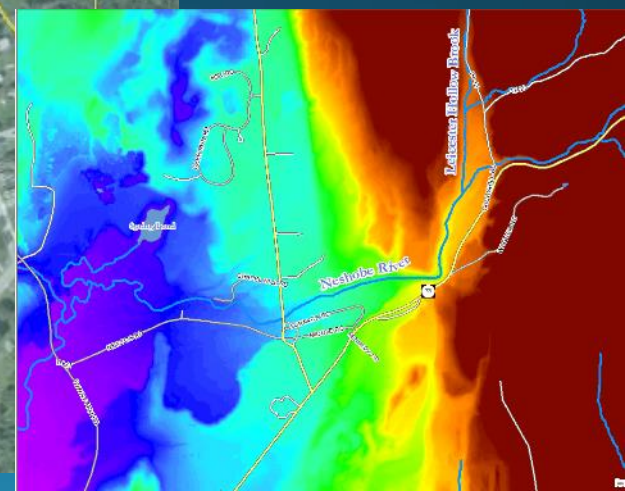
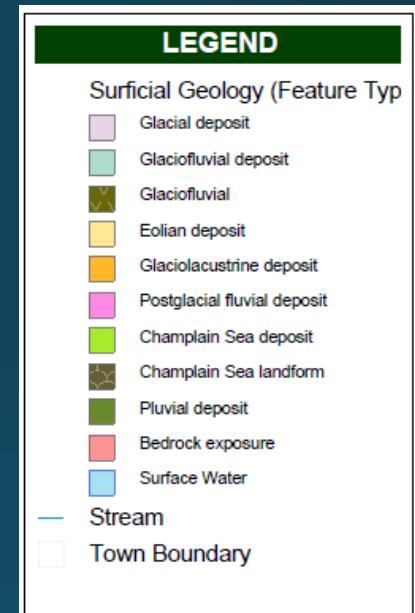
[News](#)

Geomorphology (physical)





Surficial Geology – Alluvial Fan





Irene - 2011





Landscape Setting – Alluvial Fan









Newton Thompson Road - 1913



PHOTO
LATHROP

Flood of 1927



Flood of 1927



AT FORESTDALE -VT 115

Repeat Flood Damage

Images courtesy of Lee Kahrs and The Reporter

The Reporter, September 14, 2011 — Page 26

Then and Now

The damaged from the 1938 flood is eerily similar to the devastation of the Aug. 28, 2011 torrent.

Conant Square
1938 flood



The Reporter, September 14, 2011 — Page 27



The great thing about Vermont's towns is our historic buildings. On a human level, our need to record events for posterity produces fabulous photographs from years gone by. Many photos were taken in 1938 after a flood ran through downtown Brandon, almost exactly the way it did two weeks ago. Thanks to the Brandon Museum at the Stephen A. Douglas House, we still have those photos. Here is a sampling of the flood damage, then and now, using the same Brandon locations.

At left, the destruction around the Briggs' Carriage Building from the 1938 flood, and above, right, the damage incurred from Aug. 28, 2011 flood. Below, left, Briggs Lane after the 1938 flood, and below right, Briggs Lane. Above, top photos, Center Street's pavement and sidewalk crumbled after the Noshobe River flooded through downtown in 1938, and did the same thing on Aug. 28. Bottom photos, the penstock and water main left exposed next to what is now Liza Myers' gallery in 1938, and today, next to Green Park.

Look for *The Reporter's*
Fall 2011 Sports Report
Coming next week!

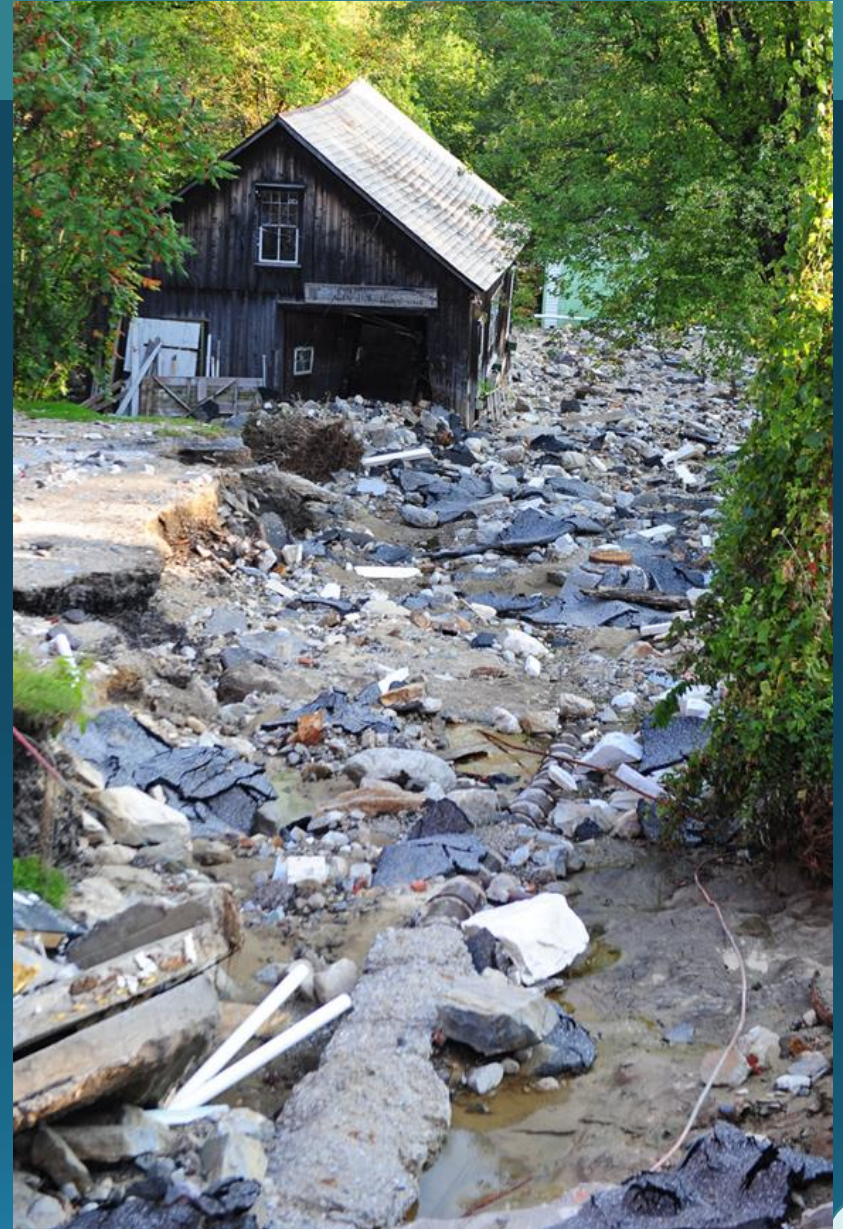
- ★ Team Photos ★ Schedules ★ Rosters
- ★ Coaches' Reports



Don't miss your chance to advertise in this
special keepsake section of *The Reporter!*

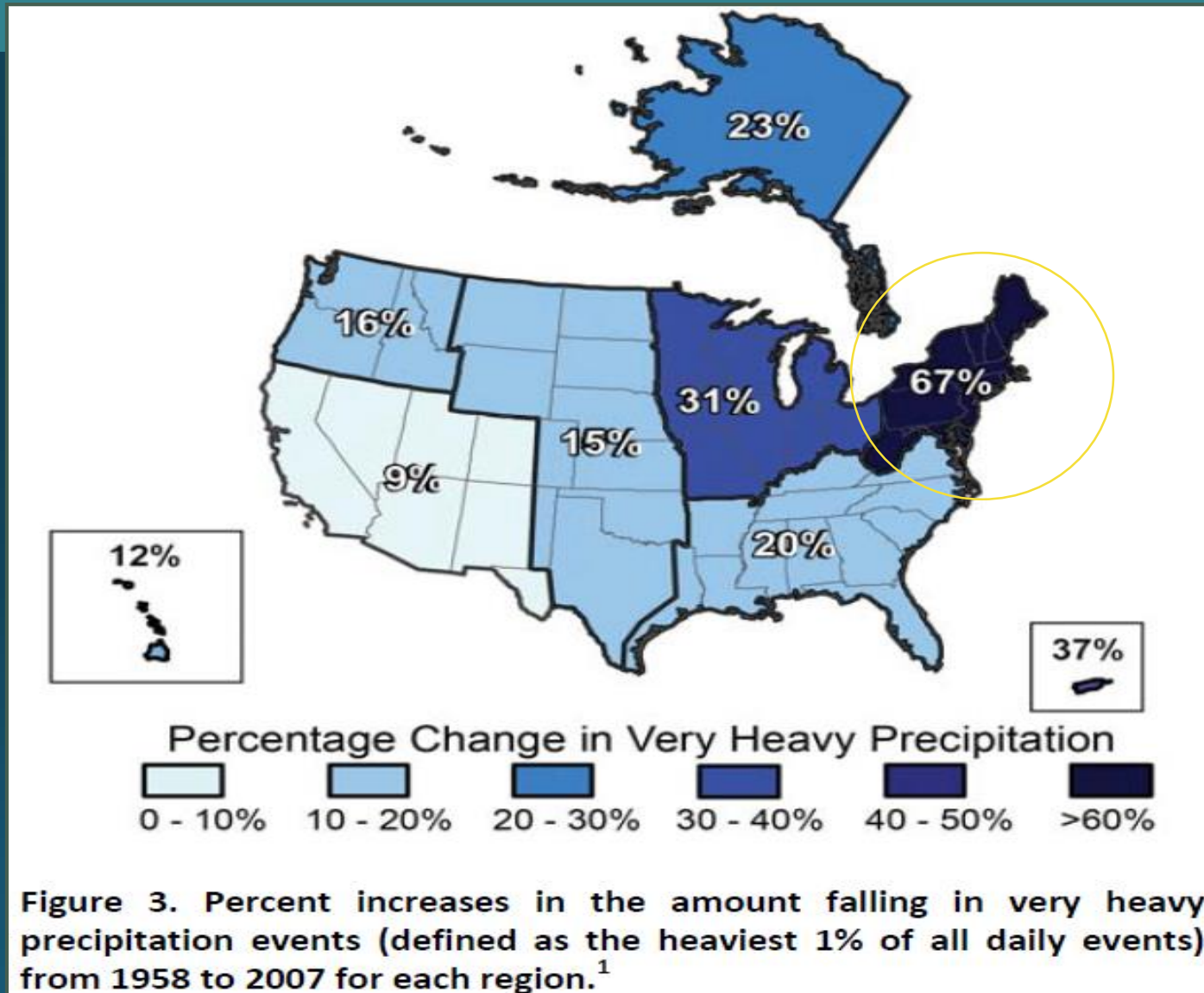
Contact Alyssa At 802-247-8080 or Email Ads@brandonreporter.com

Exposure to flood events is increasing



- Greater land development in susceptible areas
- Channels are enlarging due to stormwater conveyance
- Potential global climate shifts or cycles

Trends Toward Heavy Precipitation



River Corridor Easement

- Easement, not buyout
- Easements offered to large landowners



**Neshobe River in Rutland County
Corridor Plan
Brandon, Vermont
September 12, 2011**



Prepared by:
Bear Creek Environmental, LLC
297 East Bear Swamp Road
Middlesex, Vermont 05602

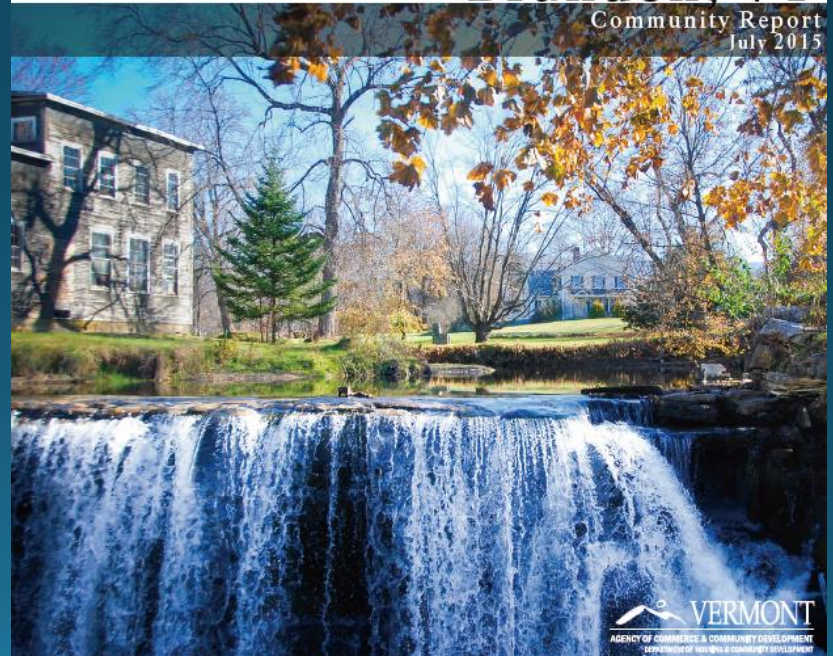


Prepared for:
The Rutland Natural Resources Conservation District
170 Main Street
Rutland, VT

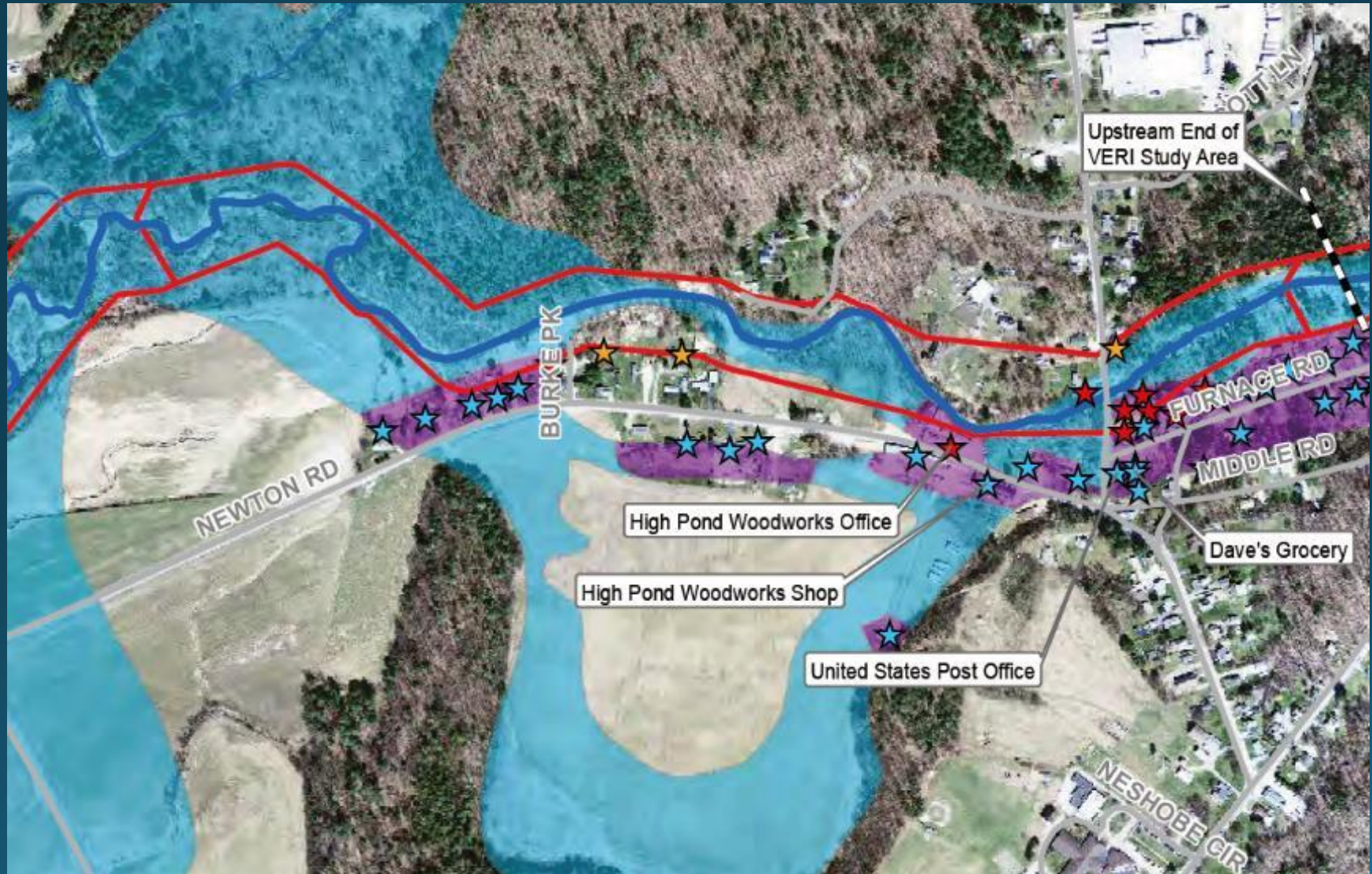
Vermont Economic Resiliency Initiative [VERI]

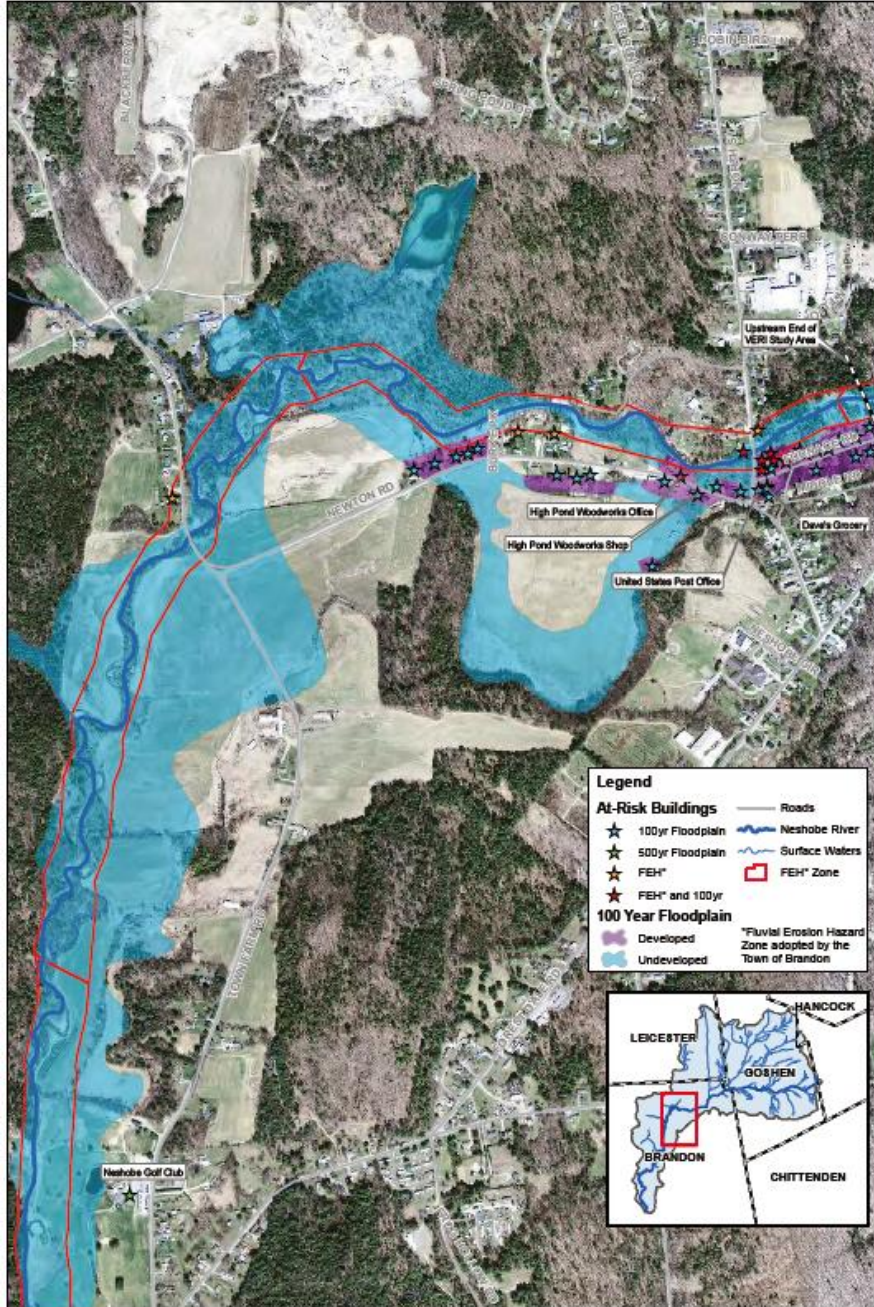
Brandon, VT

Community Report
July 2015



Vermont Economic Resilience Initiative





Legend

At-Risk Buildings

- ★ 100yr Floodplain
- ★ 500yr Floodplain
- ★ FEH*
- ★ FEH* and 100yr

100 Year Floodplain

- Developed
- Undeveloped

Roads
Neshobe River
Surface Waters
FEH* Zone

*Fluvial Erosion Hazard Zone adopted by the Town of Brandon



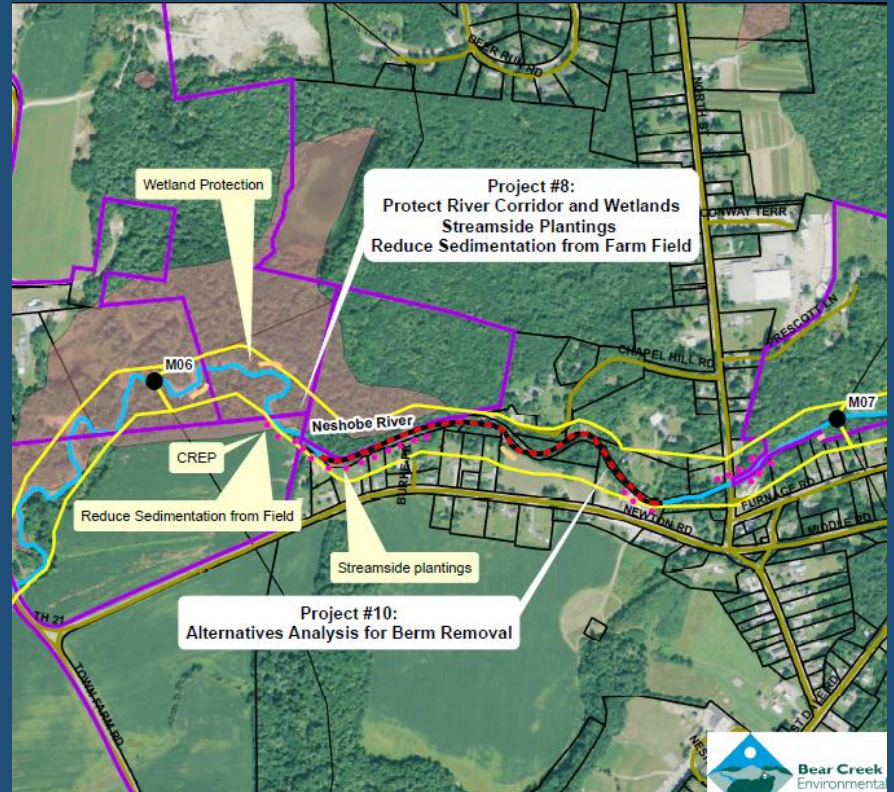
Brandon
 Recommended Projects to Protect Businesses and Infrastructure
 Vermont Economic Resiliency Initiative (VERI)
 March 31, 2015

Legend

- Effective
- ◐ Limited
-

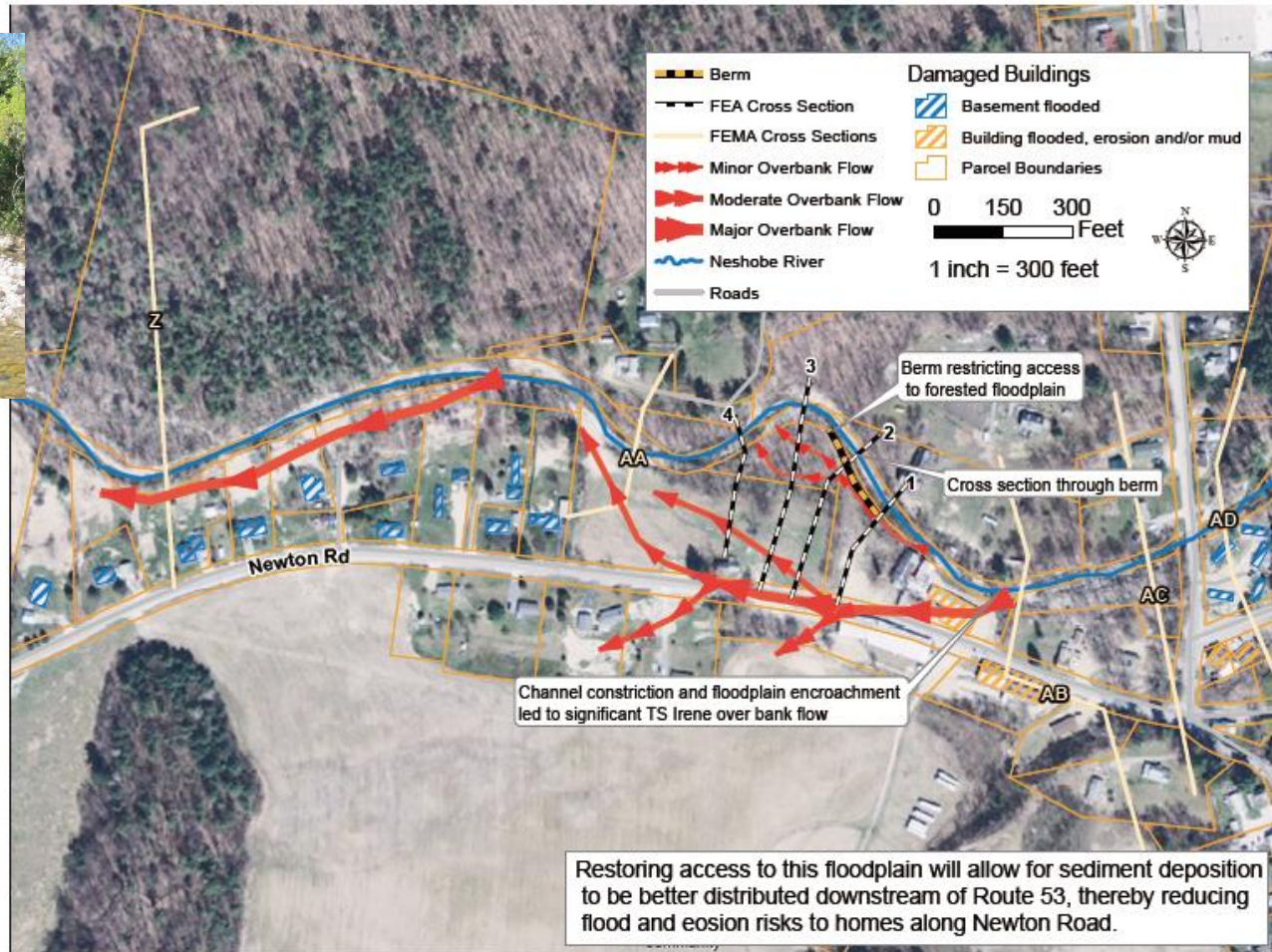
* Priority rating based on objectives and potential business impact (refer to Section x of report for explanation)

Project	What is At Risk?	Potential Business Impacts	Priority*	OBJECTIVES			FEASIBILITY	
				Reduces Flood Risk ²	Reduces Erosion Risk ²	Protects Businesses, Infrastructure, and Property	Ease of Implementation	Cost Range
Building and Site Improvements								
Flood proof businesses in Downtown Brandon (see site 11 on map 2)	Businesses	9 businesses and Town Offices with a total of 83 employees	High	○	○	●	Moderate	\$10K per building
Flood proof homes along Newton Road (see site 5 on map 1)	Residences	Residential	Low	○	○	●	Moderate	\$10K per building
Channel and Floodplain Management								
Remove berms downstream of VT Route 53 to store floodwaters and sediments in floodplain (see site 4 on map 1)	Town Road; Residences; 1 Business	1 business with 5 employees	High	●	●	●	Moderate	\$20K-\$50K
Neshobe Golf Club Floodplain/Corridor Improvements (see site 7 on map 2)	Golf Course	1 business with 25 employees	Medium	○	◐	◐	Easy	\$100-\$200K





Tubbs Building berm removal



Fitzgerald
Environmental
Associates, LLC

18 Severance Green, Suite 203
Colchester, VT 05446
Telephone: 802.876.7778
www.fitzgeraldenvironmental.com

Newton Rd Berm Removal Analysis Brandon, Vermont

Vermont Economic Resiliency Initiative
Agency of Commerce & Community Development

Drawn: JHB & EPF
Date: Feb 18, 2015

Post-Irene background imagery from VCGI