Act 121: The Flood Safety Act

The Nature Conservancy

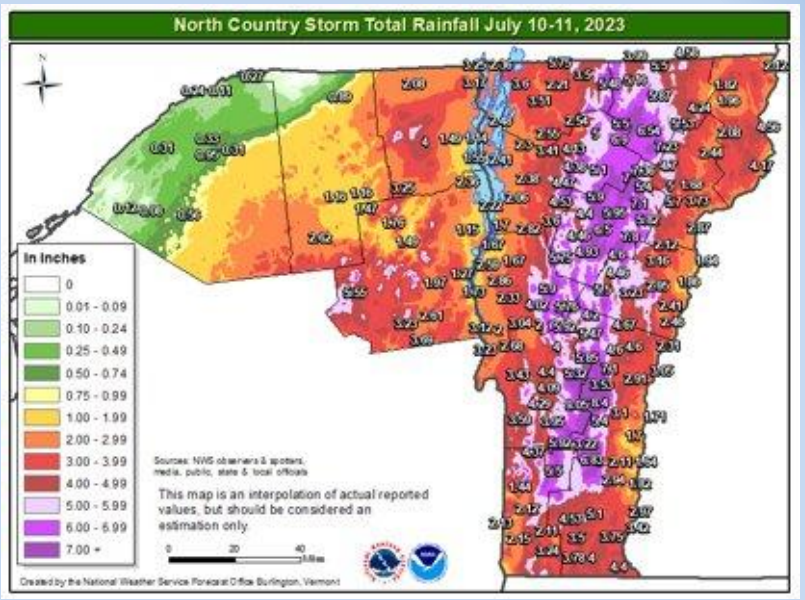
Sea Grant
LAKE CHAMPLAIN

In support of

VERMONT
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Flood Safety Act (Act 121)

- Passed in 2024 after the historic flooding of 2023
- Watershed-wide approach makes sure all towns upstream or downstream have the same protections, making all communities safer



Flood Safety Act (Act 121) aims to mitigate flooding in multiple ways

Establishes state regulation of proposed development in river corridors

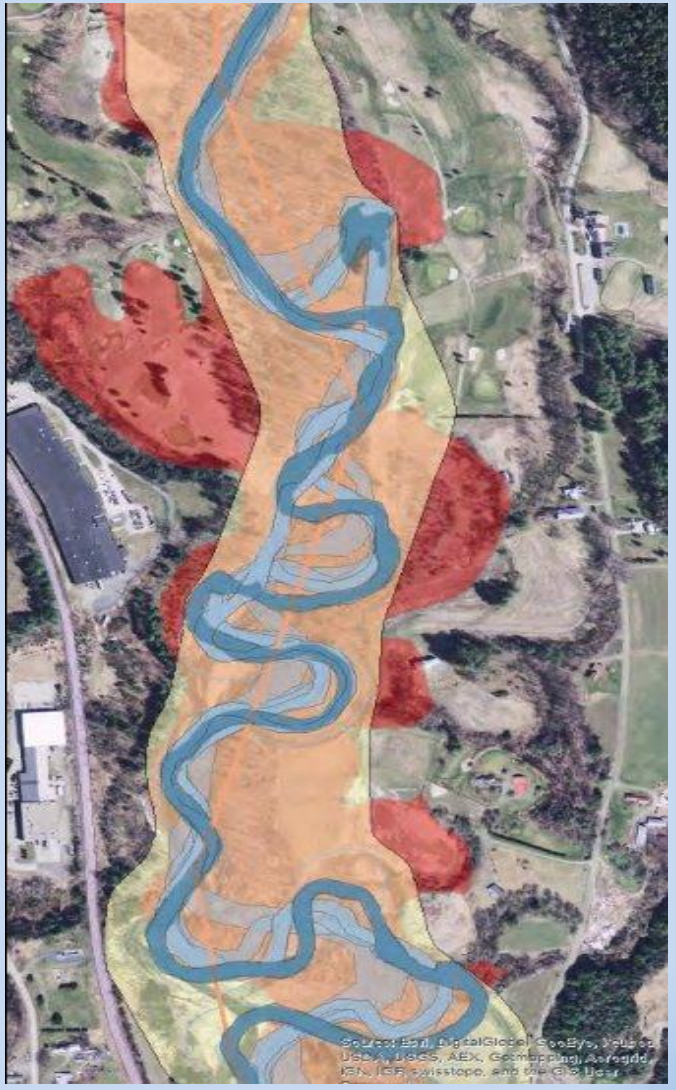
Creates statewide minimum standard for development in NFIP-enrolled towns

Strengthens dam safety through increased oversight and maintenance requirements

Increases floodwater storage in wetlands by establishing a “net gain” rule

River Corridors Timeline

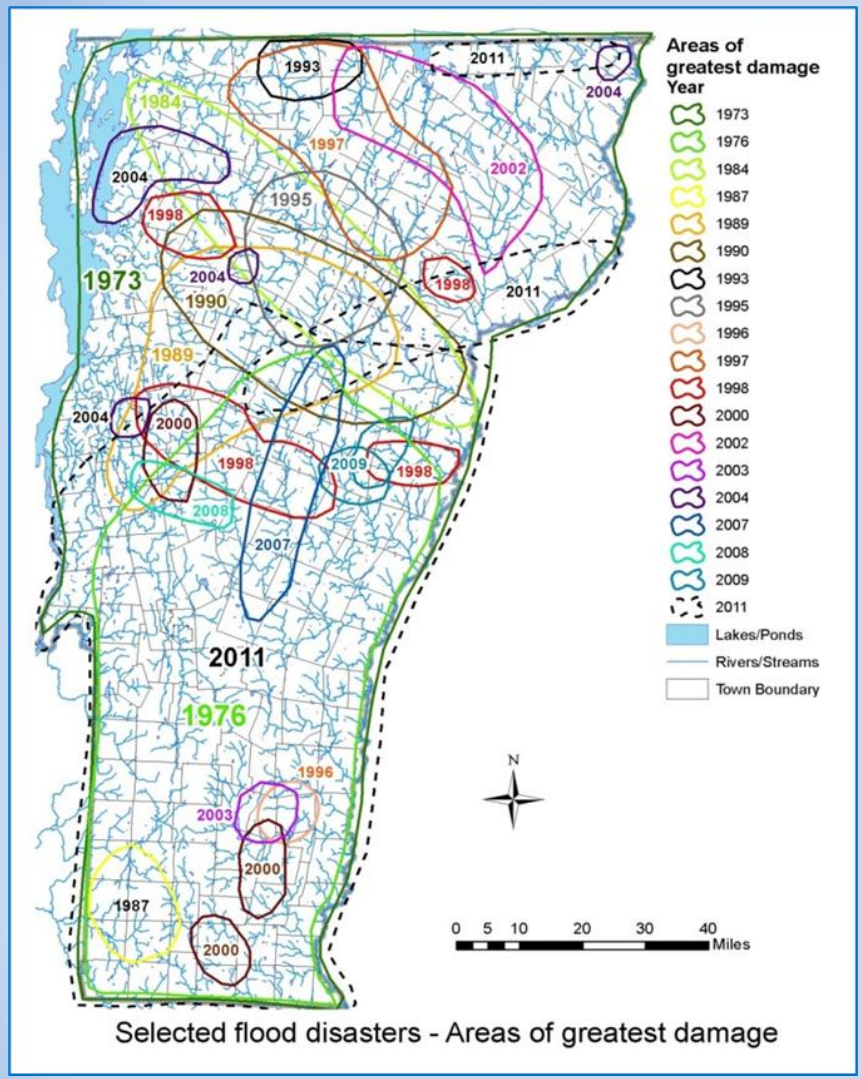
- Conduct 2-yr. education and outreach effort and collect input from the public (Jan. 1, 2025 – Jan. 1, 2027)
- Update River Corridor map to ID areas in existing settlements that will not increase fluvial erosion hazards (Jan. 1, 2026)
- Submit a report to legislature summarizing public input (Jan. 15, 2027)
- Adopt rules to limit new development in the mapped river corridors (July 1, 2027)
- Begin administration of the rules (Jan. 1, 2028)



A History of Vermont's Largest Floods

All New England Flood:	1869	Unknown
The Great Vermont Flood:	1927	$450M
The Great New England Hurricane:	1938	$482M
Floods of 1973:	1973	$326M
Tropical Storm Irene:	2011	$750M
July 2023 Flooding:	2023	$620M

Source: National Weather Service Cost figures adjusted for 2012 dollars



Selected flood disasters - Areas of greatest damage

Frequent Flood Disasters

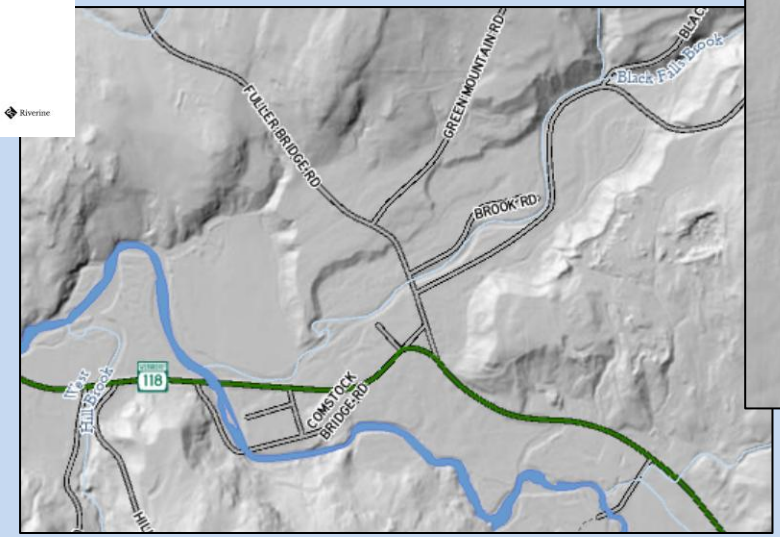
1973 – 2011: 19 regional scale floods (1 every 2 years)

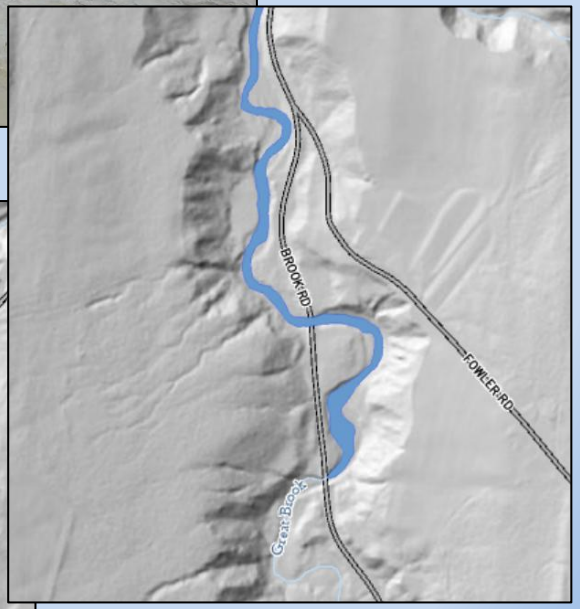
Flooding is the most common and costly recurring hazard in Vermont

$30M: Vermont's average annual public flood damage costs. **(Source: TNC analysis of FEMA public flood damage cost data for 2008-2021)**

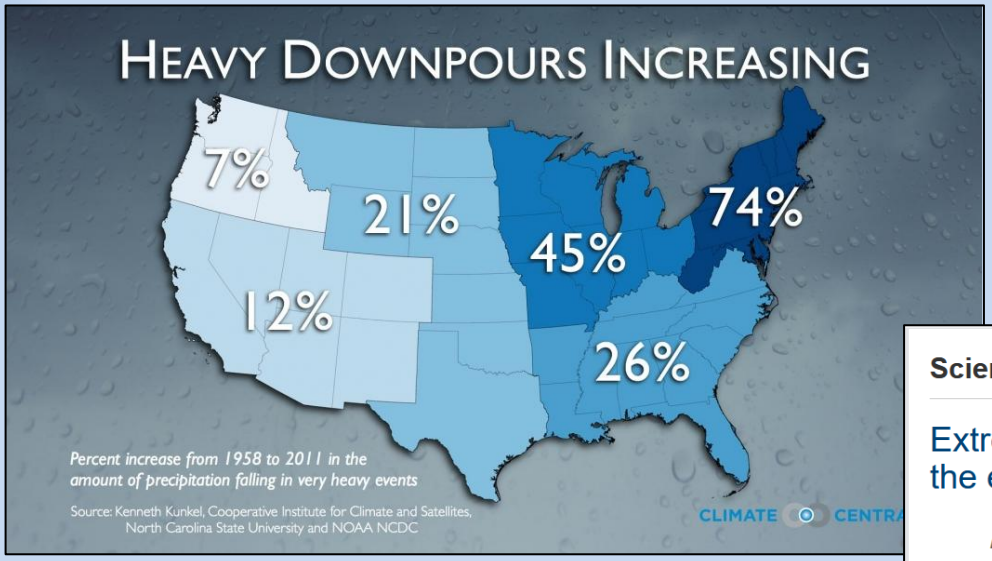
Vermont DEC

Flood Risk Factors: Topography





Flood Risk Factors: Precipitation Trends



Science News *from research organizations*

Extreme precipitation in Northeast US to increase 52% by the end of the century

Date: May 30, 2023

Source: Dartmouth College

Summary: With a warmer climate creating more humid conditions in the Northeast, extreme precipitation events -- defined as about 1.5 or more inches of heavy rainfall or melted snowfall in a day -- are projected to increase in the Northeast by 52% by the end of the century, according to a new study.

Share:

Property damages from flooding in Vermont are calculated to exceed $5.2 billion over the next 100 years.

-UVM Gund Institute

Flood Risk Factors: Risky Developments

Photo: Mansfield Heli-flight 2011

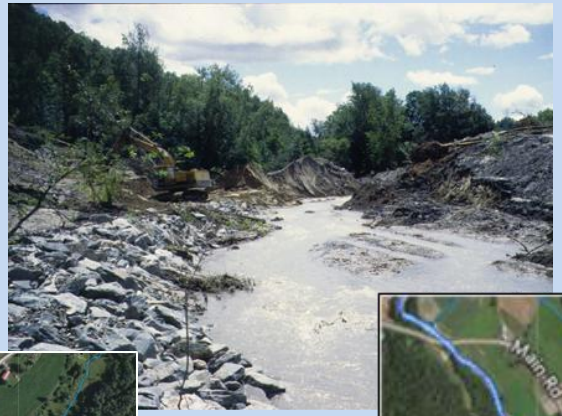
Flooding Damage:

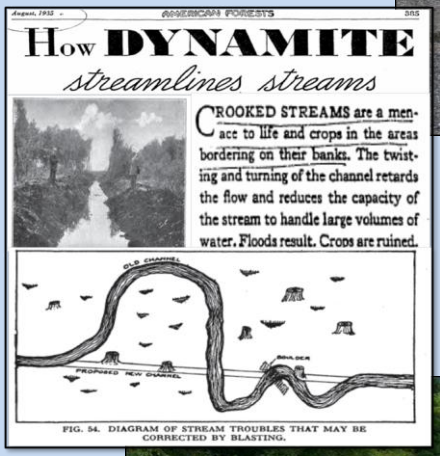
Inundation vs. Erosion

Over 75% of monetary flooding damages are due to fluvial erosion in Vermont

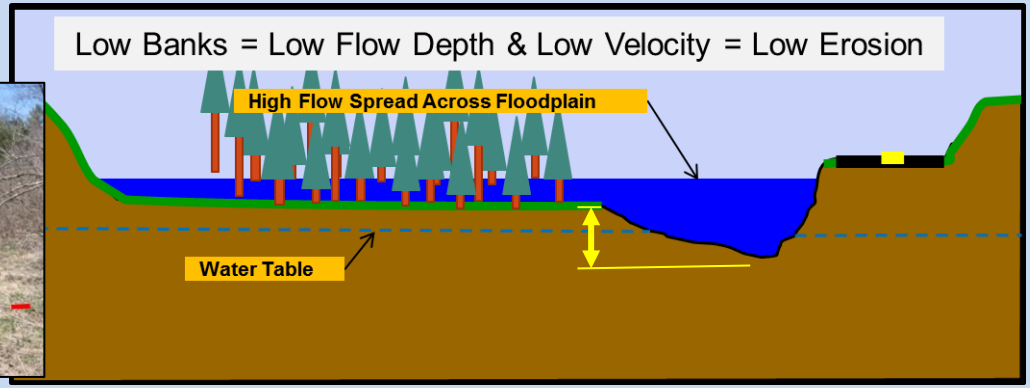
State Hazard Mitigation Plan

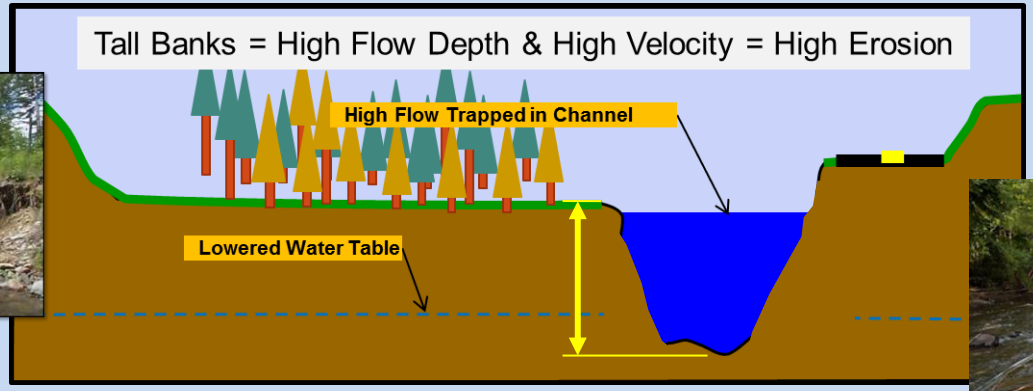
Controlling Rivers to Mitigate Flood Hazards

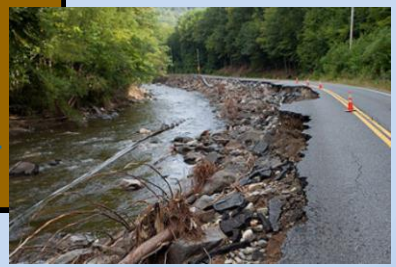




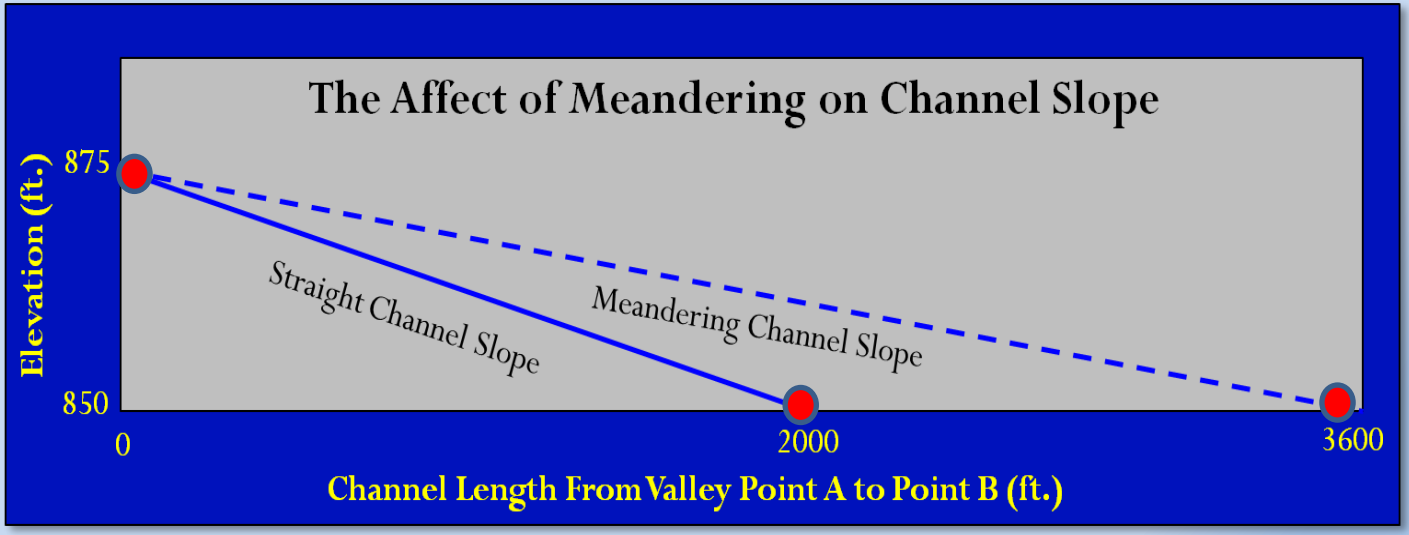
Channel Dredging and Flow Depth



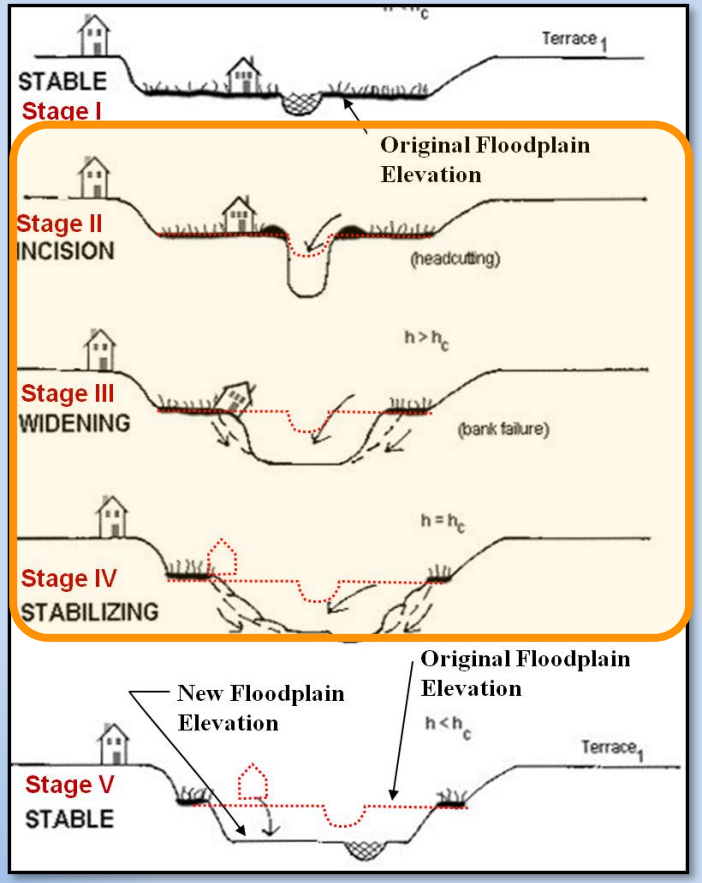




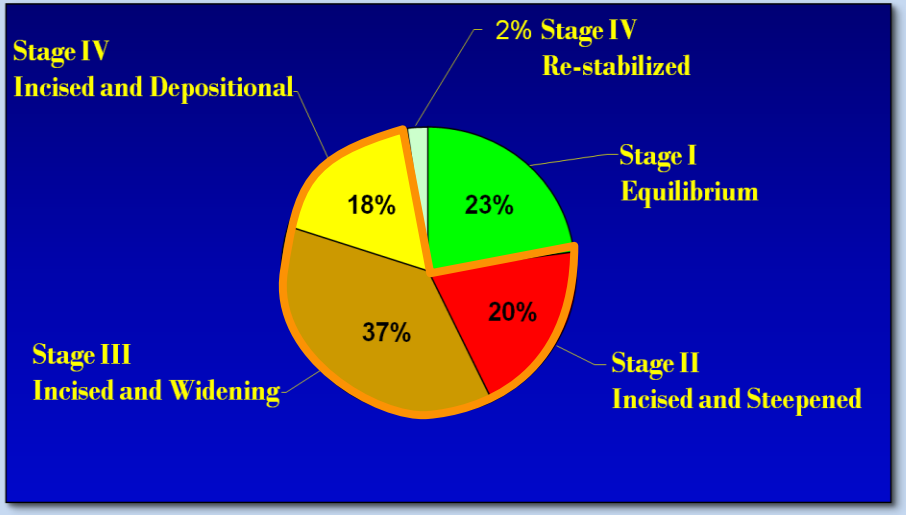
Channel Straightening and Slope



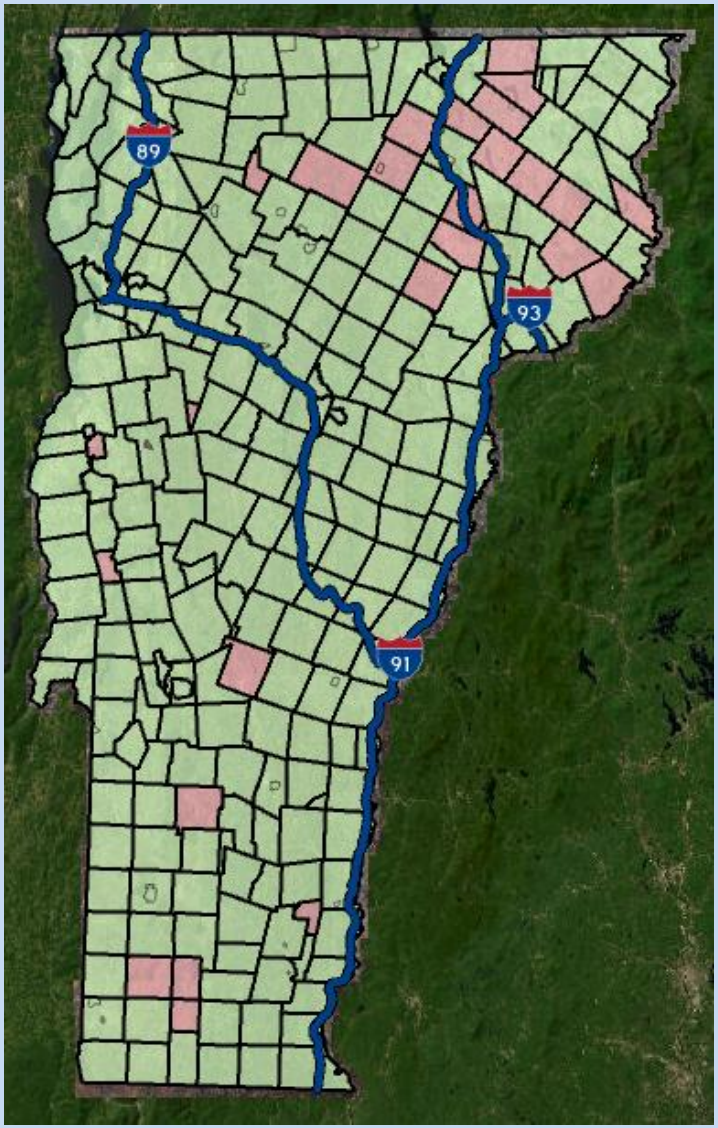
Efforts to Control Rivers have Resulted in Extensive Instability



Vermont DEC



- 5,000 river miles assessed.
- 75% undergoing channel evolution.



Vermont NFIP Participation

1/2025

Legend

National Flood Insurance Program

274 Communities — Participating Community

20 Communities — Not Participating

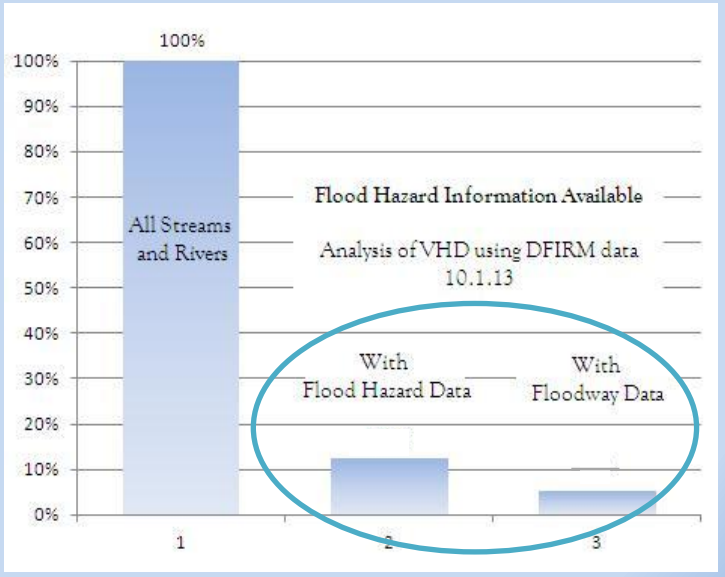
List of NFIP Participating communities available at:
https://www.fema.gov/cis/VT.html

Map available from:
Flood Ready Vermont Atlas

Many Vermont flood risks are not identified by the NFIP floodplains


Unnamed Tributary, White River, 2007

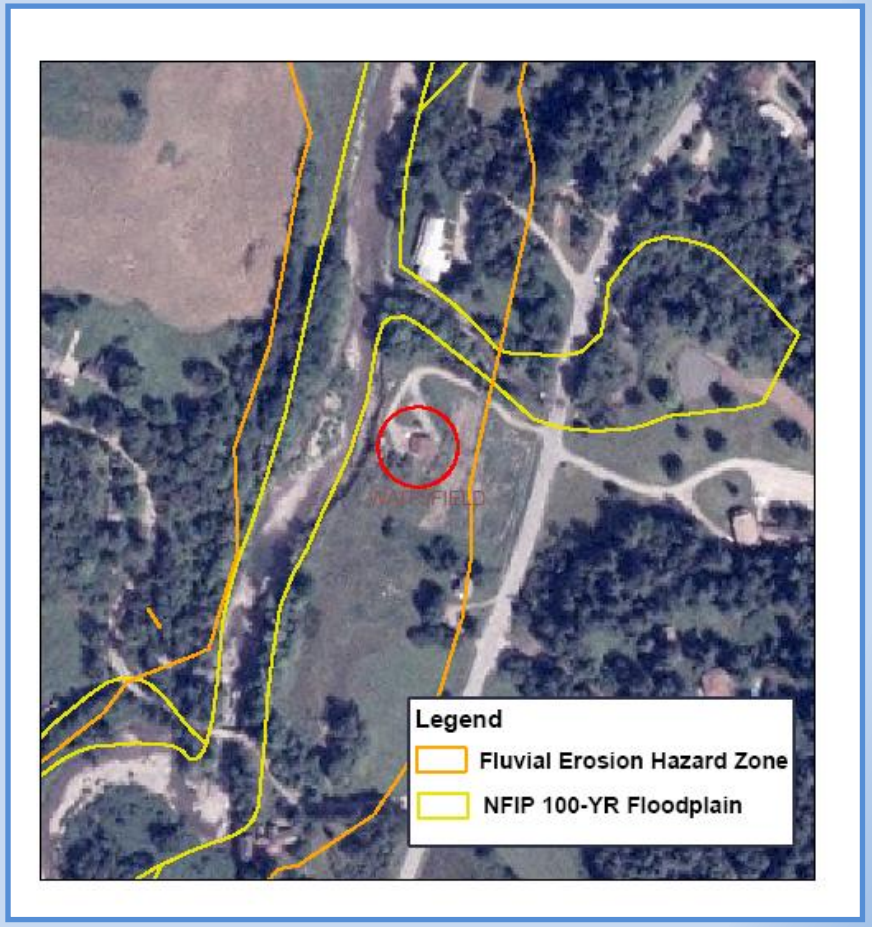
- Many streams have no FEMA-mapped floodplain
- Flash flooding and moving streams are not mapped



National Flood Insurance Program Does Not Address Fluvial Erosion Hazards

Not in the NFIP Floodplain

100 feet from NFIP Floodway and 8 feet above the 100yr. flood elevation.

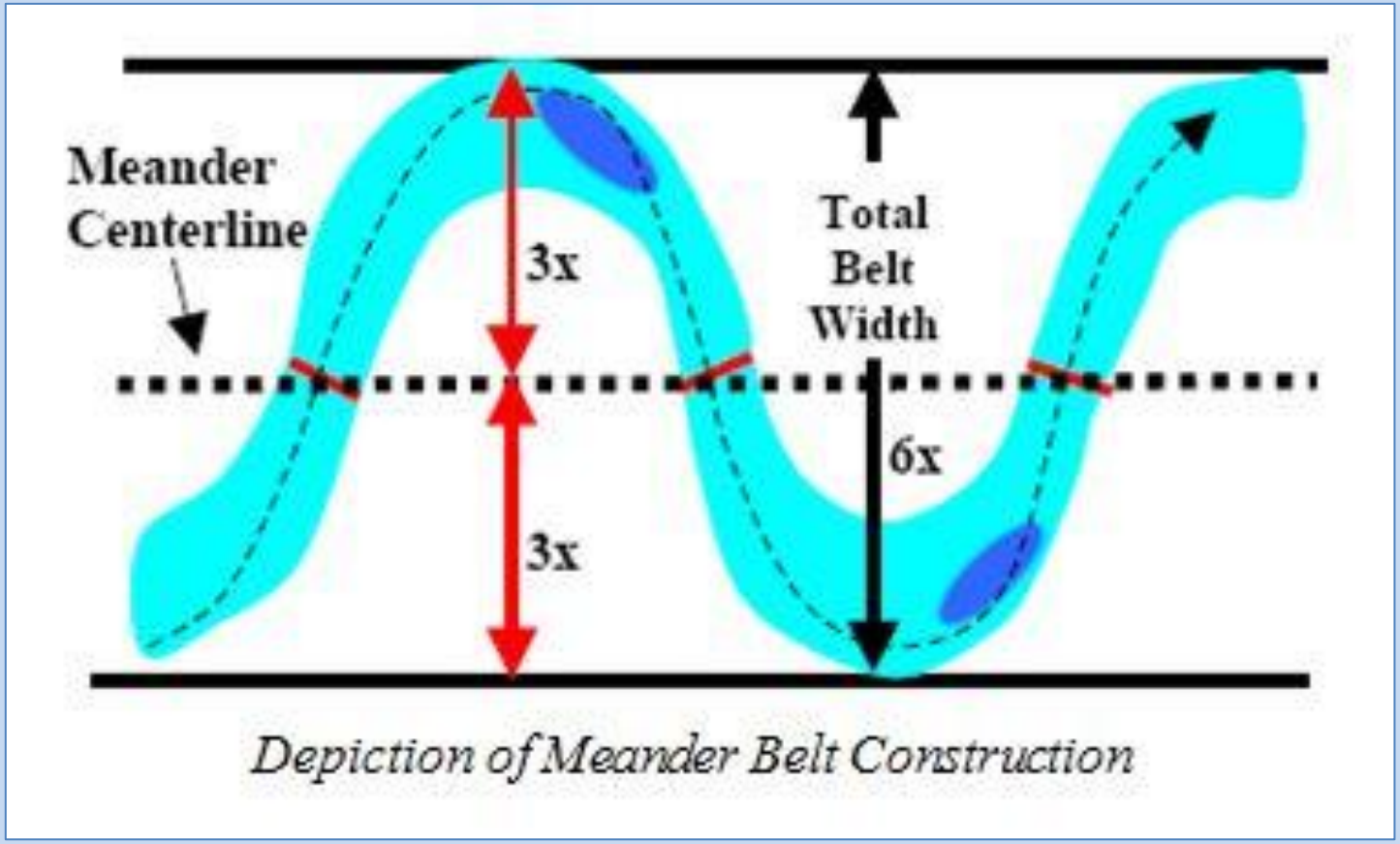


The Nature Conservancy
Protecting nature. Preserving life.

Mapping River Corridors to Reduce Exposure to Fluvial Erosion hazards

River Corridors: the area on either side of the river where we expect the channel to adjust over time

How River Corridors are Mapped

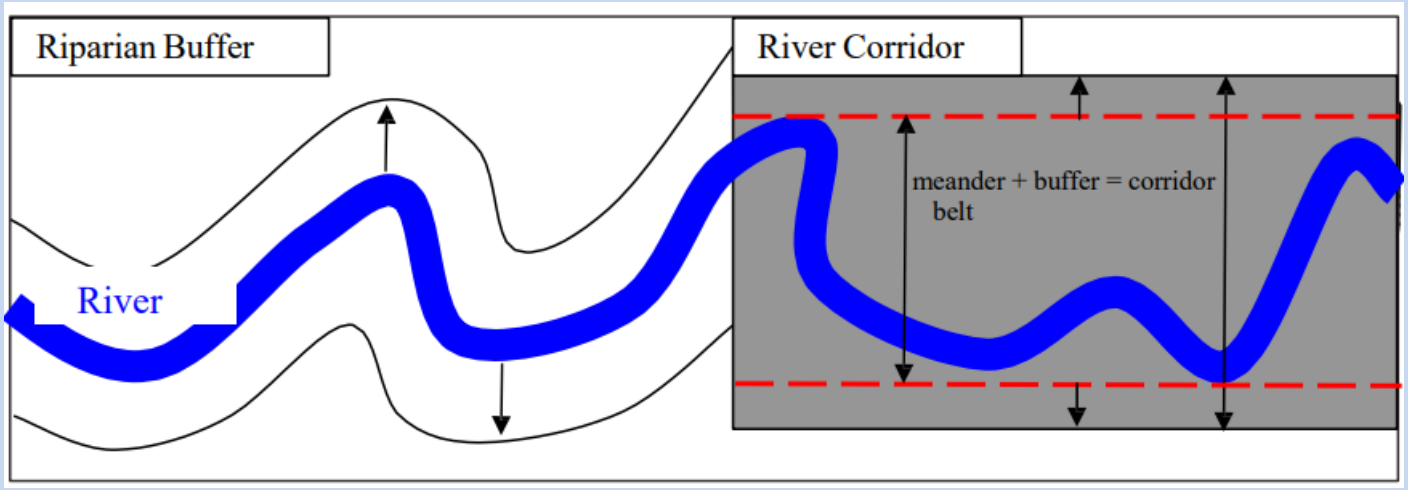


Depiction of Meander Belt Construction

A River Corridor is different than a Buffer

- Minimum space needed to maintain the natural, least-erosive slope of the channel.

- Avoid new encroachments to minimize future river conflicts



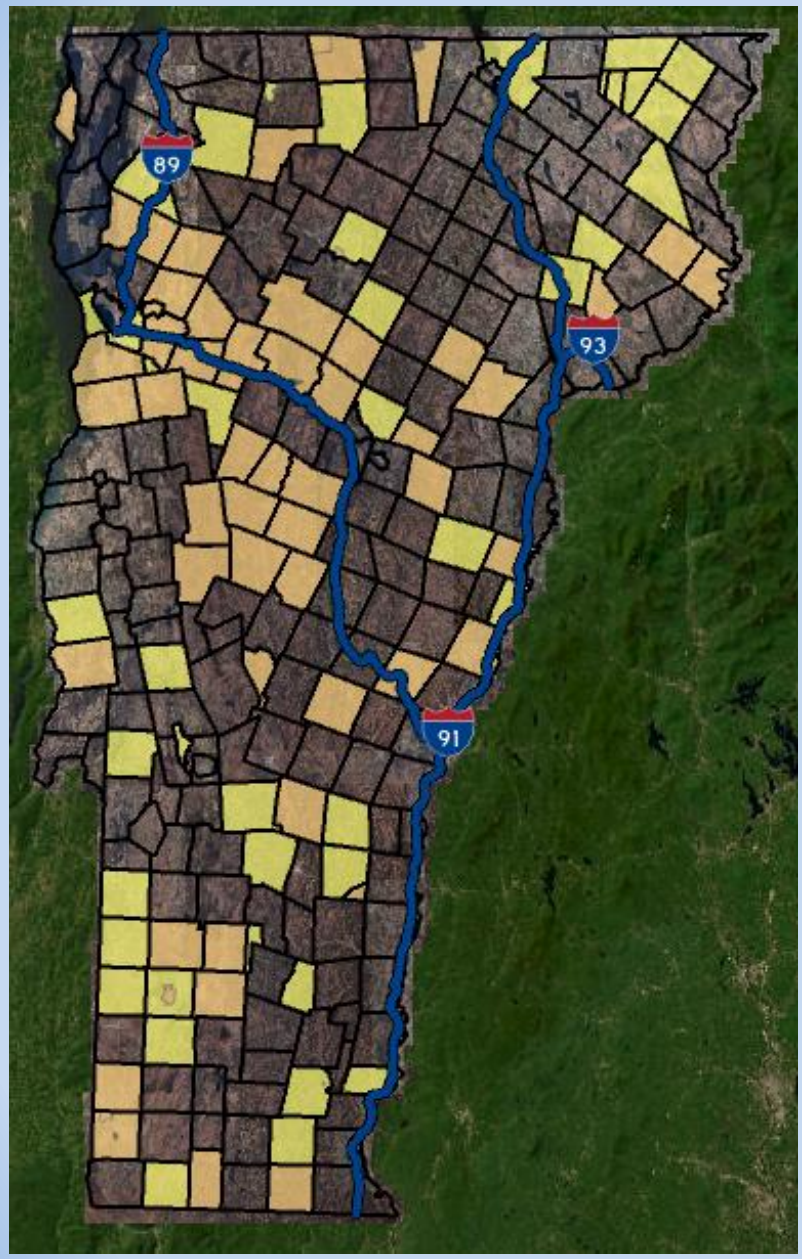
Combining Floodplains & River Corridors to Reduce Flood Hazards

FEMA Flood Hazard Area

ANR River Corridor

ANR Natural Resource Atlas
Http://Anrmaps.Vermont.Gov/Websites/Anra5/

Wild Branch in Wolcott



Municipalities with River Corridor Bylaws

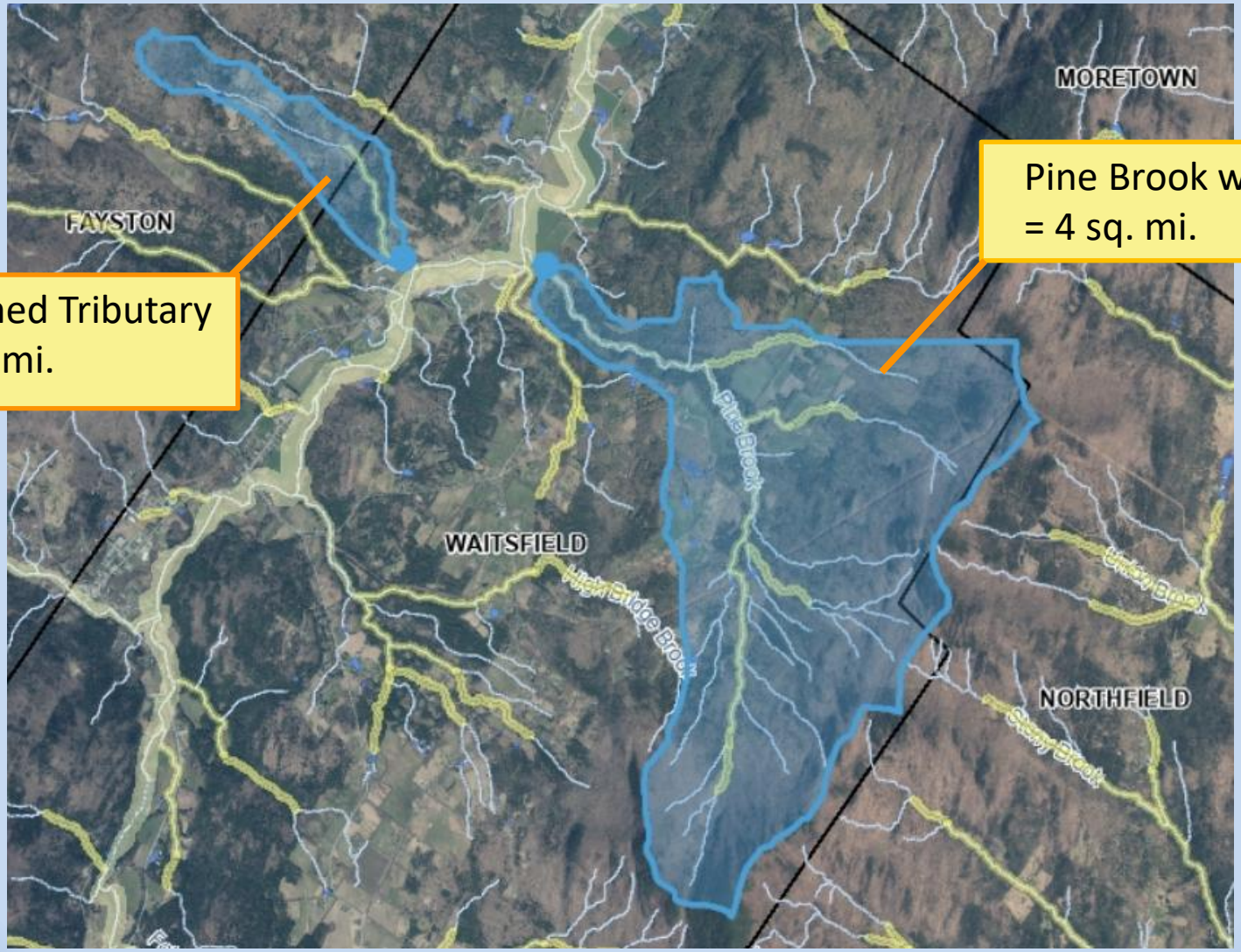
1/2025

Legend

- Flood Ready
- River Corridor Protection
  - River Corridor Protection
  - Interim River Corridor Protection

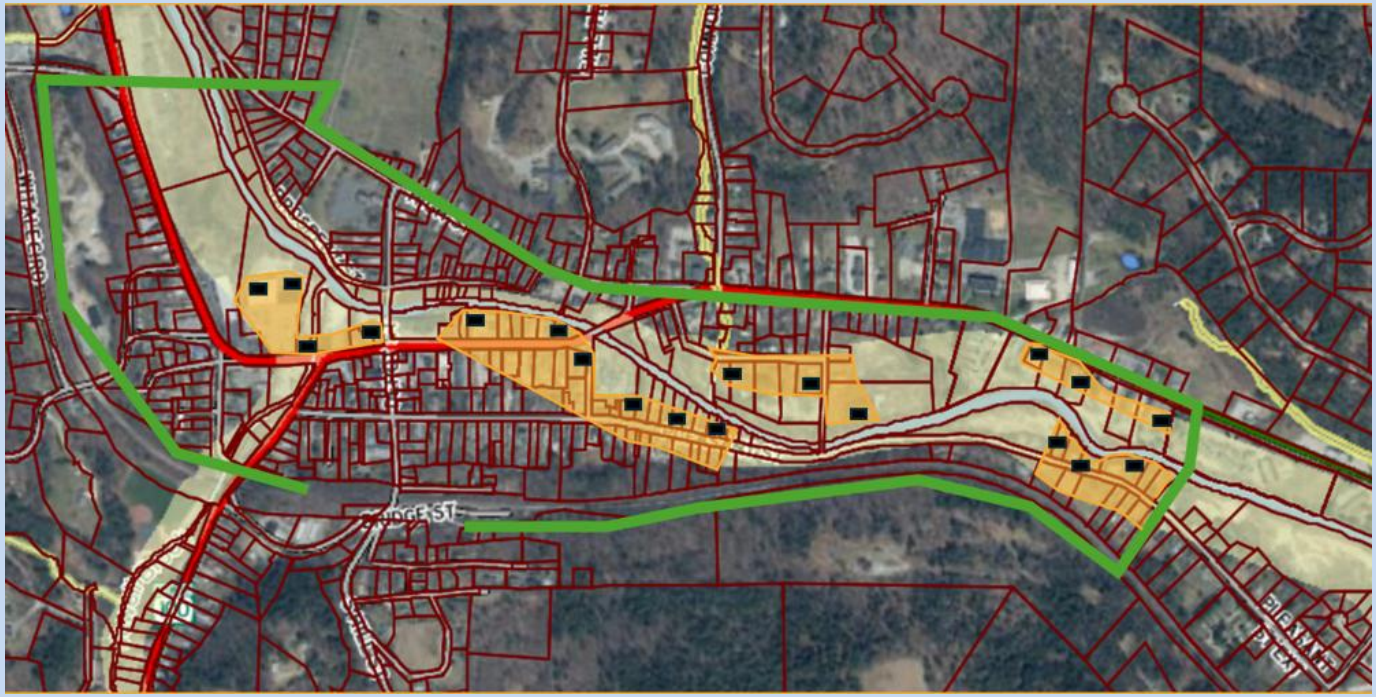
Map available from:
Flood Ready Vermont Atlas

Act 121 Applies Only to Rivers Draining More Than 2 Square Miles



River Corridor Infill and Redevelopment Areas

The Flood Safety Act recognizes the need to continue to develop within existing settlement areas, even when those areas are within river corridors.



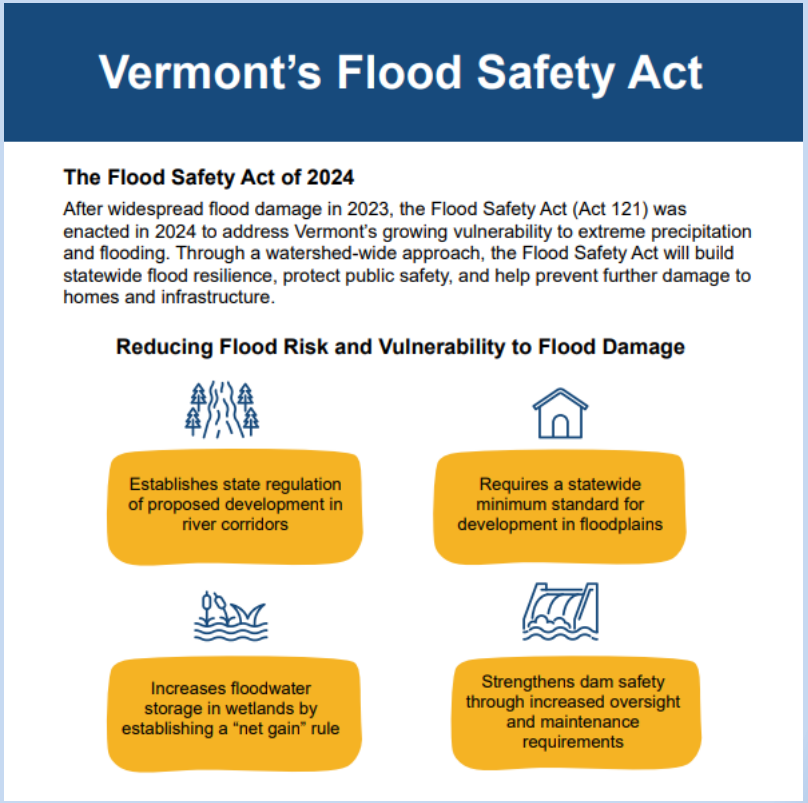
Considerations for Municipalities

- All river corridor maps can be found on the ANR atlas or Flood Ready Atlas.
- The act only addresses **new** development in river corridors. DEC will begin requiring permits for development in river corridors starting in 2028.
- Municipalities may choose to regulate development along smaller streams (less than 2 sq. mil. watersheds).
- The ERAF incentive structure after 2028 is yet to be determined.
- The Act provides for the opportunity to delegate regulation of mapped river corridors to municipalities. The specifics will be determined during the rulemaking process.

More information about the Flood Safety Act is available on the Flood Ready website

bit.ly/flood-safety-act

- Regularly updated information about the Act
- Frequently asked questions
- Infographics and other resources



FLOOD READY

Submit Questions or Comments to VT DEC

We want to hear from communities and residents statewide. Please complete the Flood Safety Act Comment Form:

- https://bit.ly/fsa-comment

Questions and comments submitted through this form will go directly to DEC.

You may also reach out to:

Shayne Jaquith, The Nature Conservancy - Shayne.Jaquith@tnc.org

Alison Spasyk: Lake Champlain Sea Grant – Alison.Spasyk@uvm.edu

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