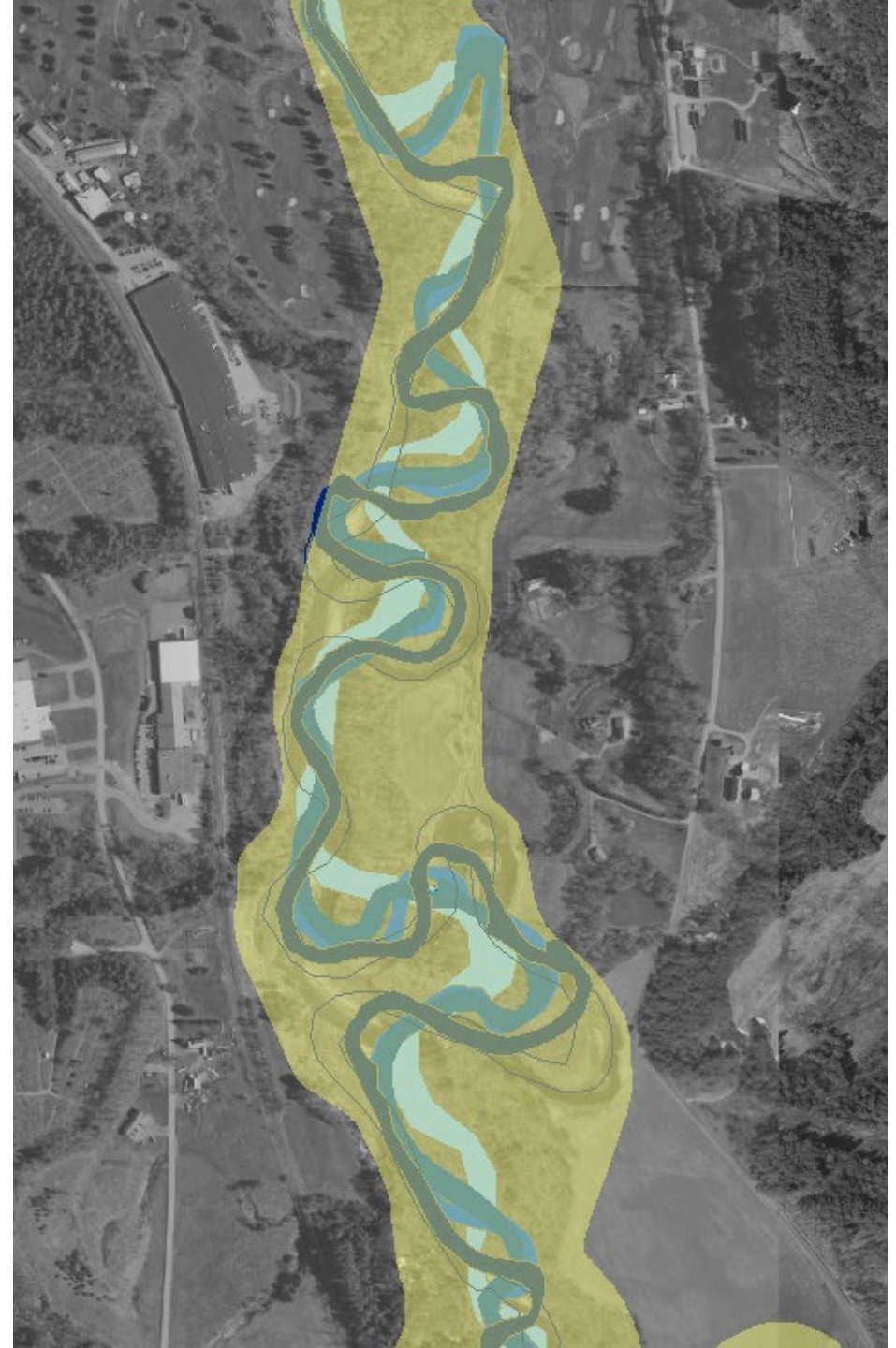


Defining & Managing River Corridors

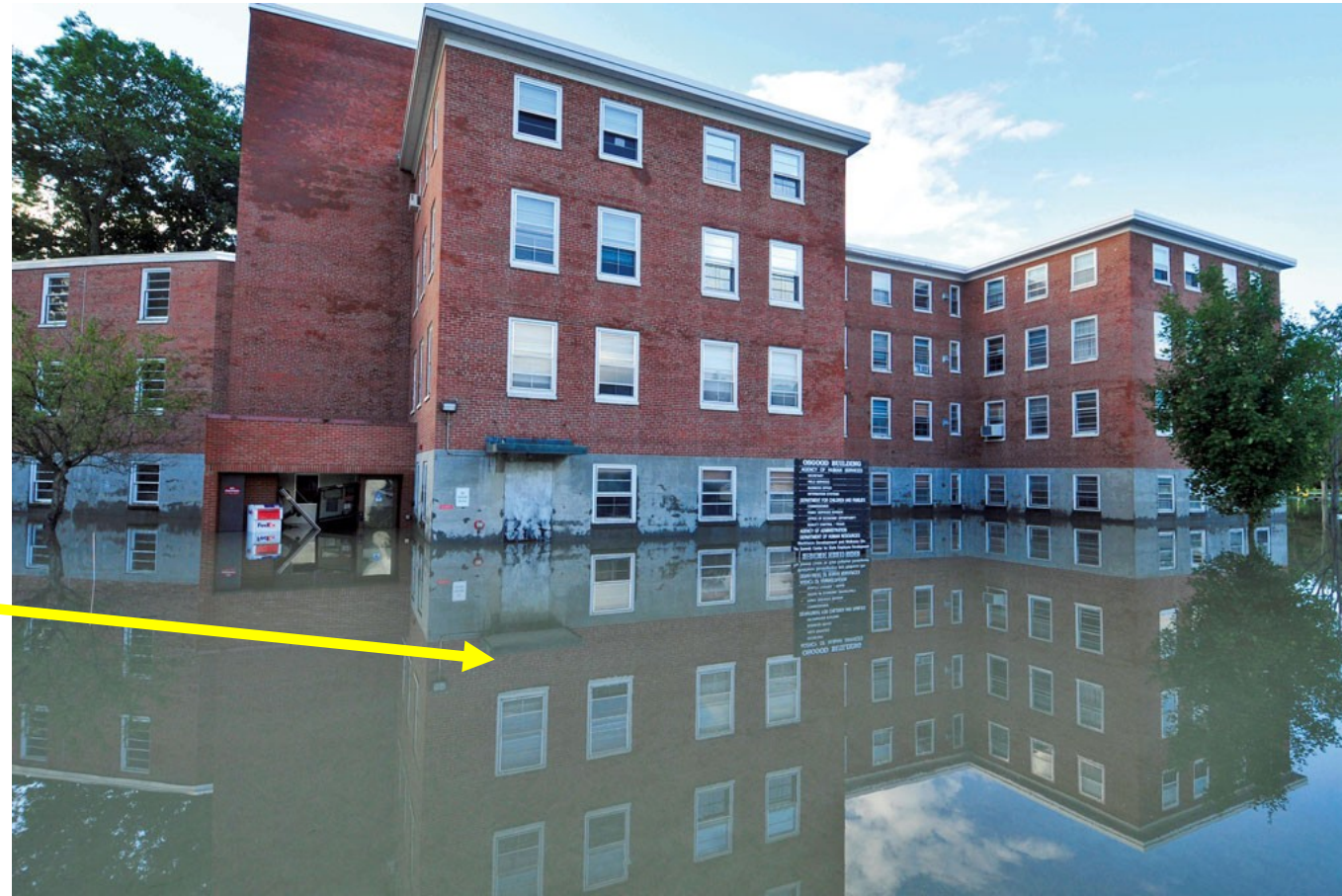
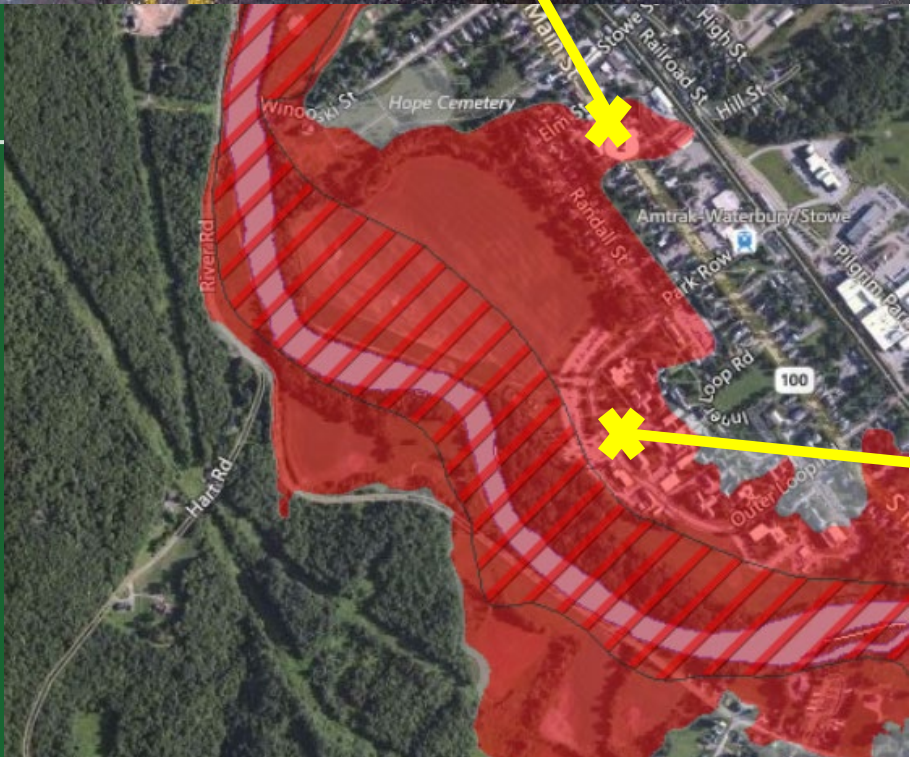
Rob Evans
Rivers Program Manager
VT Department of Environmental Conservation





1. Provide an overview of River Corridors. What are they and why do we care?
2. Discuss current river corridor jurisdiction and regulation, including Act 250
3. Provide a quick overview of River Corridor mapping so we can appreciate scale of what H.120 is proposing
4. Thoughts on H.120

Flood Inundation



Options for State Flood Control Policies and a Flood Control Program



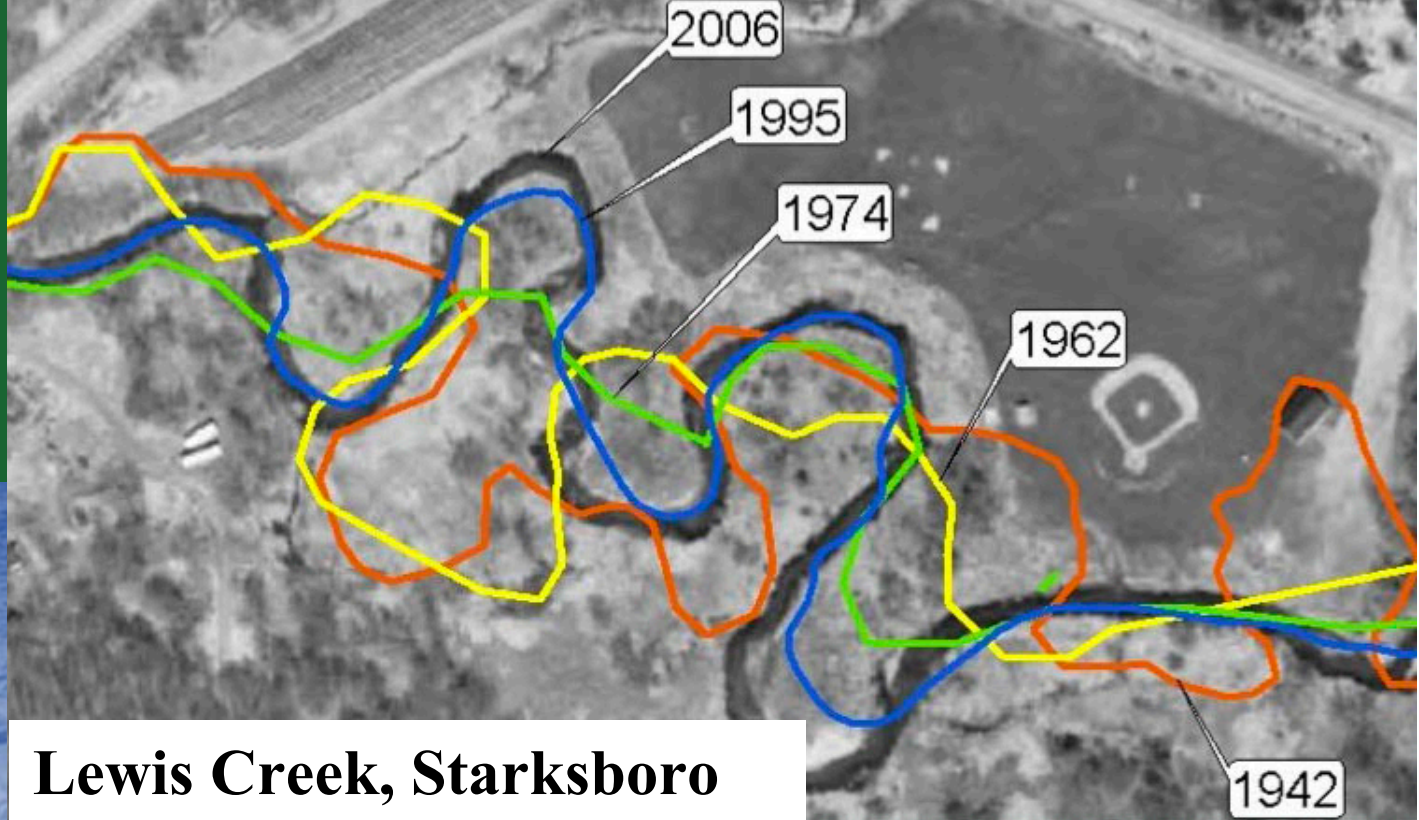
West Hill Brook, Montgomery

Prepared for the Vermont General Assembly
Pursuant to Act 137 Section 2 (1998)

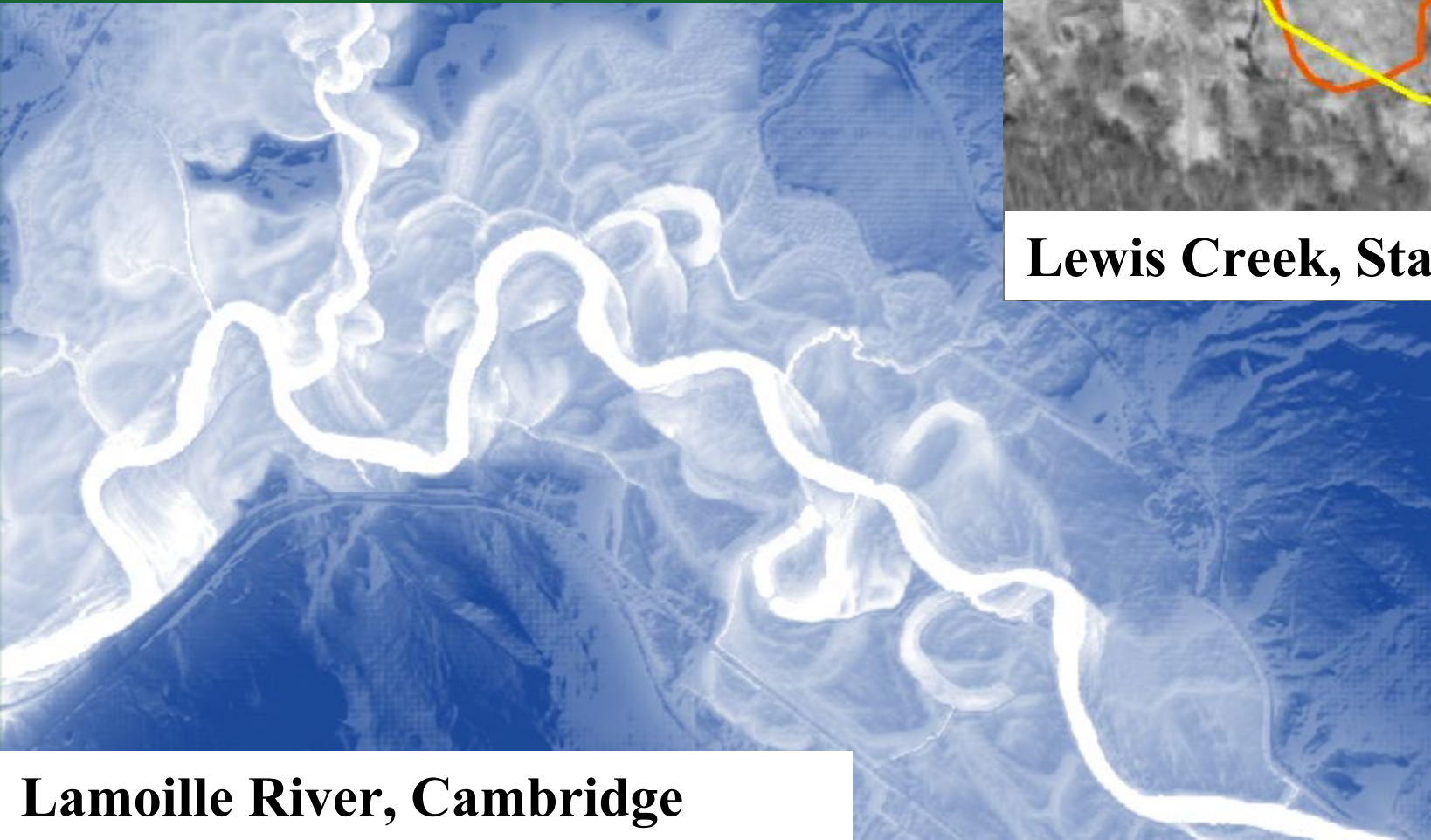
Prepared by the
Vermont Agency of Natural Resources
Department of Environmental Conservation
Water Quality Division
Waterbury, Vermont

February, 1999

“Expert opinion is converging around one central theme: establishing long-term river stability will provide both protection from flood damage and a healthy riverine environment



Lewis Creek, Starksboro



Lamoille River, Cambridge

Current day water's edge is often a relic of:

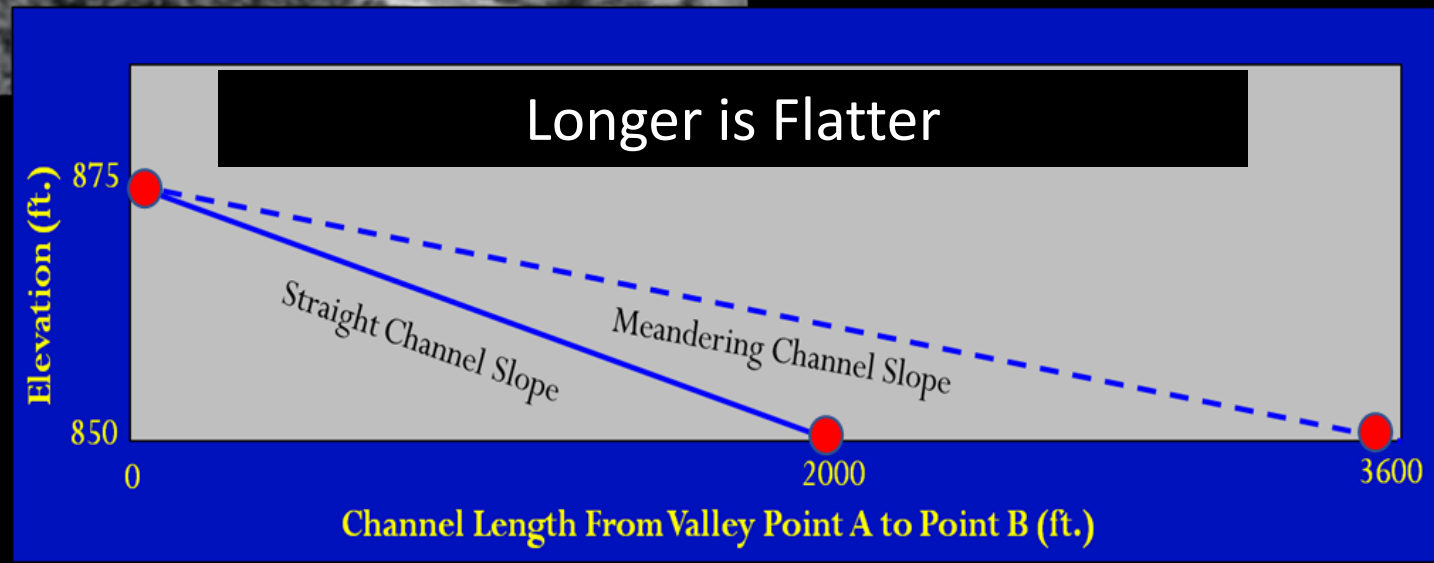
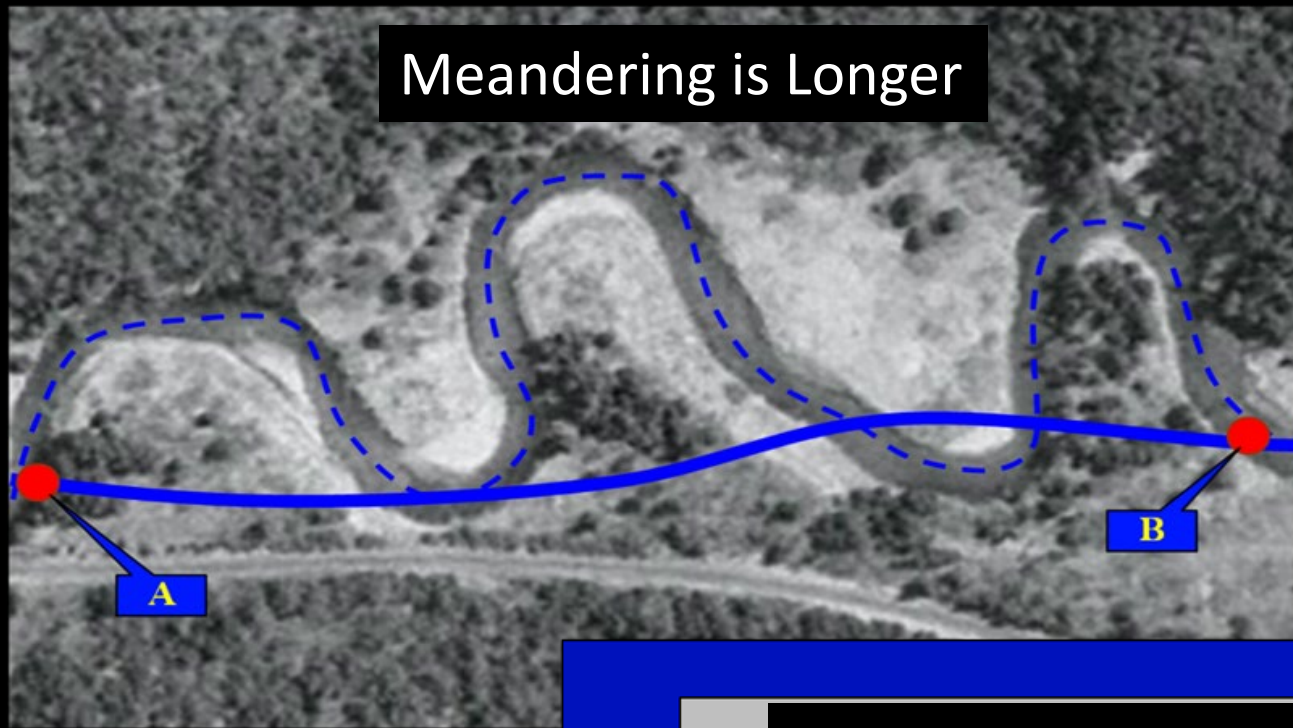


berming
dredging
draining
channeling
200+ years

~ 50% of Vermont streams historically straightened

Intact Rivers and How They Work:

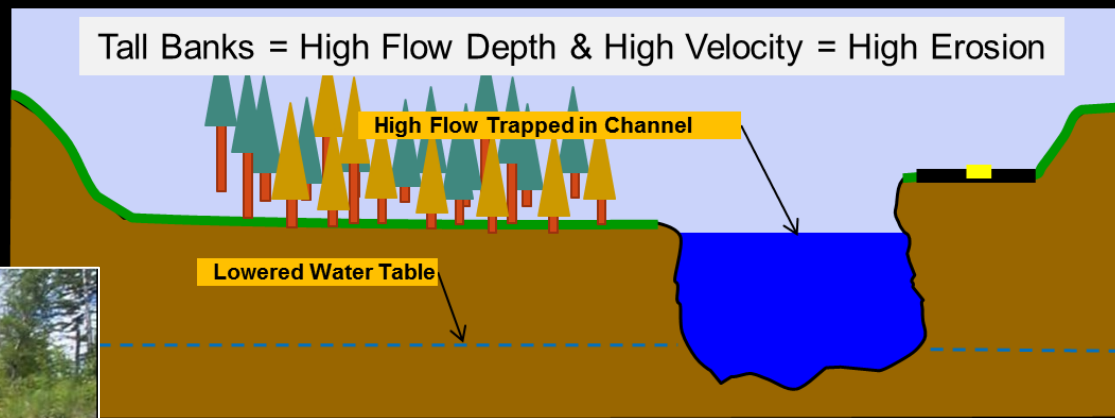
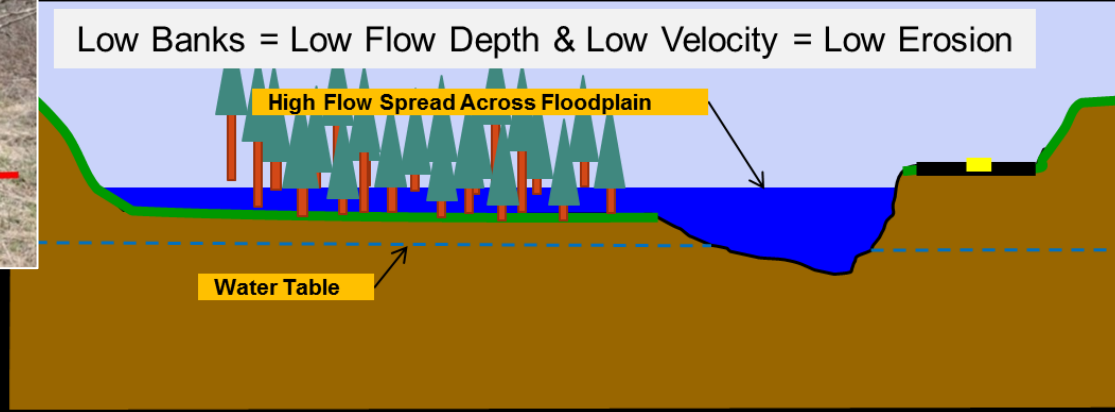
Slope Maintenance via Meandering



Courtesy: Shayne Jaquith, TNC

Intact Rivers and How They Work:

Energy Dissipation via Floodplain Connection



Courtesy: Shayne Jaquith

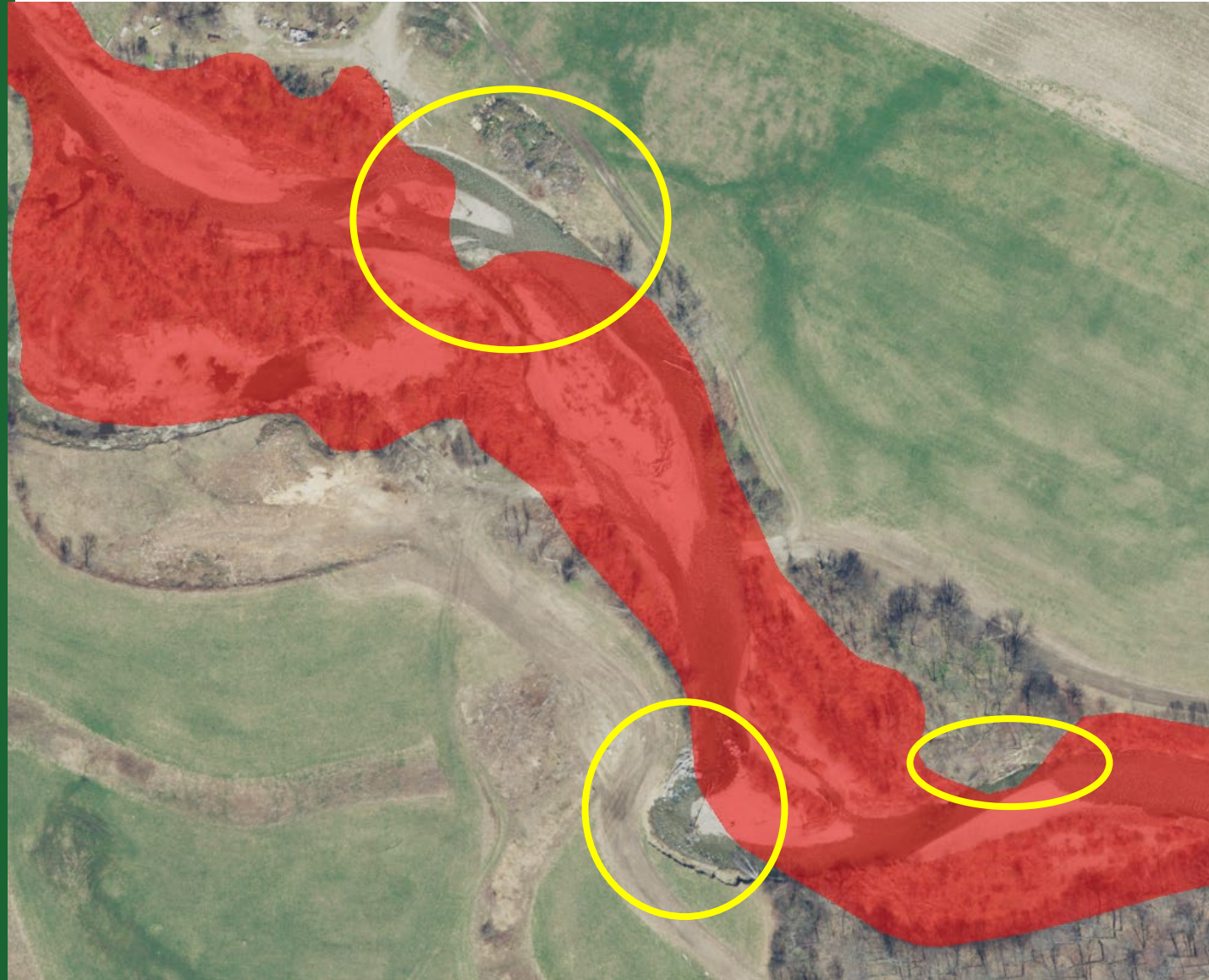


N. Branch
Deerfield
River,
Wilmington



Inundation
Flood Hazard
Maps are not
enough....

Under-represent
flood risk



Browns River, Underhill VT

River Corridors

factors the dynamic
nature of rivers into
planning and regulation



Flood-related Erosion



Rochester, VT 2011



Chester, VT, 2011

Photo:Lars Gange Mansfield Heliflight

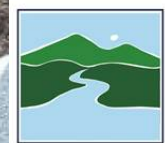


Mad River,
Waitsfield

A large component of river corridor regulation is about avoiding new bank armoring to protect to new encroachments...



STORM CLEANUP FEMA TOURS STORM DAMAGED AREAS



**WATERSHED
MANAGEMENT DIVISION**
RIVERS PROGRAM



Mouth of the Winoski

River Corridor Regulation

Avoidance Strategies
& No Adverse
Impact Standards

1. Municipal Permits (state model bylaws)

- 50 Towns with full/partial river corridor bylaws



River Corridor Regulation

Avoidance Strategies
& No Adverse
Impact Standards

1. Municipal Permits (state model bylaws)

2. State Flood Hazard Area & River Corridor Rule (2015)

- State-owned buildings and facilities,
- Required Agricultural and Silvicultural Practices, and
- Power generation/transmission facilities subject to the PUC Section 248 Process.

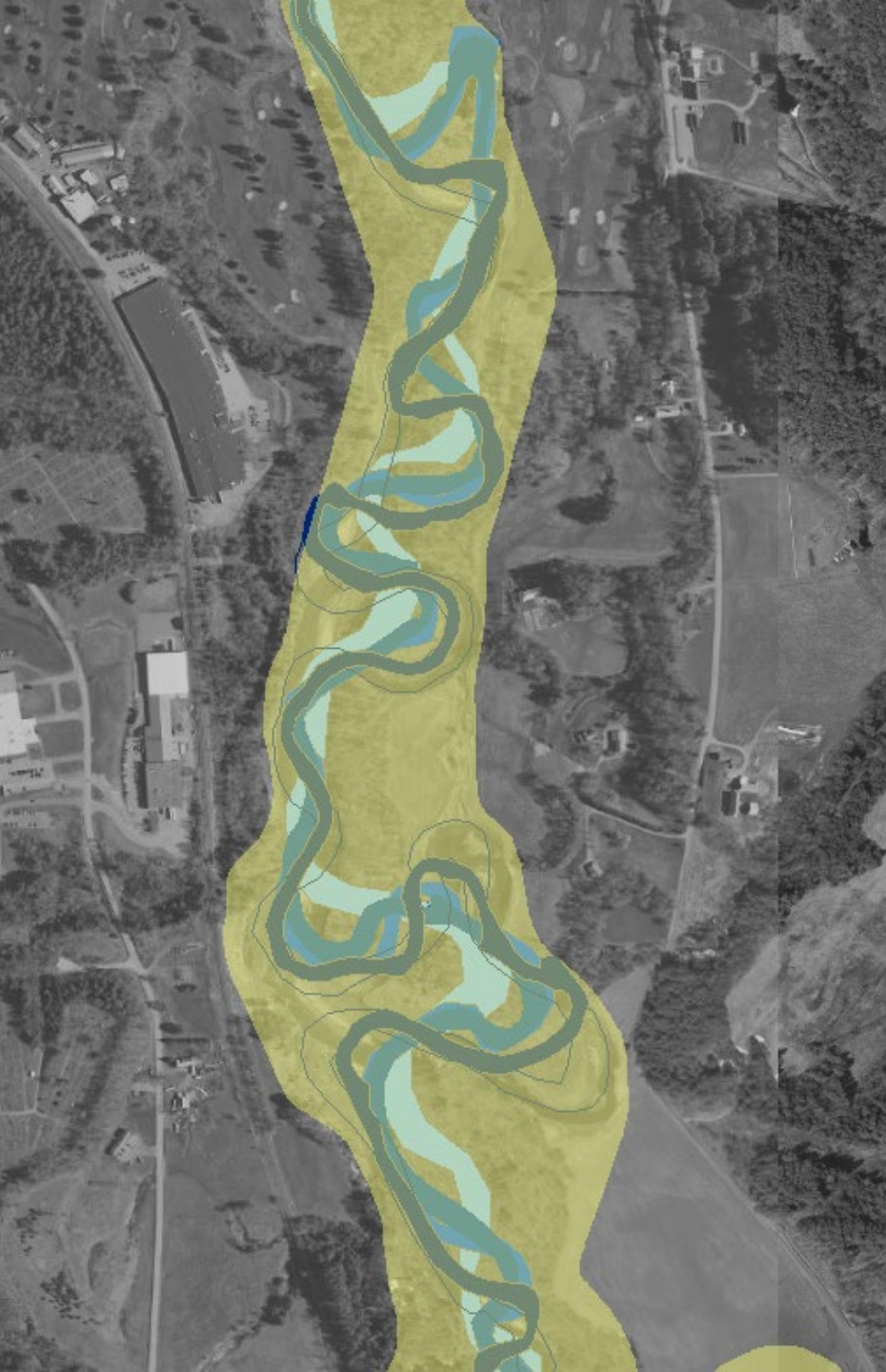


River Corridor Regulation

Avoidance Strategies
& No Adverse
Impact Standards

1. Municipal Permits (state model bylaws)
2. State Flood Hazard Area & River Corridor Rule (2015)
3. **Act 250: Criterion 1D – Floodways**
 - River Corridor considerations since 2003





Statewide River Corridor Map Layer

- Completed 2015
- Updated 2019 (2300 miles of field data)

Layers

Atlas Layers

Filter Layers...

Filter

DFIRM Panels

DFIRM Floodways

Flood Hazard Areas (Only FEMA-digitized data)

River Corridors

River Corridors (Aug 27, 2019)

Small Streams (50ft. setback)

.5 - 2 sqmi.

.25-.5 sqmi.

River Corridor Easement

River Management Engineer

Districts

Floodplain Manager Regions

Geology

Search...

Quick Tools...

50-ft setback:
Draining < 2 square miles:
8600 miles

Mapped Polygon
Draining > 2 square
miles: **5600 miles**

An aerial photograph of a town situated on a riverbank. A large dam structure is visible, creating a reservoir. The town includes several buildings, a church with a steeple, and a parking lot. The surrounding area is lush with green trees and grass.

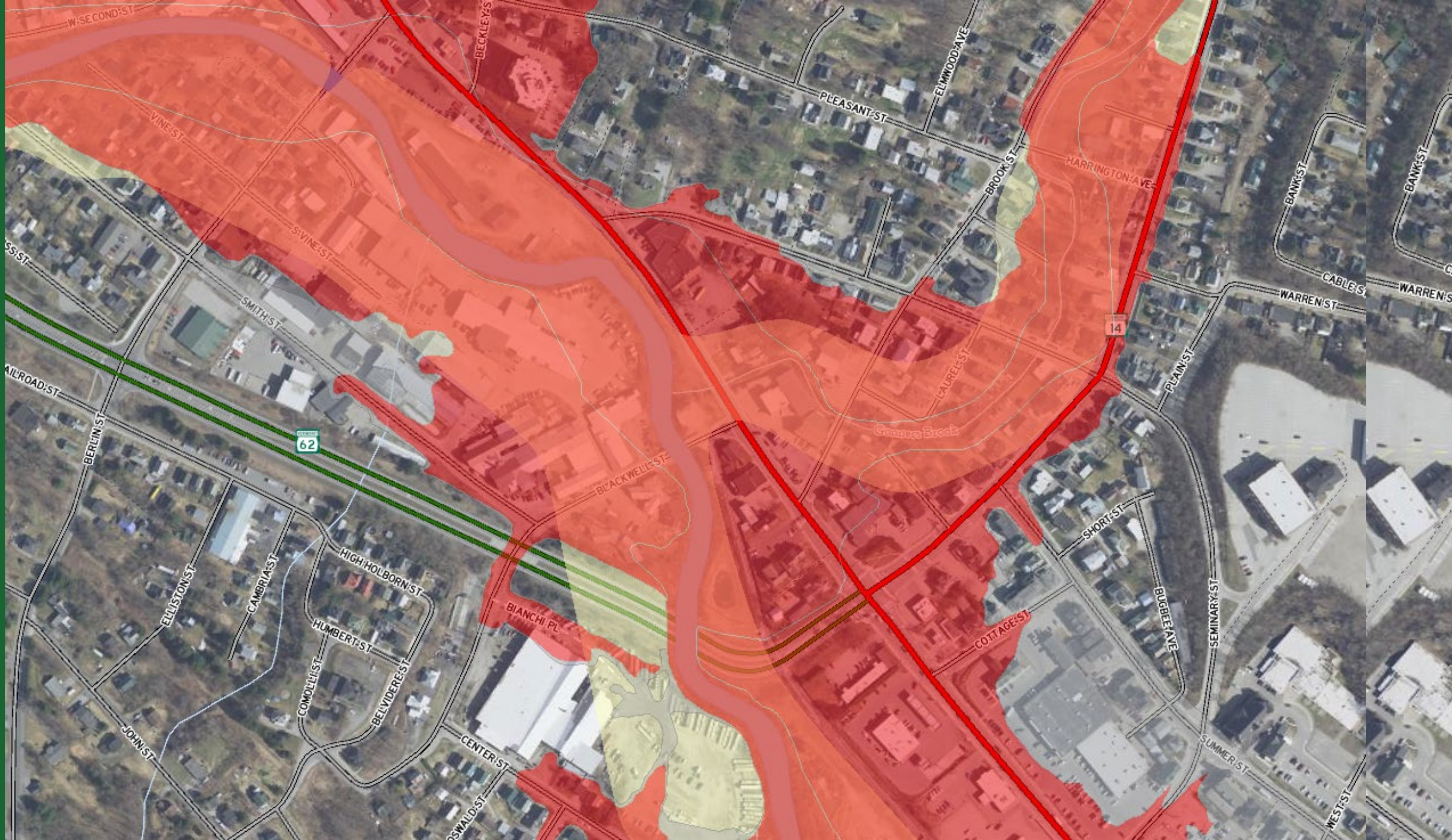
FOR RIVERS

An aerial photograph of a river winding through a dense forest. The river has several meanders and oxbow-like curves. The forest is in autumn, with trees showing various shades of green, yellow, and orange. The river's banks are visible, showing some sandy or rocky areas.

MAKING ROOM



River Corridor





Closing thoughts on H.120



More discussion on whether Act 250 is the right fit...

Making 14000 miles of river corridor jurisdictional is significant

Vermont Climate Council work is underway..