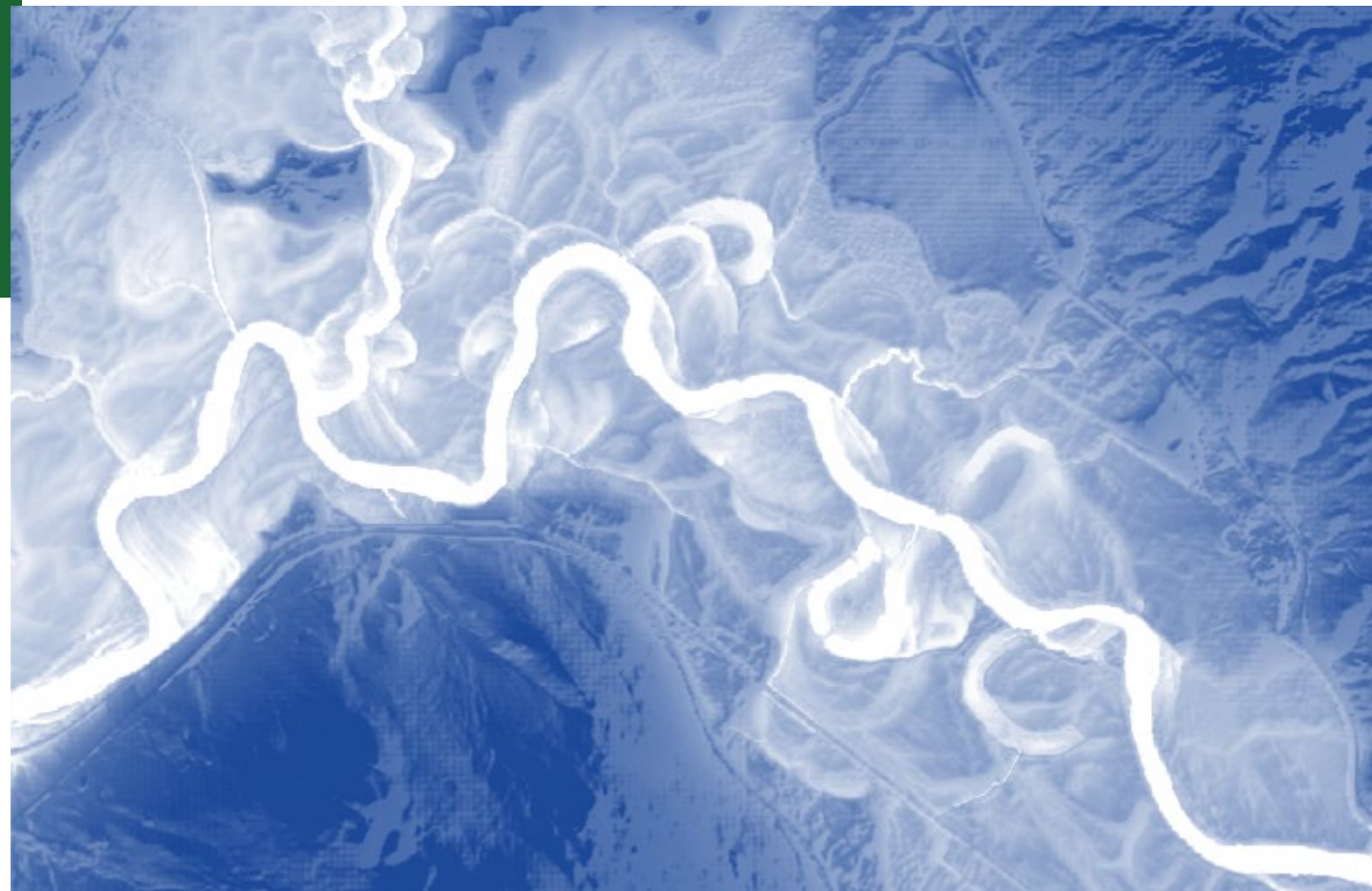


# Rivers Program Overview

Rob Evans  
Rivers Program Manager  
Agency of Natural Resources  
Department of Environmental Conservation



**WATERSHED**  
**MANAGEMENT DIVISION**  
RIVERS PROGRAM



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## 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)

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

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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



A legacy of Dredging, Berming,  
Straightening, Armoring....  
Repeated after every flood....



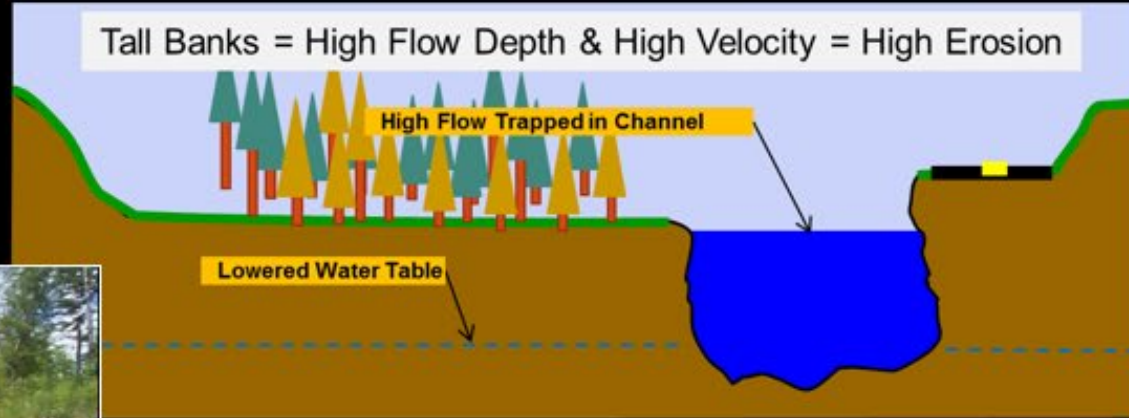
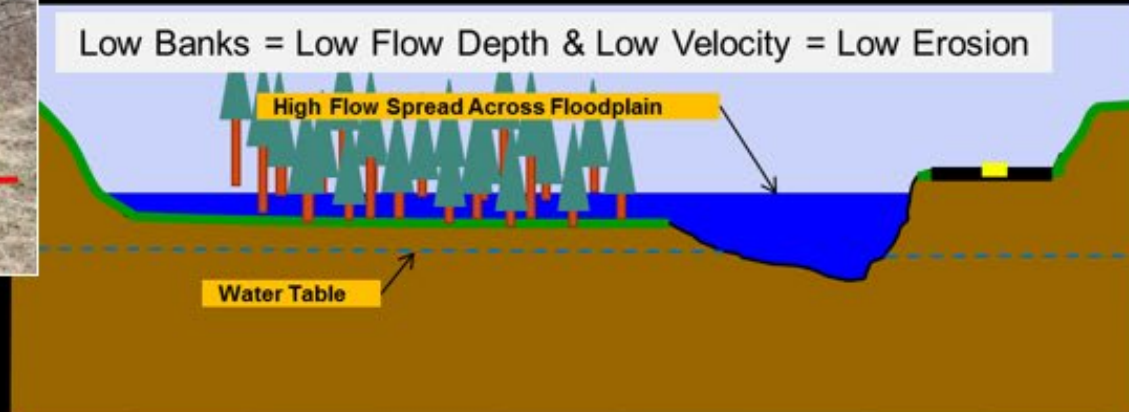


Channelized Rivers =  
Destructive Rivers



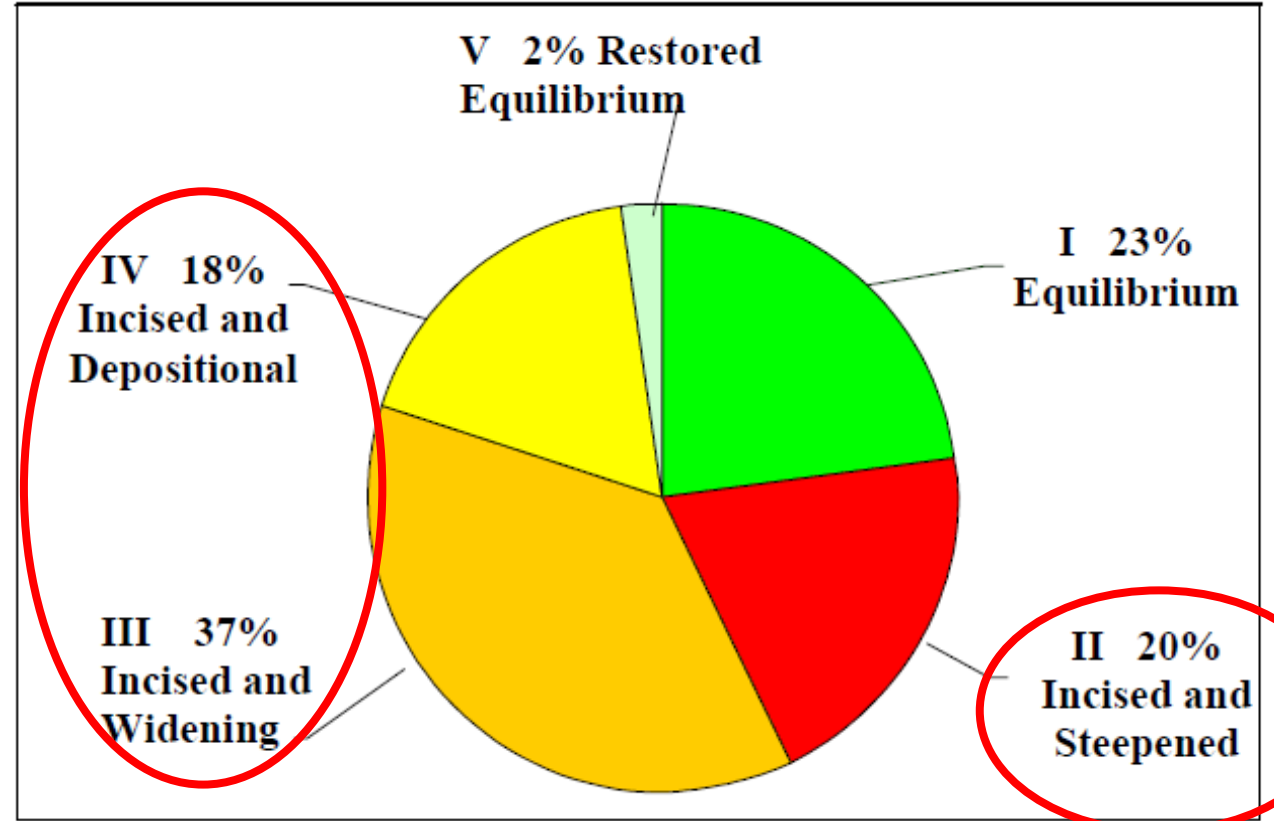
# Intact Rivers and How They Work:

Energy Dissipation via  
Floodplain Connection



Courtesy: Shayne Jaquith





# Stream Alteration Permit Changes



- Act 110 (2010) – Six-fold increase in number of stream miles regulated
- Act 138 (2012) – Provided the authority to regulate emergency work
  - Since July 2023, 330 Emergency and Next Flood Measure authorizations

2017: FEMA Approves ANR  
Stream Alteration Rule as  
“Codes and Standards”







# Key Principles Structure Width and Opening Height



**Old – 7' Pipe**



**New – 16' x 8' Precast Arch**



# Rivers & Roads Training

(Act 138 -2012)

- Developed and offered annually in collaboration with VTrans and ANR Dept. of Fish & Wildlife
- Since 2012; 48 Training Events/ 860 individuals
- Understanding and working with river processes improves flood resilience

# River Corridors as part of a No Adverse Impact Regulatory framework

Flood Hazard Area –  
Inundation

River Corridor –  
Erosion



# Land uses in River Corridors and Flood Hazard Areas

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Avoidance Strategies  
& No Adverse  
Impact Standards

## 1. Municipal Permits (state model bylaws)

- 97 towns have adopted higher standards
- 29 have town-wide river corridor regulations



# Land uses in River Corridors and Flood Hazard Areas

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Avoidance Strategies  
& No Adverse  
Impact Standards

1. Municipal Permits (state model bylaws)
  - 97 towns have adopted higher standards
  - 29 have town-wide river corridor regulation
2. **Act 250 – Criterion 1D**



# Land uses in River Corridors and Flood Hazard Areas

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Avoidance Strategies  
& No Adverse  
Impact Standards

1. Municipal Permits (state model bylaws)
  - 97 towns have adopted higher standards
  - 29 have town-wide river corridor regulation
2. Act 250 – Criterion 1D
3. **State Flood Hazard Area & River Corridor Rule (2015) – activities exempt for municipal regulation**



# River Corridor Mapping

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factors the dynamic  
nature of rivers into  
planning and regulation



