



A History of Post-Flood Channel Works
Main stems and tribs re-channelized over time

Dredging	Battenkill	Black River	Walloomsac
Post Irene ¹	5,663'	14,992'	25,725'
Pre Irene ²	6,566'	128,619'	49,284'

Dredging	Ottauquechee	Otter Creek	Saxtons River
Post Irene ¹	52,669'	36,935'	42,767'
Pre Irene ²	155,210'	273,128'	30,797'

Dredging	West River	White River	Mad / Dog
Post Irene ¹	75,634'	107,830'	26,910'
Pre Irene ²	80,143'	110,636'	96,339'

¹ VT DFW Roadside assessment of dredging (fall / 2011)
² VT Stream Geomorphic Assessment of channel straightening



VT Rules and General Permits: Stream alterations that are not exempt or qualify as an emergency measure must meet the state Stream Alteration Standards:

- **Equilibrium:** result in conditions that cause or perpetuate the unnatural aggrading (raising) or degrading (lowering) of the channel bed elevation at the reach scale;
- **Connectivity:** create significant stream bed or bank disconnections at the local scale that increase damage related to erosion or deposition in the stream; or create a barrier to the movement of aquatic life.

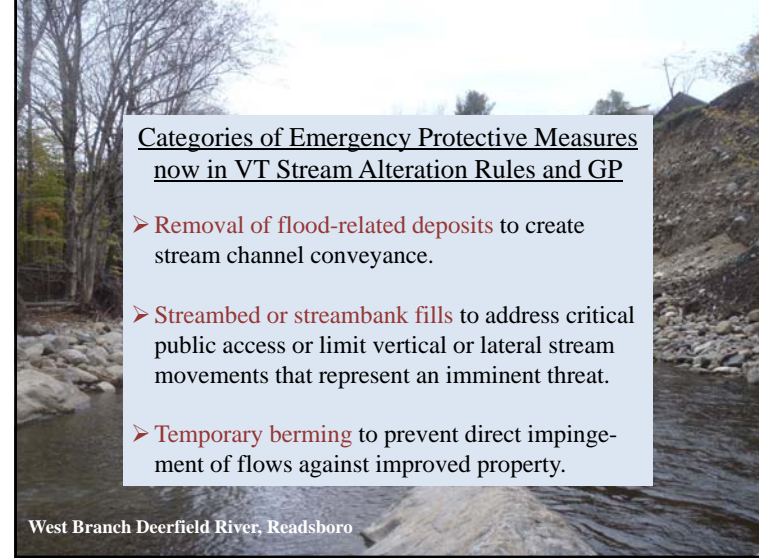
Emergency protective measures are authorized to address:

- Imminent threats to life, public health, and safety.
- Imminent threats of severe damage to property.

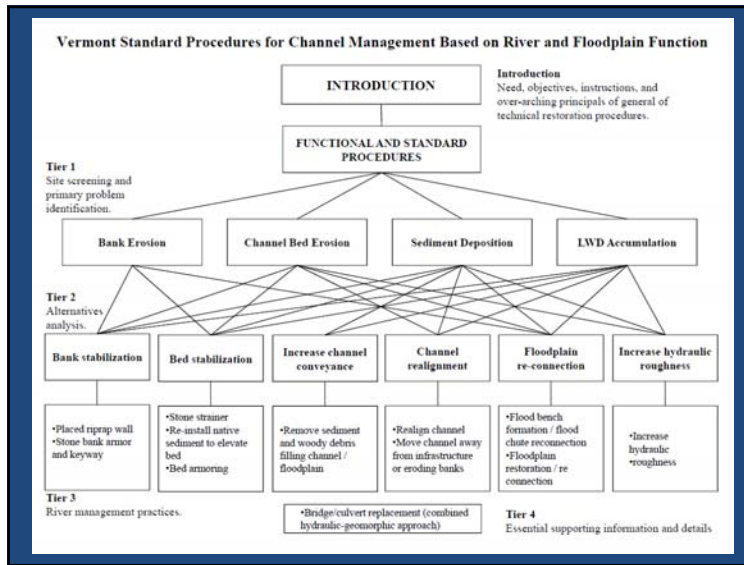


Categories of Emergency Protective Measures now in VT Stream Alteration Rules and GP

- **Removal of flood-related deposits** to create stream channel conveyance.
- **Streambed or streambank fills** to address critical public access or limit vertical or lateral stream movements that represent an imminent threat.
- **Temporary berming** to prevent direct impingement of flows against improved property.



West Branch Deerfield River, Readsboro



Whetstone Brook, Brattleboro, VT 9



Vermont Stream Crossings

- Hydraulic Capacity
- Sediment Transport Capacity
- Aquatic Organism Passage



Old – 7' Pipe



New – 16' x 8' Precast Arch



Establish a three-tiered river management training program

- Tier 1 – Online training course
How Rivers Work
- Tier 2 – Three day field course
Rivers and Roads
- Tier 3 – Three day design courses

Enhance ANR river management field operations to support better interagency coordination.



Enhance State and municipal floodplain regulation and create tools and incentives for river corridors protection.

