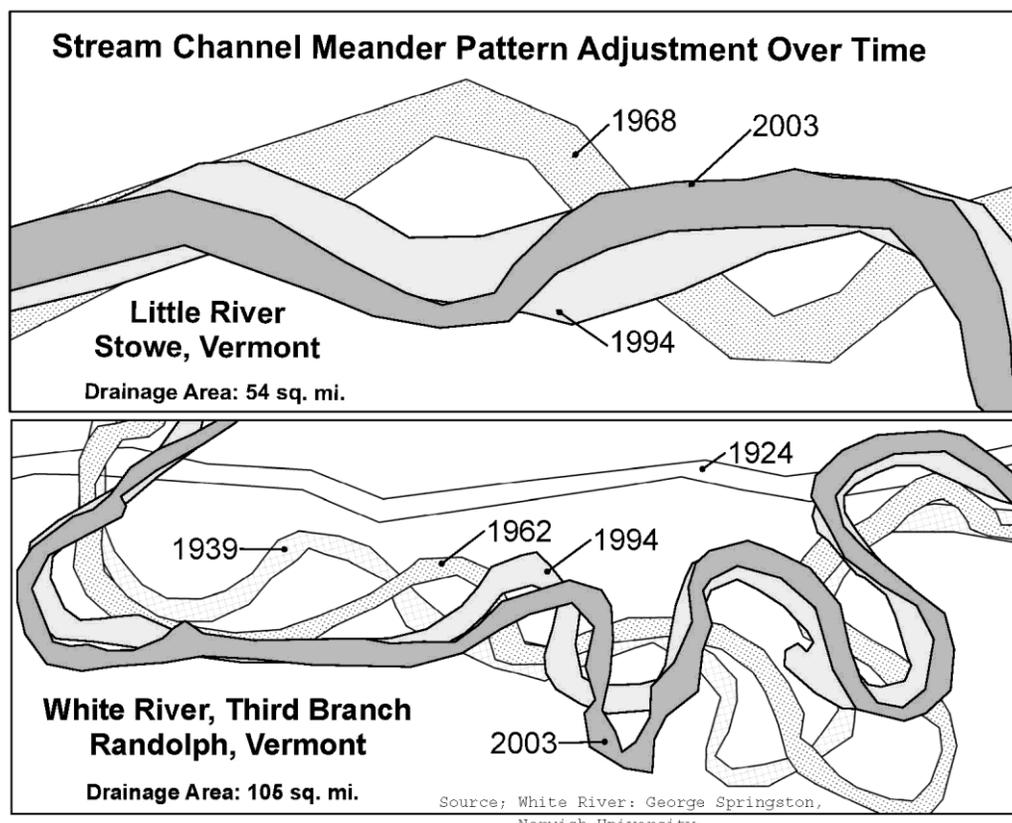


ACT 110 EXPANDS VERMONT'S RIVER MANAGEMENT PROGRAM

Many of us have seen and wondered at flooding as children, and then later as adults, we understand the social and economic devastation that may be wrought by floods. Our society now knows more about how rivers work, and how our activities can cause natural processes to be more powerful and wreak havoc on our roads, bridges, culverts, and buildings.

Vermont issues Stream Alteration Permits because **no one wants to destroy fish habitat or cause flooding or erosion problems for their neighbors**. So, how do we balance our social and economic needs with the forces at play in our natural environment that will move the water past our structures that we have built near streams? Some of these structures were built 25, 50, or 100 years or more ago and lie in harm's way of floods and natural river processes.

We know rivers will meander down our mountains and across valley floors over time as a natural geologic process that will erode the lands near our stream crossings, roads, buildings, and farmlands. Unfortunately, **our society's efforts to halt these processes and protect nearby land uses, have largely failed and cause rivers to meander even more rapidly**. The Vermont Legislature understood the conflicts causing flood and erosion impacts and passed Act 110 in 2010. Our new public policy is that, where possible, our human structures should be placed outside the corridor where meandering is likely to occur, and thereby reduce societal conflicts with natural stream processes. Many conflicts will persist and require ongoing stream alterations, but where possible, the State will promote the protection of river corridors and manage streams toward a dynamic equilibrium – a balance of natural river processes that, in time, will minimize erosion; move water and sediment; create fish habitat; and develop floodplains that may absorb the power of floods.



Dredging and channeling of watercourses to drain the land and make way for roads, development, and agriculture over the past 200 years has increased runoff velocities and led to the erosion of stream beds. Eventually the downward erosion gave way to bank erosion; stream channels have widened; and the capacity of many Vermont waterways to move sediment is now reduced. This deposition of sediments, often viewed as a bad thing, is actually the formation of new meanders and floodplains. To let this “channel evolution” process unfold, where possible, could result in stream forms and processes that are slower, less damaging, and far less expensive to manage.

Spring runoff cascades quickly down steep streams in the mountains and foothills and has great power to erode land. Further down in the valley, floodwaters rise, and water slows and spills over the banks into yards and farm fields as streams enter the valley floor and become less steep. The power of water in stream flows can quickly unravel a river in the fabric of the Vermont landscape that we all so cherish. The Vermont Rivers Program will work with property owners and towns to consider the ways in which disrupting the river will minimize social, economic and environmental harm. Seemingly benign activities like installing a new driveway culvert on a mountain stream or simply bridging a hiking path across a bottom-valley stream may alter stream processes and cause harm to fish, wildlife and other people.

The Act 110 of 2010 called for the protection of River Corridors and Riparian Buffers and enables policies and rules to restrict placement of structures and buildings in river corridors to **reduce property loss and damage, promote public safety, control water pollution, and protect fish habitat**. Allowing new development of buildings in the river corridor does not make sense for the land owner building near the stream-bank or the downstream neighbors feeling the brunt of faster erosion and/or higher flood flows. This is especially true where channels and new floodplains are evolving.

A new General Permit for Stream Alterations has taken effect this Spring (2011) for all perennial streams (i.e., those with year-round flows) and will include a review of whether proposed projects disrupt the erosive processes of a stream, impede the movement of fish and other aquatic life, or increase the likelihood of flood and erosion-related damages. Prior to Act 110, stream alteration regulations only applied to streams with a watershed greater than 10 square miles. The Vermont Rivers Program will work with property owners and towns to resolve conflicts between human investments and the dynamics of streams in a manner that promotes stream equilibrium conditions. The Stream Alteration General Permit and other guidance documents are available at: http://www.vtwaterquality.org/rivers/htm/rv_management.htm

River Program Scientists and Engineers are available to evaluate new projects, as well as the repair, replacement or retrofit of instream structures that require permitting. **Please contact the Vermont Rivers Program** to discuss stream equilibrium and your project options to balance social, economic and environmental impacts for all of us and future generations.

Please visit our web site at: www.anr.state.vt.us/dec/waterq/rivers.htm