

**Technical Guidance for Identification of Perennial Stream
For the Purpose of Jurisdictional Determinations
Under 10 VSA Section 1021(a) and 1002(10)
And the Vermont Stream Alteration General Permit**

April 16, 2011

Definition of Perennial Stream

A perennial stream is a watercourse, or portion, segment or reach of a watercourse that, in the absence of abnormal, extended or severe drought, continuously conveys surface water flow. Human caused interruptions of flow; i.e. flow fluctuations associated with hydroelectric facility operations, or water withdrawals, shall not influence the determination. A perennial stream shall not include the standing waters of wetlands, lakes, and ponds.

The jurisdictional exemption under 10 VSA Section 1002(10) for “ditches or other constructed channels primarily associated with land drainage or water conveyance” shall not include perennial streams that have been channelized or converted to ditches.

All other streams or portions thereof shall be considered and termed intermittent. A stream may, along its course, cycle from intermittent to perennial to intermittent through multiple iterations.

Evaluative Parameters

A perennial stream may be characterized by any of the following:

1. Direct observation or compelling evidence obtained that surface flow is uninterrupted.
2. Presence of one or more geomorphic characteristics typically associated with perennial streams including:
 - a. Bed forms; i.e. riffles, pools, runs, gravel bars, other depositional features, bed armor layer
 - b. Bank erosion and/or bed scour
 - c. Indications of waterborne debris and sediment transport
 - d. Defined bed and banks
3. Watershed size greater than 0.5 square miles
4. VHD data layer-derived application of USGS regression for intermittent stream flow probability
5. Presence of aquatic organisms requiring uninterrupted flow for survival
6. Base flows are primarily supported by groundwater recharge as indicated by bank seeps, springs or other indicators
7. Absence of highly permeable channel (particularly streambed) boundary conditions which, in conjunction with decline of the groundwater table below the streambed elevation may be anticipated to interrupt flow occasionally to frequently.
8. Surrounding topography exhibits characteristics of being formed by fluvial processes