

What is an Intermittent Stream, a Perennial Stream? What is the difference and why should I care?

Often homeowners are surprised when they hear unfamiliar terms regarding their property. Please read this if you believe you have an intermittent or Perennial stream on your property. The Conservation Office is offering this as a guide to help you understand your environment better. As always, feel free to contact our office via email with questions.
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Intermittent Streams

Intermittent streams are important for storm damage prevention, flood control, ground water protection, wildlife habitat, and recreation values. During spring, summer, and fall these streams disperse snow melt and storm runoff across the landscape thereby preventing dangerous volumes and flows from spilling over roadways and property. This broad dispersal also allows for larger volumes of water to infiltrate into the ground, recharging groundwater supplies.

Intermittent streams are an essential source of food and water for wildlife, and are often the only source of water in higher elevation areas of town. The moist soils that border intermittent streams are significantly richer in herbs and flowering/fruited plants – the base trophic level of food -- than surrounding upland areas.

During all seasons, but especially in winter and spring, intermittent streams act as essential corridors for animal movement when food is scarce. Some animals, such as pickerel frogs and eastern spotted newts, rely heavily on intermittent streams for movement.

For these reasons, the upland areas surrounding intermittent streams are heavily utilized by wildlife for living space, breeding, feeding, migrating, dispersal, and security.

The Sudbury Wetlands Bylaw (SWAB) protects intermittent streams of all forms and the adjacent upland resource within 100 feet of those streams. For the purposes of the Bylaw an intermittent stream is that segment of a flowing watercourse that regularly experiences naturally occurring sporadic flow interruptions such that it does not have a continuous sheet of surface water for five consecutive days or more annually.

The Conservation Commission recognizes two types of intermittent stream:

- Type I: Stream segments in which continuous standing water disappears for at least five (5) but not more than thirty (30) consecutive days annually.
- Type II: Streams in which continuous standing water disappears for more than thirty (30) consecutive days annually.

A 100 foot adjacent upland resource area exists for both type I and type II intermittent streams. In the case of the 100-foot adjacent upland resource area for Type I intermittent streams the Conservation Commission may, based on the specific functions and values of the resource, use protection guidelines adopted for the 100-foot Riverfront area for a perennial stream.

Perennial Streams

Under this Bylaw all flowing watercourses shall be considered to be perennial streams unless a preponderance of evidence deemed acceptable by the Conservation Commission rebutting this presumption is presented. Information necessary to overcoming this presumption includes, but is not limited to, direct observation and documentation of the: absence of a continuous sheet of surface water throughout the watercourse, or relevant segment, for a minimum of five consecutive days annually, in most years (excluding periods when local drought or other conditions abnormally lowering the water table are known to exist, or due to water withdrawals) as witnessed by a member of the Conservation Commission or its staff; which shall be considered definitive evidence in overcoming the presumption of perennial status.

Other information that may be relevant to overcoming the presumption of perennial stream status for a watercourse or a segment of that watercourse includes, but is not limited to, direct observation and documentation of:

- Absence of gravel, mineral, and riffle substrate;
- Absence of a clearly defined flow channel;
- Absence of bank undercutting;
- Presence of established non-aquatic plants in the flow path (i.e., plants that are unable to grow in continuously submerged conditions);
- Absence of a continuous sheet of surface water in the stream channel or relevant segment at a time when Conservation Commission designated perennial streams of comparable characteristics are flowing, as witnessed by a member of the Conservation Commission or its staff.