Table 3. Five sets of traits were included in the taxa attribute table for the low gradient SNEP dataset.

Attribute	Description	Categories	Sources*	Number of taxa with attribute assignments (out of 542)	Percent of total
Functional feeding group (FFG)	Refers to the primary process for acquiring food resources	PR = predator, CG = collector-gatherer, SH = shredder, SC = scraper, CF = collector-filterer	MassDEP, CT DEEP, VT DEC, NRSA*	526	97.0%
Tolerance values (TolVal)	Relative sensitivity to pollution, disturbance	Three categories: intolerant (numeric value = 2), intermediate (numeric value = 5) and highly tolerant (numeric value = 8)	Primary: taxa tolerance analyses on the MA/SNEP and regional low gradient datasets. Secondary: riffle habitat assignments from MassDEP, VT DEC, CT DEEP	406	74.9%
Life Cycle/ Voltinism	Number of broods or generations a species typically produces in a year	Uni (one), semi, multi (multiple)	NRSA, Poff et al. 2006	247	45.6%
Habit	Distinguishes the primary mechanism a particular species utilizes for maintaining position and moving in the aquatic environment (Merritt and Cummins 1996)	SP = sprawler, SW = swimmer, CN = clinger, CB = climber, BU = burrower	NRSA, VT DEC, Poff et al. 2006	479	88.4%
Thermal preference	Thermal preference/optima	Cold_cool or warm	U.S. EPA 2012, U.S. EPA 2016	75**	NA**

*Source abbreviations: Connecticut Department of Energy & Environmental Protection (CT DEEP), Vermont Department of Environmental Conservation (VT DEC), New York State Department of Environmental Conservation (NYSDEC), and EPA National Rivers and Streams Assessment (NRSA)

**Only the number of taxa assigned to the cold/cool and warm groups are reported here; the total number of taxa assessed during this pilot study were not available.

2.2   Habitat and water quality

Habitat and water quality data were collected by field crews at the time of the biological sampling events. Table 4 lists parameters that were collected by both MassDEP and Tetra Tech. These data were used in classification analyses and, where appropriate, in site disturbance characterizations. At the 2019 SNEP sites, Tetra Tech collected additional exploratory parameters such as counts of woody debris and flow velocity measurements (for more information, see Appendices D and F in the SNEP IBI Sampling Analysis Plan; Tetra Tech 2019).

Habitat surveys were performed in accordance with the RBP Rapid Habitat Assessment protocols for low gradient, glide-pool (GP) streams (Barbour et al. 1999). The riffle/run (RR) assessment, which is slightly different, was also performed at a few sites that had characteristics of both RR and GP stream types. The RBP-GP assessment includes ten input metrics: epifaunal substrate/available cover, pool substrate characterization, pool variability (size/depth), sediment deposition, channel flow status, channel alteration, channel sinuosity, bank stability, bank vegetative protection, and riparian vegetative zone width. Each metric was scored on a scale of either 0-10 or 0-20, then summed to get a total score (higher scores indicated better habitat quality). Habitat scores are estimated by the field crews and are subject to variable interpretations of the scoring scales. However, the crews undergo training and inter-crew calibration during each sampling season to improve estimates of habitat conditions.

Other habitat measures included visual estimates of substrate composition (clay, sand, gravel, cobble, boulder, bedrock), the number of jabs from each major habitat group (submerged wood, submerged vegetation, vegetated margins/undercut banks, and hard bottom), visual estimates of percent canopy cover and mean width, maximum depth and the high water mark (Table 4). Field crews also collected *in situ* water quality data (temperature, conductivity, dissolved oxygen, and pH), and qualitative assessments of color, odor, surface oils, turbidity, where available[1]. Field crews also took photographs of the sites. The photos show the diversity of low gradient sites represented in the IBI calibration dataset, ranging from slow winding, soft bottom streams to slow moving streams with rocky substrates (Figure 2). Stream color ranged from colorless to dark and substrate size and major habitat types varied across sites. Overall, the highest proportion of jabs were taken from submerged wood, (median = 5 out of the 10 jabs) (Figure 3). More detailed information on habitat types can be found in Appendix A.

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[1]MassDEP 2019 *in situ* data had not been QC'd in time to use in the analyses. Some of the other sites were missing data due to equipment malfunctions.