

## High-Gradient Stream

MNHESP State Rank: Unranked

### PHYSICAL

**Hydrology** Flowing water.

**Soil** Ledge, cobble, gravel, and sand.

**Topography** Scoured channel on moderate to steep slopes with abrupt drops.

**Elevation** Mostly occurring above 300 m (984 ft) elevation in the October Mountain State Forest.

**Form** Moderate to quick flowing streams with some turbulent water.

### DOMINANT PLANT SPECIES<sup>1</sup>

**Canopy** Absent, though frequently shaded by adjacent trees.

**Subcanopy** Absent, except at edge of community.

**Shrubs** Absent, except at edge of community.

**Herbs** Absent except at edge of community.

**Climbing Plants** Absent.

**Bryophytes** Often present at margin of springs.

**Notes** Vegetation highly dependent on form (e.g., rivulet or pond) and permanence of source through the season.

### COMMON ANIMAL SPECIES<sup>2</sup>

**Mammals** Raccoon and woodland jumping mouse.

**Birds** Black throated blue warbler, veery, blue-headed vireo, and eastern phoebe.

**Herpetiles** Northern two-lined salamander and dusky salamanders.

**Fish** Brook trout.

**Invertebrates** Caddisfly and stonefly.

**Notes** Small size of community occurrences limits use by larger vertebrates.

## CONSERVATION, DISTRIBUTION, AND NOTES

**MNHESP State Rank** Unranked.

**Rare Species<sup>3</sup>** Spring salamander (SC).

**Distribution in MA** Common in portions of state with topographic relief.

**Distribution in the Study Area** Most occurrences located on slopes within October Mountain State Forest.

**Variation** Bank morphology, substrate size, and stream features (e.g., riffle, run, and pool) can be substantially different depending on elevational gradient.

**Synonyms** Riverine Open Water, Riverine Aquatic Bed, Riverine Unconsolidated Bottom (Cowardin *et al.* 1979).

### REFERENCES

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deep Water Habitats of the United States. U.S. Government Printing Office.

Massachusetts Natural Heritage and Endangered Species Program. 1999. Massachusetts Natural Heritage Atlas: 2000-2001 Edition. Division of Fisheries and Wildlife, Westborough, MA, USA.

<sup>1</sup> Scientific names provided in Attachment F.

<sup>2</sup> Scientific names provided in Attachment C.

<sup>3</sup> State rank and status follow MNHESP 1999.

