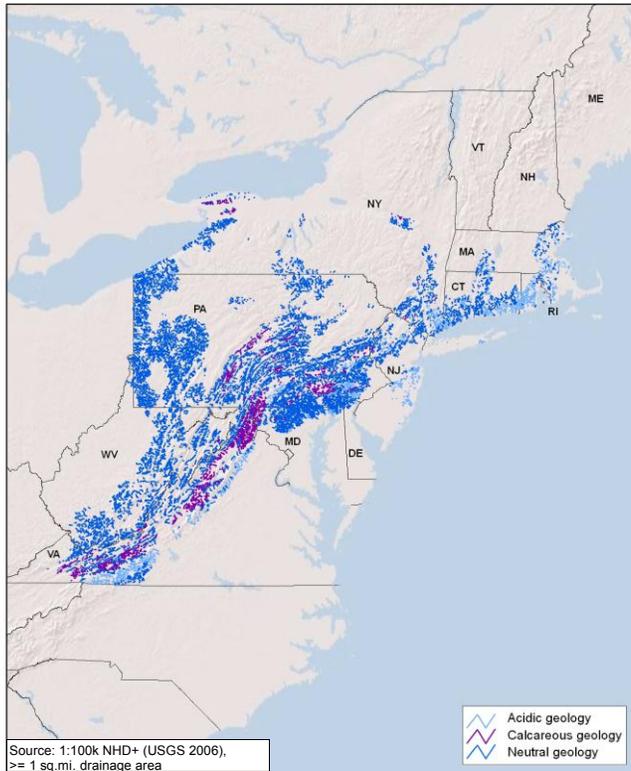


# Moderate Gradient, Cool, Headwaters and Creeks

## Macrogroup: Headwaters and Creeks

This map is based on a model and has had little field-checking. Contact your State Natural Heritage Ecologist or State Fish Game Agency for more information about this habitat.



North Fork of the South Branch Potomac River. © Tim Kiser

### Description:

Cool, moderately fast-moving, headwaters and creeks of low elevation hills and gentle slopes. These small streams of the Southern New England and the Mid-Atlantic occur on hills and slopes at low to moderate elevations in watersheds less than 39 sq.mi in size. They have cool moderately fast-moving waters with good oxygenation. Instream habitats are dominated by riffle-pool development with low sinuosity, moderately entrenchment, and moderately narrow valleys. They have substrates dominated by cobble, gravel, and sand with occasional small patches of boulders. The predominant source of energy to the stream is terrestrial leaf litter or organic matter (these are allochthonous streams). Cool water temperatures in these streams means the fish community will contain a higher proportion of cool and warm water species relative to coldwater species. Additional variation in the stream biological community is associated with acidic, calcareous, and neutral geologic settings where the pH of the water will limit the distribution of certain macroinvertebrates, plants, and other aquatic biota. The habitat can be further subdivided into 1) headwaters that drain watersheds less than 4 sq.mi, and have an average bankfull width of 16 feet or 2) Creeks that include larger streams with watersheds up to 39 sq.mi. and have an average bankfull width of 32 feet.

### Similar Habitat Types:

These moderate gradient streams are transitional types and often exhibit some characteristics of both the higher and lower gradient streams. Similarly cool streams are transitional between cold and warm systems and may include biota found in both colder and warmer types. Cool moderate gradient streams typically flow into moderate or low gradient cool and warm rivers in areas of less topography.

### Places to Visit this Habitat:

White Deer Creek, Bald Eagle State Forest | PA Pine Brook, Pine Brook Falls - Haase | CT Breakheart Brook, Arcadia Management Area | RI Right Fork Laurel Fork, Holly River State Park | WV Honey Creek, Reeds Gap State Park | PA

**State Distribution:** CT, DE, MD, MA, NH, NJ, NY, PA, RI, VA, WV

**Total Habitat (mi):** 21,323

**% Conserved:** 7.9 Unit = Acres of 100m Riparian Buffer

State	State Habitat %	Miles of Habitat	Acres GAP 1 - 2	Acres GAP 3	Total Acres Unsecured
PA	47	10080	140	316	7380
VA	16	3329	58	155	2340
WV	12	2590	46	179	1753
NY	8	1717	9	42	1263
MD	5	1168	13	65	822
CT	5	1077	34	80	717
NJ	3	628	44	19	429
MA	2	459	5	57	298
RI	1	243	10	31	150
DE	0	28	0	5	16
NH	0	5	0	0	4

## Associated Fish:

**Most Abundant:** white sucker, fallfish, common shiner, tessellated darter, eastern blacknose dace, mottled sculpin, central stoneroller, creek chub, longnose dace, fantail darter, pearl dace, rosieside dace, fathead minnow, smallmouth bass. **Less Abundant:** slimy sculpin, mountain redbelly dace, torrent sucker, bluntnose minnow, potomac sculpin, cutlip minnow, river chub, northern hog sucker, bluehead chub, green sunfish, rock bass, bluegill, greenside darter, rainbow darter, american eel, striped shiner, banded sculpin, margined madtom, crescent shiner, johnny darter, brook trout, creek chubsucker, pumpkinseed, fathead minnow, redbreast sunfish, southern redbelly dace.

## Species of Concern (G1 - G4):

**Fishes:** cheat minnow, clinch dace, redbreast darter, candy darter, mountain brook lamprey, bridge shiner, kanawha minnow, tennessee dace, rustyside sucker, black sculpin, potomac sculpin, checkered sculpin, greenfin darter, tonguetied minnow, american brook lamprey, bigmouth chub, ironcolor shiner, blacknose shiner, new river shiner, mirror shiner, appalachia darter, stripeback darter

**Crayfish, Mussels, and Snails:** elk river crayfish, big sandy crayfish, new river crayfish, littlewing pearl mussel, tennessee heelsplitter, eastern pearlshell, kidneyshell, appalachian springsnail, vernal physa  
See Appendix 2 for scientific names

## Crosswalk to State Names:

**New Hampshire:** Warm water riffle streams. **New York:** Rocky headwater stream, Marsh headwater stream. **Maryland:** Piedmont Streams, Cold Water Streams, Limestone Streams. **Pennsylvania:** Atlantic Basin Fish Coolwater Community 1, Ohio-Great Lakes Basins Fish Coolwater Stream Community.



Mottled sculpin, © Ohio Nanfa

