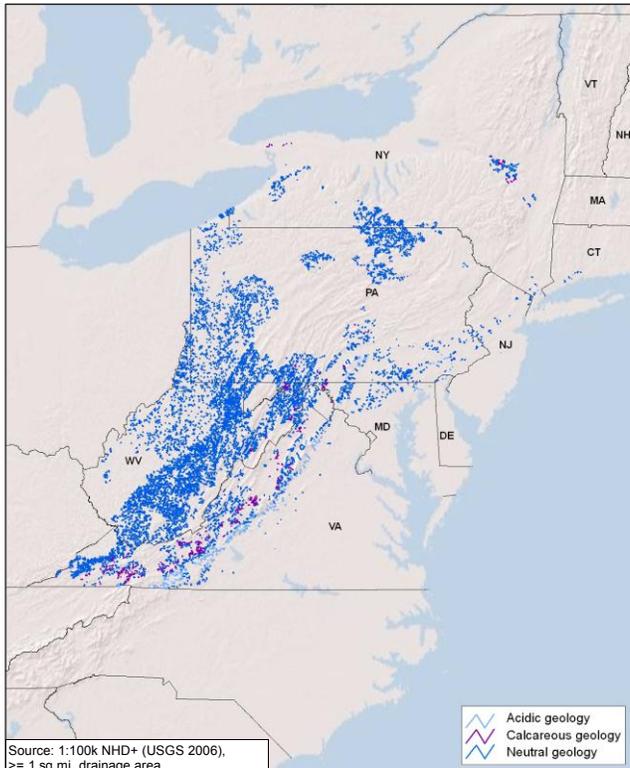


High Gradient, Cool, Headwaters and Creeks

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.



Laurel Creek, © Ken Thomas

Description:

Cool, fast-moving headwaters and creeks of steeper slopes at low to moderate elevations. These small streams of the Mid-Atlantic, occur on steep slopes at low to moderate elevations in watersheds less than 39 sq.mi in size. The cool fast moving water has high water clarity and is well oxygenated. High-gradient instream habitats are dominated by riffles and cascade and step-pool systems. Channels are usually narrowly confined, high-gradient, and surrounded by upland forests. Bed materials often consist of bedrock, boulders, cobbles, and coarse gravel. 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:

Headwaters and creeks may also occur at lower elevations but these tend to be warmer, flatter, and slower. Coastal examples of high gradient headwaters are rare. Cool high gradient streams typically flow into moderate or low gradient cool and warm rivers in areas of less topography.

Places to Visit this Habitat:

Deep Run, Green Ridge State Forest | MD Passage Creek, George Washington And Jefferson National Forest | VA Hedricks Creek, Gauley River National Recreation Area | WV Seneca Creek, Monongahela National Forest | WV Jeremys Run, Shenandoah National Park | VA

State Distribution: CT, DE, MD, NJ, NY, PA, VA, WV

Total Habitat (mi): 12,390

% Conserved: 12.9 Unit = Acres of 100m Riparian Buffer

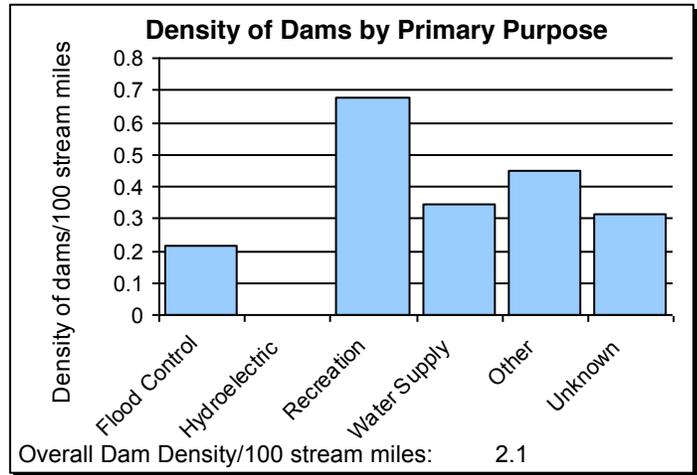
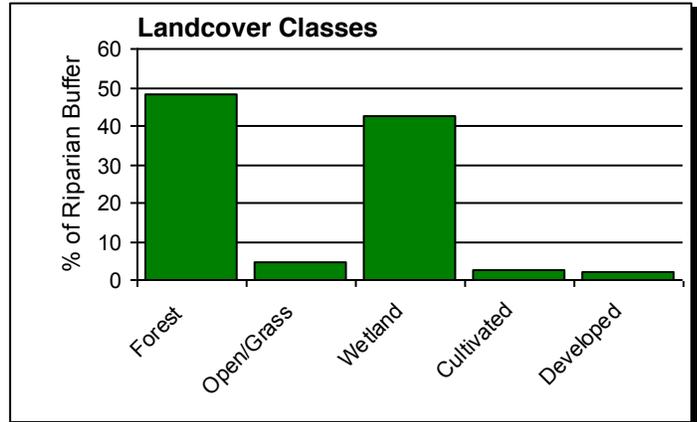
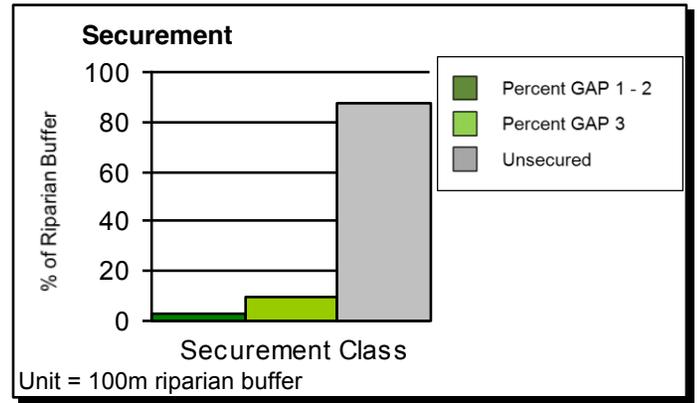
State	State Habitat %	Miles of Habitat	Acres GAP 1 - 2	Acres GAP 3	Total Acres Unsecured
WV	41	5054	110	356	3523
PA	31	3875	85	280	2702
VA	18	2262	87	243	1462
NY	5	640	0	9	491
MD	4	493	29	56	301
NJ	0	48	5	2	33
CT	0	11	0	1	8
DE	0	6	0	2	3

Associated Fish:

Most Abundant: white sucker, fallfish, common shiner, tessellated darter, eastern blacknose dace, creek chub, mottled sculpin, mountain redbelly dace, bluehead chub. Less Abundant: torrent sucker, brook trout, rosieside dace, golden redhorse, saffron shiner, central stoneroller, fantail darter, river chub, longnoes dace, rock bass, smallmouth bass.

Species of Concern (G1 - G4):

Fishes: black sculpin, checkered sculpin, tonguetied minnow, mirror shiner
Crayfish, Mussels, and Snails: elk river crayfish, big sandy crayfish, kidneyshell, appalachian springsnail
 See Appendix 2 for scientific names



Crosswalk to State Names:

New York: Rocky headwater stream. Maryland: Highland Streams, Cold Water Streams, Piedmont Streams: high gradient variant.
Pennsylvania: Atlantic Basin Fish Coolwater Community 1, Ohio-Great Lakes Basins Fish Coolwater Stream Community



USGS Mountain redbelly dace, ©

