

Physical Assessment: Coastal Stream Corridor and Habitat Assessment

Based on Stream Corridor Assessment protocols developed by Kenneth Yetman, DNR, and the Rapid Bioassessment procedures from the U.S. Environmental Protection Agency (EPA), adapted by Amanda Sullivan and Alison Armocida, Maryland Department of Natural Resources.

Instructions: Observe the stream habitat in and around the water, and use the accompanying Stream Corridor Assessment photographs to rank each characteristic. Based on your findings, you will give your stream habitat a rating.

Characteristic	Good (4)	Fair (3)	Marginal (2)	Poor (1)	Score
Floodplain Vegetation	Lots of plants, bushes, and trees along banks and floodplain.	Some plants, bushes and trees along banks and floodplain.	Most trees and bushes are gone.	Very little plant life at all along banks and floodplain.	
Channel alteration	Channel formed by natural processes and allowed to bend often in an "S" shape.	Channel straightened in some places but some natural bends still present.	Channel mostly straightened but vegetation still present and no cement.	Channel straightened and flowing along a paved channel.	
Material at the bottom of the stream bed	Mixture of materials with small rocks and firm sand covering most of the bottom. Some vegetation or root mats present.	Mixture of soft sand, mud, or clay. Some vegetation or root mats present.	All mud or clay or sand bottom. No root mats or submerged aquatic vegetation.	Clay or rock. No vegetation or root mats.	
Erosion	Banks only slightly above the level of the water.	Banks somewhat higher above the level of the water.	Banks significantly above the level of the water.	Banks extremely high compared to water level.	
Attachment sites for Macroinvertebrates	Plenty of submerged leaf litter and wood.	Some submerged wood and leaf litter.	No wood but some leaf litter present.	No wood or leaf litter present.	
Shelter for Fish	Lots of pools, undercut banks, and submerged, logs and snags present in the water.	Some pools, wood, and undercut banks present. Some submerged cover objects present.	Few pools, wood, and undercut banks present. Few hiding places available.	No pools, wood, or undercut banks or hiding places present.	
Riparian Buffer Width (estimation)	More than 50 feet of trees and brushy vegetation extending out from EACH bank of the stream.	20 - 50 feet of trees and brushy vegetation extending out from EACH bank of the stream.	5 - 20 feet of trees and brushy vegetation extending out from EACH bank of stream.	0 - 5 feet of trees and brushy vegetation extending out from EACH bank of the stream.	

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Characteristic	Good (4)	Fair (3)	Marginal (2)	Poor (1)	Score
Bank stability – Are the banks of the stream eroding, or could they erode easily?	Lots of roots and vegetation or large rocks on the vertical portion of the bank all the way down to the level of the water.	Roots and vegetation or large rocks covering the vertical part of the bank 2/3 of the way down to the level of the water.	Roots, vegetation and/or large rocks going only 1/3 of the way down the vertical part of bank towards the level of the water.	Steep banks of bare soil with no plants or roots or large rocks.	
Sediment Deposition along the stream bank	Very little sand or other sediment visible above the water in the stream.	Sand or sediment visible in small patches on the banks of the stream.	Sand and sediment visible in beach-like areas at most bends in the stream and along about half of the stream banks.	Sand and sediment visible along most of the stream banks and sometimes in patches visible above the water as islands in the stream.	
Depth combinations - Within 30 feet upstream and 30 feet downstream from where you are standing <i>There are no pictures for this category.</i>	Stream has a mix of (1) large (bigger than half the width of the stream), shallow pools, (2) large, deep pools, (3) small, shallow pools, and (4) small, deep pools.	Stream has 3 of the four types of pools.	Stream has 2 of the four types pools.	Stream has only one type of pool or is the same depth all along its length.	

Add all scores to get a total.

Total Score for Stream _____

Analysis:

If the total score is: then the Overall Stream Rating is:

31 – 40 Good

This stream has very good habitat with a wide variety of traits. If the water quality is good, this stream can support many different species of invertebrates and fish, including those sensitive to pollution and habitat changes. The stream is stable; habitat quality will not get worse unless people make changes to the area.

21 – 30 Fair

This stream has good habitat for many different species of invertebrates and fish, including some sensitive to pollution and habitat changes. The stream is most likely stable. Minor changes can increase the habitat quality, such as stabilizing erosion or planting vegetation.

11 – 20 Marginal

This stream can support some species of invertebrates and fish that are tolerant to pollution. The stream is not stable, and will get worse without restoration. Habitat can be improved by planting vegetation near the stream, stabilizing erosion, or reducing water from paved areas.

0 – 10 Poor

This stream may only support a few species of invertebrates that are very tolerant of pollution. The stream is not stable, and will get worse without restoration. Habitat can be improved by planting vegetation near the stream, stabilizing erosion, or reducing water from paved areas.

Coastal Stream Corridor Habitat Rating _____