

# **Appendix A-2**

## **PaSEC Forms**

## Stream Habitat Assessment Field Data Sheet – Rocky Bottom Sampling (p 1 of 3)

ALL of the following data sheets MUST be completed for the web host.

Date: Year \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Time: Hour \_\_\_\_\_ Minute \_\_\_\_\_

Site ID # \_\_\_\_\_ Volunteer(s) ID #(s) \_\_\_\_\_ Recorder ID # \_\_\_\_\_

Habitat		Category		
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Attachment Sites for Macro-invertebrates	Well-developed riffle and run; riffle is as wide as stream and length extends 2 times the width of stream; cobble predominates; boulders and gravel common.	Riffle is as wide as stream but length is less than 2 times width; cobble less abundant; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
2. Embeddedness	Fine sediment surrounds and fills in 0-25% of the living spaces around and in between the gravel, cobble, and boulders.	Fine sediment surrounds and fills in 25-50% of the living spaces around and in between the gravel, cobble, and boulders.	Fine sediment surrounds and fills in 50-75% of the living spaces around and in between the gravel, cobble, and boulders.	Fine sediment surrounds and fills in more than 75% of the living spaces around and in between the gravel, cobble, and boulders.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
3. Shelter for Fish & Macro-invertebrates	Snags, submerged logs, undercut banks, cobble and large rocks, or other stable habitat are found in over 50% of the site.	Snags, submerged logs, undercut banks, cobble and large rocks or other stable habitat are found in over 30-50% of the site.	Snags, submerged logs, undercut banks, cobble and large rocks or other stable habitat are found in over 10-30% of the site.	Snags, submerged logs, undercut banks, cobble and large rocks, or other stable habitat are found in less than 10% of the site.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1

Total \_\_\_\_\_ (1-3)

# Stream Habitat Assessment Field Data Sheet – Rocky Bottom Sampling (p 2 of 3)

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
4. Channel Alteration	Stream straightening, dredging, artificial embankments, dams or bridge abutments absent or minimal; stream with meandering pattern.	Some stream straightening, dredging, artificial embankments or dams usually in areas of bridge abutments; no evidence of recent channel alteration activity.	Artificial embankments present to some extent on both banks; at 40 to 80% of stream site straightened, dredging, or otherwise altered.	Banks shored with gabion or cement; over 80% of the stream site straightened and disrupted.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at stream obstructions and bends; moderate deposition in pools.	Heavy deposits of fine material, increased bar development; more bottom affected; pools almost absent due to substantial sediment deposition.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Stream Velocity & Depth Combinations	Slow (<1 ft/s)/deep (>1.5 ft); slow/shallow; fast/deep; fast/shallow combinations all present.	3 of the 4 velocity/depth combinations are present; fast current areas generally dominate.	Only 2 or the 4 velocity/depth combinations present. Score lower if fast current areas missing.	Dominated by 1 velocity/depth category (usually slow/shallow areas).
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; <25% of channel substrate is exposed.	Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Total \_\_\_\_\_ (4-7)

Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Site ID # \_\_\_\_\_

# Stream Habitat Assessment Field Data Sheet – Rocky Bottom Sampling (p 3 of 3)

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
<b>8. Bank Vegetative Protection</b>  Note: determine left or right side by facing upstream  (score each bank)	More than 90% of streambank surfaces covered by natural vegetation, including trees, shrubs, or other plants; vegetative disruption, through grazing or mowing, minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by natural vegetation, but one class of plant is not well-represented; some vegetative disruption evident; more than one-half of the potential plant stubble remaining.	50-70% of the streambank surfaces covered by vegetation; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
Score:	Left Bank 10 9	8 7 6	5 4 3	2 1 0
Score:	Right Bank 10 9	8 7 6	5 4 3	2 1 0
<b>9. Condition of Banks</b>  (score each bank)	Banks stable; no evidence of erosion or bank failure; little potential for future problems.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in site have areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank collapse or failure; 60-100% of bank has erosional scars
Score:	Left Bank 10 9	8 7 6	5 4 3	2 1 0
Score:	Right Bank 10 9	8 7 6	5 4 3	2 1 0
<b>10. Riparian Vegetative Zone Width</b>  (score each bank riparian zone)	Width of riparian zone >50 feet; no evidence of human activities (i.e. parking lots, roadbeds, clear-cuts, mowed areas, or crops) within the riparian zone.	Width of riparian zone 35-40 feet; little evidence of human activities (i.e. parking lots, roadbeds, clear-cuts, mowed areas, or crops) within the riparian zone.	Width of riparian zone 20-35 feet; moderate evidence of human activities (i.e. parking lots, roadbeds, clear-cuts, mowed areas, or crops) within the riparian zone.	Width of riparian zone <20 feet; much evidence of human activities (i.e. parking lots, roadbeds, clear-cuts, mowed areas, or crops) within the riparian zone.
Score:	Left Bank 10 9	8 7 6	5 4 3	2 1 0
Score:	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total \_\_\_\_\_ (8-10)

Total \_\_\_\_\_ (4-7)

Total \_\_\_\_\_ (1-3)

\_\_\_\_\_ Total (out of possible 200)

Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Site ID # \_\_\_\_\_