Appendix A-3
PaSEC Forms

Stream Habitat Assessment Field Data Sheet – Muddy Bottom Sampling *(p 1 of 4)*

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 Parameter	Category Optimal	Suboptimal	Marginal	Poor
1. Shelter for Fish and Macro-invertebrates	Snags, submerged logs, undercut banks, rubble or other stable habitat found over 50% of the site; logs/snags are old fall.	Snags, submerged logs, undercut banks, rubble or other stable habitat found over 30-50% of the site; some old fall, but preponderance of new fall.	Snags, submerged logs, undercut banks, rubble or other stable habitat found over 10-30% of the site; appears unstable; some new fall.	Snags, submerged logs, undercut banks rubble or other stable habitat found over less than 10% of the site; no old or new fall.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Character-ization	Pools have mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Pools have mixture of soft sand, mud, or clay substrate; mud may be dominant; some root mats and submerged vegetation present.	Pools have all mud, clay or sand substrate; little or no root submerged vegetation.	Pools have hard-pan clay or bedrock substrate; no root mat or vegetation.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pool absent.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Total _____ (1-3)

Stream Habitat Assessment Field Data Sheet – Muddy Bottom Sampling *(p 2 of 4)*

Habitat Parameter	Category: 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, artificial embankments or dams present, usually in areas of bridge abutments; no evidence of recent channel alteration activity.	Artificial embank-ments present to some extent on both banks; and 40 to 80% of stream site straight-ened, dredged, 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	Less than 20% of stream bottom affected by extensive sediment deposition; minor accumulation of fine and coarse material at snags and and submerged vegetation; little or no enlargement of islands or point bars.	20 to 50% of stream bottom affected by extensive sediment deposition; moderate accumulation substantial sediment movement only during major storm event; some new increase in bar formation.	50 to 80% of stream bottom affected by extensive sediment deposition; pools shallow, heavily silted; embankments may be present on on both banks; frequent and substantial sediment movement during storm events.	Greater than 80% of stream bottom affected by extensive sediment deposition; heavy deposits; mud, silt, and/or sand in braided or nonbraided channels; pools almost absent due to deposition
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Channel Sinuosity	The bends in the stream would increase the stream length 3 to 4 times longer than if it was in a straight line.	The bends in the stream would increase the stream length 2 to 3 times longer than if it was in a straight line.	The bends in the stream would increase the stream length 2 to 1 time longer than if it was in a straight line.	Channel straight; waterway has been channelized.
Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Total _____ (4-6)

Date _____/_____/_____

Site ID # _____

Stream Habitat Assessment Field Data Sheet – Muddy Bottom Sampling *(p 3 of 4)*

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
7. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel sub-strate 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
8. Bank Vegetative Protection Note: determine left or right side by facing upstream (score each bank)	More than 90% of the streambank surfaces covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; 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 native vegetation but one class of plants is not well-represented; some vegetative disruption evident; more than one-half of the potential plant stubble height 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; disruption of streambank vegetation is very high; vegetation has inches or less in average stubble height.
Score: Score:	Left Bank: 10 9 Right Bank: 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0

Total_____ (7-8)

Date _____/_____/_____

Site ID # _____

Stream Habitat Assessment Field Data Sheet – Muddy Bottom Sampling *(p 4 of 4)*

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
9. Condition of Banks (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 to 100% of bank has erosional scars.
Score: Score:	Left Bank 10 9 Right Bank 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >50 feet; no human activities (i.e. parking lots, roadbeds, clear-cuts, lawns, or crops) have not affected riparian zone.	Width of riparian zone 35-40 feet; little human activities (i.e. parking lots, roadbeds, clear-cuts, lawns, or crops) have affected riparian zone.	Width of riparian zone 20-35 feet; moderate human activities (i.e. parking lots, roadbeds, clear-cuts, lawns, or crops) have affected riparian zone.	Width of riparian zone <20 feet; much human activities (i.e. parking lots, roadbeds, clear-cuts, lawns, or crops) have affected riparian zone.
Score: Score:	Left Bank 10 9 Right Bank 10 9	8 7 6 8 7 6	5 4 3 5 4 3	2 1 0 2 1 0

Total _____ (9-10)
Total _____ (7-8)
Total _____ (4-6)
Total _____ (1-3)

_____Total (out of possible 200)

Date _____/_____/_____
Site ID _____