

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS (FRONT)

| | | | |
|-------------------------|-----------------|--------------------------------|-------------------------|
| STREAM NAME _____ | | LOCATION _____ | |
| STATION # _____ | RIVERMILE _____ | STREAM CLASS _____ | |
| LAT _____ | LONG _____ | RIVER BASIN _____ | |
| STORET # _____ | | AGENCY _____ | |
| INVESTIGATORS _____ | | | |
| FORM COMPLETED BY _____ | | DATE _____ TIME _____ AM PM | REASON FOR SURVEY _____ |

| | Habitat Parameter | Condition Category | | | |
|--|--|--|--|---|--|
| | | Optimal | Suboptimal | Marginal | Poor |
| Parameters to be evaluated in sampling reach | 1. Epifaunal Substrate/ Available Cover | Greater than 70% of substrate favorable for epifaunal colonization and 10% cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient). | 40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale). | 20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed. | Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking. |
| | SCORE | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| | 2. Embeddedness | Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of substrate provides diversity of niche space. | Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment. | Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment. | Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment. |
| | SCORE | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| | 3. Velocity/Depth Regime | All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 3.3 m/s, deep is > 0.5 m.) | Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes). | Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low). | Dominated by 1 velocity/depth regime (usually slow-deep). |
| | SCORE | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| | 4. Sediment Deposition | Little or no enlargement of islands or point bars and less than 2% of the bottom affected by sediment deposition. | Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-10% of the bottom affected; slight deposition in pools. | Moderate deposition of new gravel, sand or fine sediment on old and new bars; 10-50% of the bottom affected; sediment deposits at obstructions, cut sections, and bends; moderate deposition of silt prevalent. | Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; 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 |
| | 5. 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, or <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 |

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS (BACK)

| Habitat Parameter | Condition Category | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|----|----|---|---|----|----|----|---|---|---|---|-------------------|------------|------|---|---|---|---|---|---|---|---|---|---|
| | Optimal | | | | | Suboptimal | | | | | Marginal | | | | | Poor | | | | | | | | | | |
| 6. Channel Alteration | Channelization or dredging absent or minimal; stream with normal pattern. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, greater than past 20 yr; may be present, but recent channelization is not present. | | | | | Channelization may be extensive; embankments or slicing structures present on both banks; and 40 to 80% of stream reach channelized and disrupted. | | | | | Banks sited with gabion or cement; over 80% of the stream reach channelized and disrupted; instream habitat greatly altered or is covered entirely. | | | | | | | | | | | | | | | |
| SCORE | 20 | 19 | 8 | 17 | 10 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | | | | | |
| 7. Frequency of Riffles (or beads) | Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 3 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15. | | | | | Occasional riffle or bead; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25. | | | | | Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25. | | | | | | | | | | | | | | | |
| SCORE | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | | | | | |
| 8. Bank Stability (score each bank) | Banks stable, evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion. | | | | | Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods. | | | | | Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has eroded areas. | | | | | | | | | | | | | | | |
| | None determine left or right side by facing downstream. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SCORE (LB) | Left Bank | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | SCORE (RB) | Right Bank | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 9. Vegetative Protection (score each bank) | More than 50% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, woody shrubs or herbaceous macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 20-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not reflecting full plan; growth potential to any great extent; more than one-half of the potential plant stub height remaining. | | | | | 30-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-third of the potential plant stub height remaining. | | | | | Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height. | | | | | | | | | | | | | | | |
| | SCORE (LB) | Left Bank | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | SCORE (RB) | Right Bank | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| | 10. Riparian Vegetative Zone Width (score each bank riparian zone) | Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, etc.) have not impacted zone. | | | | | | | | | | | | | | | | | | | | | | | | |
| Width of riparian zone 12-18 meters; human activities have impacted zone only minimally. | | | | | Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. | | | | | Width of riparian zone <6 meters; little or no riparian vegetation due to human activities. | | | | | | | | | | | | | | | | |
| SCORE (LB) | | Left Bank | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | SCORE (RB) | Right Bank | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

Parameters to be evaluated broader than sampling reach

Total Score _____