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Habitat Assessment Data Sheet

Stream Steward #1 Name Date Time

Stream Steward #2 Name Month Day Year

Stream Name Site # Stream Steward Kit #

Site Description

Thermometer # Air Temperature °C Water Temperature °C

|  |  |  |  |
| --- | --- | --- | --- |
| Weather conditions now: | [ ] Clear | [ ] Cloudy | [ ] Rain (steady rain) |
|  | [ ] Showers (intermittent rain) | [ ] Storm (heavy rain) (heavy rain) | [ ] Other |
| Weather in past 24 hours: | [ ] Clear | [ ] Cloudy | [ ] Rain (steady rain) |
|  | [ ] Showers (intermittent rain) | [ ] Storm (heavy rain) | [ ] Other |

# Qualitative Water Quality

|  |  |  |
| --- | --- | --- |
| Water Appearance | Stream Bed Coating | Odor |
| [ ] Clear | [ ] None | [ ] None |
| [ ] Brown | [ ] Yellowish | [ ] Musky |
| [ ] Muddy | [ ] Orange to red | [ ] Acrid |
| [ ] Milky | [ ] Brown | [ ] Chlorine |
| [ ] Scum | [ ] Black | [ ] Rotten egg |
| [ ] Foam | [ ] Other  | [ ] Other  |
| [ ] Oily sheen |  |  |
| [ ] Other  |  |  |

|  |  |  |
| --- | --- | --- |
| Approximate Width of Stream Channel  | [ ] Measured | [ ] Estimated |

# **Land Uses** (check any that apply)

|  |  |  |
| --- | --- | --- |
| Residential | Recreation | Roads, etc. |
|  Single-family housing |  Power boating |  Paved roads or bridges |
|  Multi-family housing |  Golfing |  Unpaved roads |
|  Lawns |  Camping | Other |
|  Commercial/Industrial |  Swimming/fishing/canoeing |  Mining or gravel pits |
| Agricultural |  Hiking/paths |  Logging |
|  Grazing lands | Construction underway on: |  Industry |
|  Feedlots or animal holding areas |  Housing development |  Oil and gas drilling |
|  Cropland |  Commercial development |  Trash dump |
|  Inactive agricultural land/fields |  Road/bridge construction/repair |  Landfill |

Other Observations and Notes

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| Habitat Assessment Field Data Sheet |
| Muddy Bottom Sampling |
| Habitat Parameter | Category |
| Optimal | Suboptimal | Marginal | Poor |
| 1) Shelter for Fish and Macro-invertebrates | Snags, submerged logs, undercut banks, or other stable habitat found over 50% of the site: logs/snags are old fall. | Snags, submerged logs, undercut banks, or other stable habitat found over 30%-50% of the site: some old fall, but preponderance of new fall. | Snags, submerged logs, undercut banks, or other stable habitat found over 10%-30% of the site: appears unstable; some new fall. | Snags, submerged logs, undercut banks, or other stable habitat found on less than 10% of the site; no new or old fall. |
| Score  |  20 19 18 17 16 |  15 14 13 12 11 |  10 9 8 7 6 5 |  4 3 2 1 0 |
| 2) Poor substrate composition | Pools have a mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common. | Pools have a mixture of soft sand, mud, or clay substrate; mud may be dominant; some root mats and submerged vegetation present. | Pools have all mud or clay or sand substrate; little or no root mat; no submerged vegetation. | Pools have hardpan 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) Poor variability | Even mix of large-shallow, large-deep, small-shallow, and 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 pools absent. |
| Score  |  20 19 18 17 16 |  15 14 13 12 11 |  10 9 8 7 6 5 |  4 3 2 1 0 |
| 4) Channel alteration | Stream straightening, dredging, artificial embankments, dams or bridge abutments absent or minimal; stream with meandering pattern. | Stream straightening, dredging, artificial embankments, dams present, usually in area of bridge abutments; no evidence of recent channel alteration activity. | Artificial embankments present to some extent on both banks; and 40%-80% of stream site straightened, 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 |

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| Habitat Assessment Field Data Sheet |
| Muddy Bottom Sampling (continued) |
| Habitat Parameter | Category |
| Optimal | Suboptimal | Marginal | Poor |
| 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; <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 |
| 6) Bank Vegetative Protection (Score each bank; “Left” or Right” of downstream flow) | More than 90% of the stream bank surfaces covered by natural vegetation, including trees, shrubs and other plants; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally. | 70%-90% of the stream bank surfaces covered by natural vegetation, but one class of plant is not well represented; vegetative disruption is evident; more than one half of the potential plant stubble height remaining. | 50%-70% of the stream bank 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 stream bank surfaces covered by vegetation; disruption of stream bank vegetation is very high; vegetation has been removed to 2 inches or less of average stubble height. |
| Score (LB)  |  20 19 18 17 16 |  15 14 13 12 11 |  10 9 8 7 6 5 |  4 3 2 1 0 |
| Score (RB)  |  20 19 18 17 16 |  15 14 13 12 11 |  10 9 8 7 6 5 |  4 3 2 1 0 |
|  |  |  |  |  |
| 7) Condition of Banks (score each bank separately) | Banks stable; no evidence of erosion or bank failure; little potential for 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 erosional 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  |  20 19 18 17 16 |  15 14 13 12 11 |  10 9 8 7 6 5 |  4 3 2 1 0 |
| 8) Riparian Vegetative Zone (score each bank riparian zone) | Width of riparian zone > 50 feet; no evidence of human activities (i.e. parking lots, road beds, clear cuts, mowed areas, or crops) within the riparian zone. | Width of riparian zone 35-40 feet. | Width of riparian zone 20-35 feet. | Width of riparian zone less than 20 feet. |
| 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 |
| Rocky Bottom Sampling |
| Habitat Parameter | Category |
| 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 predominate; boulders and gravel common. | Riffle is as wide as stream but length is 2 times less than the width; cobble less abundant; boulders and gravel common. | Run area may be lacking, riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock are prevalent, some cobble present. | Riffles or run virtually non-existent; 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 0 |
| 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 0 |
| 3) Shelter for Fish | Snags, submerged logs, and large rocks or other stable habitat are found in over 50% of the site. | Snags, submerged logs, and large rocks or other stable habitat are found in 30%-50% of the site. | Snags, submerged logs, and large rocks or other stable habitat are found in 10%-30%of the site. | Snags, submerged logs, and large rocks or other stable habitat are found in less than 10% of the site. |
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