

Stream Steward Name _____

Date _____

Stream Steward Name _____

Month Day Year

KCD Stream Steward Habitat Assessment

Stream Name _____

Site # _____

Observation Time _____

Weather in Past 24 Hours

- Storm (heavy rain)
- Rain (steady rain)
- Showers (intermittent rain)
- Overcast
- Clear/sunny

Weather Now

- Storm (heavy rain)
- Rain (steady rain)
- Showers (intermittent rain)
- Overcast
- Clear/sunny

Water Appearance (check the ones that apply)

- | | | |
|--------------------------------|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> Clear | <input type="checkbox"/> Turbid | <input type="checkbox"/> Orange |
| <input type="checkbox"/> Milky | <input type="checkbox"/> Dark Brown | <input type="checkbox"/> Greenish |
| <input type="checkbox"/> Foamy | <input type="checkbox"/> Oily Sheen | <input type="checkbox"/> Other _____ |

Water Odor (check the ones that apply)

- | | | |
|-----------------------------------|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> Sewage | <input type="checkbox"/> Fishy | <input type="checkbox"/> None |
| <input type="checkbox"/> Chlorine | <input type="checkbox"/> Rotten Eggs | <input type="checkbox"/> Other _____ |

Water Temperature

Approximate Width of Stream Channel _____ Measured Estimated

Land Uses (check the ones that apply)

Residential

- ___ Single-family housing
- ___ Multi-family housing
- ___ Lawns
- ___ Commercial/Institutional

Roads, etc.

- ___ Paved roads or bridges
- ___ Unpaved roads

Recreation

- ___ Power boating
- ___ Golfing
- ___ Camping
- ___ Swimming/fishing/canoeing
- ___ Hiking/paths

Construction underway on:

- ___ Housing development
- ___ Commercial development
- ___ Road bridge construction/repair

Agricultural

- ___ Grazing land
- ___ Feedlots or animal holding areas
- ___ Cropland
- ___ Inactive agricultural land/fields

Other

- ___ Mining or gravel pits
- ___ Logging
- ___ Industry
- ___ Oil and gas drilling
- ___ Trash dump

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___ Landfill

Stream Steward Name _____

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Other Observations and Notes

Stream Steward Name _____

Date _____

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Month _____ Day _____ Year _____

Habitat Assessment Field Data Sheet

Muddy Bottom Sampling

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
<p>1) Shelter for Fish and Macro-invertebrates</p> <p>Score _____</p>	<p>Snags, submerged logs, undercut banks, rubble or other stable habitat found over 50% of the site: logs/snags are old fall.</p> <p>_____</p> <p>20 19 18 17 16</p>	<p>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.</p> <p>_____</p> <p>15 14 13 12 11</p>	<p>Snags, submerged logs, undercut banks, rubble or other stable habitat found over 10-30% of the site: appears unstable; some new fall.</p> <p>_____</p> <p>10 9 8 7 6</p>	<p>Snags, submerged logs, undercut banks, rubble or other stable habitat found on less than 10% of the site; no new or old fall.</p> <p>_____</p> <p>5 4 3 2 1 0</p>
<p>2) Poor Substrate Composition</p> <p>Score _____</p>	<p>Pools have a mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.</p> <p>_____</p> <p>20 19 18 17 16</p>	<p>Pools have a mixture of soft sand, mud, or clay substrate; mud may be dominant; some root mats and submerged vegetation present.</p> <p>_____</p> <p>15 14 13 12 11</p>	<p>Pools have all mud or clay or sand substrate; little or no root mat; no submerged vegetation.</p> <p>_____</p> <p>10 9 8 7 6</p>	<p>Pools have hard pan clay or bedrock substrate; no root mat or vegetation.</p> <p>_____</p> <p>5 4 3 2 1 0</p>
<p>3) Poor Variability</p> <p>Score _____</p>	<p>Even mix of large-shallow, large-deep, small-shallow, small-deep pools.</p> <p>_____</p> <p>20 19 18 17 16</p>	<p>Majority of pools large-deep; very few shallow.</p> <p>_____</p> <p>15 14 13 12 11</p>	<p>Shallow pools much more prevalent than deep pools.</p> <p>_____</p> <p>10 9 8 7 6</p>	<p>Majority of pools small-shallow or pools absent.</p> <p>_____</p> <p>5 4 3 2 1 0</p>
<p>4) Channel Alteration</p> <p>Score _____</p>	<p>Stream straightening, dredging, artificial embankments, dams or bridge abutments absent or minimal; stream with meandering pattern.</p> <p>_____</p> <p>20 19 18 17 16</p>	<p>Stream straightening, dredging, artificial embankments, dams present, usually in area of bridge abutments, no evidence of recent channel alteration activity.</p> <p>_____</p> <p>15 14 13 12 11</p>	<p>Artificial embankments present to some extent on both banks; and 40-80% of stream site straightened, dredged or otherwise altered.</p> <p>_____</p> <p>10 9 8 7 6</p>	<p>Banks shored with gabion or cement; over 80% of the stream site straightened and disrupted.</p> <p>_____</p> <p>5 4 3 2 1 0</p>
<p>5) Channel flow status</p> <p>Score _____</p>	<p>Water reaches base of both lower banks and minimal amount of channel substrate is exposed.</p> <p>_____</p> <p>20 19 18 17 16</p>	<p>Water fills >75% of the available channel; <25% of channel substrate is exposed.</p> <p>_____</p> <p>15 14 13 12 11</p>	<p>Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed.</p> <p>_____</p> <p>10 9 8 7 6</p>	<p>Very little water in channel and mostly present as standing pools.</p> <p>_____</p> <p>5 4 3 2 1 0</p>

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Habitat Assessment Field Data Sheet

Muddy Bottom Sampling (continued)

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
6) Bank Vegetative Protection (score each bank)	More than 90% of the stream bank 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 stream bank surfaces covered by natural vegetation, but one class of plants is not well-represented; vegetative disruption 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 in average stubble height.
Score (LB)	_____	_____	_____	_____
Score (RB)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
_____	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)	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 (LB)	_____	_____	_____	_____
Score (RB)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
_____	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, roadbeds, 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 (LB)	_____	_____	_____	_____
Score (RB)	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
_____	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Total Score _____

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Habitat Assessment Field Data Sheet

Rocky Bottom Sampling

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
1) Attachment Sites for Macro-invertebrates Score _____	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. _____
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2) Embeddedness Score _____	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 between the gravel, cobble and boulders. _____	Fine sediment surrounds and fills in 50-75% of the living space around and between the gravel, cobble and boulders. _____	Fine sediment surrounds and fills in more than 75% of the living spaces around and between the gravel, cobble and boulders. _____
	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 Score _____	Snags, submerged logs, and large rocks or other stable habitat are found in over 50% of the site. _____	Snags, submerged logs, cobble and large rocks or other stable habitat are found in 30-50% of the site. _____	Snags, submerged logs, undercut banks, cobble and large rocks or other stable habitat are found in 10-50% of the site. _____	Snags, submerged logs, undercut banks, cobble and other large rock or other stable habitat are found in less than 10% of the site. _____
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4) Channel Alteration Score _____	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. _____
	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 Score _____	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. _____
	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

Rocky Bottom Sampling (continued)

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
6) Bank Vegetative Protection (score each bank) Score (LB) _____ Score (RB) _____ _____	More than 90% of the stream bank 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. _____ 20 19 18 17 16 _____ 20 19 18 17 16	70-90% of the stream bank surfaces covered by natural vegetation, but one class of plants is not well-represented; vegetative disruption evident; more than one half of the potential plant stubble height remaining. _____ 15 14 13 12 11 _____ 15 14 13 12 11	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. _____ 10 9 8 7 6 _____ 10 9 8 7 6	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 in average stubble height. _____ 5 4 3 2 1 0 _____ 5 4 3 2 1 0
7) Condition of Banks (score each bank) Score (LB) _____ Score (RB) _____ _____	Banks stable; no evidence of erosion or bank failure; little potential for problems. _____ 20 19 18 17 16 _____ 20 19 18 17 16	Moderately stable; infrequent, small areas of erosion mostly healed over. _____ 15 14 13 12 11 _____ 15 14 13 12 11	Moderately unstable; up to 60% of banks in site have areas of erosion; high erosional potential during floods. _____ 10 9 8 7 6 _____ 10 9 8 7 6	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank collapse or failure; 60-100% of bank has erosional scars. _____ 5 4 3 2 1 0 _____ 5 4 3 2 1 0
8) Riparian Vegetative Zone (score each bank riparian zone) Score (LB) _____ Score (RB) _____ _____	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. _____ 20 19 18 17 16 _____ 20 19 18 17 16	Width of riparian zone 35-40 feet. _____ 15 14 13 12 11 _____ 15 14 13 12 11	Width of riparian zone 20-35 feet. _____ 10 9 8 7 6 _____ 10 9 8 7 6	Width of riparian zone less than 20 feet. _____ 5 4 3 2 1 0 _____ 5 4 3 2 1 0

Total Score _____