



Date: _____ Sample No.: _____ Evaluator(s): _____

Stream/Opening Identification

Opening # _____ Opening ID _____

Licence # _____ CP# _____ Block _____

Licensee: _____

District: _____ Year of Harvest: _____

Stream ID: _____

Stream RMA Class:

Stream Reach Location:

UTM or lat/long: _____

Landscape Unit:

Level ($\pm\%$) of RMA, RRZ (if present), and RMZ tree retention

Retention description: ☐ Merchantable conifers ☐ Non-merchantable conifers/deciduous ☐ no tree retention

Photo Section

[illegible]

	Yes	No	N/A
Question 1. Is the channel bed undisturbed?	☐	☐	☐
<p><i>Note: For Questions 1–4, decide what the predominant channel morphology is and then complete the section for that morphology only (i.e., Part A, B or C, not all three).</i></p>			
A) Riffle-pool or cascade-pool channels			
a) Less than 50% of the reach length is occupied by active sediment wedges, mid-channel bars, or braided bars.	☐	☐	☐
b) Less than 50% of the reach has active multiple channels and/or braids.	☐	☐	☐
c) More than 50% of the reach has lateral, side or point channel bars, or a thalweg that meanders from bank to bank even if lateral bars do not seem obvious.	☐	☐	☐
<i>If answer "Yes" to 2 or more, mark Yes box in Question 1.</i>			
B) Step-pool channels			
a) More than 50% of the steps present span the channel either in a perpendicular or diagonal orientation relative to the banks.	☐	☐	☐
b) More than 25% of the steps have moss.	☐	☐	☐
c) Less than 25% of the reach has active multiple channels and/or braids.	☐	☐	☐
<i>If answer "Yes" to 2 or more, mark Yes box in Question 1.</i>			
C) Non-alluvial channels			
a) Over 25% of the channel bed length has some moss on the substrate.	☐	☐	☐
b) The channel has space for storage of sediments and debris; i.e., sediment and/or LWD do not fill the channel volume or spill over the banks for any significant distance.	☐	☐	☐
c) Sediments are widely distributed throughout the channel. Sediments are not stored in a few relatively large compartments (e.g., wedged behind an accumulation of immobile rocks or organic debris).	☐	☐	☐
<i>If answer "Yes" to 2 or more, mark Yes box in Question 1.</i>			
Question 2. Are the channel banks undisturbed?	☐	☐	☐
A) Riffle-pool or cascade-pool channels			
a) Less than 15% of the shoreline or streambank on one side of the stream is recently disturbed by stream flows, windthrow, infilling, animals (hoof shear, watering sites, crossings), roads, or harvest and silviculture activities.	☐	☐	☐
b) More than 65% of the bank area immediately adjacent to the channel has deeply rooted vegetation (e.g., deep rooting grass species, shrubs, trees – not moss, shallow rooting grass species, small herbs or forbs).	☐	☐	☐
c) More than 50% of the potentially erodible reach length has vegetated overhanging or undercut banks.	☐	☐	☐
d) Less than 10% of the reach length has recently upturned (wind thrown) root wads along the banks.	☐	☐	☐
<i>If answer "Yes" to 3 or more, mark Yes box in Question 2.</i>			

	Yes	No	N/A
B) Step-pool channels			
a) Less than 10% of the shoreline or streambank on one side of the stream is recently disturbed by stream flows, windthrow, infilling, animals (hoof shear, watering sites, crossings), roads, or harvest and silviculture activities.	☐	☐	☐
b) More than 75% of the bank has deeply rooted vegetation (e.g., deep rooting grass species, shrubs, trees – not moss, shallow rooting grass species, small herbs or forbs).	☐	☐	☐
c) More than 50% of the potentially erodible reach length has vegetated overhanging or undercut banks.	☐	☐	☐
d) Less than 25% of the reach length has recently upturned (wind thrown) root wads along the banks.	☐	☐	☐
<i>If answer "Yes" to 3 or more, mark Yes box in Question 2.</i>			
C) Non-alluvial channels			
a) More than 75% of the bank has deeply rooted vegetation (e.g., deep rooting grass species, shrubs, trees – not moss, shallow rooting grass species, small herbs or forbs).	☐	☐	☐
b) Less than 10% of the shoreline or streambank on one side of the stream is negatively affected by stream flows, windthrow, infilling, animals (hoof shear, watering sites, crossings), roads, or harvest and silviculture activities.	☐	☐	☐
c) Less than 25% of the reach length has recently upturned (wind thrown) root wads along the banks.	☐	☐	☐
<i>If answer "Yes" to 2 or more, mark Yes box in Question 2.</i>			

Question 3. Are channel LWD processes undisturbed?
☐ ☐ ☐
A) Riffle-pool or cascade-pool channel

- | | | | |
|---|--------------------------|--------------------------|--------------------------|
| a) Most debris is old and does not appear to have been freshly deposited. | ☐ | ☐ | ☐ |
| b) Recently formed accumulations of debris that span the channel occur less than twice every 5-channel widths. | ☐ | ☐ | ☐ |
| c) Most debris accumulations lack recent logging debris (e.g., branches, treetops, bark, small logs and LWD with saw-cut ends, recently crushed or shattered logs). | ☐ | ☐ | ☐ |
| d) Woody debris oriented parallel to the channel banks (particularly small logs and limbs with lengths << bankfull channel width) is not abundant. | ☐ | ☐ | ☐ |
| e) There is no indication that natural debris was intentionally removed from the channel. | ☐ | ☐ | ☐ |

If answer "Yes" to 4 or more, mark Yes box in Question 3.

	Yes	No	N/A
B) Step-pool channel			
a) Most debris is old and does not appear to have been freshly deposited.	☐	☐	☐
b) Recently formed accumulations of debris occur less than twice every 5-channel widths.	☐	☐	☐
c) Most debris accumulations lack recent logging debris (e.g., branches, treetops, bark, small logs and LWD with cut ends, recently crushed or shattered logs).	☐	☐	☐
d) Woody debris oriented parallel to the channel banks (particularly small logs and limbs with lengths << bankfull channel width) is not abundant.	☐	☐	☐
e) There is no indication that natural debris was intentionally removed from the channel.	☐	☐	☐
<i>If answer "Yes" to 4 or more, mark Yes box in Question 3.</i>			
C) Non-alluvial channel			
a) Most debris is old and does not appear to have been freshly deposited.	☐	☐	☐
b) Most debris accumulations lack recent logging debris (e.g., branches, treetops, bark, small logs and LWD with cut ends, recently crushed or shattered logs).	☐	☐	☐
c) Woody debris oriented parallel to the channel banks (particularly small logs and limbs with lengths << bankfull channel width) is not abundant.	☐	☐	☐
d) There is no indication that natural debris was intentionally removed from the channel.	☐	☐	☐
<i>If answer "Yes" to 3 or more, mark Yes box in Question 3.</i>			

Question 4. Is the channel morphology undisturbed?
☐ ☐ ☐
A) Riffle-pool or cascade-pool channel

- | | | | |
|---|--------------------------|--------------------------|--------------------------|
| a) Pools are present along > 25 % of the reach. | ☐ | ☐ | ☐ |
| b) Surface sediment texture is heterogeneous, i.e., the number and range of main sediment classes present (fines and sands, gravels, small and large cobbles, small and large boulders) is large. | ☐ | ☐ | ☐ |
| c) At least two deep pools are present. (A deep pool is a pool with a channel depth twice the average channel depth at riffle crests.) | ☐ | ☐ | ☐ |

If answer "Yes" to 2 or more, mark Yes box in Question 4.

	Yes	No	N/A
B) Step-pool channel			
a) Plunge pools are frequent (>25% of steps are associated with a plunge pool with depths similar to the size of the largest rock in the step). Few pools are infilled to near the top of the next downstream step.	☐	☐	☐
b) The channel alternates almost exclusively between steps and pools (i.e., less than 25% of the channel consists of relatively long cascades).	☐	☐	☐
c) At least two deep pools are present. (A deep pool is a pool with a channel depth twice the average channel depth at riffle crests.)	☐	☐	☐
<i>If answer "Yes" to 2 or more, mark Yes box in Question 4.</i>			

Question 5. Are all aspects of the aquatic habitat sufficiently connected to allow for normal, unimpeded movements of fish, organic debris, and sediments?

☐ ☐ ☐

- | | | | |
|--|--------------------------|--------------------------|--------------------------|
| a) Temporary blockages of fish, debris or sediments because of new accumulations of debris or sediments are absent | ☐ | ☐ | ☐ |
| b) Down cutting in the main channel that blocks fish access to tributary streams or off-channel areas is absent. | ☐ | ☐ | ☐ |
| c) Build-ups of sediment or debris above or within any crossing structures are absent. | ☐ | ☐ | ☐ |
| d) There is no down cutting present below any crossing structure that blocks fish movements upstream by any size fish at any time. | ☐ | ☐ | ☐ |
| e) On fish bearing streams, all crossing structures are open bottom structures. | ☐ | ☐ | ☐ |
| f) Dewatering over the entire channel width due to excessive new accumulations of sediment is absent. | ☐ | ☐ | ☐ |
| g) Off-channel or overland flow areas have not been isolated, cut off or covered. | ☐ | ☐ | ☐ |

If answer is "No" to any statements, mark the "No" box for Question 5.

Question 6. Does the stream support a good diversity of fish cover attributes?

☐ ☐ ☐

(Note: To qualify as cover, each cover attribute should represent at least 1% of the total stream area observed.)

- | | | | |
|---|--------------------------|--------------------------|--------------------------|
| a) Deep, quiet water is available. | ☐ | ☐ | ☐ |
| b) Stable, unembedded boulders are present. | ☐ | ☐ | ☐ |
| c) Stable woody debris or rootwads are present. | ☐ | ☐ | ☐ |
| d) Stable, deep-rooted undercut banks are present. | ☐ | ☐ | ☐ |
| e) Submerged or emergent aquatic vegetation is present. | ☐ | ☐ | ☐ |
| f) Overhanging vegetation is present within 1 m of the top of the channel (streams) or water surface (wetlands, lakes). | ☐ | ☐ | ☐ |
| g) A stable substrate with void spaces for fish to hide in is present. | ☐ | ☐ | ☐ |

If the answer is "Yes" for five or more statements, mark the "Yes" box. Otherwise, mark the "No" box.

	Yes	No	N/A
Question 7. Does the amount of moss present on the substrates indicate a stable and productive system?	☐	☐	☐
a) Moss patches are easily observed from almost any point along the margins, riffles or shallow pools of the stream.	☐	☐	☐
b) Moss patches present, even uncommon, occasional or rare ones, are generally intact, not embedded with sediments, buried or damaged by scouring. Mark 'N/A' if no moss is present.	☐	☐	☐
c) Moss patches not scoured, embedded or buried in sediment appear vigorous, not stressed or dead. Mark 'N/A' if no moss is present.	☐	☐	☐
<i>If the answer is "Yes" for 2 or more statements, mark the Yes box for Question 7. Otherwise, mark the No box.</i>			
Question 8. Has the introduction of fine sediments been minimized?	☐	☐	☐
a) Inorganic fine and sand-sized sediments that blanket the substrate are best described as little or lacking.	☐	☐	☐
b) Wetted areas of gravel, sand or fine-sized sediments that a foot can be easily pushed into represent less than 1% of the total wetted area. Mark 'N/A' if the stream is dry.	☐	☐	☐
c) Gravels and cobbles are not embedded in a matrix of sand or finer sized particles. The sides of individual gravel and cobble particles can generally be seen touching each other.	☐	☐	☐
d) Invertebrates sensitive to the effects of sedimentation can be easily found on the undersides of rocks in riffles. Mark 'N/A' if the stream is dry.	☐	☐	☐
<i>If the answer is "No" to any statement, mark the "No" box for Question 8. Otherwise, mark the "Yes" box.</i>			
Question 9. Does the stream support a diversity of aquatic invertebrates? (Mark 'N/A' if the habitat is dry.)	☐	☐	☐
a) One recognizably sensitive species (e.g., caddisflies, stoneflies, freshwater clams) is present.	☐	☐	☐
b) Two different major taxonomic groups (e.g., insects, worms, mollusks, crustaceans, etc.) are present.	☐	☐	☐
c) Three recognizably different taxa within any one of the above major groups are present.	☐	☐	☐
d) Four recognizably different taxa from any of the above major groups are present.	☐	☐	☐
<i>Mark the "Yes" box for Question 9 if two of the statements are "Yes". Otherwise, mark "No".</i>			

	Yes	No	N/A
Question 10. Has the vegetation retained in the RMA been sufficiently protected from windthrow?	☐	☐	☐
a) The incidence of post-treatment windthrow in reserve zones, or management zones with wildlife trees or wildlife patches does not exceed 5% of the stems, over and above what occurs naturally in the area.	☐	☐	☐
b) Designated wildlife trees are still standing, or if windthrown, still functional as wildlife trees (e.g., aboveground bear dens).	☐	☐	☐
c) Where no reserve zones or wildlife tree patches are established, the incidence of post-treatment windthrow in the management zone does not exceed 10% of the stems, over and above what occurs naturally in the area.	☐	☐	☐
<i>If answer is "Yes" to all applicable statements, mark the "Yes" box for Question 10. Otherwise, mark the "No" box.</i>			
Question 11. Has the amount of bare erodible ground or soil disturbance in the riparian area been minimized?	☐	☐	☐
a) Total bare erodible ground in the first 10 m of the riparian zone is less than 1%.	☐	☐	☐
b) Total bare erodible ground present in the first 10 m of the riparian zone, plus all other bare erodible ground hydrologically linked to the first 10 m of riparian zone is less than 5%.	☐	☐	☐
c) Total area disturbed by animals or machinery in the first 10 m of the riparian zone is less than 5 %.	☐	☐	☐
d) Total area disturbed by animals or machinery in the first 10 m of the riparian zone, plus all other disturbed areas hydrologically linked to the first 10 m of riparian zone is less than 15%.	☐	☐	☐
<i>If the answer is "Yes" for all statements, mark the "Yes" box. Otherwise, mark the "No" box.</i>			
Question 12. Has sufficient vegetation been retained to maintain an adequate root network or LWD supply?	☐	☐	☐
a) On all streams, nonmerchantable conifer trees, understory deciduous trees, shrubs, and herbaceous vegetation were retained to the fullest extent possible within 5 m of the channel.	☐	☐	☐
b) On S1 to S3 size streams, the first 10 m of the riparian reserve zone is intact, including windthrown trees, thereby providing for 99% of the LWD normally supplied to streams with no additional inputs from upstream or the adjacent hillslopes.	☐	☐	☐
c) On S4 streams, where windthrow hazard as assessed on the Silviculture Prescription is not high, all windfirm trees with roots embedded in the bank, and 50% of all other trees (excluding dominant conifers) within 10 m of the stream bank were retained.	☐	☐	☐

	Yes	No	N/A
d) On S4 streams, where the windthrow hazard as assessed on the Silviculture Prescription is high, all conifers < 30 cm DBH were retained within 10 m of the stream bank.	☐	☐	☐
e) On valley bottom S5 streams with alluvial banks and a floodplain, 50% of dominant and codominant windfirm stems within 30 m of the stream bank were retained.	☐	☐	☐
f) On non-valley, LWD dependent S5 streams, all leaners within 10 m of the channel and all conifer stems < 30 cm DBH within 5 m of the stream bank were retained.	☐	☐	☐
g) On LWD dependent S6 streams, or S6 that flow directly into fish-bearing waters, at least 10 trees < 30 cm DBH per 100 m of streambank were retained within 5 m of the stream bank.	☐	☐	☐
Mark the "Yes" box for Question 12 if there are only "Yes" answers. Otherwise, mark the "No" box.			

Question 13. Has sufficient vegetation been retained to provide shade and reduce bank microclimate change?	☐	☐	☐
a) Canopy and ground vegetation together cover more than 99% of the riparian habitat in plan view.	☐	☐	☐
b) Shade (the average amount of sky not visible due to vegetation) averages more than 60%, as estimated visually for any two of the east, south and west aspects at 60° above the horizontal, or as estimated with a "Teti" angular canopy densiometer.	☐	☐	☐
c) Moisture sensitive species such as mosses, certain ferns and other bryophytes are all in vigorous condition, with no indication of stress due to sunburn, drought or desiccation.	☐	☐	☐
d) Soil in the riparian habitat is cool and moist to the touch.	☐	☐	☐
Mark the "Yes" box for Question 13 if 3 or more answers are "Yes". Otherwise, mark the "No" box.			

Question 14. Have the number of disturbance-increaser plants or noxious weeds present been limited to a satisfactory level?	☐	☐	☐
a) Disturbance-increaser plants (e.g., domestic grasses, dandelions, red alders, bracken, fireweed) occupy less than 25% of total area in the first 10 m of the riparian zone.	☐	☐	☐
b) Noxious weeds occupy less than 5% of total area in the first 10 m of the riparian area.	☐	☐	☐
Mark the "Yes" box for Question 14 if all statements are "Yes". Otherwise, mark "No".			

	Yes	No	N/A
Question 15. Is the riparian vegetation within the first 10 m from the edge of the stream generally characteristic of the normal plant community?	☐	☐	☐
a) All of the major vegetation layers (trees, tall shrubs, low shrubs, herbaceous plants, mosses and lichens) expected of the normal plant community are present over more than 75% of the stream reach.	☐	☐	☐
b) The dominant species present in the tree and shrub layers exhibit high vigour, normal growth form, and good recruitment of seedlings or saplings.	☐	☐	☐
c) Heavy browse is absent on a preferred browse species in the shrub layer. Heavy browse on a plant is browse down to second year wood over most (>50% of the branches) of the plant.	☐	☐	☐
d) Heavy grazing occupies <10% of the herbaceous vegetation. Heavy grazing is defined as less than the recommended target stubble height for the dominant forage species present.	☐	☐	☐
<i>Mark the "Yes" box for Question 15 if 3 or more answers are "Yes". Otherwise, mark the "No" box.</i>			

SUMMARY

		Yes	No	N/A
Question 1.	Is the channel bed undisturbed?	☐	☐	☐
Question 2.	Are the channel banks undisturbed?	☐	☐	☐
Question 3.	Are channel LWD processes undisturbed?	☐	☐	☐
Question 4.	Is the channel morphology undisturbed?	☐	☐	☐
Question 5.	Are all aspects of the aquatic habitat sufficiently connected to allow for normal, unimpeded movements of fish, organic debris, and sediments?	☐	☐	☐
Question 6.	Does the stream support a good diversity of fish cover attributes?	☐	☐	☐
Question 7.	Does the amount of moss present on the substrates indicate a stable and productive system?	☐	☐	☐
Question 8.	Has the introduction of fine sediments been minimized?	☐	☐	☐
Question 9.	Does the stream support a diversity of aquatic invertebrates?	☐	☐	☐
Question 10.	Has the vegetation retained in the RMA been sufficiently protected from windthrow?	☐	☐	☐
Question 11.	Has the amount of bare ground or soil disturbance in the riparian area been minimized?	☐	☐	☐
Question 12.	Has sufficient vegetation been retained to maintain an adequate root network or LWD supply?	☐	☐	☐
Question 13.	Has sufficient vegetation been retained to provide shade and reduce bank microclimate change?	☐	☐	☐
Question 14.	Have the number of disturbance-increaser plants or noxious weeds present been limited to a satisfactory level?	☐	☐	☐
Question 15.	Is the riparian vegetation within the first 10m from the edge of the stream generally characteristic of the normal plant community?	☐	☐	☐

Number of "Yes" answers: _____

Number of "No" answers: _____

Conclusion on FC: Proper (0–2 "No's") At High Risk (5–6 "No's")
 At Risk (3–4 "No's") Non Functioning (>6 "No's")

Specific "No" answers attributed to impact source (e.g., roads, crossings, landslides, low RMA retention, etc.), riparian treatment or management practice:

Question Impact Source

Comments:

FIELD DATA

Start point and traverse direction (US/DS): _____

Reach length: _____ Reach gradient (%): _____ Reach confinement: _____

Point Indicators*(Measure at 5–6 points along the reach being assessed, or until satisfied the threshold values are met or not.)*Mean
or Total

Q7	Moss (abundance)							
Q7	Moss (condition)							
Q8	Benthic invertebrates (# taxa)							
Q9	Fines/sands (%)							
Q13	Shade (%)							
Q13	Vegetative cover (%)							
Q14	Disturbance-increaser species (%)							
Q14	Noxious weeds (%)							
Q15	Heavy browse (% of browse plants)							
Q15	Heavy grazing (% of forage plants)							

Continuous indicators*(Measure along the total length of the reach being assessed, or until satisfied the threshold values are met or not.)*

Total

Q1	Mid-channel bars, wedges (m)	
Q1	Lateral bars (m)	
Q1	Multiple channels (m)	
Q2	Recently eroded bank (m)	
Q2	Undercut bank (m)	
Q2	Deep rooted bank (m)	
Q2	Upturned bank root wads (m)	
Q3	Recent debris jams (No.)	
Q4	Pool length (m)	
Q4	Deep pools (No.)	
Q10	Recent withthrows (No.)	
Q10	Old windthrow (No.)	
Q10	Standing trees (No.)	
Q11	Bare soil in first 10 m (m ²)	
Q11	Bare soil hydrologically connected to first 10 m (m ²)	
Q11	Disturbed in first 10 m (m ²)	
Q11	Disturbed ground hydrologically connected to first 10 m (m ²)	

Other Observations to Note

Channel Gradient, Width

Benthic Invertebrates Observed

Woody Debris Characteristics (new, old, logging related, across or parallel, natural debris intact)

Sediment Texture (uniform or not?)

Connectivity (open-bottom structures on fish streams, temporary blockages, down cutting, sediment or debris buildups, dewatering, overland flow areas nor isolated)

Fish Cover (deep water, boulders, void spaces, undercut banks, woody debris, aquatic vegetation, overhanging vegetation)

Fine Sediments (check no blanketing, substrate not embedded, no "quicksand/gravel")

Wildlife Trees (any designated, protected from windthrow?)

Soils (cool, moist, unchanged?)

Vegetation (all expected layers expected present? - trees, tall shrubs, low shrubs, herbaceous plants, mosses, lichens)

Vegetation (form, recruitment normal?)

Other Notes, Sketch Maps, Calculations