

## Riparian Impact Assessment Field Card User Notes

| <b>FIELDS</b>                     | <b>UNITS</b>  | <b>METHOD OF COLLECTION</b>                 | <b>STANDARD USED</b>  |
|-----------------------------------|---|---|---|
| <b>Georeferencing Information</b> |   |   |   |
| Stream Name                       | Alpha Numeric   | Silviculture Prescription                   | Licensee Silviculture Prescription document.                                      |
| Cutblock                          | Alpha Numeric   | Silviculture Prescription                   | Licensee Silviculture Prescription document.                                      |
| Base Map                          | Alpha Numeric - TRIM map number   | Silviculture Prescription                   | Licensee Silviculture Prescription document.                                      |
| Site UTM                          | Number - Zone, Northing and Easting   | GPS   | Resource Inventory Committee, 2001.   |
| Location                          | O = Open Slope<br>G = Gully<br>F = Fan<br>M = Mid Slope<br>L = Lower Slope<br>T = Toe       | Field Estimate                              | Standard defined by project.  |
| Date                              | Number - Year/Month/Day   | Calendar                                    | Resource Inventory Committee, 2001.   |
| Crew                              | Text  | Field Crew                                  | Resource Inventory Committee, 2001.   |
| Reach / Site                      | Number  | Silviculture Prescription / Field Assigned  | Resource Inventory Committee, 2001.   |
| Stream Class                      | S1-S6   | Silviculture Prescription                   | Licensee Silviculture Prescription document, BC Forest Practices Code, 1998.      |
| Site Length                       | Meters  | Silviculture Prescription / GPS / Hip chain | Resource Inventory Committee, 2001.   |
| Distance from Fish Habitat        | Meters  | Silviculture Prescription / GPS / Hip chain | Licensee Silviculture Prescription document.                                      |
| Riparian Management Zone: RRZ     | Meters  | Silviculture Prescription                   | Licensee Silviculture Prescription document.                                      |
| Riparian Management Zone: RMA     | Meters  | Silviculture Prescription                   | Licensee Silviculture Prescription document.                                      |
| Elevation                         | Meters  | GPS / Silviculture prescription map         | Resource Inventory Committee, 2001 / Licensee Silviculture Prescription document. |
| <b>Stream Measurements</b>        |   |   |   |
| Channel Width                     | Meters  | Field Measurement                           | Resource Inventory Committee, 2001.   |
| Wetted Width                      | Meters  | Field Measurement                           | Resource Inventory Committee, 2001.   |
| Residual Pool Depth               | Meters  | Field Measurement                           | Resource Inventory Committee, 2001.   |
| Bankfull Depth                    | Meters  | Field Measurement                           | Resource Inventory Committee, 2001.   |
| Gradient                          | Percent   | Field Measurement                           | Resource Inventory Committee, 2001.   |
| Bank Shape LB and RB              | U = Undercut<br>V = V - shaped<br>S = Sloping<br>O = Overhanging                            | Field Estimate                              | Resource Inventory Committee, 2001.   |
| Bank Material                     | F = Fines<br>G = Gravels<br>C = Cobbles<br>B = Boulders<br>R = Bedrock<br>A = Anthropogenic | Field Estimate                              | Resource Inventory Committee, 2001.   |
| Vegetated Banks                   | Yes / No  | Field Estimate                              | Standard defined by project.  |

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| Stream Measurements              |  |                           |  |
|----------------------------------|--|---------------------------|--|
| Riparian Vegetation              | N = None<br>G = Grass<br>S = Shrub<br>C = Coniferous<br>D = Deciduous<br>M = Mixed<br>W = Wetland                              | Field Estimate            | Resource Inventory Committee, 2001.          |
| Riparian Stage                   | INIT = Initial<br>SHR = Shrub<br>PS = Pole Sapling<br>YF = Young Forest<br>MF = Mature Forest<br>NA = Not Applicable           | Field Estimate            | Resource Inventory Committee, 2001.          |
| Crown Closure                    | Percent  | Field Estimate            | Resource Inventory Committee, 2001.          |
| Substrates Dominant              | F = Fines<br>G = Gravels<br>C = Cobbles<br>B = Boulders<br>R = Bedrock   | Field Estimate            | Resource Inventory Committee, 2001.          |
| Substrates Sub-Dominant          | F = Fines<br>G = Gravels<br>C = Cobbles<br>B = Boulders<br>R = Bedrock   | Field Estimate            | Resource Inventory Committee, 2001.          |
| D <sub>95</sub>                  | Centimeters  | Field Measurement         | Resource Inventory Committee, 2001.          |
| D                                | Centimeters  | Field Measurement         | Resource Inventory Committee, 2001.          |
| LWD Distribution >10 cm Diameter | C = Clumped<br>E = Even  | Field Estimate            | Resource Inventory Committee, 2001.          |
| LWD Abundance                    | N = None<br>F = Few<br>A = Abundant  | Field Estimate            | Resource Inventory Committee, 2001.          |
| SWD Distribution <10 cm Diameter | C = Clumped<br>E = Even  | Field Estimate            | Resource Inventory Committee, 2001.          |
| SWD Abundance                    | N = None<br>F = Few<br>A = Abundant  | Field Estimate            | Standard defined by project.                 |
| % of Logging Debris              | Percent  | Field Estimate            | Standard defined by project.                 |
| Soil Texture                     | O = Organic<br>S = Sand<br>L = Loam<br>SL = Sandy Loam<br>SiL = Silty Loam<br>SiCL = Silty, Clay Loam<br>FSL = Fine Sandy Loam | Silviculture Prescription | Licensee Silviculture Prescription document. |
| Surficial Materials              | C = Colluvium<br>M = Morainal<br>F = Fluvial<br>R = Bedrock  | Field Estimate            | Terrain Classification System, 1997.         |
| Surface Expression               | V = Veneer<br>W = Variable<br>B = Blanket<br>D = Depression<br>R = Bedrock   | Field Estimate            | Terrain Classification System, 1997.         |
| Glacial Process                  | G = Glacial  | Field Estimate            | Terrain Classification System, 1997.         |
| Qualifiers                       | V = Parallel Drainages   | Field Estimate            | Terrain Classification System, 1997.         |

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| <b>Morphology</b>                          |   |                   |                                     |
|--|---|-------------------|-------------------------------------|
| Pattern                                    | IR = Irregular Wandering<br>IM = Irregular Meanders<br>ME = Regular Meanders<br>SI = Sinuous<br>ST = Straight   | Field Estimate    | Resource Inventory Committee, 2001. |
| Morphology                                 | LC = Large Channel<br>RP = Riffle Pool<br>CP = Cascade Pool<br>SP = Step Pool   | Field Estimate    | Resource Inventory Committee, 2001. |
| Coupling                                   | DC = Decoupled<br>PC = Partially Coupled<br>CO = Coupled  | Field Estimate    | Resource Inventory Committee, 2001. |
| Confinement                                | UN = Unconfined<br>OC = Occasionally Confined<br>FC = Frequently Confined<br>CO = Confined<br>EN = Entrenched   | Field Estimate    | Resource Inventory Committee, 2001. |
| <b>Disturbance Indicators</b>              |   |                   |                                     |
| Disturbance Indicators: Sedimentation      | S1 = Homogeneous Bed Texture<br>S2 = Sediment Fingers<br>S3 = Sediment Wedges<br>S4 = Extensive Bars<br>S5 = Extensive Scour Zones                              | Field Estimate    | Resource Inventory Committee, 2001. |
| Disturbance Indicators: Banks              | B1 = Abandon Channels<br>B2 = Eroding Banks<br>B3 = Avulsions   | Field Estimate    | Resource Inventory Committee, 2001. |
| Disturbance Indicators: Morphology         | C1 = Extensive Riffles or Cascades<br>C2 = Minimal Pool Area<br>C3 = Elevated Mid-Channel Bars<br>C4 = Multiple Channel or Braids<br>C5 = Disturbed Stone Lines | Field Estimate    | Resource Inventory Committee, 2001. |
| Disturbance Indicators: Large Woody Debris | D1 = Small Woody Debris<br>D2 = LWD<br>D3 = Recently Formed LWD Jams  | Field Estimate    | Resource Inventory Committee, 2001. |
| Largest Size of Woody Debris Moved         | Centimeters   | Field Measurement | Standard defined by project.        |
| Logging Debris Moved                       | N = None<br>T = Trace<br>M = Moderate<br>A = Abundant   | Field Estimate    | Standard defined by project.        |
| Average Volume of Logging Debris Jams      | Volume m <sup>3</sup>   | Field Estimate    | Standard defined by project.        |
| Logging Debris in Jams                     | N = None<br>T = Trace<br>M = Moderate<br>A = Abundant   | Field Estimate    | Standard defined by project.        |
| Average Bank Erosion Volumes               | Volume m <sup>3</sup>   | Field Estimate    | Standard defined by project.        |

## Riparian Impact Assessment Field Card User Notes

| <b>Disturbance Indicators</b>      |  |  |                                     |
|------------------------------------|--|--|-------------------------------------|
| Average Sediment Wedge Volume      | Volume m <sup>3</sup>  | Field Estimate   | Standard defined by project.        |
| Number of Depositional Sites       | Number   | Field Estimate   | Standard defined by project.        |
| Length of Disturbance              | Meters   | Silviculture Prescription / Field Estimate   | Standard defined by project.        |
| Level of Disturbance               | N = None<br>L = Low<br>M = Moderate<br>S = Severe  | Field Estimate   | Standard defined by project.        |
| <b>Photodocumentation</b>          |  |  |                                     |
| Roll                               | Number   | Field Collection   | Resource Inventory Committee, 2001. |
| Frame                              | Number   | Field Collection   | Resource Inventory Committee, 2001. |
| Location                           | Text   | Field Collection   | Resource Inventory Committee, 2001. |
| Comment                            | Text   | Field Collection   | Resource Inventory Committee, 2001. |
| <b>Definitions</b>                 |  |  |                                     |
| Location                           | Locations<br>M = Mid Slope<br>L = Lower Slope<br>T = Toe<br><br>Descriptions<br>O = Open<br>G = Gully<br>F = Fan | <p>Definition: Location of the site topographically and a description of the drainage characteristics.</p> <p>Objective: To identify natural transport and deposition zones within the landscape and describe natural drainage patterns.</p> <p>Method: Field crews visually determined the locations and description.</p> |                                     |
| Vegetated Banks                    | Yes / No   | <p>Definition: Vegetation observed adjacent to stream.</p> <p>Objective: To determine if vegetation has been left adjacent to the stream (post harvest).</p> <p>Method: Field crews visually determined if vegetation has been left adjacent to the stream (post harvest).</p>   |                                     |
| Small Woody Debris Abundance       | N = None<br>F = Few (<10 pieces / bankfull width)<br>A = Abundant (>10 pieces / bankfull width)                  | <p>Definition: The presence of small woody debris within the channel.</p> <p>Objective: To determine the amount small woody debris within the channel.</p> <p>Method: Field crews visually determined the amount of small woody debris within the channel</p>  |                                     |
| Percent Logging Debris             | Percent  | <p>Definition: The percent of logging debris within the channel</p> <p>Objective: To determine the percentage of logging debris within the channel.</p> <p>Method: Percent estimate of visual logging debris in channel in excess of natural woody debris.</p>   |                                     |
| Largest Size of Woody Debris Moved | Centimeters  | <p>Definition: A measurement of the largest size of woody debris visibly moved by flows.</p> <p>Objective: To measure the transport potential of the stream.</p> <p>Method: Field crews estimated natural and logging related debris transport within the system and measured the largest piece moved by flows.</p>        |                                     |

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| Definitions                           |   |  |
|---------------------------------------|---|--|
| Logging Debris Moved                  | N = None<br>T = Trace (<10% Logging Debris Moved)<br>M = Moderate (10% - 20% Logging Debris Moved)<br>A = Abundant (>20%, Logging Debris Jam Formation) | Definition: The amount of logging related debris (SWD and LWD) moved by flows.<br><br>Objective: To rank the amount of logging debris moved by flows.<br><br>Method: Field crew visually assessed logging debris movement within the site.   |
| Average Volume of Logging Debris Jams | Volume m <sup>3</sup>   | Definition: A measurement of the total / volume of logging debris (SWD and LWD) jams within the surveyed site.<br><br>Objective: To measure the size of logging debris jams within the surveyed site.<br><br>Method: Field crew visually estimated the amount of logging debris in jams within a surveyed site.                      |
| Logging Debris in Jams                | N = None<br>T = Trace (Initial Jam Formation)<br>M = Moderate (Jams Present)<br>A = Abundant (Extensive Jam Formations)                                 | Definition: The amount of logging debris found in jams.<br><br>Objective: To rank the amount of logging debris found in jams within the surveyed site. This measurement is similar to volume of logging debris.<br><br>Method: Field crew visually estimated the amount of logging debris in jams and ranked the amount accordingly. |
| Average Bank Erosion Volume           | Volume m <sup>3</sup>   | Definition: Erosion volumes found within the surveyed site.<br><br>Objective: To determine bank erosion volumes within the surveyed site.<br><br>Method: Field crews measured bank erosion volumes (post harvest) within the surveyed section.   |
| Average Sediment Wedge Volume         | Volume m <sup>3</sup>   | Definition: Average volume of sediment wedges within the surveyed site.<br><br>Objective: To measure sediment deposition and wedge development within the surveyed site.<br><br>Method: Field crews measured the volume of depositions and wedges within the surveyed site.  |
| Number of Depositional Sites          | Number  | Definition: The number of sediment depositional sites within the surveyed section.<br><br>Objective: To determine the number of sediment depositional sites within the surveyed site.<br><br>Method: Field crew counted the number of sediment depositional sites within the surveyed site.  |
| Length of Disturbance                 | Meters  | Definition: Length of disturbance observed over the length surveyed.<br><br>Objective: To quantify the length of disturbed stream channel in relation to survey site length.<br><br>Method: Field crews determined disturbance in relation to survey site length.  |

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| Definitions          |   |   |
|----------------------|---|---|
| Level of Disturbance | N = None<br>L = Low<br>M = Moderate<br>S = Severe | <p>Definition: Overall level of disturbance observed throughout the surveyed site.</p> <p>Objective: To classify / rank each site for overall level of disturbance taking into account instream sedimentation, stream bank erosion, morphology changes, logging debris and overall length of disturbance as a result of logging.</p> <p>Method: Based on the above information collected on the field card, field crew assigned the appropriate level of disturbance.</p> |