

1.1 Fisheries Sensitive Watersheds

Background Information
Source of Objectives: Order – Fisheries Sensitive Watershed, Thompson Rivers Forest District and Cascades Forest District , given under authority of sections 14(1) and 14(2) of the Government Actions Regulation
<ol style="list-style-type: none">1. For the Fisheries Sensitive Watersheds indentified by this Order, the objectives are:<ol style="list-style-type: none">a. Maintain channel stability and riparian function by retaining and protecting all mature timber and/or other natural vegetation on all active fluvial units on:<ol style="list-style-type: none">i. fish streams; andii. streams that are a direct tributary to fish streams.b. Minimize adverse sediment related effects to fish and fish streams by maintaining a very low likelihood of harmful sediment delivery from un-natural sediment sources to:<ol style="list-style-type: none">i. fish streams; andii. streams that are a direct tributary to fish streams,c. To protect the quantity and timing of annual and seasonal flows establish and maintain a sustainable rate of cut for the fisheries sensitive watershed and/or specified basins, that does not exceed 25% Equivalent Clearcut Area (ECA) above the snowline, with forest harvesting distributed by aspect, sub-basin, and elevation where possible.

1.1.1 Definitions

For the purposes of the fisheries sensitive watershed results or strategies:

“Order” means the “Order – Fisheries Sensitive Watershed, Thompson Rivers Forest District” and “Order – Fisheries Sensitive Watershed, Cascades Forest District”, given under authority of sections 14(1) and 14(2) of the Government Actions Regulation, dated March 27, 2018, and effective April 13, 2018.

“fisheries sensitive watershed” means a watershed identified in the *Order* in “Table 1 – Fisheries Sensitive Watersheds Established by this Order”.

“active fluvial unit” or **“AFU”**, as defined in the Order, means “that portion of a floodplain over which water can be expected to flow during a runoff event of magnitude 1 in 100 years, and that portion of an AFU on which there is evidence of hydro-geomorphic processes, active within at least one full rotation”.

“applicable fisheries sensitive watersheds” means, for the purposes of *Order* Objective 1c., those watersheds, basins or residuals where a maximum ECA of 25% has been specified in Schedule B, Table 2 of the *Order*.

“direct tributary” means a stream channel that has the ability to transport sediment to downstream fish-bearing waters as a result of stream power and physical connection.

“relevant active fluvial unit” means an *active fluvial unit* that is relevant to the *Order*, due to its location within a fisheries sensitive watershed; and

- a) on a fish stream; or
- b) a stream that is a *direct tributary* to a fish stream.

“new road” means a road or road section within the Kamloops or Merritt TSAs that is included in either a Road Permit or an amendment to a Road Permit which is issued to a holder of this FSP during the term of this FSP. A road within the Kamloops or Merritt TSAs that was constructed prior to the term of this FSP and during the term of this FSP is transferred from another licence holder to a Road Permit or Road Permit Amendment held by a holder of this FSP is not considered a *new road*.

“active fluvial unit assessment” means an assessment, conducted by a *qualified professional* on a *relevant active fluvial unit* that is located within a proposed *cutblock*; or that crosses or is *adjacent* to a proposed *new road*, which specifies, where applicable, recommendations for:

- a) mature tree and/or other natural vegetation retention within that portion of a *relevant active fluvial unit* that is located within that *cutblock*; and
- b) the location, construction, maintenance and deactivation phases of the section of the proposed *new road* that crosses or is *adjacent* to the *relevant active fluvial unit*,

in order to ensure, to the extent it is *practicable* to do so, that stream channel stability and riparian function are maintained.

“sediment mitigation assessment” means an assessment conducted by a *qualified professional*, of a proposed *new road* that crosses or is *adjacent* to a fish stream or a stream that is a *direct tributary* to a fish stream, which:

- a) identifies existing or potential sediment generation and delivery zones that may be affected by or result from constructing, maintaining and where applicable, deactivating the proposed *new road*; and
- b) specifies recommendations or measures to mitigate potentially adverse sediment related effects to fish and fish streams that may result from un-natural sediment delivery related to that proposed *new road*.

“equivalent clearcut area”, or **“ECA”**, as defined in the *Order* “refers to the area of forest that has been disturbed (e.g. harvested, affected by insects, cleared or burned, with consideration given to the silvicultural system, regeneration, and location of forest stands within a watershed). *ECA* is an indicator used to measure the relative loss and recovery of hydrologic function of a forest canopy”.

A *qualified professional* will specify the process and assumptions used in the *ECA* calculation.

“sustainable rate-of-cut”, or **“SRC”**, as defined in the *Order* “refers to a non-declining average annual rate of merchantable forest cover removal or alteration by primary forest activities and/or other land-use activities within the forest land base of the FSW. The *sustainable rate-of-cut* for the watershed and its basins must consider disturbances resulting from primary forest activities, natural events (wildfire, insects, pathogens etc...), and other land use activities, including disturbance on private land”.

In any given year the actual harvest can exceed the *SRC* as long as the running average over a 10 year time period is maintained by balancing high levels of annual harvest with years of little or no harvest.

A *qualified professional* will specify the process and assumptions used in the *sustainable rate-of-cut* calculation.

1.1.2 Result or Strategy for Fisheries Sensitive Watersheds – maintenance of channel stability and riparian function

Applicable *FDU*: All Fisheries Sensitive Watersheds within the Kamloops and Merritt TSAs

For objective 1a of the *fisheries sensitive watershed Order*, to “maintain channel stability and riparian function” in *fisheries sensitive watersheds* the *FSP holder* will ensure that:

1. prior to harvesting a *cutblock* or constructing a *new road* to which this *FSP* applies, that is located within a *fisheries sensitive watershed*:
 - a) a *qualified professional* assesses that *cutblock* and *new road* location for the presence of a *relevant active fluvial unit*;
 - b) where a *relevant active fluvial unit* is identified within that *cutblock* or along that *new road* location, an *active fluvial unit assessment* is completed; and
2. *cutblock* harvesting and *new road* related activities are conducted consistent with the recommendations of the *active fluvial unit assessment*.

1.1.3 Result or Strategy for Fisheries Sensitive Watersheds – minimizing adverse sediment related effects to fish and fish streams

Applicable *FDU*: All Fisheries Sensitive Watersheds within the Kamloops and Merritt TSAs

For objective 1b of the *fisheries sensitive watershed Order*, to “minimize adverse sediment related effects to fish and fish streams”, the *FSP holder* will ensure that:

1. prior to constructing a *new road* to which this *FSP* applies, that is located within a *fisheries sensitive watershed*:
 - a) a *qualified professional* assesses that proposed *new road* location for the presence of a fish stream or a stream that is a *direct tributary* to a fish stream;
 - b) a *sediment mitigation assessment* is completed where a fish stream or stream that is a *direct tributary* to a fish stream is crossed by or *adjacent* to that *new road* location; and
2. road activities are conducted consistent with the recommendations of the *sediment mitigation assessment*.

1.1.4 Result or Strategy for Fisheries Sensitive Watersheds – to protect the quantity and timing of annual and seasonal flows

Applicable *FDU*: All Fisheries Sensitive Watersheds within the Kamloops and Merritt TSAs

For objective 1c of the *fisheries sensitive watershed Order*, “to protect the quantity and timing of annual and seasonal flows”, the *FSP holder* will:

1. ensure that:
 - a) prior to harvesting a *cutblock* to which this *FSP* applies, that is located within an *applicable fisheries sensitive watershed*:
 - (i) the *ECA* above snowline of that *applicable fisheries sensitive watershed* is calculated;
 - (ii) where the calculated *ECA* above snowline of that *applicable fisheries sensitive watershed* exceeds 20%, a *sustainable rate-of-cut* is calculated;
 - b) *cutblock* harvesting to which this *FSP* applies, that is located within that *applicable fisheries sensitive watershed* is:
 - (i) conducted consistent with the calculated *sustainable rate-of-cut*;
 - (ii) distributed by aspect, sub-basin, and elevation where possible; and
2. where the *ECA* above snowline within an *applicable fisheries sensitive watershed* exceeds 25%, not conduct harvesting within that *applicable fisheries sensitive watershed* unless that harvesting is required to construct a road that provides access to timber beyond that *applicable fisheries sensitive watershed*, and there is no *practicable* alternate location for that road.