

The following provide further information regarding fish and fish habitat inventory standards and procedures, presented in the Resources Inventory Committee (RIC) Standards. RIC Standards must be consulted to provide a context for this information.

Handling Provincial/Federal Borders in a Reconnaissance Inventory Project

This information relates to: Reconnaissance (1:20,000) Fish and Fish Habitat Inventory, Chapter 2 and Chapter 5.

Purpose/Problem

Administrative boundaries (e.g., provincial borders) in a fisheries biophysical inventory can cause problems because:

- watershed boundaries generally do not coincide with administrative boundaries;
- data sources may be different (TRIM available in B.C., only NTS for Yukon and B.C, no NTS/1:50 000 for Washington State);
- cannot perform fieldwork out of province.

Discussion

The following rules and procedures have been identified for use in projects where watersheds extend beyond the B.C. provincial boundary. They will require that available maps for the portions of the drainage network outside of B.C be used.

1) **Watershed codes/ILP's:** There is no change in watershed code use. These codes were developed using the full drainage networks (i.e., including portions extending beyond the B.C provincial boundary).

2) **Reach breaks:** Reach boundaries are to be identified at the B.C. border. For those reach boundaries that are at the borders, identify them on the map using the termination of survey symbol (to identify an "unnatural" break in the reach/sampling). Reach numbering should be consistent with the standards¹ - starting at 1 at the downstream end of the network, and increasing consecutively upstream. The entire network outside of the provincial boundary is treated as a reach (see the example "Streams that repeatedly cross borders").

3) **Reach characteristics:** Reach characteristics should be interpreted from available data sources (e.g., TRIM on the B.C. side, NTS for portions of watersheds in Alberta, Yukon, etc.). No characteristics are required for reaches outside of the provincial boundary.

a) *order:* interpret order using a "best guess" from the combination of data sources. I.e., for those streams outside of B.C., it will require interpretation as to whether additional

¹ Some current projects use an alternative reach numbering system which had been identified for use near prov./fed. boundaries. Where it is already in use, make sure reach numbers are consecutive. All new projects should use the procedures outlined here.

tributaries been identified if TRIM were available (see the example “Streams that repeatedly cross borders”).

b) *magnitude*: interpret for only those reaches whose entire upstream drainage network is within the B.C. provincial boundary.

c) *other reach characteristics* (gradient, pattern, and information on reach form): interpret for only those reaches which are within the provincial boundary. For reaches with breaks at the boundary, use only the section within the provincial limits to determine the characteristics.

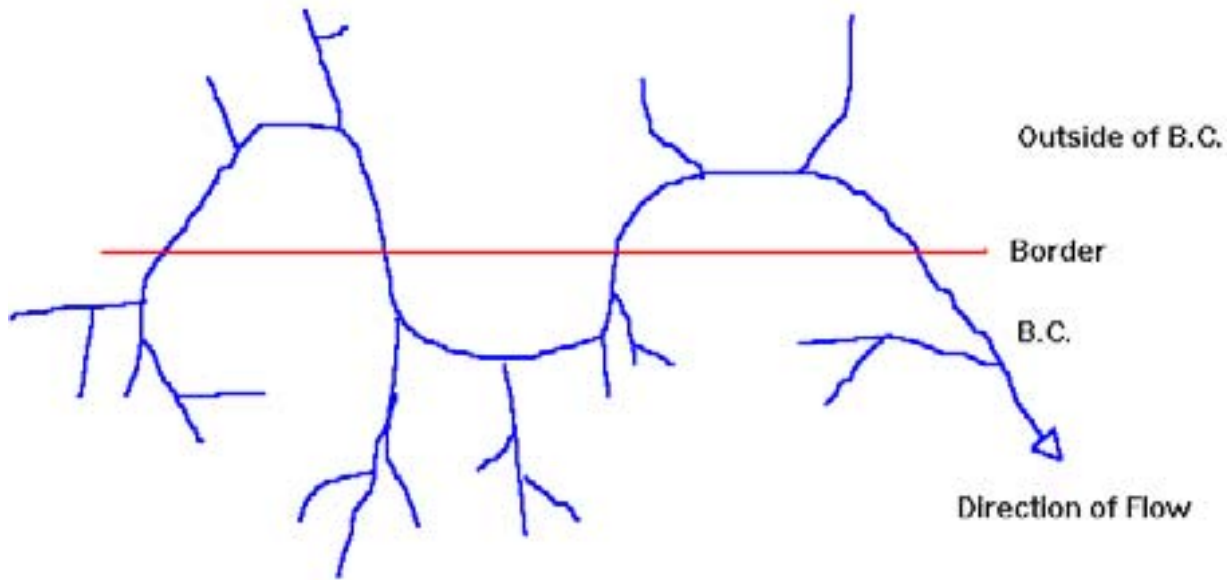
4) **Field sampling**: There is to be no field sampling outside of B.C. Where information is deemed to be required, only office methods (e.g., gathering data from reports, airphotos, etc.) are to be used.

5) **Reach Table and FDIS (ver. 5)**: Examples of reach data are shown in the following examples. The current version of FDIS allows for reaches to be designate: IN, OUT, BORDER. IN refers to reaches which are within the provincial boundary in their entirety. OUT refers to reaches which are identified as being outside of provincial boundaries (such as reaches 3 or 7, on the stream identified as 123-333333 in the first example). BORDER refers to reaches which are truncated due to the presence of a border (such as reached 2, 4, 6, and 8, on the same example stream).

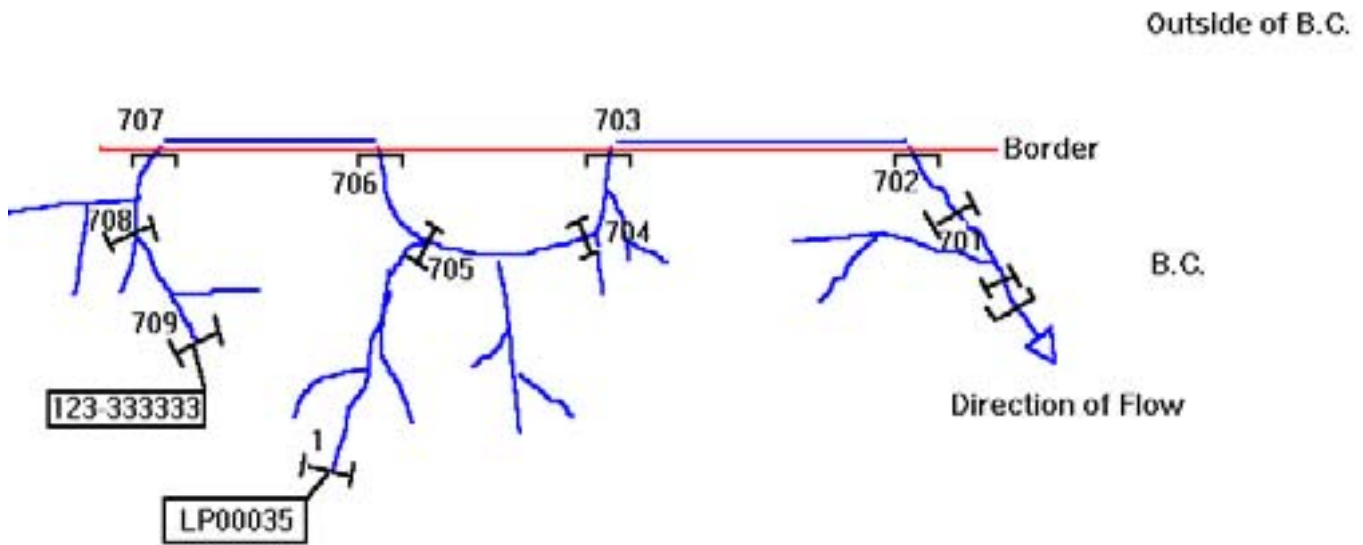
In the following examples², the “Reach Tables” shown also include fields for magnitude, gradient and comments, which are part of the Reach Form.

² To reduce clutter and improve clarity, not all reaches on all streams have been identified in the diagrams.

1. Streams that repeatedly cross borders:



become:

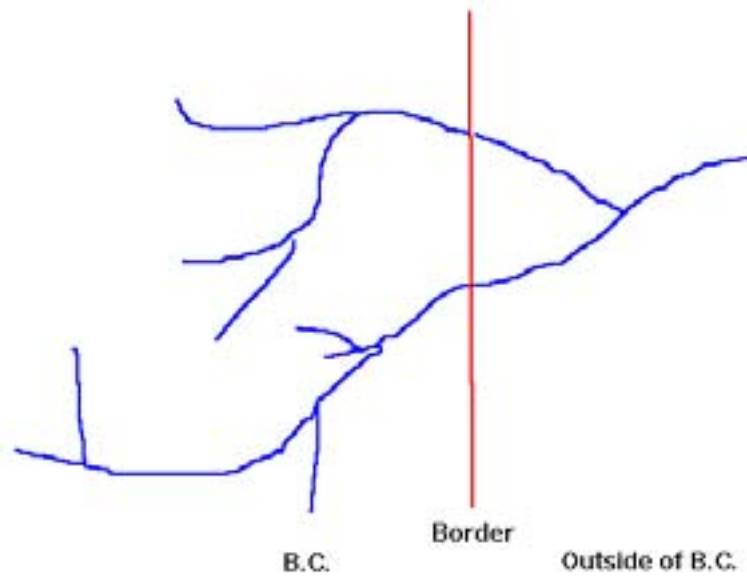


Reach Table (also included mag, gradient and comments as examples) would look like:

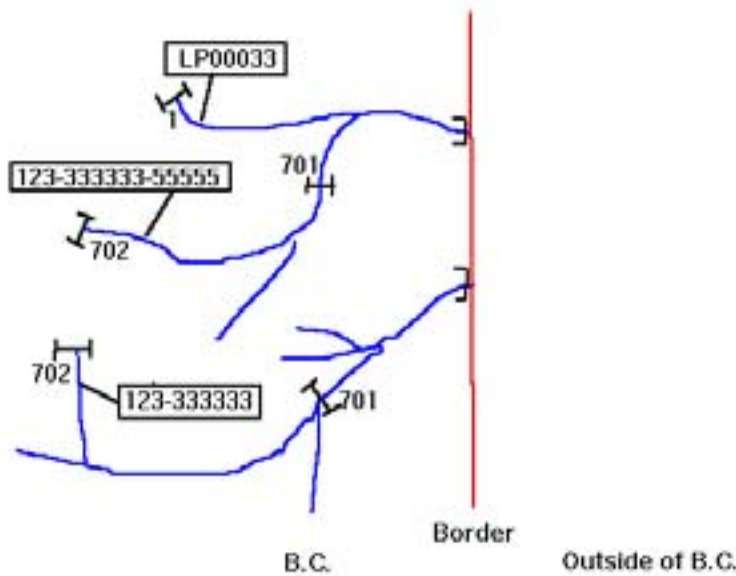
Watershed Code	ILP	Reach	Order	Mag	Gradient	Designation
123-333333		1	3		4	IN
123-333333		2	3		4	BORDER
123-333333		3				OUT
123-333333		4	3		6	BORDER
123-333333		5	3		9	IN
123-333333		6	3		9	BORDER
123-333333		8	3	5	19	BORDER
123-333333		9	2	3	21	IN
	00035	1	2	3	18	IN

Note: The streams on the “Outside of B.C” maps are probably all first/second orders - similar tributaries on the “B.C.” maps (more detailed TRIM maps) portray more streams/tributaries, but these are all first and second order. This results in the mainstem (123-33333) being order 3 in the downstream reaches.

2. Streams that originate in BC:



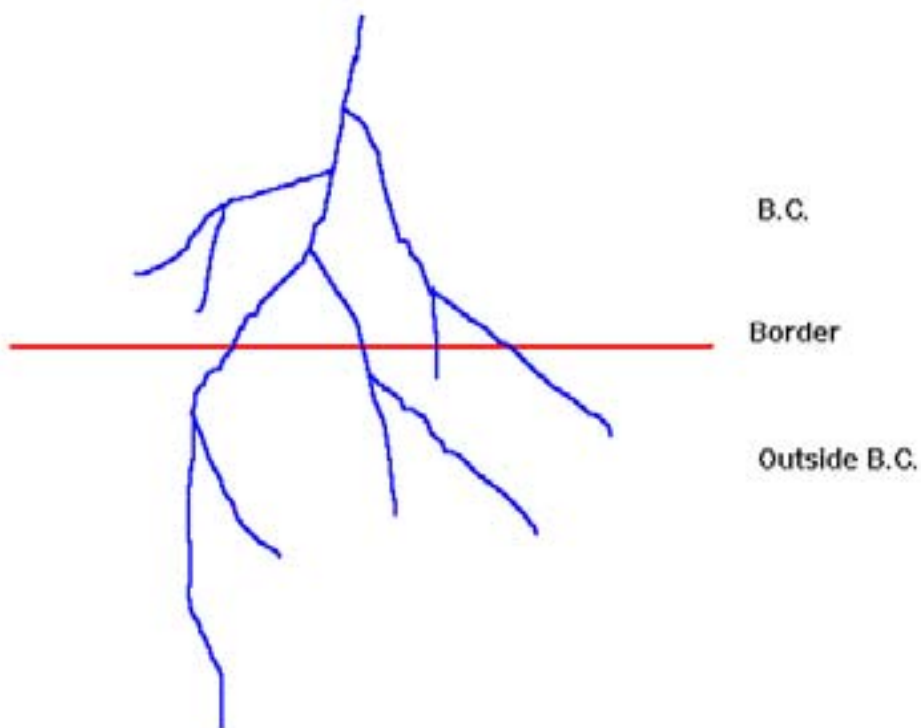
become:



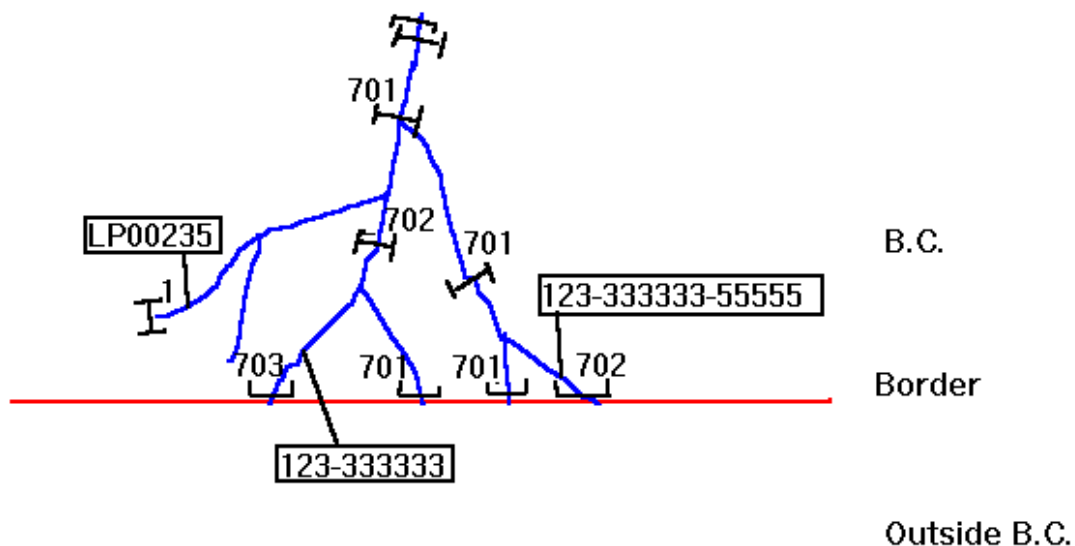
The Reach Table would look like:

Watershed Code	ILP	Reach	Order	Mag	Gradient	Designation
123-333333		1	2	5	5	BORDER
123-333333		2	2	2	8	IN
123-333333-55555		1	2	3	7	BORDER
123-333333-55555		2	2	2	11	IN

3. Streams originating outside of BC:



become:



The Reach Table would look like:

Watershed Code	ILP	Reach	Order	Mag	Gradient	Designation
123-333333		1	3		2	IN
123-333333		2	3		4	IN
123-333333		3	2		8	BORDER
123-333333-55555		1	2		6	IN
123-333333-55555		2	1		7	BORDER
	00235	1	2	2	11	IN