

Importance Matrix of Water Body Types and FRPA Habitat Components

(Consensus point **C3am**)

Water Body Type	1. Large Woody Debris	2. Stream Bank Stability	3. Channel Morphology	4. Water Temperatures	5. Stream Flows	6. Water Quality	7. Adequate Nutrient Cycling	8. Food Sources	9. Clean Spawning Gravels	10. Sunlight	Comments
GLACIAL W/ ANADROMOUS OR HIGH VALUE RESIDENT FISH											
A. Glacial Waters -- Dynamic reaches or channels	H L-M	L L	M L-M	H L	H L*	H L	H L	H L	L L	L L	includes full-time sloughs such as Salchaket
H. Glacial Waters -- Stable reaches or channels	H M	H M-H	H M	H L	H L*	H L	H L	H L	L L	M*	
F. Clear Upwellings in Glacial Streams	? M	L L	M? M	H L	H L*	H L	H L	H L	H M	L L	potential effects due to road crossings (ice bridges, scouring, etc.)
B. Sloughs or Oxbows Seasonally or Partly Connected to Glacial Waters	H M	H L	H L	H M	H* L-M	H M	H L	H L	H*/L L	H M*	photosynthesis is key; emergent veg'n very important
NON-GLACIAL W/ANADROMOUS OR HIGH VALUE RESIDENT FISH											
C. Non-glacial Clear Groundwater Streams (e.g., Richardson Clearw R)	H H	H H	H M-H	H L	H L-M	H L/M*	H L	H L	H M-H	H M*	gravel bed (as opposed to silt); veg'n does stabilize banks
D. Non-glacial Runoff/Tannic Streams (e.g., Chena R, Goldstream Cr)	H H	H H	H M-H	H L-M	H L-M	H M	H L	H H	H* M-H	H* L	veg'n does stabilize banks
I. Non-glacial--Dynamic reaches	H M-H*	H L-M	H M	H L	H L*	H L-M	H L	H L-M	H L	H L	
H. Non-glacial sloughs and oxbows	H M	H M	H M	H M	H L-M	H M	H L	H M	H M	H H	
E. Lake and Wetland Connections to River Systems (e.g., Minto area)	H L	L M	H L	H L	H M*	H L	H L	H L	L L	H L	silty bottoms; emergent veg'n very important; road effect since low harvest
LAKES W/ ANADROMOUS OR HIGH VALUE RESIDENT FISH											
G. Lakes w/A5 Anadromous and High Value Resident Fish	L H	? L	H L	H L	H* L	H M-H*	H H	H H	H* L*	H L	emergent veg'n very important; effects are due to closed, autotrophic system

Importance ranks:

Upper rank is value to anadromous or high value resident fish habitat in this water body type => **H**

M <= lower rank likelihood of forest management activities influencing that value.


H = high; **M** = moderate or mixed; **L** = low; **?** = Unknown or not well enough understood to rank.


Channel morphology was restricted to channel geometry (entrenchment, depth to width ratio, etc.)

Habitat components 1 and 4-8 were deemed most important.

Water body type B is a subset of type A, and includes reaches that fish can access from the main river at least seasonally, and that mix with glacial water at least seasonally.

Concern rank: Combination of importance rank and likelihood of disturbance.

 = **H** importance and **H** or **M-H** likelihood of management activities affecting

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*CELL NOTES for importance matrix cells flagged with an asterisk:

A5, F5, H5, I5 -- potential for impact low except for possible impacts from ice bridging.

B10, C10 – may increase productivity if sunlight increases

C8 – driven by primary production; highly productive streams, with large amounts of benthic algae since no scouring flows

C6, D6 – low likelihood for harvest, moderate for access roads

C9, D9 – freeze-down issues?

D5 – removing timber would likely increase snow load and runoff flows

E2 – moderate likelihood of impact from waterbody crossings

E5 – moderate likelihood of impact to winter flows and maintenance of fish passage

G6 – likelihood of impacts depends on size of water body

G6, G7, G8 – effects depend on extent of harvesting in watershed

G9 – if cleared large areas off for staging or access due to freeze-down in shallow areas

H6 – due to ice bridges

H7 – flow driven

H9 – due to lack of flushing ability

I1 -- potential for impact varies depending on size of river