

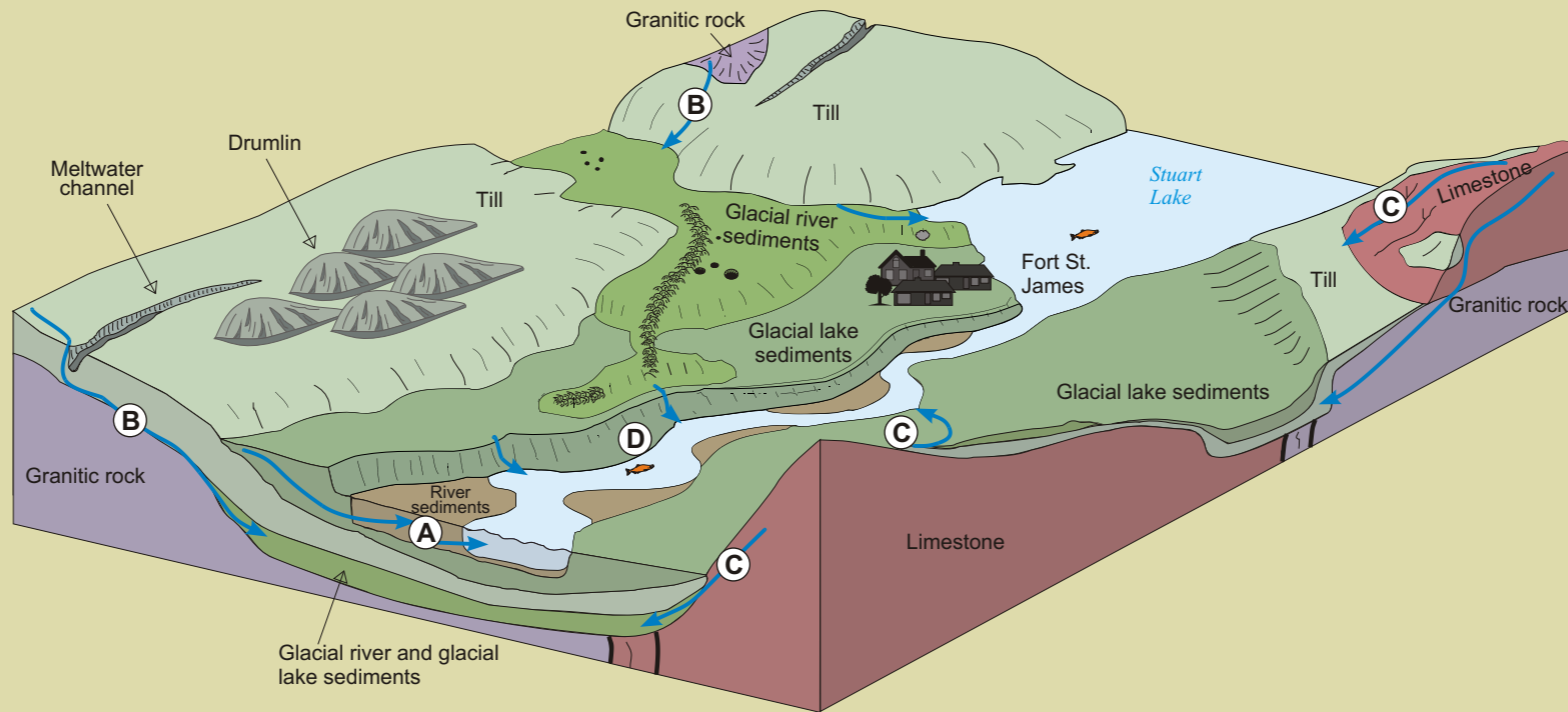
Geological controls on fish habitat

The headwaters of the Fraser and Skeena rivers occur in the Fort Fraser map area. Large numbers of Pacific salmon spawn in streams in these headwater areas. Lakes and streams feeding the Stuart and Nechako rivers host salmon that have travelled up the Fraser River, and lakes and streams feeding Babine Lake and Babine River host salmon that have travelled up the Skeena River.

The map area has abundant habitat for fresh water and spawning marine fishes. Factors that influence the quality of the fish habitat include water temperature, water chemistry, and the stream sediment load.

Water temperature

Pacific salmon prefer cool waters. In summer and fall, when salmon spawn, groundwater is generally cooler than surface water. Groundwater discharge into lakes and rivers **(A)** maintains cooler water temperatures during hot weather. Without groundwater inflow, stream temperatures could reach levels harmful to salmon.



Water chemistry

Fish prefer neutral to alkaline waters. Surface water and groundwater are generally more acidic in areas underlain by granitic rock **(B)** than in areas of limestone **(C)**.

Sediment load

Fish spawning habitat can be damaged if streams deposit silt in their channels. Sediment in streams in the Fort Fraser map area is primarily derived from glacial river deposits (sand and gravel), till, and glacial lake sediments (sand, silt and clay). Natural siltation is highest in areas where streams cut into banks of glacial lake sediments, such as along the Stuart and Nechako **(D)**.

Figure 19. Geological controls on fish habitat