

The University of Northern British Columbia's Quesnel River Research Centre (QRRC) is ideally situated for both land and aquatic based research and university education. The Quesnel River watershed drains 12,000 square kilometers in the central interior of British Columbia's Cariboo region. Quesnel Lake is the third largest lake in BC (104 km long) and is the deepest fjord lake in the world with a confirmed depth of 510 m; it also features 500 km of shoreline. This river system supports five salmon species and numerous other species, including steelhead and sturgeon.



Grizzly paw prints.

WELCOME TO QRRC

The QRRC is a world-class research centre that provides a setting for collaboration involving researchers from UNBC and other provincial, national and international universities, government agencies, other



Students studying carbon levels in the soil near Likely.

research centers, and industry. The centre also offers field study opportunities to undergraduate and graduate students, summer field schools, as well as extension services and seminar facilities for non-university user groups. The QRRC was originally a fish hatchery rearing more



Sockeye salmon with a device that measures sediment.



Grizzly bear cub.

than 2.5 million chinook and coho salmon and rainbow trout fry annually. Strong community pressure to save the facility upon its closure in 1995 and the awarding of an endowment fund for Landscape Ecology by Forest Renewal BC in 2002 resulted in the facility being granted another life as a year round research and educational centre that offers the following amenities:

- fully equipped laboratory
- instructional facilities
- seminar and workshop capabilities
- audio visual equipment
- research technical support
- accommodation with full kitchen
- research and extension office space
- wireless satellite internet
- jet boats/lake boats
- adjacent river and lake access
- 4x4 vehicles
- six 30m outdoor flumes
- scientific field instruments and gear
- aquaculture facilities including incubation and rearing
- well and river water
- wet lab
- mechanic/woodworking shop
- standby power
- walk in cooler and freezer
- local knowledge



Photo- view of Penfold creek, flowing into the Mitchell river, headwaters of the Quesnel river watershed.

RESEARCH & EDUCATION

The Quesnel river rises high in the glacier-capped Cariboo mountains. This area provides excellent opportunities for climate-related research. The snow pack in the mountains feeding Quesnel Lake reaches an annual depth of 2-3 metres, releasing large volumes of water in the spring and early summer. The flow



Researcher in flumes.

of these volumes of water is an important landscape-level factor. The streams which arise in the mountains flow westward through the Quesnel Highlands which feature globally-significant and ancient interior rain forests. This river system is part of the much larger Fraser Basin which drains about 30% of the area of BC and is home to over 60% of its population.

QUESNEL WATERSHED OFFERS:

- the Quesnel, Cariboo and the Horsefly Rivers, and a multitude of small lakes and streams;
- a variety of biogeoclimatic zones and sub-zones within the area;
- the 6,060 hectare Cariboo River Protected Area;
- anadromous salmonids such as Chinook, Coho, sockeye, and pink salmon;
- non-anadromous fish such as rainbow trout, bull trout, dolly varden and kokanee;
- other fish species such as burbot, mountain whitefish, northern pikeminnow, longnose dace, peamouth chub, redbreasted shiner, and suckers;
- the Cariboo Mountains and its varied wildlife, including grizzly and black bear, wolverine, cougar, lynx, caribou, elk, moose, deer, mountain goat, beaver, martin, weasel, waterfowl, raptors and dozens more species of birds;
- historical large-scale hydraulic placer mining such as the Bullion Pit which is 120 metres deep, 3 kilometres long, and where >9 million cubic metres of gravel were hydraulically removed into the Quesnel River;
- current open pit and placer mining operations;
- active forest harvesting and management by major licencees;
- a Community Forest joint venture between Xat'súll First Nation and Likely;
- other land uses, including cattle ranching, woodlots and market farms;
- a Fisheries and Oceans fish ladder at Cariboo Falls

Photo- waterfalls at Blue Lead creek, east arm of Quesnel lake.

WHAT IS LANDSCAPE ECOLOGY?

Landscape ecology is an interdisciplinary field of study that examines the composition, structure, and function of landscapes. A landscape is simply an area of land (at any scale) containing an interesting pattern (and is effected) by ecological processes.

Landscapes are spatially diverse geographic areas made up of various ecosystems, ranging from relatively natural terrestrial and aquatic systems such as forests, grasslands, and lakes to human dominated environments including agricultural and urban settings.

Key research topics in landscape ecology include: ecological flows in landscape mosaics, land use and land cover change, scaling, relating landscape pattern analysis with ecological processes.

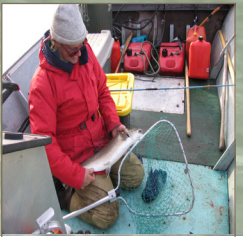
Photo- spawning sockeye salmon in Quesnel lake.

The facilities at QRRC:



1 Utilize fully equipped laboratory (left) and wet lab.

2 Stay in fully equipped, all-season residence (far right) with full kitchen.



3 Take advantage of the research and extension office space and satellite internet access.

4 Use our aquaculture facilities including incubation and rearing capacity.



5 There is adjacent river and lake access, as well as jet boats and lake boats.

6 View many land and aquatic species in many different habitats.

The Dr. Max Blouw Quesnel River Research Centre

Likely, British Columbia

Canada

For more information about
the Quesnel River Research
Centre please contact:

Phone: (250) 790-2031
Facsimile: (250) 790-2032
or visit our website at:
www.unbc.ca/qrrc

The northeast Cariboo lies within the traditional territories of the Shuswap First Peoples, who refer to themselves as "Secwepemc." Secwepemc territory covers approximately 145,000 square kilometers, extending from Shuswap Lake in the south to Quesnel Lake in the north, and from the Columbia-Kootenay Range in the east to the Alexis Creek area in the west. The Shuswap Nation is part of the Interior Salish People. The Salish People cover the area from the Coast (Coastal Salish) from northern British Columbia to Washington State to the Cariboo region. The Secwepemc Nation has 17 autonomous bands that are united by a common language and cultural belief system. The four First Nations members in the Cariboo are Xat'súll (Soda Creek Band), Cm'etem (Deep Creek Band), T'exelc (Williams Lake Band), Tsq'escen' (Canim Lake Band), and Stswecem'c/Xgat'tem (Canoe Creek Band/Dog Creek Band).

The community of Likely has a year round population of approximately 300 residents and twice as many during the summer months. Traditionally, Likely has been a mining and logging community with recreation and tourism becoming an increasingly important part of the local economy.

