

The Little Campbell River (LCR) faces threats that are typical of many streams in rapidly developing areas of the Lower Mainland. And while the creek continues to support many salmonids, the waterway is clearly under stress and the species of salmon that exist in the stream (along with sea-run cut-throat trout) are all showing large decreases and fluctuations in their escapement numbers. Since 1980, the LCR Voluntary Hatchery has been caring for the salmon resources of the LCR, in an attempt to ensure that the salmon runs are not depleted. Unfortunately, decreases in the number of fish from the many threats listed below are beginning to outweigh the huge inputs from this volunteer hatchery, since the main purpose of the hatchery is to augment the wild numbers rather than be the main supplier of salmon progeny.

Development pressures: Urban industrial (Campbell Heights business park) and semi-rural (High Point) developments are all effecting the watershed through increasing impermeable surfaces, loss of riparian habitats and tributary streams and decreasing water quality. Phase 1 of the Campbell Heights park contributed large amounts of silt downstream and had a number of fish streams reconstructed. Before construction of Phases 2 and 3 commences, the City of Surrey will hopefully re-evaluate how the first phase was done, prior to preceding with similar types of high intensity development. High siltation levels from these and other developments during the critical salmon egg incubation period in the main stem gravel beds are impacting wild salmon stocks of the LCR.

Agricultural threats: The eastern drainage of the LCR contains predominantly agricultural acreages and hobby farms in South Langley and parts of South Surrey. Along this part of the river, threats include the trampling of many riparian areas by livestock, the historical diversion or filling-in of wetlands and ephemeral streams, water quality issues around improper manure use, and old and failing rural septic systems. While some riparian areas have been fenced, many agricultural areas have lost much of their riparian stream edges and habitats along the main stem of the LCR and key tributary streams.

Water Quality: The water quality concerns associated with livestock and human wastes is contributing to potential eutrophication and coliform pollution. In the 2003 Hay and Co. Report, the LCR was noted as a significant contributor of fecal coliforms into Semiahmoo Bay. This resulted in a 2006 BC Environment Water Quality Report on the lower LCR, which indicated that there were significant fecal coliforms coming from the tributaries and storm drains downstream of Highway 99. The continued urbanization of eastern

White Rock and western South Surrey has also resulted in very flashy and polluted stormwater run-offs from McNally and Fergus Creeks along with numerous other stormwater outfalls, which drain into the lower LCR. Currently, the BC Ministry of Environment is working to correct this problem, yet there is still the need for further fecal coliform and water quality investigations for the upper watershed, which is plagued by leaking septic fields and agricultural nutrient run-off.

Other Biological Threats: Benthic invertebrate studies have been undertaken by A Rocha Canada, downstream from the 16th Avenue Bridge in 2004, 2006 and 2007. Results from these years indicate that the lower LCR system is under varying degrees of biological stress. Invasive plants, such as Reed canary grass has totally invaded the river areas and the riparian edges, Himalayan blackberry has overtaken many tributary streams and riparian areas, giant hogweed, lambium, Japanese knotweed and others are continuing to out-compete native plants species throughout the river system.

Threats to Wetlands: LCR wetlands are at risk from human disturbances, including agricultural, urban and recreational pressures along with ground water extractions, pollution and nutrient loading. The remaining wetlands within the LCR watershed provide critical habitat for hundreds of species, many of which are endangered, threatened or vulnerable. The protected wetlands in Campbell Valley Regional Park (CVP), located along the LCR, supports 174 bird species, 70 of which breed there. In addition, many of the salmon species continue through these wetlands to spawn in the LCR headwaters. The continued health of these wetlands is critical to the biotic survival of the LCR.

Hydrological threats: The LCR has become increasingly flashier with at least four major flood events during the winter of 2006-2007, with the majority occurring after salmon spawning between November and March. These floods have had significant erosional effects on the river, since this has served to dislodge large amounts of gravel downstream. A large mid-section of the LCR is underlain with large glacial gravel that serves to drain off large amounts of summer flows. In addition to this seepage, the LCR is over-subscribed with many historical water licenses for domestic and agricultural usage. Due to the inability of government agencies to monitor and regulate water withdrawals, large water extractions (particularly during dry years such as 2006) result in a loss of available water and habitat for juvenile salmonids. Also, in many years during the months of July and August, large sections of the LCR dry up downstream of Campbell Valley Park in Langley, stranding large numbers of coho fry. While fish salvage operations undertaken by volunteers have rescued large numbers of these fish, many are also lost to predators and drought.