

Promoting Biodiversity in British Columbia

Submitted by Leonard Sielecki, Environmental Issues Analyst. Photos by Patricia House, Department of Fisheries and Oceans

British Columbia is Canada's most biologically diverse province or territory. The province is home to more than 1,100 species of vertebrates, including 488 bird, 468 fish, 142 mammal, 18 reptile, and 22 amphibian species. Within the province are found many species and ecosystems of local, regional, national and global significance.

From a continental perspective, the biodiversity in British Columbia is important because many sensitive species and ecosystems lost in other parts of Canada and the United States still survive here. In numerous cases, the species and ecosystems found in British Columbia exist nowhere else in North America. From a global perspective, some species and ecosystems are completely unique to our province, such as the Vancouver Island Marmot and the Kermode Bear.

According to the recently published Biodiversity Atlas of British Columbia, habitat connectivity is a critical factor for biodiversity. Without movement between critical habitats during all their lifecycles, fish and wildlife cannot survive. Throughout the province, as is the case in all jurisdictions in North America, roads and highways have the potential to create obstacles for fish and wildlife movement.

The Ministry of Transportation and Infrastructure has a long history of restoring and preserving the natural environment to

support biodiversity conservation. Over a decade ago, the ministry foresaw the need to proactively retrofit and replace culverts which blocked or limited fish passage. In 1998, the ministry's Environmental Management Section initiated its Culvert Retrofit Program (CRP) to systematically examine ministry culverts throughout the province and alter those that created obstacles for fish passage. Working closely with the B.C. Ministry of Environment and the Canadian Department of Fisheries and Oceans, our ministry has retrofitted or replaced hundreds of culverts throughout the province and improved fish access to hundreds of hectares of fish habitat.

The CRP initiative was greatly augmented in 2003, when the ministry's Executive established the Environmental Enhancement Fund (EEF). The EEF was developed to support projects which link to the provincial highway infrastructure and directly enhance, restore or protect environmental resources like fish and wildlife populations and their habitat. Unique among transportation agencies in North America, the EEF has won numerous national awards, including the Transportation Association of Canada (TAC) Environmental Achievement Award and the Ducks Unlimited Platinum Award.

Through the EEF, the ministry has focused its efforts to improve or restore fish passage wherever its roads and highways cross



Construction at St. Laurent Creek, south of Chase, funded by the Culvert Retrofit Program.

streams, rivers or other water bodies. Access for fish to underutilized habitat is provided through culvert retrofits and replacements. This approach helps restore the populations of prized species like coho and sockeye salmon to their former levels. The ministry has strategically acquired and protected ecologically sensitive and endangered habitats and ecosystems along its rights-of-way to protect them from future development. Fish and wildlife habitat enhancements have included the construction of salmon and trout rearing habitat and spawning channels, water storage to create wetlands or wetted habitat, and estuary and riparian planting enhancements. Other projects have involved pink salmon transplants to restore wild fish populations, the capture and relocation of Roosevelt Elk, Mountain Goats and Bighorn Sheep away from collision-prone locations to safer, suitable underutilized habitat, and the reduction of vehicle-related mortality for the Red-Legged Frog, Western Toad, Western Painted Turtle and American Badger through the strategic installation of fencing and crossing structures.

While the CRP and EEF programs are administered by Senior Fisheries Biologist Sean Wong, who is located in HQ, the ministry's



Before: The culvert at St. Laurent Creek limited the passage of fish.

continued on Page 8...

Regional Environmental Managers have been instrumental in the successful delivery of CRP and EEF projects. While vast expanses of land may be more readily available in the more remote areas of the province, acquiring property for preserving fish and wildlife habitat along highways is not a simple task for the South Coast Region's Manager of Environmental Services Greg Czernick. Greg is responsible for more than 150,000 square kilometres, including the most densely populated and heavily travelled southwest corner of the province. In the Lower Mainland, the ministry faces a severe shortage of land available for fish and wildlife habitat restoration and enhancement projects, due to existing dense urban development, extremely high land costs and competition from municipalities attempting to secure land for their own habitat compensation needs.

In the Southern Interior Region, a very large number of wildlife species are at the extreme northern end of their North American ranges. While these species may be common south of the Canada/U.S. border, they are typically rare or endangered in Canada and protected by Federal Species at Risk legislation. Consequently, the region's Environmental Services Manager Brent Persello, is always exploring opportunities to protect these species along the southern highways in an area approximately 260,000 square kilometres in size, stretching between Alberta and the Pacific Ocean, and bordering the U.S. states of Washington, Idaho and Montana.

The vast provincial highway network in the north and the extremely short construction windows force the Northern Region's Manager of Environmental Services Daryl Nolan, to balance time and distance carefully. In the delivery of CRP and EEF projects, Daryl singlehandedly oversees a 640,000 square-kilometre area that extends from the Alberta border to the Alaska border, an area that is larger than France or Germany.

Over the last 12 years, through the CRP and the EEF, the ministry has spent over \$16 million for culvert replacements, habitat restoration and



After: The new culvert maintains biodiversity by improving access to fish habitat.

other initiatives to foster habitat connectivity and promote biodiversity. Throughout the province, the ministry's projects have involved numerous partners. In addition to the provincial environment ministry and the federal fisheries department, the ministry has established productive partnerships with environmental stewardship groups, private landowners, non-governmental organizations and local fish and game associations. Both the CRP and EEF programs continue to make fish and wildlife habitat connectivity – a fundamental requirement for maintaining biodiversity – a priority for the ministry.

Given their ongoing successes, the ministry's CRP and EEF programs offer a model for other agencies working to enhance habitat connectivity and support biodiversity. ♦

Submit your stories and photos to **RoadRunner**

If you want to submit articles send your Word files and photos to: RoadRunner@gov.bc.ca. To ensure the best quality possible, please email your photos as JPEGs and do not embed them in your article.

