

**DROUGHT
UPDATE >**

PULLOUT INSIDE

WATER REGION 2

State ^{OF OUR} Streams 2015

WATER QUALITY EDITION



Little Qualicum River

The Drinking Water & Watershed Protection (DWWP) Program has been working with community partners, including provincial & local government, environmental stewardship organizations, private forest companies and volunteers to monitor water quality across our region since 2011 with the Community Watershed Monitoring Network. **For more information, please visit: www.dwwp.ca**



**DRINKING WATER
WATERSHED
PROTECTION**

**REGIONAL
DISTRICT
OF NANAIMO**

The Community Watershed Monitoring Network

Program 2 under the Drinking Water and Watershed Protection Action Plan outlines the goal to improve information about the region's water resources in terms of quantity and quality. The Community Watershed Monitoring Network (CWMN) furthers this program action, by collecting water quality data to track stream health. Partnership between local stewardship group volunteers, BC Ministry of Environment, the RDN DWWP program and Island Timberlands has enabled this expansion of monitoring in our region.

Water quality is sampled in 17 watersheds and 51 sites across the region.

- 5 samples in the low flow (Aug - Sept)
- 5 samples in the fall flush (Oct - Nov)

water quality indicators

TURBIDITY

suspended particles in water; linked to higher levels of contaminants

DISSOLVED OXYGEN

oxygen dissolved in water supports aquatic life; lower when stream flow is reduced

TEMPERATURE

affects processes in water and in aquatic life



This DWWP program is linked to Indicator 5 of our Regional Growth Strategy (RGS) monitoring program which measures progress towards achieving Goal 2 of the RGS: to "protect and enhance the environment and minimize ecological damage related to growth and development". With regard to fresh water, the RGS identifies a strategy to meet this goal, of "protecting the quality and quantity of ground water and surface water". The RGS seeks to maintain the long term sustainability of these water resources. Please see the Monitoring the RGS website at www.rdn.bc.ca/rgsmonitoring for more information.

WATER REGION 2 Little Qualicum River



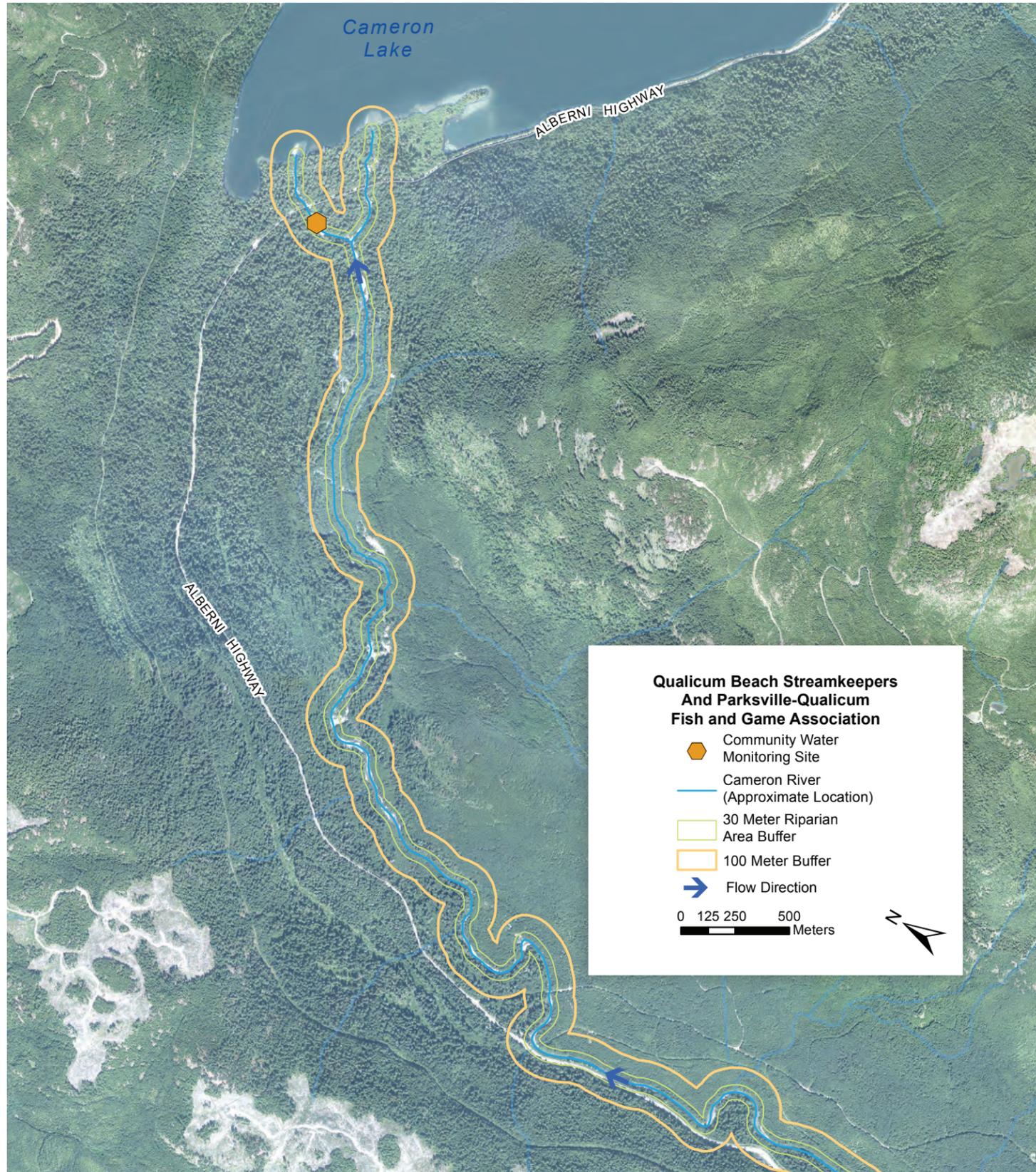
- 1 BIG QUALICUM
- 2 LITTLE QUALICUM
- 3 FRENCH CREEK
- 4 ENGLISHMAN RIVER
- 5 SOUTH WELLINGTON TO NANOOSE
- 6 NANAIMO RIVER
- 7 GABRIOLA ISLAND

This publication highlights:
Cameron River & Little Qualicum.

For more monitoring results details and other streams in the region, see the full report at

www.dwwp.ca

CAMERON RIVER



Challenges

Parallel to Cameron River for seven kilometers, the Alberni Highway (Highway 4) has the potential to introduce sediments and contaminants such as hydrocarbons from vehicles to this fish-bearing waterway. Although turbidity exceedences were not noted in the CWMN sampling to date, sedimentation was noted in the 1998 Coastal Watershed Assessment of Cameron Watershed to enter the river from surface sources (roads and bridges) as well as from channel erosion attributed to the increase in stream flow linked to storm events and historic logging practices. At this time, this river demonstrates no notable health challenges.



Details

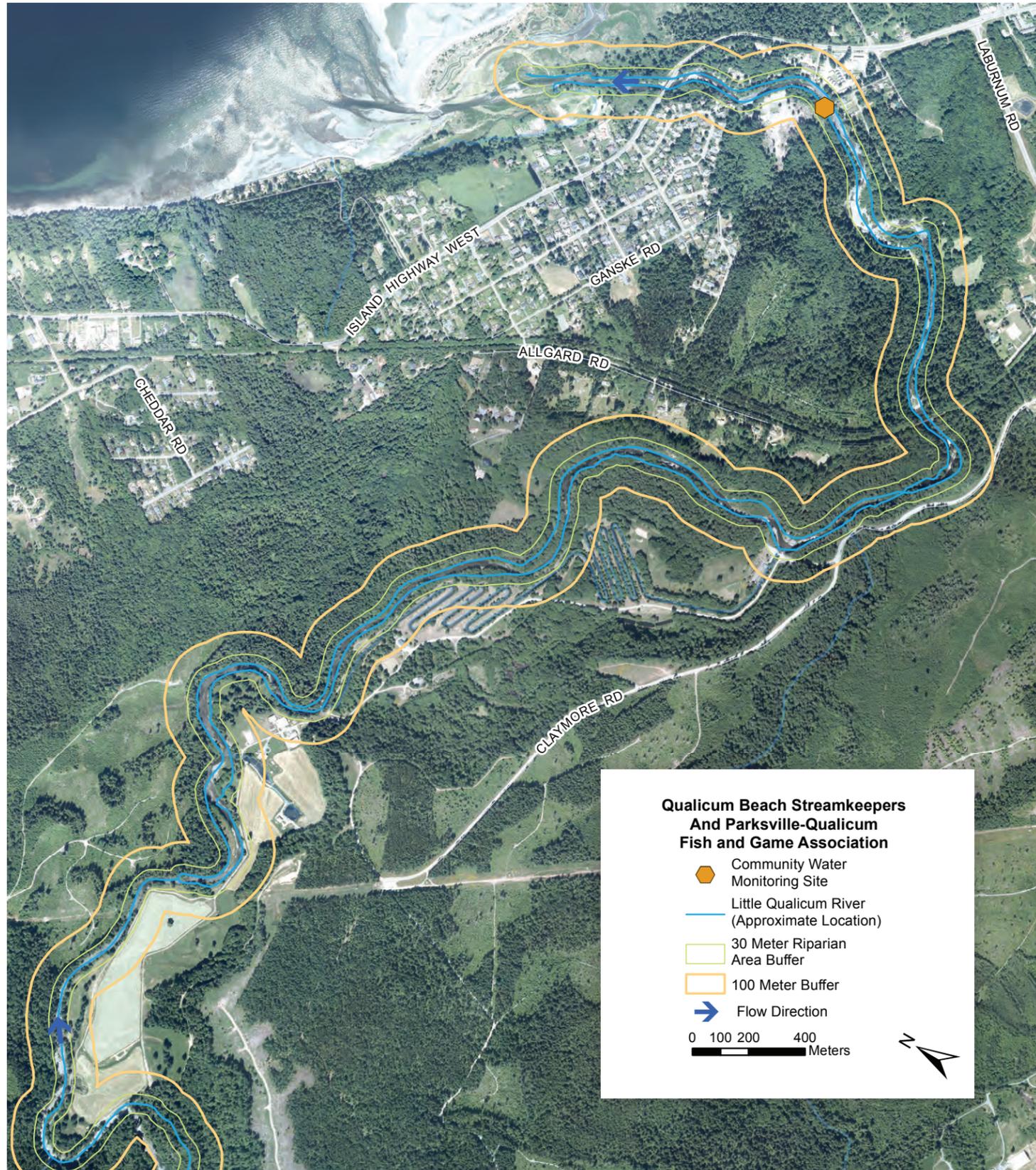
Water Region two is within the traditional territories of the Qualicum First Nation. Cameron River/Lake is a tributary to the Little Qualicum River and has a drainage area of 111.8 square kilometers. The headwaters of the 31.2 kilometer long Cameron River originates in private forestry lands, while the lower reaches flow through MacMillan Provincial Park before joining Cameron Lake. Cameron River is the primary tributary to this lake, which is the largest surface water body in the Little Qualicum Water Region (WR2). Recreational uses, including kayaking, hiking, hunting and fishing, are popular in this watershed. Two Community Watershed Monitoring Network (CWMN) sampling sites are located on Cameron River; both the upper and lower river sites have displayed good water quality throughout the past four years of monitoring with no exceedences of the Provincial Drinking Water Quality Guidelines.



Opportunities

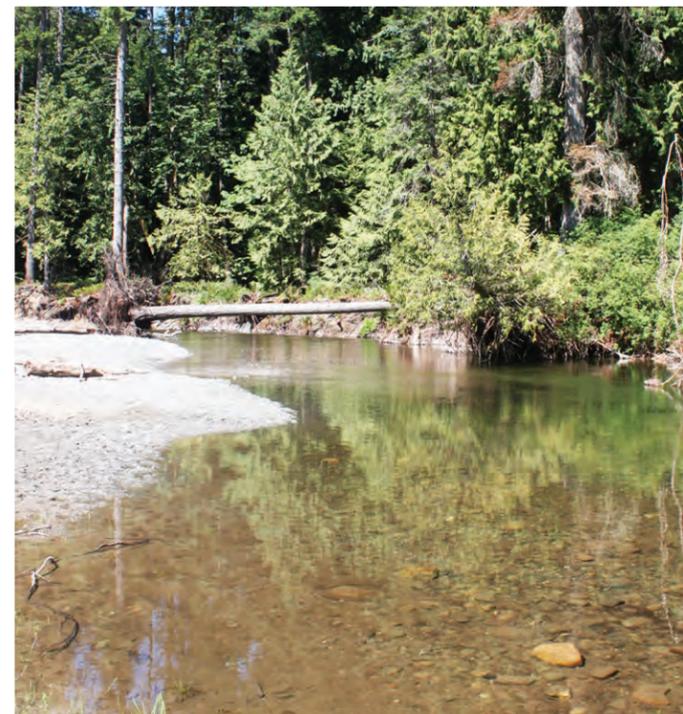
The good quality water in this system can be maintained by continued best practices to control sedimentation off of logging roads and river crossings. Visitors to Cathedral Grove in MacMillan Provincial Park and recreationists play their part by packing out what they bring in and using provided restrooms and garbage cans. Motorists traveling along this highway corridor can keep vehicles in good repair to minimize impacts from hydrocarbons entering the river and lake from the roadside. Current habitat assessments could be completed and compared to the 1998 Watershed Assessment to discern any changes in the health of this watershed.

LITTLE QUALICUM



Challenges

The Greater Georgia Basin Steelhead Recovery Plan identified several limiting factors of this stream including a lack of large woody debris, a low percentage of wetted area and a high percentage of fine sediments on the stream bottom. This Plan also highlights special habitat protection requirements, primarily from potential impacts of human activities in the watershed such as agriculture, urbanization and logging. Since 2011 the only potential exceedences of the Drinking Water Guidelines has been for the parameter of temperature, which is common in our local waterways that are wide and shallow. At this time, this river demonstrates no notable health challenges.



Details

Including all of its tributaries, Little Qualicum River has a drainage area of 251.7 square kilometers with flows controlled by a weir at the outflow of Cameron Lake. In 1940 Little Qualicum Falls Provincial Park was established to protect the area around the river, waterfalls, old-growth Douglas fir and associated plant communities. The park includes many kilometers of trails for hiking and cycling, as well as opportunities for swimming, fishing and camping. In the lower reaches of the river, the Little Qualicum Hatchery was built in 1963, and since its inception it has stocked chinook, chum, coho, cutthroat and steelhead. Currently only chum and chinook salmon are reared in and stocked from this hatchery. This river is designated as a 'Sensitive Stream' by the Ministry of Environment through the federal Fisheries Act, ensuring that the most important management goal is for fish sustainability.



Opportunities

The Little Qualicum River is a significant source of drinking water for local communities and has a very high fisheries value. Two well fields are used by the Town of Qualicum Beach, the Berwick and River well fields. Located alongside the lower reaches of the Little Qualicum River from an aquifer that is interconnected to the surface water in the river, the River well field supplies water to Town of Qualicum Beach residents year round. To better discern if the increase in summer water temperature can be addressed by riparian area improvements, such as increasing vegetative cover over the stream, a detailed physical assessment using the Urban Salmon Habitat Program methodology could be completed. From a Salmon Toss to native plantings in the estuary the Qualicum Beach Streamkeepers are continuously completing an array of restoration works, if you would like to get involved please contact info@qbstreamkeepers.ca.

WORKING TOGETHER



ACTIONS

- ✓ Keep stream banks naturally vegetated
- ✓ Refrain from chemical use in landscape maintenance
- ✓ Pick up after your dog, ensure dog waste and poop bags stay out of waterways
- ✓ Minimize impervious surfaces – deal with rainwater on site to limit what runs-off into the stream, potentially carrying contaminants, contributing to erosion and flash flooding



ACTIVITIES

- ✓ Continuous monitoring in local waterways helps to promote watershed health awareness in our communities
- ✓ Environmental stewards are trained every year how to monitor our watersheds and collect data to provincial standards
- ✓ Trend reports created from the first three years of data determine which sites would benefit from additional monitoring
- ✓ CWMN results continue to highlight areas for improved watershed management, physical stream assessments, outreach and education

GET INVOLVED

Departure Creek Streamkeepers
operates under auspices of NALT
volunteer@nalt.bc.ca

Lantzville-Nanosee Streamkeepers
nanoseesteamkeepers.blogspot.ca
cpollak@shaw.ca

Nile Creek Enhancement Society
www.nilecreek.org | Nile.creek@shaw.ca

Friends of French Creek Conservation Society
www.ffccs.ca | communications@ffccs.ca

Mid-Vancouver Island Habitat Enhancement Society
www.mvihes.bc.ca | info@mvihes.ca

Qualicum Beach Streamkeepers
www.qbstreamkeepers.ca
info@qbstreamkeepers.ca

Island Waters Fly Fishers
www.iwff1.ca | rschiefke@shaw.ca

Nanaimo & Area Land Trust
www.nalt.bc.ca | volunteer@nalt.bc.ca

VIU - Fisheries & Aquaculture Department
www2.viu.ca/fisheries | daniel.fox@viu.ca

For trend reports, monitoring sites and program outline please visit www.rdn.bc.ca/CWMN



DRINKING WATER WATERSHED PROTECTION

REGIONAL DISTRICT OF NANAIMO