

**DROUGHT
UPDATE >**

PULLOUT INSIDE

WATER REGION 1

State ^{OF OUR} Streams 2015

WATER QUALITY EDITION



Nile Creek

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

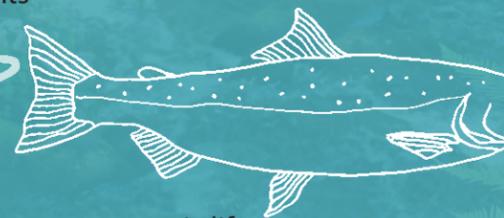
suspended particles in water; linked to higher levels of contaminants

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 1 Big 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

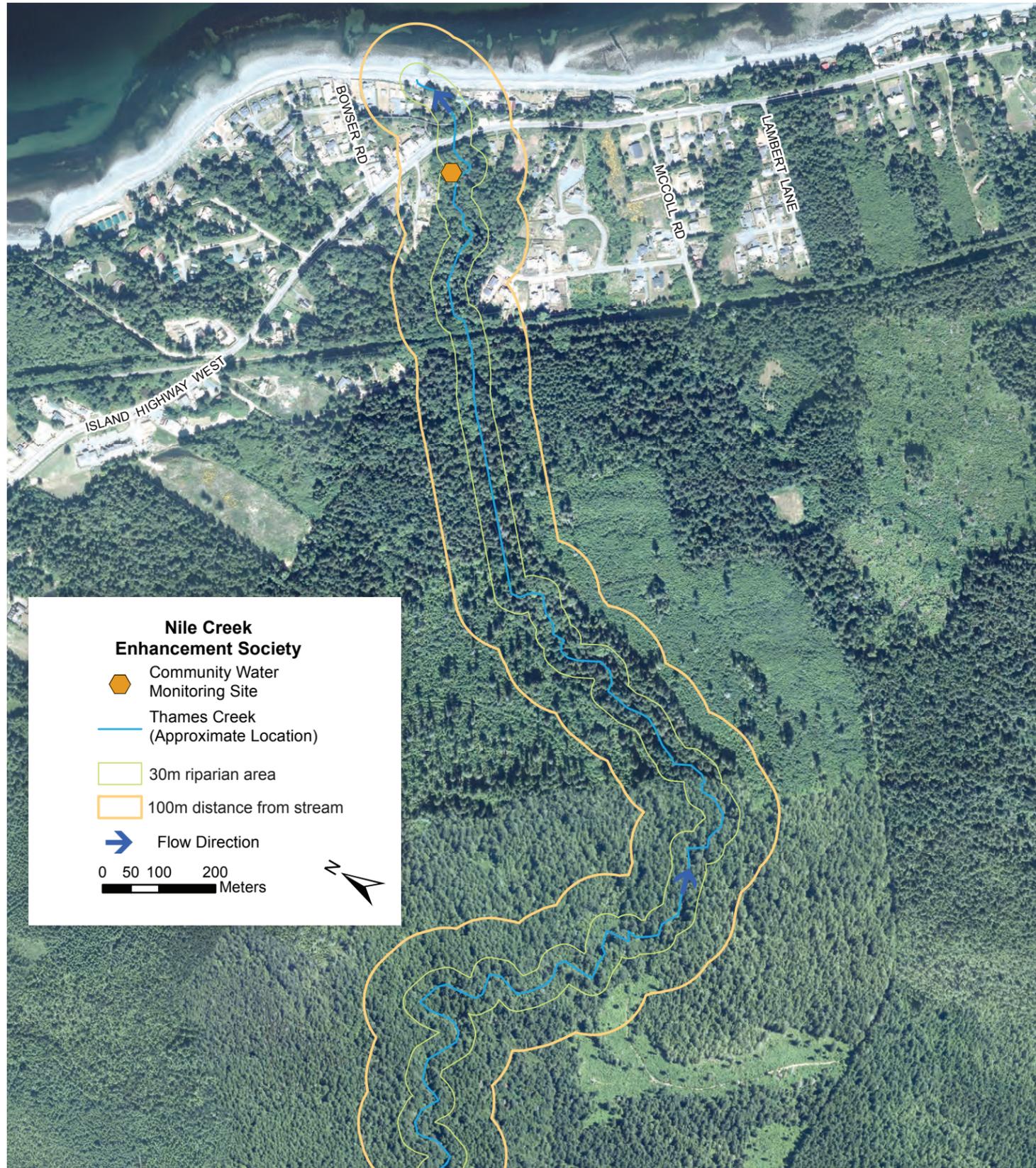
This publication highlights:

Thames Creek & Nile Creek

For more monitoring results and other streams in the region, go to

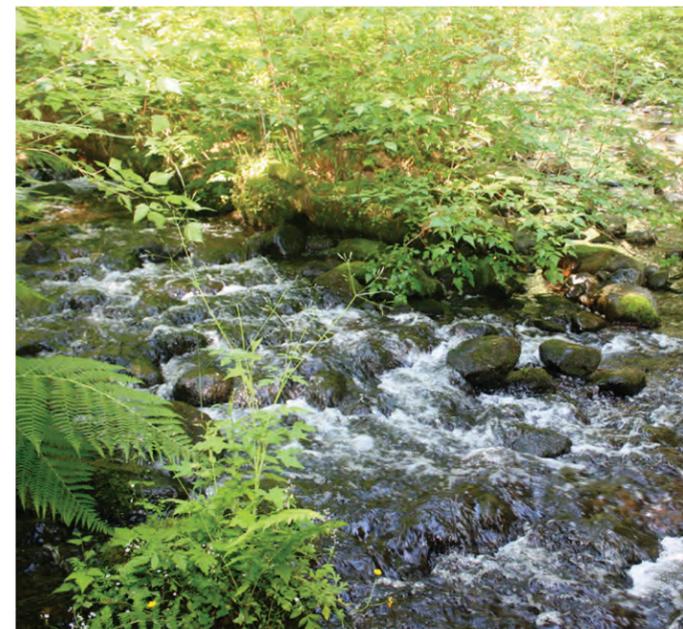
www.dwwp.ca

THAMES CREEK



Challenges

In assessments completed between 2000 and 2003, Nile Creek Enhancement Society (NCES) identified several limiting factors of this creek including a lack of large woody debris, a low percentage of wetted area and a high percentage of fine sediments. As is common in our eastern Vancouver Island streams, the lower reaches of Thames Creek experienced periodic increases in water temperature during some of the summer sample dates; however, the average temperature in a sample period did not exceed the provincial guidelines for water quality or coho rearing.



Details

Traditional territory of the Qualicum First Nations, Thames Creek has a drainage area of approximately 8.5 square kilometers. Groundwater contributions are evident, maintaining the cooler summer temperatures and continuous flows in the central and lower reaches. In the summer months the stream typically goes sub-surface 6.8 kilometers upstream from where it enters the Salish Sea. Primarily surrounded by forested crown land, this waterway has displayed good water quality throughout the past four years of monitoring and has been used as a baseline in CWMN program data analysis. In all sample dates, dissolved oxygen levels were well above the provincial guidelines for drinking water, and the only increases in turbidity were minor and correlated with rainfall events.



Opportunities

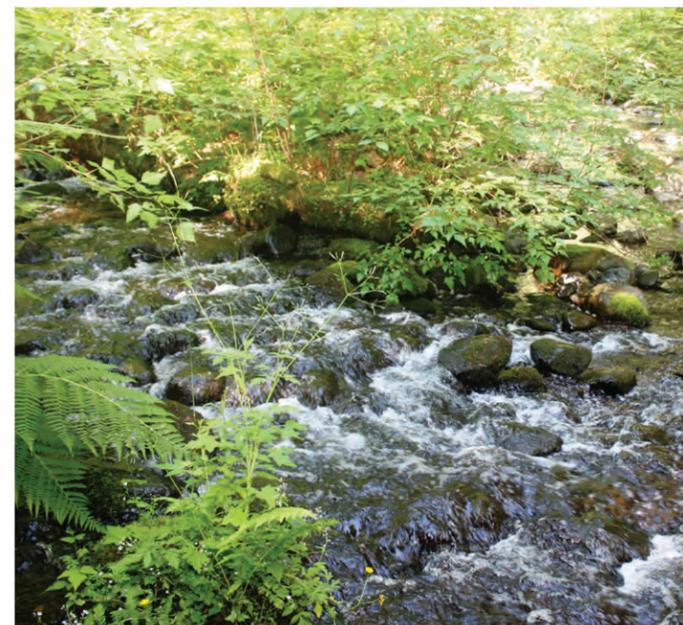
It has been over 12 years since a physical assessment has been conducted on this waterway to document the current state of the stream another assessment using the Urban Salmon Habitat Program method could be completed. Additional restoration works for the purpose of improving stream health are being completed by the Nile Creek – Qualicum Bay Enhancement Program, a comprehensive habitat restoration and enhancement initiative in Area H. If you would like to get involved in their efforts please contact the NCES nile.creek@shaw.ca.

NILE CREEK



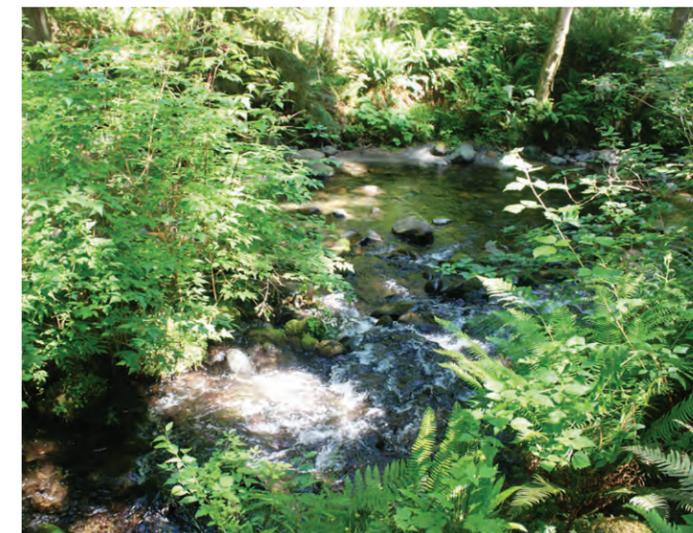
Challenges

In 1999 the Steelhead Society Habitat Restoration Corporation completed an assessment of Nile Creek, finding that it experiences flash floods, erosion, severe scouring and gravel shifting. In addition to instream challenges, the estuary area key for anadromous species has several concerns including unnatural modification of shoreline zones and accretion.



Details

Once known locally as the Pink River, due to the historic large pink salmon run, this major watershed has a drainage area of approximately 18.3 square kilometers. Flows and cooler temperatures of Nile Creek are maintained by groundwater influences. Allan Channel, a side channel about one kilometer in length created in 1999, provides shelter and spawning area for salmonids. CWMN samples taken from Nile Creek have indicated good water quality, and as with Thames Creek, data has been used as a healthy baseline in comparison across our region. No exceedences in dissolved oxygen or turbidity have occurred during any of the sample periods in the last four years. This creek falls within traditional territories of the Qualicum First Nation.



Opportunities

Nile Creek provides essential habitat for trout and salmon. Work by streamkeepers and Nile Creek Hatchery volunteers has ensured that these species have a viable habitat for rearing and spawning. The Hatchery has been in operation since 1998, stocking Pink Salmon each year since then. There are many kilometers of natural trails adjacent to this waterway and it is important that we all work together to keep this area pristine and healthy for human use and aquatic life.

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
nanoseestreamkeepers.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

