

DATE: January 7, 2020

FILE: 6130-00

TO: Chair and Directors
Electoral Areas Services Committee

FROM: Russell Dyson
Chief Administrative Officer

Supported by Russell Dyson
Chief Administrative Officer

R. Dyson

RE: Water Quality Testing for Swim Locations

Purpose

The purpose of this report is to review the need for continued testing of water quality at swim locations in electoral areas previously monitored by Island Health.

Recommendations from the Chief Administrative Officer:

THAT the report on water quality testing for swim locations dated January 7, 2020 be received and filed.

Executive Summary

- Island Health will no longer be sampling water quality at select swimming locations in the Comox Valley.
- Sampling history shows historically safe test results with the exception of an odd spike at Comox Lake.
- Parks staff intend to continue with sampling at Goose Spit Park since it is the only historic sampling location that is located in a Comox Valley Regional District (CVRD) park.

Prepared by:

B. Allaert

Brian Allaert
Parks Technician

Concurrence:

M. Harrison

Mark Harrison
Manager of Parks

Concurrence:

D. DeMarzo

Doug DeMarzo
General Manager of
Community Services

Stakeholder Distribution (Upon Agenda Publication)

Island Health	✓
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Background/Current Situation

With provincial health authorities discontinuing beach water sampling across B.C. Island Health has stopped collecting samples at Comox Valley beaches. Island Health historically monitored 15 locations in the valley including 11 in the CVRD. See Appendix A for a list of sites.

If others collect samples Island Health environmental health officers will provide oversight of monitoring. Island Health will pay for the lab services, analyze the results, post the results online and make recommendations about safety advisories. If, where and how often sampling occurs in the electoral areas is being left to others to decide.

Rarely have past results been found to be above recommended limits in the regional district. In fact, there have not been any warnings issued at Goose Spit since testing began. Test results at the three beaches within the jurisdiction of the CVRD that Island Health did sample have been very low with the exception of an odd spike at Comox Lake.

Currently samples are tested for E. coli at fresh water beaches and Enterococci at salt water beaches. This has not always been the case. Prior to a few years ago testing was not done for Enterococci at salt water locations.

Generally the threshold at which a warning is issued for a given location is based on Health Canada guidelines for recreational water quality. For a warning to be issued in a salt water environment, Enterococci levels would need to exceed 70 for a single sample or above a mean of 35 for several samples. For freshwater, recorded levels of E. coli would need to exceed 400 for a single sample or over 200 for several samples.

The beach at Comox Lake campground sees higher levels of bacteria and fecal matter from the beach water not being flushed as regularly as an ocean beach, as well as due to the high number of people using the beach and the gulls that like to hang out on the log booms around the swim area. Environmental health officers believe the regional district may wish to monitor water quality at Comox Lake beaches to assess potential threats to the Valley drinking water system. They point out this is a popular beach especially for families and monitoring provides some data on the raw water quality.

For 2020 parks staff will begin collecting samples at Goose Spit from mid-May to Labour Day. Sampling will likely be handled by CVRD staff or Goose Spit park stewards who are already working daily at the park to manage beach fires. Island Health will be coordinating lab testing, helping with determining the best sites for sampling and posting results online. Testing will likely be every two weeks on the outer beach with the samples collected about 30cm below the surface in about a half metre of water. Provincial labs require three days to complete testing.

Other popular swim locations in the electoral areas such Nymph Falls, Little River, Royston, Tsolum Spirit Park, Headquarters Townsite and Bracken Park would not be monitored under this proposal as they were not part of the Island Health testing program. Monitoring could be done at other swim locations if desired and resources are dedicated for sampling. Sampling and testing is being done at Graham Lake on Denman Island with no involvement of CVRD parks.

No testing is done for swimmers itch bacteria (Schistosomes). The bacteria are apparently difficult to detect with no local labs offering testing. Schistosomes can lay dormant in silt which swimmers then stir up as they swim about.

Policy Analysis

Goal 4 of the Rural Comox Valley Parks and Greenways Strategic Plan 2011 is to plan and manage parks in a proactive and responsive manner.

Comox Lake Watershed Protection Plan (WPP)

The focus of the WPP is ensuring safe drinking water for Comox Valley residents. While there is an interest in how swimming can affect water quality the plan doesn't address monitoring water for the safety of swimmers.

Options

The following options are available:

1. Do not collect water samples in the locations historically tested by Island Health.
2. Collect water samples at Goose Spit Park only.
3. Collect water samples at various popular swim locations within the electoral areas.
4. Partner with Courtenay, Comox and Cumberland to coordinate sampling around the Valley.

Staff will proceed with option two unless directed otherwise by the board. This is based on fiscal responsibility and limits for the parks service funding.

Financial Factors

Sampling at Goose Spit Park will have no immediate financial implications given park stewards, maintenance contractors and staff visit the park regularly already.

Option three would require additional staff resources or employing contractors to collect water samples. Depending on which beaches are being sampled this could be a half-day to full day of work with travel time and a vehicle for one employee or contractor. This option may even require the establishment of a new service to monitor sites not already part of a CVRD service.

Option four would require the establishment of a new regional service.

Legal Factors

Beach water sampling is not a legislative requirement.

Once aware of hazardous conditions in a park the CVRD has a responsibility to make park users aware of the particular risks. Hence, if a test shows poor water quality public notices will need to be posted with additional sampling done to monitor conditions.

Regional Growth Strategy Implications

Not relevant

Intergovernmental Factors

BC Parks will not be monitoring water quality at provincial park beaches located in the CVRD.

Courtenay intends to collect water samples at Puntledge Park only for 2020 and then will reconsider need for monitoring based on data collected.

Comox and Cumberland have not made any commitments to do any water sampling for swimming.

Interdepartmental Involvement

While engineering services staff do already collect water samples in and around Comox Lake, monitoring of the lake water quality for the purposes of ensuring the health and safety of swimmers is not within the extent of their responsibility. Engineering uses a private lab rather than the services of Island Health primarily so that they can get results back within 24 hours.

Citizen/Public Relations

A Mulholland Drive resident enquired, shortly after Island Health announced they would stop sampling, if and where the CVRD would assume sampling. Another Comox area resident also asked in September if testing would continue. Past enquiries about water quality have usually been about the inner beach at Goose Spit.

Attachments: Appendix A – Sites Previously Monitored by Island Health
Appendix B – August 2019 Island Health letter encouraging CVRD to continue
sampling at Goose Spit
Appendix C – FAQ: Island Health webpage

Appendix A – Sites Previously Monitored by Island Health

Location	Operated or Managed by
Comox Lake Campground	Village of Cumberland
Goose Spit	CVRD
Graham Lake Beach (Denman Island)	Graham Lake Swim Dock Committee Graham Lake Improvement District
Kin Beach	Local volunteer board on behalf of BC Parks
Kitty Coleman	Local volunteer board on behalf of BC Parks
Kye Bay	Town of Comox
Little Tribune Bay (Hornby Island)	Provincial Crown land
Miracle Beach	BC Parks
Pt Holmes	Pt Holmes Recreation Association Town of Comox
Puntledge Park	City of Courtenay
Stotan Falls	Private property
Sandpiper (Hornby Island)	Provincial Crown land
Saratoga Beach	Provincial Crown land
Tribune Bay (Hornby Island)	BC Parks
Whaling Station (Hornby Island)	Provincial Crown land

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everywhere, every time



August 2, 2019

Comox Valley Regional District
600 Comox Road
Courtenay BC
V9N 3P6

Attention: Doug DeMarzo

Dear Mr. DeMarzo:

Re: Recreational Beach Sampling

Changes within Island Health's beach monitoring program have resulted in our Environmental Health Officers no longer collecting beach water samples. This change brings our services with regard to beaches more in line with the services we provide for drinking water supply systems, and improves our consistency of practice with other BC Health Authorities. Further, the change allows EHOs to continue to protect the health of the public through duties that require their direct involvement.

Beginning in the Fall of 2018, we requested local governments and other entities providing beach oversight to collect the samples for the 2019 season and beyond. For those wishing to participate in the program, Island Health continues to cover the costs of shipping samples to the laboratory and having them analyzed for the appropriate indicator organism. We continue to receive laboratory results, provide notification of adverse results, and advise on appropriate actions to be taken. Our webpage is updated on a weekly basis to inform the public where testing has been conducted.

Beach monitoring and web reporting are health promotion activities that many members of the public appreciate as they plan beach based recreation for themselves and their families. As such, many some governments view sample collection as an important service which they do choose to provide. There is no legislation requiring Environmental Health Officers, Local Government, or any other entity to conduct routine sampling at recreational bathing beaches.

During our phone conversation earlier this season, you mentioned that, while an extensive beach sampling program was likely not going to be within reach, the CVRD had not yet determined whether to pursue sampling for Goose Spit. If there is any further information I can provide that may assist you with your decision, please let me know.

Regards,

A handwritten signature in blue ink that reads 'Heather Hutton'. The signature is fluid and cursive, with the first name 'Heather' being larger and more prominent than the last name 'Hutton'.

Heather Hutton, CPHI(C)
Regional Environmental Health Consultant

Appendix C – FAQ: Island Health Webpage

<https://www.islandhealth.ca/learn-about-health/environment/recreational-water-beach-reports>

How often are beaches sampled?

Each beach is assessed by an Environmental Health Officer (EHO) based on usage, previous sample results and potential sources of contamination. Once beaches have been assessed, a recommended sampling frequency is made based on the following:

HIGH – Sampled weekly

MODERATE – Sampled every two weeks

LOW – Sampled monthly

VERY LOW – Not sampled unless EHO believes it is necessary to do so

Beach sampling generally begins in mid-May, so that results are available in advance of May Long weekend, and runs through until Labour Day.

What do we test for?

We test for indicator bacteria. Indicator bacteria are used to identify the presence of fecal contamination and provide an indication of the potential risk associated with swimming in that location. The indicator bacteria used depends on the type of water sampled. E. coli is used at fresh water beaches and Enterococci is used at salt water beaches.

When are Advisories Posted on Beaches?

Beach advisories are recommended by Island Health when a sample result of over 1000 E. Coli or 175 Enterococci per sample is received, as studies indicate there is an elevated risk associated with these bacterial levels. A beach advisory will also be considered when:

- the average of the past several sample results (also called a “geometric mean”) exceeds 200 E. coli or 35 Enterococci
- a single sample result exceeds 400 E. coli or 70 Enterococci per sample
- other public health hazards are identified