

**JUN 29 2017**

**Property information** (Refer to your tax assessment notice or certificate of title.)

Legal description	To:
Civic address <b>3780 Col Lake Road</b>	CC:
PID <b>029-762-103</b> <b>026-200-881</b>	BC Assessment roll No. <b>771 05 838.050</b> <b>771 05 838-100</b>

**Application type** (If more than one application is needed, check the additional applicable boxes.)

<b>Bylaw amendment</b>		
<input type="checkbox"/> Official community plan	<input checked="" type="checkbox"/> Zoning bylaw (i.e., rezoning)	
<b>Development permit</b>		
<input type="checkbox"/> DPA #1: Aquatic (watercourse / foreshore)	<input type="checkbox"/> DPA #2: Eagles Drive	<input type="checkbox"/> DPA #3: Eagle nest trees
<input type="checkbox"/> DPA #4: Heron nest sites	<input type="checkbox"/> DPA #5: Back Road	<input type="checkbox"/> DPA #6: Commercial / industrial development
<input type="checkbox"/> DPA #7: Resort tourism	<input type="checkbox"/> DPA #8: Steep slopes	<input type="checkbox"/> DPA #9: Buffer for agricultural land
<input type="checkbox"/> DPA #10: Union Bay: tourist highway commercial	<input type="checkbox"/> DPA #11: Royston: village core	<input type="checkbox"/> DPA #12: Royston: residential conservation design
<input type="checkbox"/> Mount Washington mixed use	<input type="checkbox"/> DPA #17: Kensington comp. development	<input type="checkbox"/> DPA #18: Shoreline protection devices
<b>Variance</b>		
<input type="checkbox"/> Development variance permit	<input type="checkbox"/> Board of variance	
<b>Others</b>		
<input type="checkbox"/> Temporary use permit	<input type="checkbox"/> Site specific amendment to floodplain	<input type="checkbox"/> Strata conversion
<input type="checkbox"/> Home occupation, bed and breakfast...	<input type="checkbox"/> Temporary occup. of additional dwelling	<input type="checkbox"/> Property information request

**Owner information**


Name(s) <b>Courtenay &amp; District Fish and Game Protective Association</b>	Company
Mailing address <b>P.O. Box 3177</b>	City <b>Courtenay</b> Province <b>BC</b> Postal code <b>V9N 5N4</b>
Phone(s) <b>250-338-9122</b>	Email

**Applicant information** (If the applicant is not the owner(s), complete this and the agent authorization sections. All communication will be forwarded to the applicant only.)

Name(s) <b>LYNDEY DOUGLAS</b>	Company <b>CDFGPA</b>
Mailing address <b>As above</b>	City Province Postal code
Phone(s) <b>778-991-0173</b>	Email <b>lyndsey.j.douglas@gmail.com</b>

**Agent authorization** (Complete only if the applicant is not the owner(s).)

I/we, (owner's name) <b>COURTENAY &amp; DISTRICT FISH &amp; GAME PROTECTIVE ASSOCIATION</b>	declare that I am/we are the property owner(s) noted on this form, and hereby authorize
(agent's name) <b>LYNDEY DOUGLAS</b>	to act as agent in the matter of this/these application(s).

Owner's name 1 <b>TERRY W KERTON</b>	Signature 
Owner's name 2	Signature

All owners shown on the certificate of title must sign. Attach a separate page with additional signatures.

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**Development proposal** (Describe the present and intended uses, and reasons for proposal. Attach additional pages if needed.)

See Attached proposal.

**Provincial site profile**

Section 40(1) of the *Environmental Management Act* requires a site profile to be completed with an application when the applicant knows, or reasonably should know, that a site has been used or is being used for commercial or industrial purposes. If any activities found in Schedule 2 of the *Contaminated Sites Regulation* apply to the subject property, the applicant is required to complete a site profile. Schedule 2 and the site profile application form are available in the "land remediation" section of the BC Government web site ([www.gov.bc.ca](http://www.gov.bc.ca)), as well as at the Comox Valley Regional District (CVRD). If any of the listed activities in Schedule 2 applies, contact the CVRD. If any of the listed activities in Schedule 2 does not apply, complete the following declaration:

I hereby declare that, based upon my current knowledge of the subject property, no Schedule 2 activities have been carried out.

Signature	Date
-----------	------

**Notice of collection of personal information**

Personal information on this application form is collected for the administration, enforcement and processing of this application. The personal information is collected under the authority of the *Freedom of Information and Protection of Privacy Act* (FIPPA), *Local Government Act* and CVRD bylaws. All documentation, drawings, plans and information submitted in support of this application can be made available for public inspection pursuant to the FIPPA. For questions about the collection of personal information, please contact the corporate legislative officer at 600 Comox Road, Courtenay, BC or at 250-334-6007.

**Declaration**

I, the undersigned, have attached the required documentation, as noted on the submission checklist, along with the required application fee and hereby agree to submit further information deemed necessary for processing this application. I hereby certify that the documentation and information provided with respect to this application is full and complete<sup>1</sup> and is, to the best of my knowledge, a true statement of the facts related to this application. Lastly, I hereby acknowledge that an incomplete application will not be processed and will be returned to me, and that any fees paid are non-refundable except as noted in the Planning Procedures and Fees Bylaw.

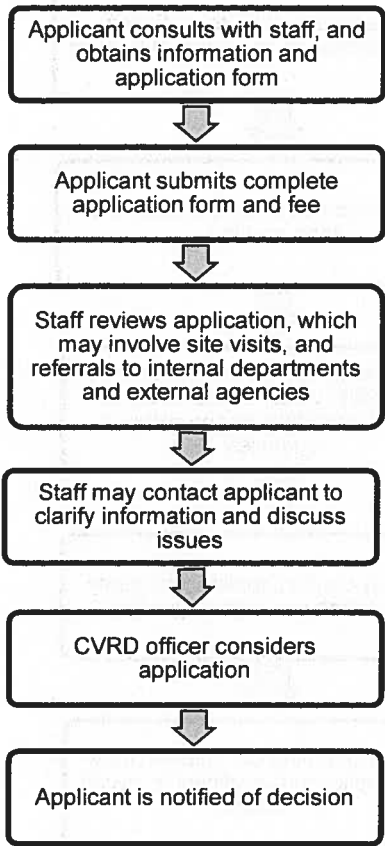
Signature	Date
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<sup>1</sup> A complete application includes: application form properly filled out and all fees paid; plans and supporting information compiled by applicant into a complete, required set; compliance with existing development agreements on certificates of title and conditions of previous planning approvals; identification of existing easements and rights-of-way. Incomplete applications will not be processed and will be returned.

**Office use**

PSR	Date received June 29, 2017	Received by dm
	Fee \$ 2000.00	Security deposit \$ n/a
Planning staff	Date assigned June 29, 2017	Assigned to Alana Mullaly

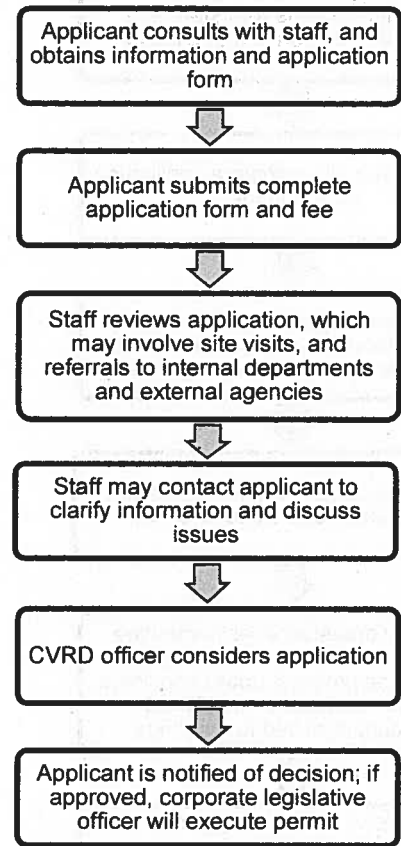
**Generalized process for a home occupation / domestic industrial use application<sup>2</sup>**



Allow approximately one to two weeks for processing

**Generalized process for a DP application that requires CVRD officer consideration**

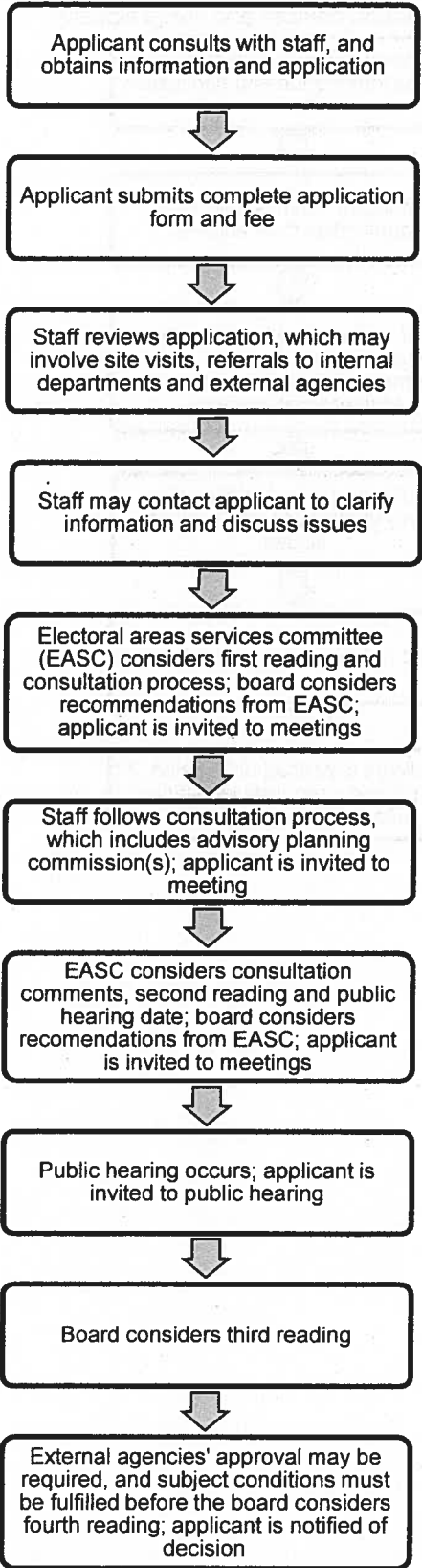
(e.g., aquatic, eagle nest trees, heron nest sites, shoreline protection devices and steep slopes)<sup>2</sup>



Allow approximately four weeks for processing

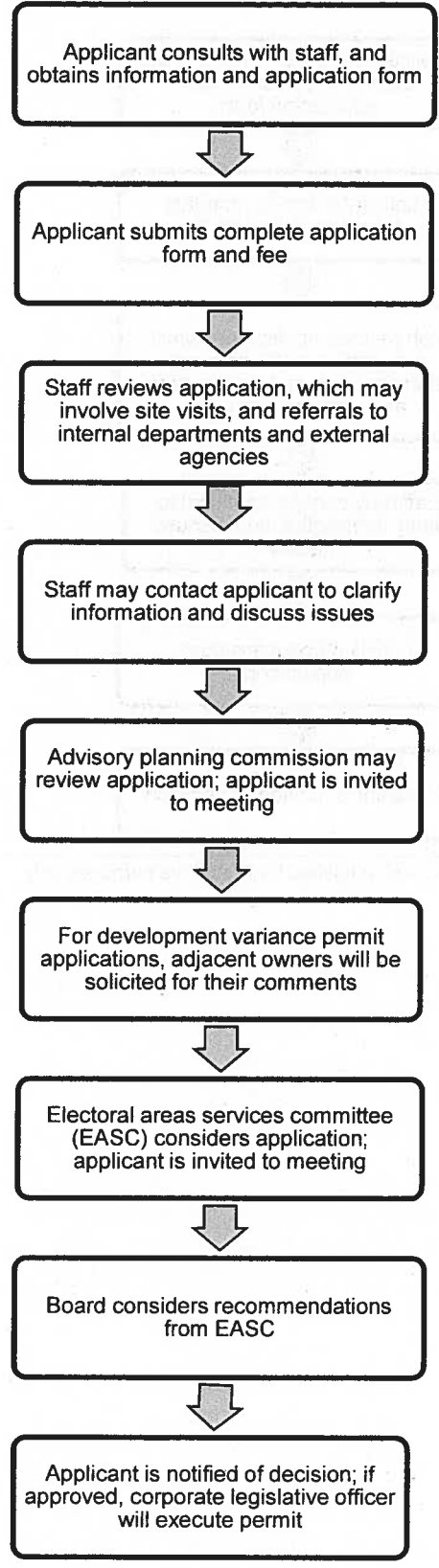
<sup>2</sup> These processes are simplified for illustrative purposes only.

**Generalized process for an OCP amendment or zoning bylaw amendment application<sup>2</sup>**



Allow approximately six to 12 months for processing an OCP amendment or zoning bylaw amendment application

**Generalized process for a DP application that requires board consideration or a development variance permit application<sup>2</sup>**



Allow approximately six weeks for processing a DP application that requires board consideration or a development variance permit application

<sup>2</sup> These processes are simplified for illustrative purposes only.



COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

Comox Valley Regional District  
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File:

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To:

cc:

June 27, 2017

To: Alana Mullalay, MCIP RPP  
Manager of Planning Services, Planning and Development Services Branch

### Proposal

The Courtenay and District Fish and Game Protective Association (CDFGPA) is now applying to restart the rezoning for the Property located at 3780 and 3786 Colake Road, Courtenay, BC. (PID's 026-762-103 and 126-200-883)

CDFGPA is not planning any additional activities on the property (other than the proposed Fish Hatchery which is allowed under the existing zoning), we would like the zoning to reflect the existing uses of the Property. **The specific additional uses include:**

- **A campground - the maximum number of camping spaces within 250 metres of Comox Lake, including one caretaker's space, is limited to 54**
- **an interpretive or cultural centre**
- **boat launch, docks and wharfs**
- **special events - including facility rental to CDFGPA members for social events**
- **recreational facilities directly related to a principle use**

The Purposes of the CDFGPA, as per the Constitution (Appendix E) are the following:

- a) To conserve, enhance, and promote the wise use of all natural resources;
- b) To raise monies to restore fish and wildlife populations and their habitat;
- c) To support scientifically sound conservation;
- d) To practice and promote safe and ethical sportsmanship;
- e) To promote hunting and fishing as rights to be enjoyed by all Canadians and to affiliate and work with like-minded organizations;
- f) To provide education, training, skills, and social development relating to conservation, hunting, fishing, shooting sports, and associated outdoor activities; and,
- g) To provide facilities for pursuing these purposes for Association members.

The CDFGPA is not seeking to commercialize our Property, we are a non-profit organization. We are seeking the additions to the zoning in order to assist in covering our costs and providing our members with the opportunities listed in our Purposes. All of

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our activities, including camping and hall rental, are for our members and guests only and not for the public. We do invite the public on to the property for events such as Family Fishing, Fishing Forever, our Outdoor Show, and open events at the venues.





## History

A proposal to rezone the properties owned by the CDFGPA was submitted in November 2014. The subject properties are used by the CDFGPA members for a range of conservation and leisure activities. Some of these uses do not comply with the property's zoning; the CDFGPA would like to bring the use of the properties into compliance.

The subject properties are split zoned: upland resource 400 hectares (UR-400ha) and water supply resource area (WS-RA). The applicant is proposing a site-specific amendment to the UR-400ha portion of the properties in order to permit the following uses:

- Public assembly (for special events in the clubhouse and outdoors);
- Archery ranges (in addition to firearm ranges, which are currently permitted); and
- RV camping in which wastewater, such as sewage and grey water, must be hauled out.

There were no development plans associated with this application. However, two major concerns were raised during the consultation process:

1. The shoreline vegetation along Comox Lake be re-established. And:
2. A report assessing the risk of the camping and boat launching activity on the drinking water quality from Comox Lake.

The rezoning application above resulted in the issuance of a Temporary Use Permit in order to address some issues raised during the consultation process. The Courtenay & District Fish and Game Protective Association (CDFGPA) has been operating under TUP 2C 15 since February 3, 2016. The terms of the TUP are:

1. This temporary use permit (TUP 2C 15) is issued subject to compliance with all of the bylaws of the regional district applicable thereto, except as specifically varied or supplemented by this permit for the following proposed accessory uses:
  - campground;
  - special events directly related to a principal use;
  - recreational facilities directly related to a principal use; and
  - boat launch, docks, and swimming floats.

And,



4. The land described herein shall be developed strictly in accordance with the following terms and conditions and provisions of this permit:

Land Use:

- i. the subject properties can have, as accessory uses, one boat launch, docks, swimming floats, a campground, special events directly related to a principal use, and recreational facilities directly related to a principal use;
- ii. no buildings or structures, except for utility buildings or structures, are permitted within 30m of the present natural boundary/high water mark of Comox Lake;
- iii. wastewater associated with recreational vehicle (RV) campers, such as sewage and grey water, must be hauled out and properly disposed; and
- iv. the maximum number of camping spaces (tent spaces and RV spaces), including one caretaker's space, is limited to 54.

The TUP also required:

1. An assessment under the Riparian Area Regulation and any subsequent restoration work and recommendations which this assessment identifies. The RAR identified a 15 metre Comox Lake Streamside protection and Enhancement Area in a portion of the campsite where the vegetation had been removed down to the lake shore which required restoration. And:
2. A risk assessment of the campground use on the water quality of Comox Lake has been submitted to the Comox Valley Regional District. The risk assessment must be prepared by a qualified professional and address the following:
  - o identify potential contaminants to Comox Lake related to campground use;
  - o identify spatial and temporal risk to Comox Lake water supply intake; and
  - o identify measures to protect Comox Lake from contamination related to campground use.

The CDFGPA has contracted Current Environmental to conduct both a Riparian Area Assessment (see Appendix B) and a Risk Assessment (see Appendix C) of our camping and boat launching activities in relation to the present drinking water intakes and the planned new deep water intake.

The RAR Assessment recommended reestablishment of the riparian and the creation of a 15 metres Comox Lake Streamside Protection and Enhancement Area (SPEA). The riparian area was planted in March 2017 and the fencing and signage were completed in May 2017. At the same time 15 campsite were relocated out of the SPEA, so now no campsite is within 15 metres of Comox Lake.



The Risk Assessment, completed on May 12, 2017, summarizes recommendations from the Watershed Protection Plan (WPP) and the mitigation measures CDFGPA has implemented to date. The WPP contains 54 recommendations to reduce risk by helping to prevent contamination in the watershed. The CDFGPA has taken many steps to mitigate their impact on Comox Lake, including measures that pre-date the WPP (see Table 1 in the Risk Assessment). The WPP acknowledges that the mitigation measure put in place up by the CDFGPA at the time of the writing of the WPP had reduced the risk of its activities from very high down to moderate risk.

The Risk Assessment concludes management of potential sources of pollution and implementation of mitigation measure appear to be functioning as intended and monitoring data show that water quality objectives are being maintained. The report recommends, and the CDFGPA supports, continued participation with any water quality monitoring effort by the CVRD under the WPP and to maintain our active role in the Watershed Advisory Group.

Riparian planting and consequent re-location or re-configuration of 8 campsites out of the riparian area will further reduce the risk through the increased infiltration in the SPEA and greater separation between the lake and the campsites.

The previous statements were made in relation to the risk at the existing BC Hydro penstock intake. In addressing the risk in relation to the proposed deep water intake the Risk Assessment notes that the general near-shore water movement from the CDFGPA's shoreline is down the Puntledge River, out of Comox Lake. The proposed deep water intake is in effect upstream of the CDGFPA and it is expected that the risk will be further reduced.

We work with all stake holders in the Comox Valley Watershed and are committed to ensure safe drinking water for all residents of the Comox Valley. The CDFGPA sees ourselves as first line of defense stewards of Comox Lake, and have been a member of the Watershed Advisory Group since its inception and were participants in all of previous processes leading to the Watershed Protection Plan.

### Concerns and Mitigation Strategies

The following documentation is intended to provide those without a working knowledge of the CDFGPA, information about our organization and to provide supporting documents to assist in developing appropriate amendments to our current UR-400ha and WS-RA zoning.



Concerns	Mitigation Strategies
<p>Water quality and watershed protection from RV camping; public assembly; and boat ramps and docks</p>	<ul style="list-style-type: none"> <li>◦ 8 campsites have been relocated outside of the riparian area as per the attached Riparian Area assessment and the Risk Assessment. (see Appendices B and C)</li> <li>◦ As per the SPEA, no campsites are located within 15m of Comox Lake or any other watercourse.</li> <li>◦ CDFGPA has prohibited any additional campsites within 250m of Comox Lake</li> <li>◦ Onsite disposal from RV camping (grey and black waste water) have always been prohibited on the Property, (see Appendix F Campground Regulations #22)</li> <li>◦ The CDFGPA supports outdoor ethics and the wise use of natural resources and our members are the first to report any illegal dumping of RV wastewater in the area surrounding our property. We have never found evidence of illegal dump during our annual clean-up of the access roads to our site.</li> <li>◦ Contained vaulted toilets are located in the campground and are regularly maintained and pumped out as needed by a certified waste water maintenance company.</li> <li>◦ To reduce potential erosion designated pathways have been established and the restored riparian area is a fenced 'no access' area, (see Campground Regulation #10)</li> <li>◦ A Risk Assessment of the campground use, relative to the protection of water quality in Comox Lake has been completed and is attached.(see Appendix C)</li> <li>◦ The CDFGPA has taken measures to meet the recommendations of the WPP. Summarized in Table 1 in the Risk Assessment (see Appendix C).</li> <li>◦ CDFGPA Boat Launch Regulations #3, 4, 5, 6, 7, 8 and 9 highlight our desire to be good stewards to Comox Lake to minimize our impact on the Lake. We regulate type of watercraft, cleanliness of boats and trailers, as well as not allowing fueling, maintenance or repair of boats and motors on the lake or within 30m of the shoreline. No holding tanks may be emptied or bilge drain plugs pulled on the Property. Failure to comply may result in loss of membership and access to the facilities (see Appendix F and G).</li> <li>◦ Members with boats are identified by a sticker each year to prevent public from using our facilities and require access through two locked gates.</li> </ul>





Concerns	Mitigation Strategies
Riparian area impacts of non-compliant RV camping	<ul style="list-style-type: none"> <li>◦ The riparian area adjacent to Comox Lake has been restored and campsites have been relocated 15 from the natural boundaries of Comox Lake. (See attached Risk Assessment Appendix C). The width of the SPEA was determined by the Riparian Area Regulation by a Qualified Environmental Professional.(see RAR Report - Appendix B)</li> </ul>
Broad scope of public assembly definition	<ul style="list-style-type: none"> <li>◦ As per our “Courtenay and District Fish &amp; Game Club Information” sheet, the meeting hall may only be used by members in good standing for private social activities. The “rental regulations” and “Bar Rules &amp; Regulations” further restricts and regulates the type of assembly on our property.</li> <li>◦ Public assembly only occurs during special events, such as the Outdoor Show. The CDFGPA has followed best practices such as those outlined in the new Special Events Bylaw for the last 25 years and has done so without incident.</li> <li>◦ RCMP, Cumberland Fire Department, and VIHA have all approved the systems in place to support our Special Events (specifically the Outdoor Recreation Show).</li> <li>◦ CDFGPA cooperates with other event organizers such a Snow To Surf and Mind Over Mountain race event and consider them like minded outdoor recreationalists.</li> </ul>
Consistency with the regional growth strategy with respect to watershed protection and resource area policies	<ul style="list-style-type: none"> <li>◦ CDFGPA supports the Western Canada Marine Response Corporation Oil-spill response training by providing our campsite and boat launch for their Beach Supervisor Training. We are hoping to arrange for a club representative to audit this activity to provide hands on training on spill response.</li> <li>◦ CDFGPA participates in the Spill Response Planning Group from the Watershed Advisory Committee and hosts Spill Response Workshops, organized by TimberWest. The workshops include gate access, bin access and contents review and spill curtain deployment at Puntledge bridge.</li> <li>◦ CDFGPA monitors use of Comox Lake areas adjacent to the club. We assist the Cumberland Fire Department and the Ministry of Forests by checking on locally reported smoke in the area.</li> <li>◦ CDFGPA has worked with CVRD and MOE to monitor water quality of Comox Lake and will continue to monitor potential impacts from pour activities.</li> </ul>



Concerns	Mitigation Strategies
	<ul style="list-style-type: none"> <li>◦ Our Caretaker provides on the scene first responder/reporter of potential negative impacts on Comox Lake to the proper authority.</li> <li>◦ CDFGPA is a participant in a Mutual Agreement with Comox Valley Emergency Response that our hall would be used for an evacuation holding center for the community of Cumberland if ever necessary.</li> </ul>
<p>Assess the zoning change in terms of the Drinking Water Protection Act, Sewerage System Regulation and Food Premises Regulation</p>	<ul style="list-style-type: none"> <li>◦ The CDFGPA is working with the Island Health Authority (IHA) to ensure we continue to be following the Drinking Water Protection Act</li> <li>◦ CDFGPA is not seeking to expand or build additional facilities on the Property (other than the fish hatchery).</li> <li>◦ All septic fields are in compliance with VIHA and all vault toilets are pumped out regularly by certified waste disposal company</li> <li>◦ A shower facility, on approved septic is available to campers at the Archery venue. (#22 of Campground regulations - Appendix F).</li> <li>◦ The kitchen is permitted, CDFGPA follows best practices when the kitchen is being used and have certified "Food Safe" volunteers overseeing work done in the Kitchen.</li> </ul>
<p>Lack of guidance as what constitutes a resort development. RGS MG-3A-1</p>	<ul style="list-style-type: none"> <li>◦ The campsite is not for the "traveling public", as stated in the definition of a campsite, but is rather for the use of our members and their guests.</li> <li>◦ CDFGPA is willing to include the following modified land use conditions included in the Temporary use permit (TUP 2C 15): <ul style="list-style-type: none"> <li>i) the subject properties can have, as accessory uses, one boat launch, docks, swimming floats, a campground, special events directly related to a principal use, and recreational facilities directly related to a principal use;</li> <li>ii) no buildings or structures, except for utility buildings or structures, are permitted within 15m of the present natural boundary/high water mark of Comox Lake;</li> <li>iii) wastewater associated with recreational vehicle (RV campers, such as sewage and grey water, must be hauled out and properly disposed; and,</li> <li>iv) the maximum number of camping spaces (tent spaces and RV spaces), including one caretaker's</li> </ul> </li> </ul>



Concerns	Mitigation Strategies
	<p>space, is limited to 54 within 250m of Comox Lake.</p> <ul style="list-style-type: none"> <li>◦ The campground regulation #2 states sites are non-reservable and #7 and 8 limit the occupancy time of sites (Appendix F).</li> <li>◦ There are no living quarters located in the clubhouse or ancillary buildings. The caretaker is the only resident and the campground manager is on site May until Sept.</li> <li>◦ CDFGPA is not seeking additional uses other than what already exists on the Property as of May 2017, it is a private member Protective Association as per the purposes in the Constitution (Appendix E), .</li> </ul>

### Appendices

- Appendix A - Site Plan
- Appendix B - SPEA Report/RAR
- Appendix C - Risk Assessment
- Appendix D - Site Profile
- Appendix E - CDFGPA Constitution and Bylaws
- Appendix F - Campground Regulations
- Appendix G - General Property Regulations and Boat Launch Regulations
- Appendix H - Courtenay and District Fish & Game Club Information sheet
- Appendix I - Rental regulations
- Appendix J - Bar Rules & Regulations
- Appendix K - CDFGPA membership Declaration
- Appendix L - Letter from Ministry of Environment (2014)





**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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To:

cc:

# Appendix A

# Site Plan



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**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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# Appendix B

# Riparian Area Assessment



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Tel:

Fax:

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FORM 1

Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

**Riparian Areas Regulation: Assessment Report**

Please refer to submission instructions and assessment report guidelines when completing this report.

Date

**I. Primary QEP Information**

First Name	Rupert		Middle Name	
Last Name	Wong			
Designation	RPBio		Company Current Environmental Ltd	
Registration #	705		Email rwong338@gmail.com	
Address	244 4 <sup>th</sup> St. Unit H			
City	Courtenay	Postal/Zip	V9N1G6	Phone # 250-871-1944
Prov/state	BC	Country	Canada	

**II. Secondary QEP Information (use Form 2 for other QEPs)**

First Name		Middle Name	
Last Name			
Designation		Company	
Registration #		Email	
Address			
City		Postal/Zip	Phone #
Prov/state		Country	

**III. Developer Information**

First Name	Wayne		Middle Name	
Last Name	White (Conservation Chair)			
Company	Courtenay Fish & Game Protective Association			
Phone #	250-338-6964		Email gwww@shaw.ca	
Address	3780 Colake Road			
City	Cumberland	Postal/Zip	V0R1S0	
Prov/state	BC	Country	Canada	

**IV. Development Information**

Development Type	Recreational		
Area of Development (ha)	0.14	Riparian Length (m)	100
Lot Area (ha)	34.6	Nature of Development	Re-development
Proposed Start Date	May 1, 2016	Proposed End Date	Apr 30, 2017

**V. Location of Proposed Development**

Street Address (or nearest town)	3780 Colake Road, Cumberland, BC		
Local Government	Comox Valley Regional District	City	Courtenay
Stream Name	Comox Lake		
Legal Description (PID)	000-863-840	Region	Vancouver Island
Stream/River Type	Lake	DFO Area	South Coast
Watershed Code	920-553200-94200		
Latitude	49	38	33
Longitude	125	05	23

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## **Section 1. Description of Fisheries Resources Values and a Description of the Development proposal**

### **Background**

The subject property was used as an industrial logging site for almost 100 years until 1990's (Photo 1 & 2). Site remediation, installation wetlands and a fish hatchery took place after the Courtenay & District Fish & Game Protective Association took control of the site in 2000. Comox Lake was developed into a reservoir in 1912 to provide water for the Puntledge Hydroelectric Project. Water levels on Comox Lake and release of water into Puntledge River are governed by the Puntledge River Water Use Plan (BC Hydro 2004)<sup>1</sup> that balances the aquatic resource amongst various stakeholders, including regional water supply, recreation, generation of electricity, and fish habitat.

### **Description of Fisheries Resource Values**

Comox Lake (WC: 920-553200-94200) is a large body of freshwater with a surface area of ~2,100 ha, a maximum depth of 109 m and a mean depth of 61 m. Lake reservoir levels fluctuate with dam releases, evaporation, and inflow from precipitation and snow/glacier melt. The Lake system is known to support numerous fish species including rainbow trout, brook trout, cutthroat trout, steelhead, Dolly Varden, kokanee, and coho and chinook salmon<sup>2</sup>.

Fisheries habitat zones with particular importance to the subject property include the aquatic littoral zone and terrestrial backshore. The littoral zone extends from the water's edge towards deeper water in the near shore area where light can penetrate and aquatic plants are typically present. The littoral zone provides critical habitat and food sources for a variety of lake organisms, including fish, amphibians, larger zooplankton and insects. Similarly the backshore zone is instrumental for providing shade and microclimates; shoreline stabilization; pollutant removal; and litter fall, LWD recruitment, and insect drop for food production

On the subject property, specifically within the confines of the campground study area (Figure 1), the littoral zone is characterized by a lack of aquatic vegetation (Photo 3): an apparent result of artificially fluctuating reservoir water levels causing upper littoral zone desiccation. Terrestrial vegetation in the backshore zone has been disturbed by land-use activities on the property including its ongoing use as a campground. Terrestrial riparian species in evidence along the subject shoreline are dominated by deciduous species including red alder, cottonwood, and willow spp.; while the backshore area along the access road edge is populated by a small number of conifers dominated by Douglas fir with subdominant shore pine.

### **Description of Development Proposal**

The subject shoreline has been identified for review by the Comox Valley Regional District in order to meet a criterion of a Temporary Use Permit (TUP 2C 15) for continued accessory uses of the site, including that of a campground operated by the Courtenay Fish & Game Protective Association. There is no additional development planned on the site; however, the existing campsites are recommended to be reconfigured to account for the establishment of a 15 m Streamside Protection and Enhancement Area that would include reclaiming disturbed land within the setback by re-siting the campsites landward, planting native backshore vegetation, while maintaining pedestrian access to the lakeshore via formalized access points (Table 1; Figure 1). Since lake water levels are

<sup>1</sup> BC Hydro. 2004. Puntledge River Project Water Use Plan.

<http://www.llbc.leg.bc.ca/public/PubDocs/bcdocs/404112/environment30828.pdf>. Accessed on April 29, 2016.

<sup>2</sup> <http://a100.gov.bc.ca/pub/fidq/infoSingleWaterbody.do>

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continually in flux it is recommended that plant species in the lower elevation portion of the site be able to withstand periods of flooding and drought, while drought resistant backshore species be planted in the higher elevation terrestrial portion of the Streamside Protection and Enhancement Area.

The following remediation measures are recommended within the 15 m wide Streamside Protection and Enhancement Area.

- Reinststate riparian habitat within the 15 m SPEA of the active campground area (Figure 1) to offset historical impacts to vegetation (Photo 5).
- Existing campsites encroaching the Streamside Protection and Enhancement Area will be re-aligned.
- Delineate the Streamside Protection and Enhancement Area with permanent fencing such as the example in shown in Photo 2 that will also serve to delineate boundaries between campsites.
- Day-use area west of active campsites (Photo 6) will be planted with native species throughout and marked with signage to limit access and inform users about sensitivities of the restoration area (Figure 1).
- Planting treatment areas should be dressed with coarse woody debris placements that will dissuade pedestrian access and provide additional habitat for insects and return nutrients into nearby soils.

In order to provide the highest likely percent survival for planted stock the plants should be installed during the autumn, after the campground's high season and prior to overnight frosts and the onset of heavy winter storm activity.

As the majority of the high traffic areas within the SPEA are composed of hard packed gravel and fines, soil amendments will likely be required to support survival and long-term success of the plantings in this area. The soil surrounding planted stock installations should be amended with the addition of top-soil, bone meal, fertilizer, and mulch as dictated by site conditions. Soil amendments should extend out a minimum of 3x the diameter of the root ball and 2 x the depth. The use of a mini-hoe to excavate the plantings in hard packed areas may help improve the success of the planted stock by loosening compacted soils and possibly reaching native soils below the fill. A hoe will also reduce the amount of hand labour needed to install the plant stock. Soil amendments could be a mix of well degraded bark mulch with a high organic content mixed with nutrient compost (i.e. fish-compost). Depending on the composition of the bark mulch mixture an additional layer of bark mulch may be required to cover the final planting to help reduce desiccation through the summer months.

Planted stock should also be watered in following installation. All riparian restoration activity should be overseen by a Qualified Environmental Professional (QEP). A list of recommended plants and densities is provide in Table 1 on the following page.

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**Table 1. Proposed list of riparian plants/numbers for shoreline restoration along the north bank of Comox Lake study area at the Courtenay & District Fish and Game Protective Association's Campground.**

Common Name	Scientific Name	Distance from HWM (m)	Plant Spacing	Plant Size	Approximate Number
Pacific willow	<i>Salix lucida</i>	5-10	Cluster & 2 x 2 m*	1 gal.	20
Red alder	<i>Alnus rubra</i>	0-5	Cluster & 2 x 2 m	1 gal.	20
Red Osier Dogwood	<i>Cornus stolonifera</i>	0-5	Cluster & 2 x 2 m	1 gal.	20
Oceanspray	<i>Holodiscus discolor</i>	5-15	Cluster & 2 x 2 m	1 gal.	20
Nootka rose	<i>Rosa nutkana</i>	5-15	Cluster & 2 x 2 m	1 gal.	20
Salmonberry	<i>Rubus spectabilis</i>	5-15	Cluster & 2 x 2 m	1 gal.	20
Dull Oregon grape	<i>Mahonia nervosa</i>	5-15	Cluster & 2 x 2 m	1 gal.	20
Salal	<i>Gaultheria shallon</i>	5-15	Cluster & 2 x 2 m	1 gal.	20
Western red cedar	<i>Thuja plicata</i>	5-15	6 x 6 m	1 gal.	25
Douglas fir	<i>Pseudotsuga menziesii</i>	5-15	6 x 6 m	1 gal.	29
Grand fir	<i>Abies grandis</i>	5-15	6 x 6 m	1 gal.	30
Western hemlock	<i>Tsuga heterophylla</i>	5-15	6 x 6 m	1 gal.	21
Sitka spruce	<i>Picea sitchensis</i>	5-15	6 x 6 m	1 gal.	9
Western white pine	<i>Pinus monticola</i>	5-15	6 x 6 m	1 gal.	8
Willow spp. & Red Osier Dogwood	<i>Salix spp.</i> & <i>Cornus stolonifera</i>	0-5 m	Cluster & 2 x 2 m*	Stakes	80

\* Cluster planting will be targeted within delineated pedestrian exclusion areas within the existing campground area while 2 x 2 m spacing would be applied to the day use restoration area (Figure 1).

## 2. Results of Detailed Riparian Assessment

Refer to Chapter 3 of Assessment Methodology

Date: Nov. 24, 2016

Description of Water bodies involved (number, type)

1

Stream	
Wetland	
Lake	1
Ditch	
Number of reaches	1
Reach #	1

**Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)**

	Channel Width(m)	Gradient (%)	
starting point upstream	n/a	n/a	I, <u>Rupert Wong</u> ( <i>name of qualified environmental professional</i> ), hereby certify that: a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> ( <i>name of developer</i> ); c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.
downstream			
Total: minus high /low mean			
Channel Type	R/P	C/P	S/P

### Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes
Polygon No:	<span style="border: 1px solid black; padding: 2px;">1</span>		I, <u>Rupert Wong</u> ( <i>name of qualified environmental professional</i> ), hereby certify that: a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> ( <i>name of developer</i> ); c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.
SPVT Type	LC	SH	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			Method employed if other than TR

### Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons
LWD, Bank and Channel Stability ZOS (m)	15	



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Litter fall and insect drop ZOS (m)	15					
Shade ZOS (m) max	15	South bank	Yes		No	X
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)				n/a	
Ditch Fish Bearing	Yes	No	If non-fish bearing insert no fish bearing status report		n/a	
<b>SPEA minimum</b>	<b>15</b>	<b>(For ditch use table3-7)</b>				

I, Rupert Wong (*name of qualified environmental professional*), hereby certify that:

a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;

b) I am qualified to carry out this part of the assessment of the development proposal made by the developer Bob McClure (*name of developer*);

c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

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Section 3. Site Plan

RAR site plan of subject portion of  
Plan 552H Section 33 Township 10  
Land District 15 OF PL 788RW



**Section 4. Measures to Protect and Maintain the SPEA**

1. Danger Trees	This assessment is in support of the proponent's requirement to apply for a Temporary Use Permit (TUP) with the Comox Valley Regional District. As there is no proposed construction within the 30 m Riparian Assessment Area, a danger tree survey was not completed as part of this assessment. However, once minor disturbances from campground realignment and restoration planting have taken place it is <u>recommend that a qualified danger tree assessor be retained to assess any potential danger tree issues</u> that may affect the study area at that time.
<p>I, <u>Rupert Wong</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>e) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>f) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> (<i>name of developer</i>);</p> <p>g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
2. Windthrow	This assessment is in support of the proponent's requirement to apply for a Temporary Use Permit (TUP) with the Comox Valley Regional District. As there is no proposed construction within the 30 m Riparian Assessment Area, a windthrow survey was not completed as part of this assessment. However, once minor disturbances from campground realignment and restoration planting have taken place it is <u>recommend that a qualified danger tree assessor be retained to assess any potential windthrow issues</u> that may affect the study area at that time.
<p>I, <u>Rupert Wong</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
3. Slope Stability	No triggers for slope stability were found in the study area during the field assessment as per Section 3.7.3 (Slope Stability) of the RAR Assessment Methods.
<p>I, <u>Rupert Wong</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
4. Protection of Trees	All of the vegetation, including trees and undergrowth, within the 15 m SPEA that does not currently pose a risk as assessed by a qualified danger tree assessor shall not be

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	<p>impacted in any way by future activities or campsite development on the subject property. This includes protection from mechanical damage, soil disturbance, or soil compaction to prevent destabilizing trees or causing tree or other vegetation mortality. Other measures will include the following:</p> <ol style="list-style-type: none"> <li>1. Formalize shoreline pedestrian access routes that avoid impacting tree roots and undergrowth;</li> <li>2. Protect vegetation established in designated SPEA restoration areas from damage either by establishing exclusion fencing or signage.</li> <li>3. Establish root protection zones around significant, larger trees in the 30 m Riparian Assessment Areas. Root protection zones should be calculated by multiplying the diameter of the tree by 18. This value is the radius of the area of land surrounding the trunk of a tree that is to be avoided.</li> <li>4. With the exception of riparian vegetation restoration, no soil disturbing activities will be permitted within the lakeshore SPEA.</li> </ol>
<p>I, <u>Rupert Wong</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <ol style="list-style-type: none"> <li>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</li> <li>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> (<i>name of developer</i>);</li> <li>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</li> </ol>	
<p>5. Encroachment</p>	<p>As mentioned, pedestrian access within the 15 m SPEA will be managed through the establishment of formalized shoreline access routes, and protection of existing and proposed riparian vegetation restoration areas with exclusion fencing/signage.</p> <p>If future development should be proposed on the property within the 30 m RAA the 15 m SPEA setback area will be clearly delineated using flagged stakes prior to the commencement of work and no encroachment within the SPEA will be permitted including machinery, foot traffic, or spoilage material. A QEP must be notified 7 days prior to the commencement of any construction to delineate the SPEA and ensure other measures to protect the SPEAs are in place.</p>
<p>I, <u>Rupert Wong</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <ol style="list-style-type: none"> <li>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</li> <li>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> (<i>name of developer</i>);</li> <li>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</li> </ol>	
<p>6. Sediment and Erosion Control</p>	<p>General measures to control sediment during any earth disturbing works will include:</p> <ol style="list-style-type: none"> <li>a) The SPEA is to be clearly delineated using stakes and/or flagging;</li> <li>b) Maintain/do not disturb all existing vegetation within</li> </ol>

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	<p>SPEA;</p> <p>c) No machinery is to enter the SPEA at any time without consent/oversight of a QEP;</p> <p>d) Where there is a potential for silt runoff in proximity to waterbodies, control devices will be installed prior to construction activities commencing;</p> <p>e) Filter fabric dams, rock check dams, and silt fencing will be used as needed on a site-specific basis to control erosion. Silt fencing is not an acceptable mitigation technique to control erosion in flowing watercourses; however, it is useful for containing slumping areas and for use as baffles to slow water velocities.</p> <p>f) Excavation will be stopped during intense rainfall events or whenever surface erosion occurs affecting the watercourse.</p> <p>g) Watercourses are not to be traversed by machinery at any time.</p> <p>h) Soil stockpiles will be placed a minimum of 30 m from any waterbody and in a location where erosion back into the waterbody cannot occur and will not impede drainage.</p> <p>i) Soil stockpiles with the potential to erode into waterbodies are to be covered with poly sheeting. Other techniques, such as terracing or surface roughening can greatly reduce surface erosion on steeper slopes.</p> <p>j) Permanent exposed soil areas and erosion-prone slopes that may potentially erode into the watercourse are to be seeded immediately, or covered with geotextile.</p> <p>k) Clearing will take place immediately prior to excavation and earthworks to minimize the length of time that soils are exposed. Vegetation in adjoining areas will not be disturbed.</p> <p>l) Site re-vegetation measures are required to stabilize soils and stream banks and reduce erosion. The measures, including hydroseeding, are to be implemented as directed by the biologist as construction is completed.</p>
<p>I, <u>Rupert Wong</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> (<i>name of developer</i>);</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
<p>7. Stormwater Management</p>	<p>All non-vegetated ground near the subject property will be maintained with permeable surfaces such as gravel to maintain rainwater infiltration. There is no development proposed within the 30 mm RAA that will cause stormwater related impacts. The implementation of riparian vegetation planting within the 15 m lakeshore SPEA will function to reduce the impacts of stormwater flowing off the subject property.</p>
<p>I, <u>Rupert Wong</u> (<i>name of qualified environmental professional</i>), hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> (<i>name of developer</i>);</p>	

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c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
8. Floodplain Concerns (highly mobile channel)	Floodplain concerns are not a concern due to water levels in the lake reservoir being managed by BC Hydro.
I, <u>Rupert Wong</u> ( <i>name of qualified environmental professional</i> ), hereby certify that:	
a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ;	
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Bob McClure</u> ( <i>name of developer</i> );	
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	

**9. Fuels and Hazardous Materials**

The accidental release of petroleum, oils, hydraulic fluids, lubricants, concrete additives, anti-freeze or other hazardous materials onto land surfaces or into waterbodies is an offence under the Federal *Fisheries Act* and may result in degradation of habitat quality and could be a threat to human health.

Environmental protection procedures for handling and storage of fuels and hazardous materials shall include the following items:

- a) A spill kit of appropriate capacity will be on hand at all times during land modifying work that requires the use of machinery.
- b) All identified spills will be cleaned up immediately, and contaminated soils and vegetation will be removed for appropriate disposal.
- c) Refuelling of equipment is to occur only at designated fuelling stations and located at least 30 m from all waterbodies.
- d) All fuel, chemicals, and hazardous materials will be clearly marked.
- e) Pumps and jerry cans are to be placed on poly sheeting and sorbent pads to contain spills.
- f) All equipment maintenance with the potential for accidental spills (e.g., oil changes, lubrications) will be done on a designated area at least 30 m from any watercourses. Tarps should be laid down prior commencement of work to facilitate clean up.
- g) In the event of a spill, the following guidelines should be followed:
  - Spills need to be immediately reported to the biologist. Spills to the receiving environment are to be reported to the BC Provincial Emergency Program (1-800-663-3456) if they exceed the reportable limits (e.g. 100 litres of fuel or oil).
  - Apply sorbent pads and booms as necessary.
  - Dispose of all contaminated debris, cleaning materials, and absorbent material by placing in an approved disposal site.

**Section 5. Environmental Monitoring**

This assessment is in support of the proponent's requirement to meet the criteria set out in the CVRD's TUP, rather than proposing construction within the 30 m riparian assessment area. The proponent may, however, initiate SPEA vegetation restoration within close proximity to the sensitive environment of the lakeshore. The following tasks would then be completed prior to those works:

- A QEP should be present on site to oversee layout and planting of riparian vegetation plantings;
- Ensure the setback area is clearly delineated;
- Review work plan;
- Ensure appropriate mitigation measures are/will be in place;
- Review all Measures to Protect the SPEA stated in this report and ensure appropriate equipment to satisfy the measures are on-site or available;
- Review emergency spill response plan (see above);
- Set up a contact system should a biologist be required on site in the event of sediment/erosion issues or some other type of risk to aquatic habitats that may arise during construction.

Immediately upon completion of the construction work, the proponent is to contact a Qualified Environmental Professional (QEP) for a post-construction site inspection. Any deficiencies noted by the QEP are to be addressed by the proponent. A final post-construction report is to be submitted by the QEP to the BC RAR Notification System.

As per Item 10 of Temporary Use Permit 2C 15, an annual report will be submitted to CVRD that confirms compliance to mitigation measures outlined in this report.

**Section 6. Photos**

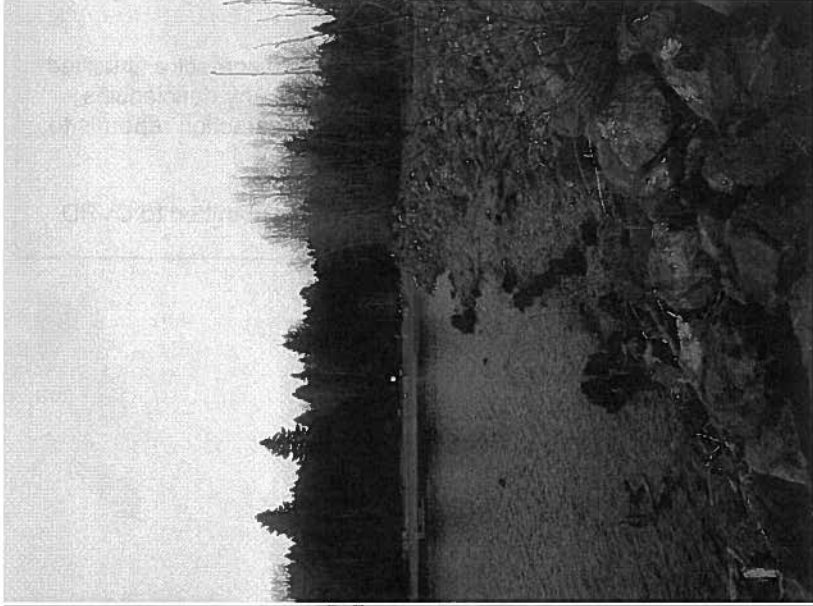


Photo 1 & 2. View looking north from southwest corner of subject property about 50 years ago during logging tenure (left) and present day after site remediation during recreation/conservation tenure by Courtenay & District Fish & Game Protective Association (right).





Photo 3. Example of shoreline riparian cluster planting exclusion fencing in a park/campground setting.



Photo 4. View east taken from the western edge of the campground study area shoreline showing exposed lake littoral area characterized by a lack of aquatic vegetation and sparse terrestrial vegetation growth in gravel beach substrates. Note "HWM Log Barrier" at left of image also shown in Figure 1.

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Photo 5. View east taken from the western edge of the campground study area showing open campsites that are recommended for partial re-vegetation.



Photo 6. View west taken from the western edge of the campground study area showing day-use area that has been identified for riparian restoration plantings.

## Section 7. Professional Opinion

### Assessment Report Professional Opinion on the Development Proposal's riparian area.

Date

1. I/We Rupert Wong

Please list name(s) of qualified environmental professional(s) and their professional designation that are involved in assessment.)

hereby certify that:

- a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Regulation made under the *Fish Protection Act*,
- b) I am/We are qualified to carry out the assessment of the proposal made by the developer Bob McClure (*name of developer*), which proposal is described in section 3 of this Assessment Report (the "development proposal"),
- c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
- d) In carrying out my/our assessment of the development proposal, I have/We have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

- a)  if the development is implemented as proposed by the development proposal there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed, **OR**  
(Note: include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed)

- b)  if the streamside protection and enhancement areas identified in this Assessment Report are protected from the development proposed by the development proposal and the measures identified in this Assessment Report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed.

**[NOTE:** "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if

- (a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
- (b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
- (c) the individual is acting within that individual's area of expertise.]



**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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# Appendix C

# Risk Assessment

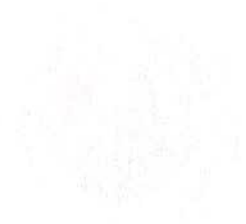
Comox Valley Regional District  
**RECEIVED**

File:

JUN 29 2017

To:

cc:



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Comex Valley Regional District

File:

JUN 29 2017

16

20

**Technical Memorandum**



558 England Ave  
Courtenay, BC V9N 2N3  
p: 250.871.1944  
w: currentenvironmental.ca

To: Alana Mullaly, CVRD Mgr. Planning  
From: Rupert Wong, R.P.Bio  
Dusty Silvester, R.B.Tech.  
Cc: Wayne White, F & G

Date: May 12, 2017  
Pages: 24 + Appendices  
Project: TUP 2C 15

Comox Valley Regional District  
**RECEIVED**

File:

JUN 29 2017

RE: CAMPGROUND USE PRELIMINARY RISK ASSESSMENT ON COMOX LAKE PRE-TREATMENT  
SOURCE WATER QUALITY  
COURTENAY AND DISTRICT FISH AND GAME PROTECTIVE ASSOCIATION (F&G) - CVRD TUP 2C 15

To:

cc:

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# Technical Memorandum



558 England Ave  
Courtenay, BC V9N 2N3  
p: 250.871.1944  
w: currentenvironmental.ca

## 1.0 INTRODUCTION

This technical memorandum is provided under a requirement set out by the Comox Valley Regional District (CVRD) for the renewal of TUP 2C 15 which requires the provision of a risk assessment of Courtenay and District Fish and Game Protective Association (F&G) campground use on pre-treatment source water quality in Comox Lake, and may be used to support a future re-zoning application.

The CVRD *Regional Growth Strategy Bylaw No. 120, 2010*<sup>1</sup> Objective 5-B recognizes that drinking water is vulnerable to contaminants derived from numerous watershed uses including those related to the recreational character and specific F&G campground uses. As a result, this report is intended to actualize the precautionary principle within the CVRD drinking water supply watershed by discussing potential impacts on water quality for continued campsite use under TUP 2C 15 and future re-zoning.

Specific objectives of this risk assessment include identifying:

1. potential contaminants to Comox Lake related to campground use, including boat launch;
2. spatial and temporal risk to Comox Lake pre-treatment water supply intake; and
3. measures to protect Comox Lake from potential contamination related to campground use.

The effort expended in this risk assessment is consistent with a Preliminary Site Investigation level of assessment; where single grab samples were obtained at four sites over two time periods and their results used to indicate whether a more detailed water quality investigation was warranted. A discussion of water quality sample results is provided in Section 8.0 and conclusions on present and future site use strategies are in Section 9.0.

## 2.0 RAR STUDY AREA

Boundaries of the Riparian Areas Regulation (RAR) study area were defined in collaboration with CVRD staff and were set along with those defining the area of study for a detailed RAR assessment<sup>2</sup> on the subject shoreline of Comox Lake (Figures 1-3). The subject property is recovering from its use as an industrial logging site for almost 100 years until the 1990's (Photos 1 & 2). The F&G undertook large scale site remediation, installation of wetlands, and establishment of a fish hatchery after taking control of the site in 1997.

The study area encompasses an approximate 100 m length of Lake shoreline located immediately east of the primary F&G boat launch and associated parking area near the southwestern property boundary (Figures 2 & 3). The study area has been used to support a section of waterfront campsites and a day use area since 2005<sup>3</sup>. Based on the recent application of RAR setbacks, defined in a report from CEL (dated Nov. 24, 2016), on the subject shoreline the campsites have been re-configured and riparian planting was completed in spring 2017 to restore the 15 m setback area (Figure 3; Photos 3 & 4).

<sup>1</sup> CVRD Regional Growth Strategy Bylaw No. 120, 2010 was accessed from <http://www.comoxvalleyrd.ca/EN/main/community/regional-strategies/regional-growth-strategy.html>.

<sup>2</sup> Detailed RAR Assessment #4347 uploaded to RARNS on Nov. 24, 2016.

<sup>3</sup> Based on historical aerial photographs accessed from CVRD iMap



### 3.0 DEEP WATER INTAKE

Upgrades to the existing CVRD drinking water system have been commissioned to respond to Vancouver Island Health Authority's (VIHA) requirement to provide filtration as part of their water treatment system to comply with the provincial *Drinking Water Protection Act*. This decision by VIHA follows elevated turbidity events in 2014 and 2015 which prompted the CVRD to issue Boil Water Notices under the direction of VIHA for a period of 10 days and 47 days, respectively.

All of the proposed design concepts for the new CVRD drinking water conveyance and treatment system include a deep water intake in Comox Lake. Preliminary designs indicate that the intake will be located approximately 1 km southwest of the F&G property at an approximate elevation of 106.5 meters (asl). The water quality station closest to the proposed intake is Site #059 located just offshore from the Comox Lake Bluffs Ecological Reserve (Figure 1).

It has been identified by the BC MOE (2011) *Water Quality Assessment and Objectives: Comox Lake*<sup>10</sup> that an effort to locate the CVRD drinking water intake further from shore and below the water surface will minimize the exposure of bacteriological contamination to consumers. Accordingly, any potential influence that the F&G shoreline may exert upon the water quality of the existing Comox Valley drinking water system, with its current intake located in the Puntledge River downstream of the F&G, can be expected to change with the modified deep water intake location. As shown in Figure 1, the general near-shore water movement from the F&G shoreline is down the Puntledge River and out of Comox Lake (north). With the proposed location of the new drinking water intake located upstream, and at depth, it is expected that any influences or risks on water quality from the F&G property will be diminished.

## 4.0 MITIGATION MEASURES IN PLACE

The CVRD commissioned a Watershed Protection Plan<sup>4</sup> (WPP) to guide management of the Comox Lake watershed for the long-term protection of drinking water. The WPP includes a risk assessment of both natural and human caused risks. The F&G are acknowledged as contributors to the WPP and key watershed stakeholders.

The WPP contains 54 recommendations to reduce risk by helping to prevent contamination in the watershed. The F&G have taken steps to mitigate their impact on the watershed, including measures that pre-date the WPP, since the creation of and according to recommendations made in the WPP. The following table summarizes WPP recommendations and F&G mitigation measures to date (Table 1).

**Table 1. WPP Recommendations with relevance to F&G property activities and existing management initiatives.**

WPP #	WPP Recommendation	F&G Measure
4	<i>No new development should occur in the Comox Lake Watershed</i>	F&G is engaging in a re-zoning process with the CVRD to legalize their existing uses and is not proposing "new development".
5	<i>Land within the Comox Lake Watershed should not be re-zoned to permit further residential, commercial, recreational, agricultural or industrial development.</i>	The F&G Rezoning application is not intended to permit further development - No new development is being sought.
10	<i>All activities, current and proposed, must recognize the need for toilet facilities that are properly maintained to avoid contamination of Comox Lake.</i>	The F&G recognizes the need for properly maintained and fully contained toilet facilities - The F&G have only allowed fully contained RVs or vault toilets with effluent being disposed of off-site at approved facilities. See Section 4.1 below.
12, 13	<i>-The CVRD should dedicate the resources required to support implementation of the WPP. -The WAG should meet at least semi-annually and continue to advise and support the implementation and adaptation of the WPP.</i>	The F&G has been part of the watershed planning process since 2008 and remain strong advocates for the WPP and a deep water intake. The F&G have taken steps to implement on-site improvements in the spirit of the WPP since that time.
14	<i>Member agencies of the WAG should commit to abiding by the objective, vision and principles of the WPP.</i>	The F&G has, since the time of property purchase, sought to remediate the impacts identified on site and have taken precautionary steps to minimize impacts from onsite camping. The F&G has never allowed disposal of domestic waste from campers. Fully contained vault toilets were installed for tents and RV's do not dispose of waste onsite. Caretakers and F&G executives enforce the rules established by the club to protect the watershed.
24	<i>The Emergency Management Plan should be expanded to include watershed emergencies. It should be reviewed annually and updated periodically.</i>	The F&G has been part of an action group from the WAG to provide response to spills on the lake and the river. Internal development of emergency plans have been implemented and external coordination is desired to assist in planning and response to watershed emergencies. The F&G provides year round onsite caretaker and a seasonal campsite caretaker for consistent surveillance over their portion of the watershed. Caretakers have been trained by Western Canada Marine Response in spill response protocols.
26	<i>A trail management plan should be developed for all existing trails.</i>	The F&G supports a limited number of sporting trails and are willing to review trail building standards as determined by the WPP. F&G trails are intended for walking, not mountain biking or ATV use.

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Table 1. Cont.

WPP #	WPP Recommendation	F&G Measure
28, 29	<p><i>-Camping outside of designated campgrounds should not be permitted in the watershed. In addition to garbage and human waste posing a health risk, wildfire risk is a concern</i></p> <p><i>-Campfires outside of designated campgrounds should not be permitted in the watershed.</i></p>	The F&G campground was designated under the WPP. The F&G are seeking to legitimize campground use through a re-zoning process with the CVRD.
30	<i>ATV use should be limited to maintained logging roads and subject to code of conduct, enforcement and user agreements with landowners.</i>	ATV's are not allowed on F&G property. Two vehicles owned by the F&G that could be categorized as ATV's are only used on F&G roads or to provide handicapped users access to facilities. (General property Reg. 4 - Appendix B)
31	<i>Dog waste stations and wildlife-proof garbage cans should be installed and maintained at high use sites (trail heads, campgrounds).</i>	At the request of F&G membership, a dog waste policy was established and has provided collection facilities for several years. (General property Reg. 5 - Appendix B).
32	<i>TimberWest should require proof that sewerage and septic facilities for all licensed cabins on its private lands in the Comox Lake Watershed are properly located, constructed and annually inspected as a requirement for renewing each licence.</i>	All sewage disposal facilities are approved by Island Health. See section 4.1 for details.
34	<i>Designated boat cleaning stations should be developed away from the lake to prevent the spread of invasive species.</i>	F&G does not have a boat cleaning station; however, they have indicated that they are willing to research the issue. The majority of boats launching from the F&G are small fishing vessels that do not contain bilges for transport of invasives. Boat launch Reg. 5 (Appendix B) states that boat and trailer should be free of organic debris before launching, especially when coming from another body of water.
35	<i>All motorized boats must be fuelled at designated stations away from the lakeshore. Offenders and spills should be reported to the CVRD.</i>	The F&G does not allow refueling on or near the lake. See Section 4.2. Boat launch Reg. 6 stipulates no refuelling or motor work shall be done within 100 metres of the lake, Boat launch Reg. 7 stipulates that no holding tanks shall be emptied and bilge plugs shall not be pulled on the Association's property (Appendix B).
36	<i>The CVRD should ensure its bylaws regulate the size/type of boat allowed on the lake (e.g. no houseboats). Bylaw enforcement is also required.</i>	The F&G has a bylaw enforced ban on house boats, jet skis/skidoos being launched from their boat ramp (Boat Launch Reg. 4). Changes to their bylaws require a special resolution with a 75% majority.
37	<i>Designated sani-dump facilities for bilge and holding tanks should be established outside the watershed; boat users and campers should be directed to these stations.</i>	F&G campground RVs users are directed to local, off-site, sani-stations and the F&G's pump out contractors have access to the municipal sewage treatment plant (Section 4.1).

Table 1. Cont.		
WPP #	WPP Recommendation	F&G Measure
44	<i>Pesticide and herbicide use should be eliminated wherever possible. All pesticides or herbicides intended for use in the watershed should be reviewed for safety in and around aquatic habitat and for potential human health impacts. Pesticides should not be stored in the watershed.</i>	No pesticides have been used on the F&G property and only small amounts of lime for moss control have been applied.
49	<i>The CVRD should develop a comprehensive water quality monitoring program for all major tributaries to Comox Lake as well as a more comprehensive and longterm monitoring program for the lake itself. This is a high priority.</i>	F&G has requested to be fully involved in the water quality monitoring program under the WPP. The F&G have helped MoE with the last two water quality assessments of Comox Lake and provide the CVRD with access for their monitoring program. The F&G is willing to participate with any monitoring program the CVRD and the Water Advisory Group propose under the WPP.

**4.1 SANITARY**

As described in the Watershed Protection Plan<sup>4</sup>, risks to CVRDs water supply are rated as moderate, in part due to the presence of mitigation measures in place, including the following.

- All sewage from the F&G campground is collected in sealed vault toilets and is hauled off the property for disposal at the sewage treatment plant.
- Sewage generated by the RV campers must be held in their holding tanks and disposed of at suitable facilities off-site.
- As the F&G campground has no septic disposal fields near the shoreline there are no risks associated with such features.
- The permanent F&G facilities sited on other parts of the property set back from the shoreline do have disposal fields, which meet Island Health requirements.
- Campsite Reg. 19 (Appendix B) stipulates "Health regulations will be enforced – release of gray or black water is not permitted on Association property. Emptying of holding tanks should be at proper discharge locations in town. No bathing or washing of hair, dishes or laundry in the lake. Swimmers should follow Health Canada and Center for Disease Control guidelines for infants in diapers and individuals with diarrhoea illness".
- As per F&G Constitution and Association Rules governing conduct, all pets are kept on leash and pet waste is collected and deposited at designated receptacles that are regularly maintained by a contractor and disposed of at a suitable facility off-site.

Risk from the F&G campground is expected to be further reduced by the installation of a new deep water intake, as described in Section 3.0, as the general near shore water movement is down the Puntledge River and out of Comox Lake.

4.2 HAZARDOUS MATERIAL SPILLS

In 2013 F&G became part of a Watershed Action Group (WAG) under the Watershed Protection Plan<sup>4</sup> with TimberWest, BC Hydro and the CVRD for emergency spill response in Comox Lake and the Puntledge River. The WAG was created in response to the concern of hydrocarbon fuel spills at the Puntledge Bridge. The emergency spill kit contains sufficient quantity of readily deployable sorbent material and isolation booms for a small scale spill (Table 2). TerraWest Environmental Inc. was retained by TimberWest to develop a spill response plan, which contains sufficient boom systems to span Puntledge River and required equipment to clean-up a potential spill before it reaches the Hydro intake at the Diversion Dam. The emergency spill kit is located at the F&G boat launch and is regularly maintained by TimberWest.

Cumberland Fire Department is the lead agency for spill response and both of the F&G caretakers and the seasonal campsite caretaker are trained in emergency spill response, and have access to the spill equipment. All F&G members are required to read and sign Constitution and Association Rules governing conduct including no re-fueling or engine repairs within 30 m of the shoreline.

Table 2. Contents of the Emergency Spill Kit located near the F&G boat launch (adapted from TerraWest, 2013).

**Comox Bin Content List - replace items as needed.**

Qty	Item #	Item Description
10	KI-1200	Heavy Weight Oil Absorbent Pads (100 per bundle) - White
4	KI-UNIV-H	Heavy Weight Universal Absorbent Pads (100 per bundle) - Grey
2	KI-1200H	Heavy Weight Hazmat Absorbent Pads (100 per bundle) - Yellow
8	KI-510	5" x 10' Linkable Oil Absorbent Boom (4 per bundle)
4	KI-810	8" x 10' Linkable Oil Absorbent Boom (4 per bundle)
1	KI-O348	3" x 48" Oil Absorbent Socks (40 per box)
1	KI-O396	3" x 96" Oil Absorbent Socks (20 per box)
5	KI-1-PMPA	Plug n' Dike, Premix w/ Antifreeze (1 lb. Jar)
10	KI-OG30	Oil Gator Premium Bioremedial Absorbent (30 lb. Bag)
12	KI-A8141	PVC Gloves, Neoprene Rubber, Green, 14 inch (Various sizes)
12	KI-NITGLO	Nitrile Gloves (Pair, Various sizes)
12	KI-GOGG	Plastic Safety Goggles
12	KI-TYVEK	Tyvek Coveralls with Hood (Various sizes)
2	KI-DBAG	HD Yellow Hazmat Disposal Bags (33" x 45" x 6 mil, 50 per roll)
3	KI-FB-364	Mini-Berm - 36" x 36" x 4" in Chem Shield fabric
1	KI-FB-486	Mini-Berm - 48" x 48" x 6" in Chem Shield fabric
1	KI-0500	UltraTech 95 gallon yellow poly overpack
1		Plastic Biohazard Bin (32 gallon)
1		Roll of Polyethylene
1		Flashlight (plus extra batteries)
2		Shovel
2		Pulaski
1		Level I First Aid Kit
1		Drinking water (flat)
1		Fire Extinguisher (40 BC Marine FE)
2		Hardhats
4		Cones
2		Vests
1		Decontamination Kit (water, towels, disinfectant soap)

<sup>4</sup> Aqua-Tex Scientific Consulting Ltd. (2016). *Comox Lake Watershed Protection Plan*. Prepared for the Comox Valley Regional District. 106 pp. (56 pp. + Appendices).

## 5.0 SAMPLING PROTOCOLS

Study program design protocols were guided in part by the Resource Information Standards Committee (RISC) *Guidelines for Designing and Implementing a Water Quality Monitoring Program in British Columbia* (MELP, 1998)<sup>5</sup>. Study sample collection methods were guided by *Sampling Procedures for Water from Guidelines for Canadian Recreational Water*<sup>6</sup>, and the *Protocols Manual for Water Quality Sampling in Canada* (CCME, 2011)<sup>7</sup>, with additional QA/QC and surface water sample collection methods derived from the *Guidance Manual for Environmental Site Characterization in Support of Environmental and Human Health Risk Assessment* (CCME, 2016)<sup>8</sup>.

Samples were collected by hand (Photo 5) from surface waters where the bottles were inverted and plunged downward to a depth of 15-30 cm, oriented towards the current when present, and upturned to fill. Samples were collected from the upstream side of the boat. Duplicates were collected from each site and placed on ice in a cooler for overnight transport to the laboratory.

The program design for this preliminary site investigation included a single surface water sample (with duplicate) collected from four sites over two time periods, for a total of eight samples acquired for laboratory analysis. The level of sampling program detail was selected based on the objective to assess whether the current land use regime of the F&G campsite poses a risk to the Comox Lake drinking (untreated) water source and to identify whether more detailed study is warranted.

Temporal sample comparison is provided by sample collections being undertaken in the early spring (April 29, 2016) and again in the late summer (Aug. 30, 2016) to show temporal differences linked to campground use. In April the campsite was largely empty following a period of disuse over the winter months. This time period is expected to exemplify a period of time where inputs from campground users on the surrounding environment are negligible. Conversely, water quality samples collected during late summer high season campsite use -following a period of sustained use over the preceding summer months- is expected to show the status of possible environmental contaminants during the period of maximum use.

Spatial comparison is provided by proximity of sample sites to high use campground facilities (such as the campsite study area #056) and successive locations radiating downstream with the direction of flow at the campground boat launch (#057) located 125 m to the southwest, and towards the head of the Puntledge River with Site #058 located an additional 200 m southwest (Figure 3). The existing Comox Lake drinking water supply intake resides within the Puntledge River at a BC Hydro diversion dam located approximately 4 km downstream from the study area of the subject property (Figure 1). A "reference site", used to provide comparative background water quality, was selected on the west bank of the inflow stream into the Puntledge River adjacent to the Comox Bluffs Ecological Reserve approximately 400 m southwest of #056 (Figure 2) at a location where samples are not influenced by

<sup>5</sup> Resource Information Standards Committee. *Guidelines for Designing and Implementing a Water Quality Monitoring Program in British Columbia*. Accessed from: <https://www.for.gov.bc.ca/hts/risc/pubs/aquatic/design/>.

<sup>6</sup> Public Health Agency of Canada (2012). *Guidelines for Canadian Recreational Water quality -3rd Ed*. Accessed from: <https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-recreational-water-quality-third-edition/guidelines-canadian-recreational-water-quality-third-edition-page-18.html#b1>

<sup>7</sup> Canadian Council of Ministers of the Environment (2011). *Protocols Manual for Water Quality Sampling in Canada*. Accessed from: [http://www.ccme.ca/files/Resources/water/water\\_quality/protocols\\_document\\_e\\_final\\_101.pdf](http://www.ccme.ca/files/Resources/water/water_quality/protocols_document_e_final_101.pdf)

<sup>8</sup> Canadian Council of Ministers of the Environment (2016). *Guidance Manual for Environmental Site Characterization in Support of Environmental and Human Health Risk Assessment: Volume 1 Guidance Manual*. Accessed from: [http://www.ccme.ca/en/files/Resources/csm/Volume%201-Guidance%20Manual-Environmental%20Site%20Characterization\\_e%20PN%201551.pdf](http://www.ccme.ca/en/files/Resources/csm/Volume%201-Guidance%20Manual-Environmental%20Site%20Characterization_e%20PN%201551.pdf)

campground activity but that is exposed to similar environmental conditions such as fetch, aspect, prevailing winds, water depth, and wildlife use.

## 6.0 POTENTIAL CONTAMINANTS OF CONCERN

It is important to recognize that the Comox Lake “outlet basin”, within which the F&G study area is situated, is also inhabited by full time residential properties, an additional seasonal campground on the Lake’s south shore, and is regularly exposed to boat traffic and Lake-wide seasonal recreational activities that include swimming, canoeing, camping, etc.

It is recognized that the CVRD conducts regular water quality analyses for bacteriological indicators to ensure that raw and post-treatment water is in compliance with regulated standards for drinking water for the protection of consumers. By no means should the presence of any contaminants in the samples acquired during this preliminary risk assessment be misconstrued as possibly being present in post-treatment drinking water.

Background review of campground site uses, facilities, and trends were considered in order to establish a list of potential contaminants of concern that could be mobilized from the campground into the surrounding aquatic environment of Comox Lake. The potential contaminants and their rationales are also based in part on by *RISC Guidelines for Interpreting Water Quality Data*<sup>9</sup> and included:

1. **Total Coliform:** A microbiological parameter used as an indicator of fecal contamination in water. Coliforms are used as a surrogate for pathogenic microorganisms with an inherent level of uncertainty of indicating pathogen presence -which limits their use as an indicator of fecal contamination.<sup>10</sup> Based on total coliform's limited reliability as an indicator its presence will not be used to show fecal contamination where *E. coli* is the preferred indicator (see 2. below).
2. ***Escherichia coli* ("*E. coli*"):** A thermotolerant coliform, *Escherichia coli*, is understood to originate specifically from mammalian or avian fecal contamination (i.e. human, other mammal, bird). A common indicator of fecal contamination in water sources limited by the inability to differentiate human from other mammalian wildlife sources. Source differentiation is possible in Microbial Source Tracking but was not undertaken as part of this study.
3. **Surfactants:** Non-ionic surfactants (such as detergents or foaming agents) are the primary component of hand dishwashing liquids<sup>11</sup> that may be expected to be present in the environment where campground users dispose of their dishwater near the lake edge. This parameter is expected to indicate whether this contaminant is migrating, and if so at what distance, from the campground.
4. **LEPH/HEPH:** Light and Heavy Extractable Petroleum Hydrocarbons are residual hydrocarbon fractions of Extractable Petroleum Hydrocarbons (EPH) after the PAHs listed under the Provincial *Contaminated Sites Regulation* (CSR) are separated. LEPH/and HEPH can be used to indicate the

<sup>9</sup> Resource Information Standards Committee. *Guidelines for Interpreting Water Quality Data*. Accessed from <https://www.for.gov.bc.ca/hts/risc/pubs/aquatic/interp/interp.htm>.

<sup>10</sup> Ministry of Environment. (2011). *Water Quality Assessment and Objectives for Comox Lake*. Environmental Protection Division. Environmental Sustainability Division. Pp. 74.

<sup>11</sup> Handbook of Detergents. (2009). Ed. Zoller, U. Taylor and Francis Group, Boca Raton, FL.

presence of certain petroleum based products related to vehicle use such as diesel fuel and motor oil. The presence of LEPH/HEPH in surface waters may indicate migration of petroleum based contaminants released from RVs, trucks, boats, etc. used in and around the campsite; however, source tracking is severely limited by other known recreational uses on the Lake such as wide-spread boat traffic.

5. **PAHs:** Polycyclic Aromatic Hydrocarbons are the hydrocarbon fraction of EPH that are listed specifically, and regulated separately in the BC CSR as mentioned above. As with LEPH/HEPH, PAHs can be used to indicate the presence of petroleum based products related to vehicle use and also suffers from the same source tracking limitations.

## 7.0 LITERATURE REVIEW

According to a report prepared by Clayton (2005)<sup>12</sup> for the Comox-Strathcona Regional District which tracked the microbial source of fecal coliforms near the lake outlet, it was determined that the predominant sources were attributable to deer, dogs, and seagulls. Furthermore, this study used two alternate methodologies to confirm microbial source tracking and both of them were negative for human sources of fecal contamination throughout. All observed fecal sources were determined to be from non-human animal sources.

A 2011 study of Comox Lake water quality released by MOE<sup>10</sup> undertook a water quality sampling/analysis program of seven sites with one set of five samples collected from each site in both summer and fall 2005 and 2007, resulting in 30 samples per site. Those samples were analyzed for fecal coliforms and *E. coli*, whereas the samples in this preliminary risk assessment include total coliforms and *E. coli*. The MOE study sampled four sites around the Comox Lake "outlet basin" including "Site 4" nearest the study area (Figure 4). Of those four sites, geometric mean sample results for *E. coli* at Site 4 ranged from below detection limits to 12.0 CFU/100ml (Table 3). Comparatively, the highest concentration of *E. coli* observed from 2005-2007 in the outlet basin was 53.9 CFU/100ml (Table 3) near the shoreline of the south shore campsite across the Lake from the F&G study area ("Site 6"; Figure 4).

In addition to MOE's 2011 report<sup>10</sup>, unpublished data from 2015 has been made available to the F&G by MOE that is useful in describing the trends over time as well as spatially across the lake from sampling sites in the far west via inputs from Cruickshank River and the upper Puntledge River ("inlet"), through the central reach of the lake ("mid-basin"), and the west end in White's Bay ("outlet") near the subject study area (Table 3; Figure 4).

<sup>12</sup> Clayton, W.E.L. (2005). Microbial Source Tracking Study. IEC International. Prepared for Comox-Strathcona Regional District, Courtenay, BC. Accessed from: [http://agendaminutes.comoxvalleyrd.ca/Agenda\\_minutes/CVRDCommittees%5CCVW%5C10-Nov-15%5C8%5CIEC%5CInternational%5CSource%5CTracking%5CStudy%5CFinal%5Creport.pdf](http://agendaminutes.comoxvalleyrd.ca/Agenda_minutes/CVRDCommittees%5CCVW%5C10-Nov-15%5C8%5CIEC%5CInternational%5CSource%5CTracking%5CStudy%5CFinal%5Creport.pdf).



Table 3. Summary of Comox Lake inlet and outlet basins geometric mean *E. coli* concentrations (CFU/100 ml) for groups of five samples collected within a 30-day period from BC MOE (2011)<sup>10</sup> and unpublished data (2015).

Location Basin	Inlet				Outlet			Lake Average
Sample Site	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	All Sites
Date	MOE Published Data (2011)							
Aug 11 - Sept 9, 2005	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	1.0	< 1.0
Oct 14 - Nov 10, 2005	1.5	2.1	1.4	1.5	1.3	1.6	6.2	2.2
Aug 30 - Sep 13, 2006	< 1.0	< 1.0	1.0	1.3	2.7	2.5	4.3	2.4
Oct 17 - Nov 22, 2006	1.6	1.6	1.3	6.1	4.5	2.1	1.4	2.7
Aug 9 - Sept 13, 2007	1.6	2.2	1.4	9.5	4.0	53.9	2.2	10.7
Oct 23 - Nov 22, 2007	2.3	1.2	1.2	12.0	4.1	3.8	3.1	4.0
	MOE Unpublished Data (2015)							
Aug 5 - Sept 1, 2015	< 1.0	< 1.0	< 1.0	< 1.0	3.7	2.1	< 1.0	1.1
Oct 13 - Nov 9, 2015	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

## 8.0 WATER QUALITY STANDARDS

Water quality standards for the assessed parameters are derived from provincial and federal sources where available and can be categorized as drinking water, aquatic life, or recreational water quality (Table 4).

Drinking water quality guidelines provided for total coliforms and *E. coli* are included because this assessment is ultimately in aid of determining whether the study area poses a risk to the Comox Lake drinking water source; however, as mentioned, the CVRD operates a disinfection plant that treats for this parameter and removes bacteriological pathogens to the 0/100 mL count level.

The BC MOE (2011) stipulates water quality objectives for Comox Lake that are intended to provide an extra level of protection to the treated drinking water supply and for recreational users that may acquire water directly from the lake. The objectives include prescribed guidelines for *E. coli* at 10 CFU/100 ml (30 day period) at all sites within Comox Lake (Table 4). Based on historical data, this objective was exceeded nearest the study area (Site 4) during a single sampling period coinciding with 2007 fall freshet, but not in 2015 according to unpublished data (Table 3). The grab samples collected in 2016 in support of this assessment do not exceed this objective.

Aquatic life water quality guidelines for surfactants are provided where there is no standard available for human health risk.

The BC CSR regulates acceptable limits for petroleum hydrocarbons in water standards for aquatic life in both LEPH/HEPH and PAH.

As the study area and much of the Lake's outlet basin is frequently used for recreation the guidelines for Canadian recreational water quality are included for *E. coli*.

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**Table 4. Water quality standards for the assessed parameters from provincial and federal sources of drinking water, aquatic life, or recreational water quality.**

Parameter	Canadian Drinking Water Quality Guideline	BC Working Water Quality Guidelines <sup>13</sup> Fresh water aquatic life	Contaminated Sites Regulation Schedule 6 Water Standards for Aquatic Life <sup>14</sup>	Guidelines for Canadian Recreational Water Quality <sup>15,16</sup>	BC MOE Comox Lake Water Quality Objective <sup>10</sup>
<b>Total Coliform</b>	0/100 ml <sup>17</sup>	-	-	-	
<b>E. coli</b>	0/100 ml <sup>17</sup>	-	-	≤ 77/100 ml <sup>18</sup> ≤ 400/100 ml <sup>19</sup>	10/100 ml
<b>Surfactant (LAS)<sup>20</sup></b>	-	65 µg/L <sup>21</sup>	-	-	
<b>LEPH/HEPH</b>	-	-	500 µg/L	-	
<b>PAHs:</b>					
acenaphthene	-	-	60 µg/L	-	
acridine	-	-	0.5 µg/L	-	
anthracene	-	-	1.0 µg/L	-	
benzo[a]anthracene	-	-	1.0 µg/L	-	
benzo[a]pyrene	-	-	0.1 µg/L	-	
chrysene	-	-	1.0 µg/L	-	
fluoranthene	-	-	2.0 µg/L	-	
fluorene	-	-	120 µg/L	-	
naphthalene	-	-	10 µg/L	-	
phenanthrene	-	-	3.0 µg/L	-	
pyrene	-	-	0.2 µg/L	-	
quinoline	-	-	34 µg/L	-	

<sup>13</sup> [http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/wqgs-wqos/bc\\_env\\_working\\_water\\_quality\\_guidelines.pdf](http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/wqgs-wqos/bc_env_working_water_quality_guidelines.pdf)

<sup>14</sup> [http://www.bclaws.ca/civix/document/LOC/complete/statreg/--%20E%20--/Environmental%20Management%20Act%20\[SBC%202003\]%20c.%2053/05\\_Regulations/19\\_375\\_96%20-%20Contaminated%20Sites%20Regulation/375\\_96\\_08.xml#Schedule6](http://www.bclaws.ca/civix/document/LOC/complete/statreg/--%20E%20--/Environmental%20Management%20Act%20[SBC%202003]%20c.%2053/05_Regulations/19_375_96%20-%20Contaminated%20Sites%20Regulation/375_96_08.xml#Schedule6)

<sup>15</sup> <https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-recreational-water-quality-third-edition/guidelines-canadian-recreational-water-quality-third-edition-page-9.html#a411>

<sup>16</sup> <http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/wqgs-wqos/approved-wqgs/microindicators-or.pdf>

<sup>17</sup> Maximum Acceptable Concentration for water leaving a treatment plant.

<sup>18</sup> Geometric mean of 5 samples collected within a 30-day period.

<sup>19</sup> Single-sample maximum concentration.

<sup>20</sup> Linear alkylbenzene sulphonate (LAS) -The most common surfactant type in hand dishwashing liquid products<sup>11</sup>.

<sup>21</sup> 99% (species) level of protection.

## 9.0 RESULTS

Lab analysis results of samples collected in the early spring (April 29, 2016) and again in the late summer (Aug. 30, 2016) are provided in Appendix A. A summary of the results are provided for each of the studied parameters, detailed in Section 4.0, according to sampling date with site locations provided in Figure 2:

### 9.3 APRIL 29, 2016

1. **Total coliform:** Reported in CFU (colony forming units)/100mL this value represents a count of colonies formed on agar media. The highest concentration was observed near the campsite study area shoreline 40 CFU/100mL for Site #056, with fluctuating concentrations moving westward towards the outlet of the basin towards the Puntledge River with 4 CFU/100mL for #057, and 8 CFU/100mL for #058. The reference site, #059, near the Comox Bluffs Ecological Reserve shoreline, showed 3 CFU/100mL.
2. ***E. coli*:** Result below detectable limits.
3. **Surfactants:** With the exception of water quality site #058 (see Figure 2) which showed a concentration of 0.07 mg/L (70 µg/L); all other sites were below detectable limits. The BC Working Water Quality Guideline for LAS Surfactants at the 99% (species) level of protection is 65 µg/L while the 95 % level is 280 µg/L (Table 4). Sample site #058, located furthest from campground study area (with the exception of the reference site #059), showed a 5.0 µg/L exceedance of the BC standard for freshwater aquatic life.
4. **LEPH/HEPH:** All parameters below detectable limits.
5. **PAH:** All parameters below detectable limits.

### 9.4 AUGUST 30, 2016

The lab returned August sample results for total coliform and *E. coli* using Most Probable Number (MPN/100mL). MPN uses the multiple tube fermentation method of analysis and the result is a statistical estimation based on 95% confidence limits. As the lab elected to utilize a different analysis technique than that applied to April 29<sup>th</sup> samples the results cannot be reliably compared against each other. According to a study by Cho et al. (2010) enumerated *E. coli* concentrations in MPN can be greater than those in CFU by up to one order of magnitude.<sup>22</sup>

1. **Total coliform:** The highest concentration was observed near the campsite study area shoreline at >200.5 MPN/100mL for Site #056, with decreasing concentrations moving westward towards the outlet of the basin towards the Puntledge River with 144.5 MPN/100mL for #057, and 47.8 MPN/100mL for #058. The reference site, #059, near the Comox Bluffs Ecological Reserve shoreline, showed 42.9 MPN/100mL.

<sup>22</sup> Cho, K., Han, D., Park, Y., Lee, S., Cha, S., Kang, J., and Kim, J. (2010). Evaluation of the relationship between two different methods for enumeration fecal indicator bacteria: colony-forming unit and most probable number. Journal of Environmental Science (China). 22(6):846-50.

During sampling effort an observation of bird down floating on the water surface was recorded at all four sample locations.

2. ***E. coli***: Sites #056 and #057 both showed 2.0 MPN/100mL counts. These sites are located near the campground study area shoreline and boat launch, respectively. Site #058 nearest the Lake outlet towards the Puntledge River, and Site #059 near the Comox Bluffs Ecological Reserve shoreline showed 0 MPN/100mL.
3. **Surfactants**: Similarly to April 29<sup>th</sup> samples, all other sites showed concentrations below detectable limits with the exception of water quality site #058 which showed a concentration of 0.11 mg/L (110 µg/L), a 45 µg/L exceedance over the BC standard for freshwater aquatic life.
4. **LEPH/HEPH**: All parameters below detectable limits.
5. **PAH**: All parameters below detectable limits.

## 10.0 DISCUSSION

It is important to recognize that total coliform are a group of bacteria that, with few exceptions, are not harmful to humans.<sup>23</sup> Total coliforms can be widely distributed in water, soil, and vegetation<sup>15</sup> and do not alone represent fecal coliform concentrations. In the BC MOE *Water Quality Assessment and Objectives for Comox Lake*<sup>10</sup> total coliforms do not have a set objective concentration. Most often, measuring total coliforms is a useful tool for drinking water managers to identify potential post-treatment contamination in water distribution systems.

Total coliform counts from all sample sites, during both April & August 2016 sampling efforts exceed treated drinking water standards (0/100mL) but are generally lower than coliform counts from both Clayton (2005) and MOE (2011). Earlier reports by Clayton and MOE are relevant to the temporal context of Comox Lake where sampling data shows that total coliforms appear to be consistently present throughout the Lake from 2005-2007.

As total coliforms can be derived from numerous non-human sources it is noteworthy that during the August 30, 2016 sampling effort, when coliform concentrations were highest, an observation of bird down floating on the water surface was recorded at all four sample locations. According to MOE (2011) “high numbers of birds (generally seagulls) were observed at and near the sampling stations (e.g. sitting on log booms adjacent to docks)”, indicating a potential source of coliforms. For fecal contamination, the presence of *E. coli* is a much more reliable indicator than total coliforms.

The only *E. coli* counts above detectable limits for 2016 sampling occurred on August 30<sup>th</sup> at Sites #056 and #057 located at the campground study area and boat launch, respectively. The presence of two *E. coli* colony counts in each sample near the shoreline but not evident downstream at Site #058 suggests that whatever the source of the contaminant it did not appear to be transported from near the campsite study area towards the Lake outlet into the Puntledge River. In addition, the source of the *E. coli* is

<sup>23</sup> United States Environmental Protection Agency (2017). Revised Total Coliform Rule and Total Coliform Rule. Drinking Water Requirements for States and Public Water Systems. Accessed from <<https://www.epa.gov/dwreginfo/revised-total-coliform-rule-and-total-coliform-rule>>.

unknown but based on a previous study by Clayton (2005)<sup>12</sup> it was most likely derived from a non-human source (i.e. dog or deer). The temporal difference between April 29<sup>th</sup> and August 30<sup>th</sup> sampling events showed an increase above detectable limits only in August, the high use campground season, which could possibly be linked to increased shoreline use by pets at the campground.

The 2016 grab samples collected in support of this assessment did not exceed the MOE objective for *E. coli*, and are well below recreational standards for maximum concentration in a single sample (Tables 3 & 4). BC MOE (2011) water quality objectives for all sites in Comox Lake are prescribed for *E. coli* at 10 CFU/100 ml (30 day period). Based on historical data (2005-2007), this objective was exceeded nearest the study area ("Site 4") during a single sampling period coinciding with the 2007 fall freshet, but according to unpublished data the objective was not exceeded during 2015 sampling (Table 3).

The BC Working Water Quality Guideline for LAS Surfactants at the 99% (species) level of protection is 65 µg/L while the 95 % level is 280 µg/L. The only surfactant concentration above detectable limits was observed at water quality Site #058 during both April 29<sup>th</sup> and August 30<sup>th</sup> sampling efforts that exceeded the 99% species standard but not the 95 % level. That is, the concentration observed at Site #058 has the potential to negatively affect within 4% more aquatic species types. The lack of presence at sample sites closest to the study area (i.e. Sites #056 & 057) suggest that the F&G campground is not the source of the surfactant observed at Site #058.

LEPH/HEPH & PAH were below detectable limits at all sample locations for both April 29<sup>th</sup> and August 30<sup>th</sup> efforts, suggesting that there is no release of petroleum hydrocarbon based products from the F&G study area or surrounding environs outside of the study area.

## 11.0 CONCLUSIONS

Management of potential sources of pollution and implementation of mitigation measures (Table 1) in and around the F&G Campground and Boatramp appear to be functioning as intended for the following reasons:

1. Surfactant concentrations near the F&G study area were below detectable levels while exceedances of BC Working Water Quality Guidelines for fresh water aquatic life were observed only at Site #058 and cannot reliably be linked to F&G campsite activity.
2. LEPH/HEPH and PAH were below detectable limits for all sample sites and are not a cause of concern for petroleum hydrocarbon contamination as it relates to the F&G campsite, or other site uses, including the boat launch.
3. The presence of *E. coli* shown in 2016 grab samples is only present in low concentrations (maximum 2 CFU/100 ml) that are below the MOE *E. coli* objective threshold and well under the Guidelines for Canadian Recreational Water Quality. Observed 2016 *E. coli* concentrations appear consistent with background concentrations measured by MOE at "inlet basin" Sites 1-3 (Table 3) and based on existing information is likely linked to non-human sources<sup>12</sup>.

The F&G has been part of the watershed planning process since 2008 and remain strong advocates for the WPP and a deep water intake. The F&G have taken steps to implement on-site improvements in the spirit of the WPP since that time (Table 1). According to MOE data (Table 3), the Site 4 water quality

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station (nearest the study area; Figure 4), as well as the three 2016 sites selected for this preliminary risk assessment (Figure 2), have not exceeded the MOE *E. coli* objective (10 CFU/100 ml over 30 day period) since the time when many of the mitigation measures described in Section 3 (Table 1) have been implemented -in part to meet WPP recommendations.

These results indicate that no additional or modified waste containment/treatment methods appear necessary at the F&G campsite at this time. It is, however, recommended that the F&G continue to participate with any water quality monitoring program the CVRD and the Water Advisory Group propose under the WPP.

In addition to the measures already implemented to meet WPP recommendations, contamination risks are expected to be further reduced by:

1. The 2017 re-configuration of F&G campsites and rehabilitation of the Comox Lake Streamside Protection and Enhancement Area (SPEA) prescribed in detailed Riparian Areas Assessment<sup>2</sup> (Figure 3; Photos 3-4). Re-configuration and enhancement efforts are expected to increase the containment and retention of potential contaminants by shoreline vegetation.
2. Implementation of the CVRD deep drinking water intake project approximately 1 km upstream of the F&G property and at depth is expected to minimize the exposure of bacteriological contamination to consumers.

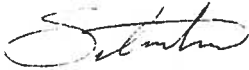
Based on the results of this preliminary risk assessment there is no conclusive indication that the F&G's use of the study area shoreline as a campsite poses a risk to the water supply or human health, and no additional study appears warranted at this time. It is expected, however, that the F&G will remain active members of the WAG and will participate in the ongoing water quality program in cooperation with the CVRD under the WPP. Furthermore, based on the results of this preliminary assessment it is anticipated that the proposed continued use of the study area as a campsite, assuming no significant alteration, will not negatively impact drinking water in the future.

## Technical Memorandum

### 12.0 CLOSURE

We trust the conclusions of this report meet the anticipated requirements of a Risk Assessment of Courtenay and District Fish and Game Protective Association (F&G) campground use on pre-treatment source water quality in Comox Lake in support of the renewal of CVRD TUP 2C 15 and a future re-zoning application. If any additional information is required please contact the undersigned.

Prepared by:



Dusty Silvester, R.B.Tech. 58

Reviewed by:



Rupert Wong, R.P.Bio. 705

CURRENT ENVIRONMENTAL LTD.

### 13.0 DISCLAIMER

This report was prepared exclusively for Courtenay and District Fish and Game Protective Association for use by the Comox Valley Regional District by Current Environmental Ltd. The quality of information, conclusions and estimates contained herein is consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by the authors and/or supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by Courtenay and District Fish and Game Protective Association for use by the Comox Valley Regional District only, subject to the terms and conditions of its contract or understanding with Current Environmental Ltd. Other use or reliance on this report by any third party is at that party's sole risk.

14.0 FIGURES

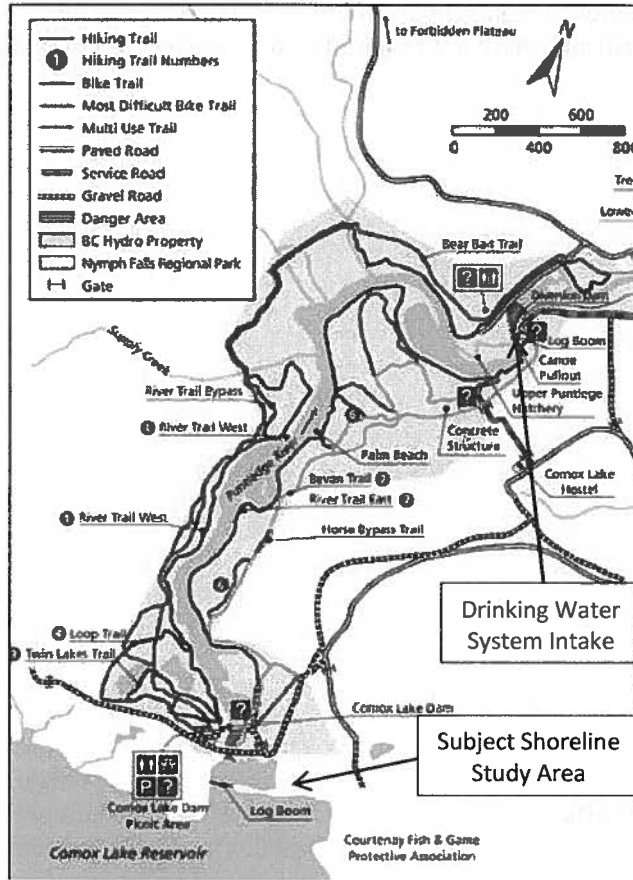


Figure 1. Regional setting of subject shoreline study area relative to the Puntledge River drinking water system intake located approximately 4 km downstream.

Source: <https://www.bchydro.com/content/dam/hydro/medialib/internet/images/graphics/maps/map-puntledge.gif>



# Technical Memorandum

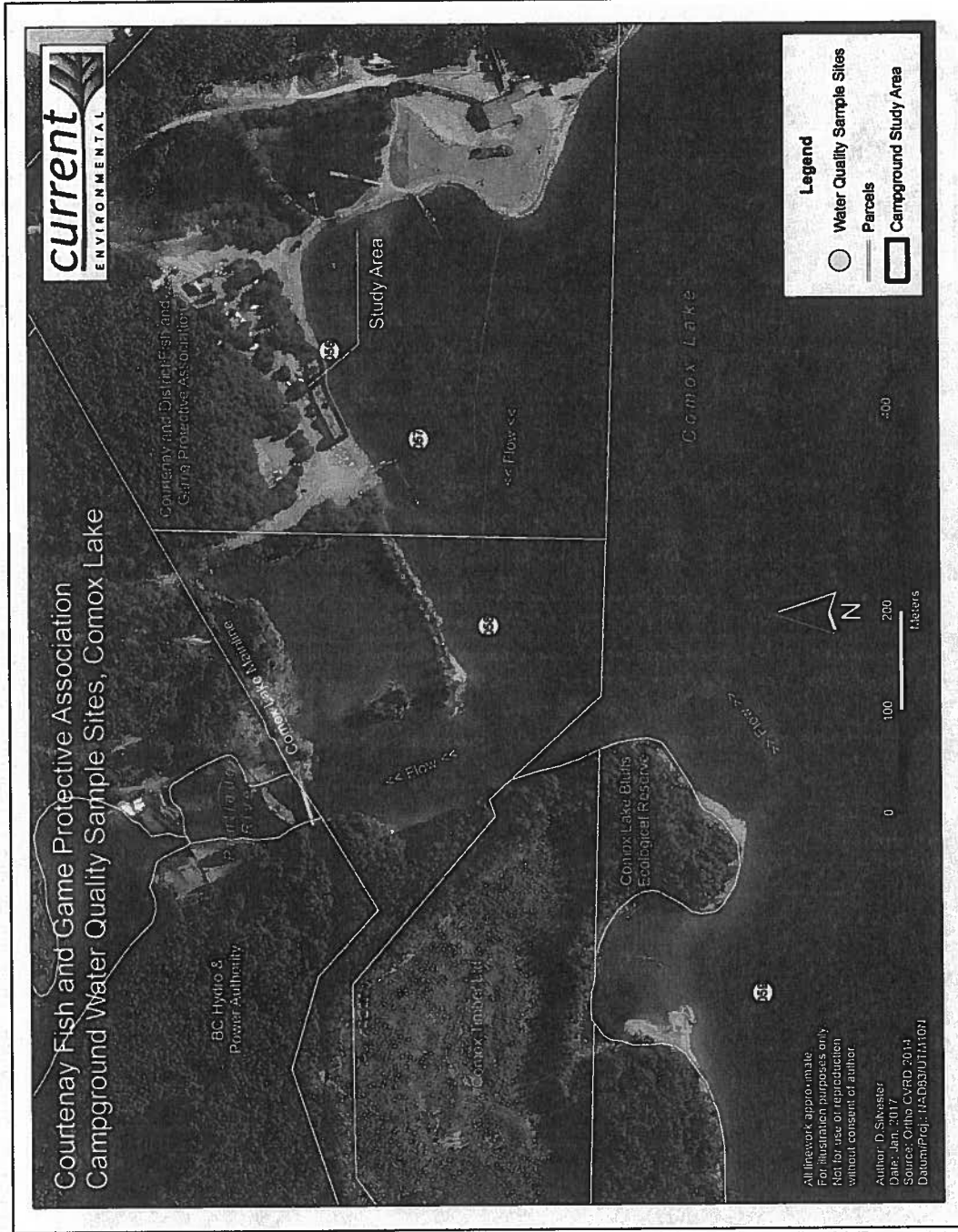


Figure 2. Site plan of water quality sampling sites relative to campground study area and flow directions towards the Comox Drinking Water Intake approximately 4 km downstream.

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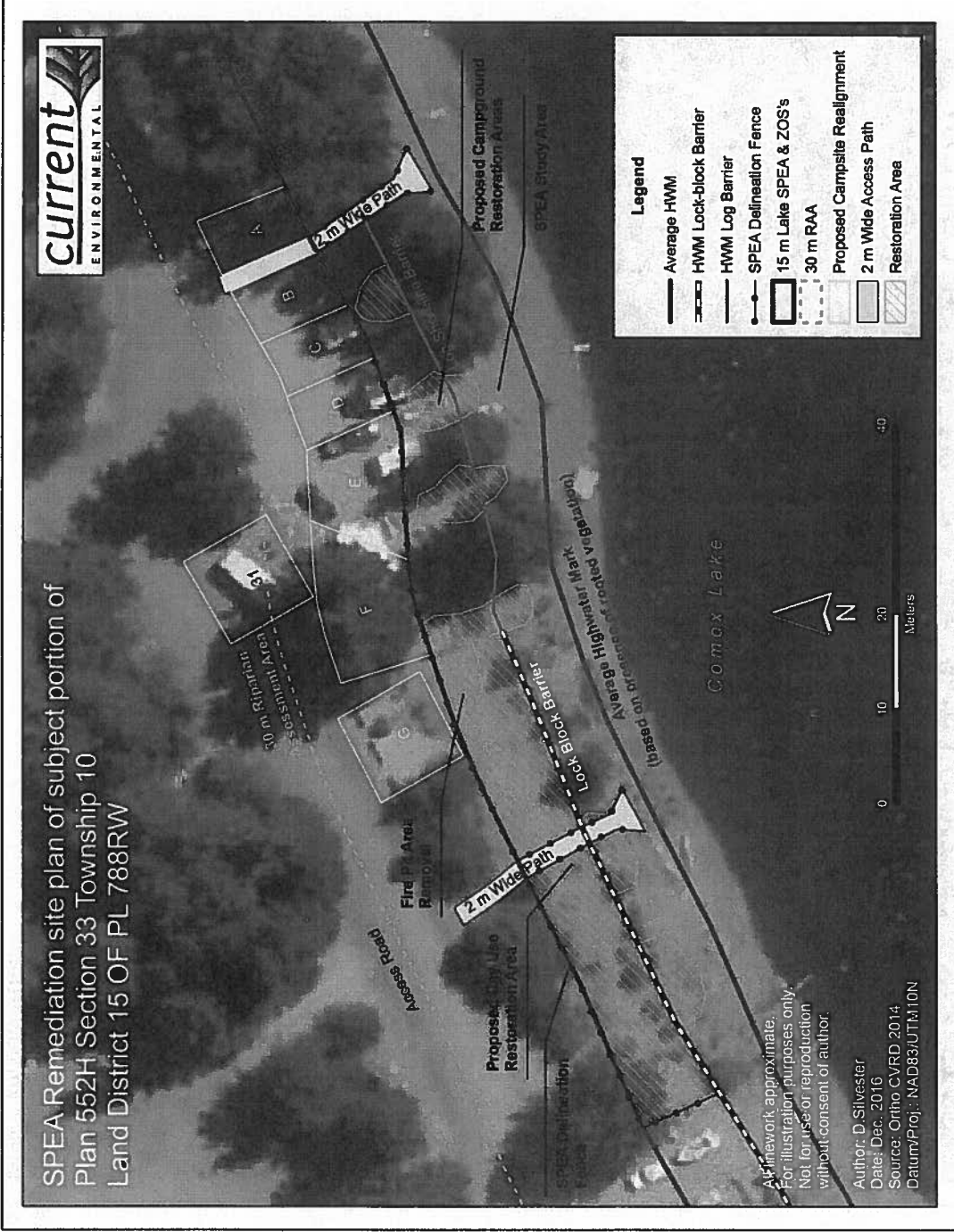


Figure 3. Site plan of the study area showing detailed Riparian Areas Regulation assessment remediation plan and campsite reconfiguration.

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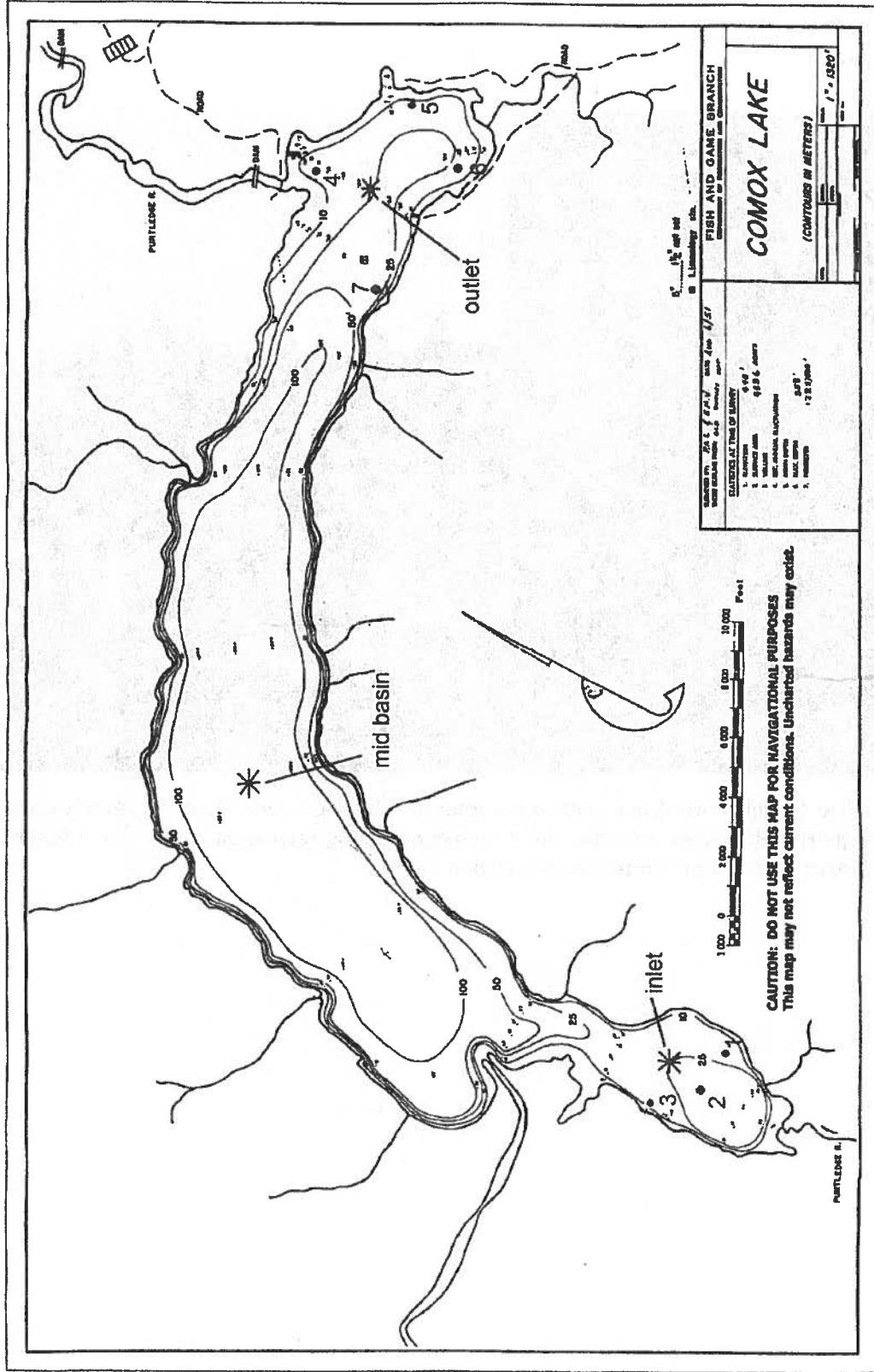


Figure 3. BC MOE Water Quality Assessment<sup>10</sup> map showing sites where surface water samples were collected during 2011 and 2015 programs.

15.0 PHOTOS



Photos 1 & 2. View looking north from southwest corner of subject property about 50 years ago during logging tenure (left) and present day after site remediation during recreation/conservation tenure by Courtenay & District Fish & Game Protective Association (right).



Photos 3 & 4. Before (top) and after (above) views of SPEA restoration efforts that includes relocating campsites and establishing native vegetation within a 15 m setback from the lake shoreline (Mar. 2017).

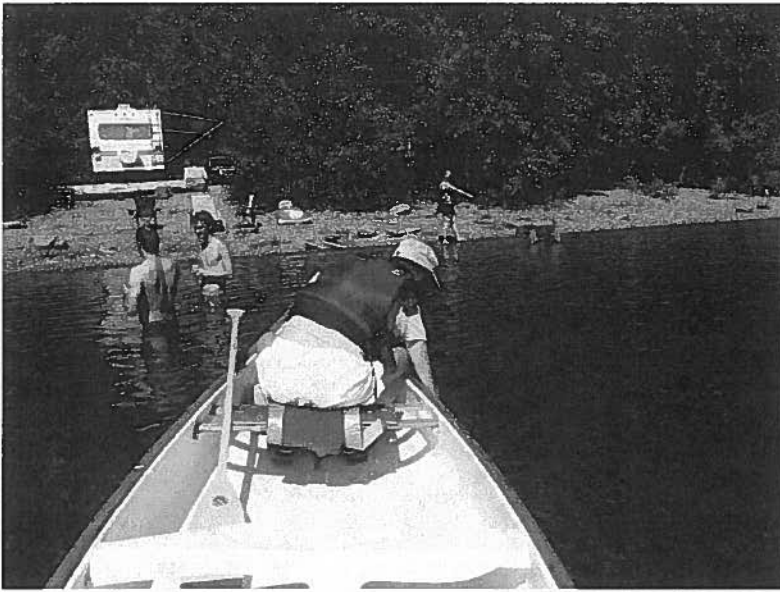


Photo 5. Surface water quality sample collected from Site #056 on August 30th 2016 showing high-season campsite use.

**APPENDIX A – WATER QUALITY SAMPLE LABORATORY ANALYSIS RESULTS**

Your Project #: F AND G  
Site Location: COMOX LAKE  
Your C.O.C. #: G114457

**Attention:Dusty Silvester**

Current Environmental  
244 - 4th Street  
Courtenay, BC  
Canada V9N 1G6

**Report Date: 2016/05/06**  
Report #: R2175193  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B632396**

**Received: 2016/04/29, 11:15**

Sample Matrix: Water  
# Samples Received: 4

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Coliform by membrane filtration (1)	4	N/A	2016/04/29	BBY4SOP-00001	SM 22 9222 m
E.coli by membrane filtration in Water (1)	4	N/A	2016/04/29	BBY4SOP-00001	SM 22 9222 m
EPH in Water when PAH required (1)	4	2016/05/05	2016/05/05	BBY8SOP-00029	BCMOE EPH w 12/00 m
PAH in Water by GC/MS (SIM) (1)	4	2016/05/05	2016/05/05	BBY8SOP-00021	EPA 8270d R4 m
Total LMW, HMW, Total PAH Calc (1)	4	N/A	2016/05/06	BBY WI-00033	Auto Calc
EPH less PAH in Water by GC/FID (1)	4	N/A	2016/05/06	BBY WI-00033	Auto Calc
MBAS Surfactants Subcontract (2)	4	2016/05/06	2016/05/06		

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Vancouver

(2) This test was performed by Sub Vancouver to Exova BC

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Shanaz Akbar, Project Manager

Email: SAKbar@maxxam.ca

Phone# (604)639-2618

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**RESULTS OF CHEMICAL ANALYSES OF WATER**

<b>Maxxam ID</b>		ON6562	ON6563	ON6564	ON6565	
<b>Sampling Date</b>		2016/04/29 10:00	2016/04/29 10:05	2016/04/29 10:10	2016/04/29 10:15	
<b>COC Number</b>		G114457	G114457	G114457	G114457	
	<b>UNITS</b>	<b>G056</b>	<b>G057</b>	<b>G058</b>	<b>G059</b>	<b>QC Batch</b>
<b>Parameter</b>						
<b>Subcontract Parameter</b>	N/A	ATTACHED	ATTACHED	ATTACHED	ATTACHED	8262897

Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**MICROBIOLOGY (WATER)**

Maxxam ID		ON6562	ON6563	ON6564	ON6565		
Sampling Date		2016/04/29 10:00	2016/04/29 10:05	2016/04/29 10:10	2016/04/29 10:15		
COC Number		G114457	G114457	G114457	G114457		
	UNITS	G056	G057	G058	G059	RDL	QC Batch
Microbiological Param.							
E. coli	CFU/100mL	<1	<1	<1	<1	1	8256425
Total Coliforms	CFU/100mL	40	4	8	3	1	8256424
RDL = Reportable Detection Limit							

Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (WATER)**

Maxxam ID		ON6562	ON6563	ON6564	ON6565		
Sampling Date		2016/04/29 10:00	2016/04/29 10:05	2016/04/29 10:10	2016/04/29 10:15		
COC Number		G114457	G114457	G114457	G114457		
	UNITS	G056	G057	G058	G059	RDL	QC Batch
<b>Polycyclic Aromatics</b>							
Low Molecular Weight PAH's	ug/L	<0.24	<0.24	<0.24	<0.24	0.24	8255513
High Molecular Weight PAH's	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8255513
Total PAH	ug/L	<0.24	<0.24	<0.24	<0.24	0.24	8255513
Naphthalene	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	8260964
2-Methylnaphthalene	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	8260964
Quinoline	ug/L	<0.24	<0.24	<0.24	<0.24	0.24	8260964
Acenaphthylene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Acenaphthene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Fluorene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Phenanthrene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	8260964
Acridine	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Fluoranthene	ug/L	<0.020	<0.020	<0.020	<0.020	0.020	8260964
Pyrene	ug/L	<0.020	<0.020	<0.020	<0.020	0.020	8260964
Benzo(a)anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	8260964
Chrysene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Benzo(b&j)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Benzo(a)pyrene	ug/L	<0.0090	<0.0090	<0.0090	<0.0090	0.0090	8260964
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Dibenz(a,h)anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8260964
<b>Calculated Parameters</b>							
LEPH (C10-C19 less PAH)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8255514
HEPH (C19-C32 less PAH)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8255514
<b>Ext. Pet. Hydrocarbon</b>							
EPH (C10-C19)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8260978
EPH (C19-C32)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8260978
<b>Surrogate Recovery (%)</b>							
O-TERPHENYL (sur.)	%	95	94	94	93		8260978
D10-ANTHRACENE (sur.)	%	93	106	99	100		8260964
D8-ACENAPHTHYLENE (sur.)	%	95	105	100	102		8260964
RDL = Reportable Detection Limit							

Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (WATER)**

Maxxam ID		ON6562	ON6563	ON6564	ON6565		
Sampling Date		2016/04/29 10:00	2016/04/29 10:05	2016/04/29 10:10	2016/04/29 10:15		
COC Number		G114457	G114457	G114457	G114457		
	UNITS	G056	G057	G058	G059	RDL	QC Batch
D8-NAPHTHALENE (sur.)	%	90	89	84	96		8260964
D9-Acridine	%	85	96	90	89		8260964
TERPHENYL-D14 (sur.)	%	88	102	93	94		8260964
RDL = Reportable Detection Limit							

Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**GENERAL COMMENTS**

**Results relate only to the items tested.**

Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**QUALITY ASSURANCE REPORT**

QA/QC			Parameter	Date	Value	Recovery	UNITS	QC Limits
Batch	Init	QC Type		Analyzed				
8260964	JC9	Matrix Spike	D10-ANTHRACENE (sur.)	2016/05/05		102	%	60 - 130
			D8-ACENAPHTHYLENE (sur.)	2016/05/05		100	%	50 - 130
			D8-NAPHTHALENE (sur.)	2016/05/05		78	%	50 - 130
			D9-Acridine	2016/05/05		96	%	50 - 130
			TERPHENYL-D14 (sur.)	2016/05/05		110	%	60 - 130
			Naphthalene	2016/05/05		NC	%	50 - 130
			2-Methylnaphthalene	2016/05/05		88	%	50 - 130
			Quinoline	2016/05/05		108	%	50 - 130
			Acenaphthylene	2016/05/05		97	%	50 - 130
			Acenaphthene	2016/05/05		NC	%	50 - 130
			Fluorene	2016/05/05		NC	%	50 - 130
			Phenanthrene	2016/05/05		NC	%	60 - 130
			Anthracene	2016/05/05		90	%	60 - 130
			Acridine	2016/05/05		91	%	50 - 130
			Fluoranthene	2016/05/05		NC	%	60 - 130
			Pyrene	2016/05/05		102	%	60 - 130
			Benzo(a)anthracene	2016/05/05		96	%	60 - 130
			Chrysene	2016/05/05		97	%	60 - 130
			Benzo(b&j)fluoranthene	2016/05/05		94	%	60 - 130
			Benzo(k)fluoranthene	2016/05/05		99	%	60 - 130
			Benzo(a)pyrene	2016/05/05		105	%	60 - 130
			Indeno(1,2,3-cd)pyrene	2016/05/05		65	%	60 - 130
			Dibenz(a,h)anthracene	2016/05/05		62	%	60 - 130
			Benzo(g,h,i)perylene	2016/05/05		59 (1)	%	60 - 130
8260964	JC9	Spiked Blank	D10-ANTHRACENE (sur.)	2016/05/05		107	%	60 - 130
			D8-ACENAPHTHYLENE (sur.)	2016/05/05		104	%	50 - 130
			D8-NAPHTHALENE (sur.)	2016/05/05		86	%	50 - 130
			D9-Acridine	2016/05/05		99	%	50 - 130
			TERPHENYL-D14 (sur.)	2016/05/05		117	%	60 - 130
			Naphthalene	2016/05/05		79	%	50 - 130
			2-Methylnaphthalene	2016/05/05		86	%	50 - 130
			Quinoline	2016/05/05		99	%	50 - 130
			Acenaphthylene	2016/05/05		95	%	50 - 130
			Acenaphthene	2016/05/05		93	%	50 - 130
			Fluorene	2016/05/05		86	%	50 - 130
			Phenanthrene	2016/05/05		97	%	60 - 130
			Anthracene	2016/05/05		96	%	60 - 130
			Acridine	2016/05/05		89	%	50 - 130
			Fluoranthene	2016/05/05		99	%	60 - 130
			Pyrene	2016/05/05		101	%	60 - 130
			Benzo(a)anthracene	2016/05/05		88	%	60 - 130
			Chrysene	2016/05/05		90	%	60 - 130
			Benzo(b&j)fluoranthene	2016/05/05		94	%	60 - 130
			Benzo(k)fluoranthene	2016/05/05		90	%	60 - 130
			Benzo(a)pyrene	2016/05/05		101	%	60 - 130
			Indeno(1,2,3-cd)pyrene	2016/05/05		91	%	60 - 130
			Dibenz(a,h)anthracene	2016/05/05		90	%	60 - 130
			Benzo(g,h,i)perylene	2016/05/05		85	%	60 - 130
8260964	JC9	Method Blank	D10-ANTHRACENE (sur.)	2016/05/05		95	%	60 - 130
			D8-ACENAPHTHYLENE (sur.)	2016/05/05		97	%	50 - 130
			D8-NAPHTHALENE (sur.)	2016/05/05		86	%	50 - 130
			D9-Acridine	2016/05/05		88	%	50 - 130
			TERPHENYL-D14 (sur.)	2016/05/05		97	%	60 - 130
			Naphthalene	2016/05/05		<0.10		ug/L

Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			2-Methylnaphthalene	2016/05/05	<0.10		ug/L	
			Quinoline	2016/05/05	<0.24		ug/L	
			Acenaphthylene	2016/05/05	<0.050		ug/L	
			Acenaphthene	2016/05/05	<0.050		ug/L	
			Fluorene	2016/05/05	<0.050		ug/L	
			Phenanthrene	2016/05/05	<0.050		ug/L	
			Anthracene	2016/05/05	<0.010		ug/L	
			Acridine	2016/05/05	<0.050		ug/L	
			Fluoranthene	2016/05/05	<0.020		ug/L	
			Pyrene	2016/05/05	<0.020		ug/L	
			Benzo(a)anthracene	2016/05/05	<0.010		ug/L	
			Chrysene	2016/05/05	<0.050		ug/L	
			Benzo(b&j)fluoranthene	2016/05/05	<0.050		ug/L	
			Benzo(k)fluoranthene	2016/05/05	<0.050		ug/L	
			Benzo(a)pyrene	2016/05/05	<0.0090		ug/L	
			Indeno(1,2,3-cd)pyrene	2016/05/05	<0.050		ug/L	
			Dibenz(a,h)anthracene	2016/05/05	<0.050		ug/L	
			Benzo(g,h,i)perylene	2016/05/05	<0.050		ug/L	
8260964	JC9	RPD	Naphthalene	2016/05/05	5.8		%	40
			2-Methylnaphthalene	2016/05/05	NC		%	40
			Quinoline	2016/05/05	NC		%	40
			Acenaphthylene	2016/05/05	3.1		%	40
			Acenaphthene	2016/05/05	9.0		%	40
			Fluorene	2016/05/05	5.2		%	40
			Phenanthrene	2016/05/05	13		%	40
			Anthracene	2016/05/05	9.7		%	40
			Acridine	2016/05/05	22		%	40
			Fluoranthene	2016/05/05	4.0		%	40
			Pyrene	2016/05/05	3.4		%	40
			Benzo(a)anthracene	2016/05/05	NC		%	40
			Chrysene	2016/05/05	NC		%	40
			Benzo(b&j)fluoranthene	2016/05/05	NC		%	40
			Benzo(k)fluoranthene	2016/05/05	NC		%	40
			Benzo(a)pyrene	2016/05/05	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/05/05	NC		%	40
			Dibenz(a,h)anthracene	2016/05/05	NC		%	40
			Benzo(g,h,i)perylene	2016/05/05	NC		%	40
8260978	IT1	Matrix Spike	O-TERPHENYL (sur.)	2016/05/05		96	%	50 - 130
			EPH (C10-C19)	2016/05/05		119	%	50 - 130
			EPH (C19-C32)	2016/05/05		106	%	50 - 130
8260978	IT1	Spiked Blank	O-TERPHENYL (sur.)	2016/05/05		95	%	50 - 130
			EPH (C10-C19)	2016/05/05		101	%	50 - 130
			EPH (C19-C32)	2016/05/05		100	%	50 - 130
8260978	IT1	Method Blank	O-TERPHENYL (sur.)	2016/05/05		99	%	50 - 130
			EPH (C10-C19)	2016/05/05	<0.20		mg/L	
			EPH (C19-C32)	2016/05/05	<0.20		mg/L	
8260978	IT1	RPD	EPH (C10-C19)	2016/05/05	1.7		%	30

Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC				Date					
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits	
			EPH (C19-C32)	2016/05/05	NC		%	30	
<p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).</p> <p>NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples &lt; 5x RDL).</p> <p>(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.</p>									

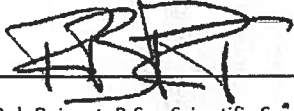


Maxxam Job #: B632396  
Report Date: 2016/05/06

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**VALIDATION SIGNATURE PAGE**

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Rob Reinert, B.Sc., Scientific Specialist

---

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



CHAIN OF CUSTODY RECORD

G 114457

BBY FCO-0007705

Page 1 of 1

Form 101 4/00 (Canada, U.S., Mexico, B.C. Use U.S. and F.W. 1/97) Iss. 4/06

Company Name: **CURRENT ENVIRONMENTAL**  
 Contact Name: **DUSTY SILVESTER**  
 Address: **744 4th St**  
**COASTWAY # 19N166**  
 Phone: **250-871-1944**  
 Email: **current@environmental.ca**

Project Information (where applicable):  
 Project # **Ford G**  
 Location **CONOR LAKE**  
 Sample ID **DS & WF**

Client Information:  
 Client Name: **DS & WF**  
 Address: **100 W. 1st St**  
 City: **Victoria**  
 State: **BC**  
 Country: **Canada**

Special Instructions:  
 Ice Core  
 Ice Core (Specify):  
 Drinking Water  
 Ice Core Water  
 Other (Specify):  
 Ice Water Quality

Regulatory Criteria:  
 Methanol  
 Ethanol  
 Acetone  
 Benzene  
 Toluene  
 Xylene  
 Styrene  
 Chloroform  
 Trichloroethylene  
 Perchloroethylene  
 Hexachlorocyclopentadiene  
 Heptachlorocyclopentadiene  
 Heptachloroepoxide  
 Dieldrin  
 DDT  
 DDE  
 DDD  
 Aldrin  
 Dieldrin  
 Heptachlorocyclopentadiene  
 Heptachloroepoxide  
 Heptachloroepoxide  
 Heptachloroepoxide  
 Heptachloroepoxide

Sample Identification	Lot Identification	Date Sampled (YYYY/MM/DD)	Time (HH:MM)	Collector (Signature/Print)	Received By (Signature/Print)	Date (YYYY/MM/DD)	Time (HH:MM)
1 G056		2016/04/29	1000				
2 G057		"	1005				
3 G058		"	1010				
4 G059		"	1015				
5							
6							
7							
8							
9							
10							

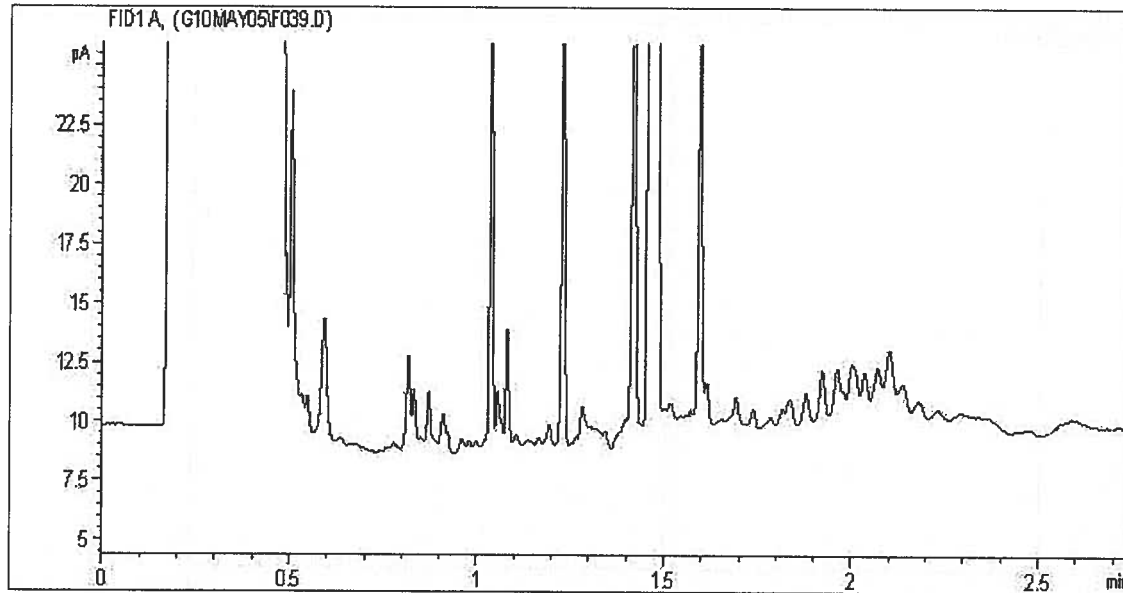
Signature: *[Signature]* Date: 2016/04/29 Time: 11:15  
 Signature: *[Signature]* Date: 2016/04/29 Time: 11:15

Comments:  
 X for Comments Entered  
 HOLD DO NOT ANALYZE  
 COOLERS TO BE RECHARGED  
 COOLERS TO BE RECHARGED  
 COOLERS TO BE RECHARGED

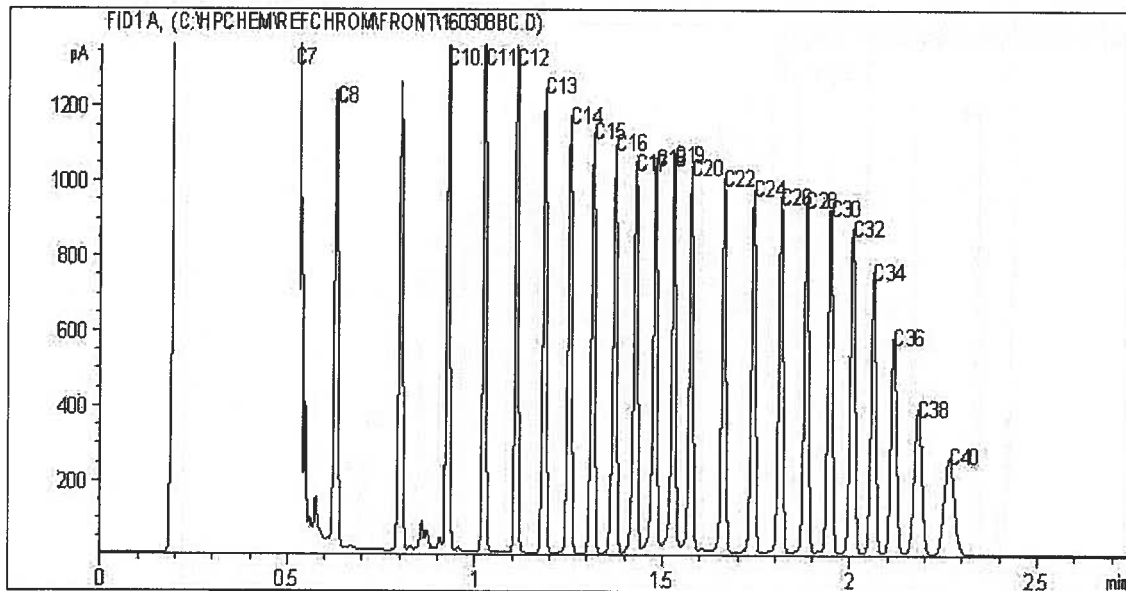
29-Apr-16 11:15  
 Sharaz Akbar  
 B612396

MBU

EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram

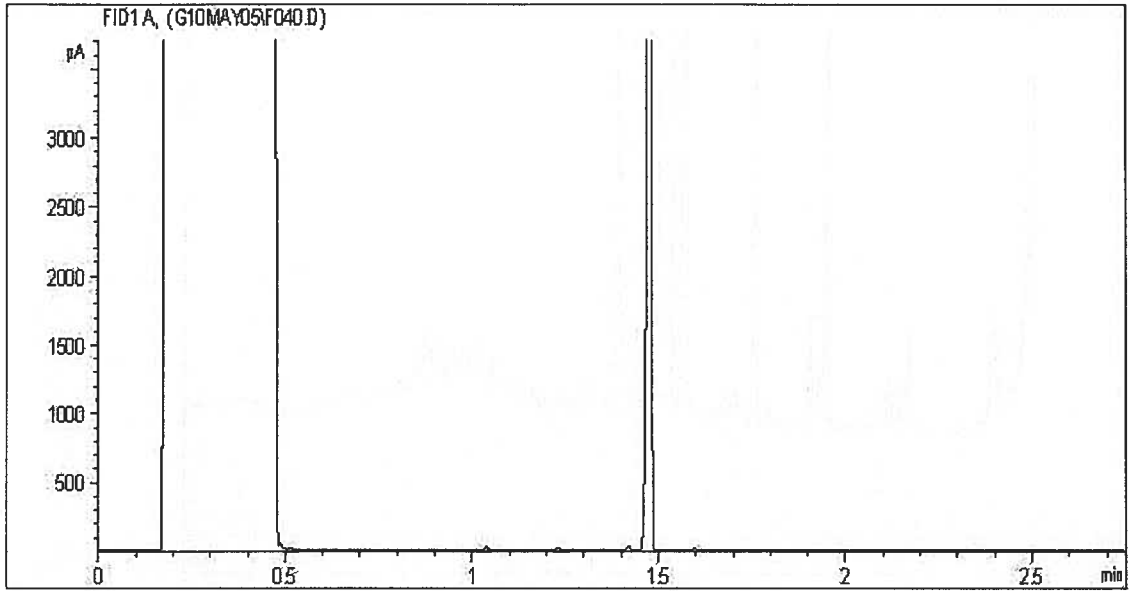


TYPICAL PRODUCT CARBON NUMBER RANGES

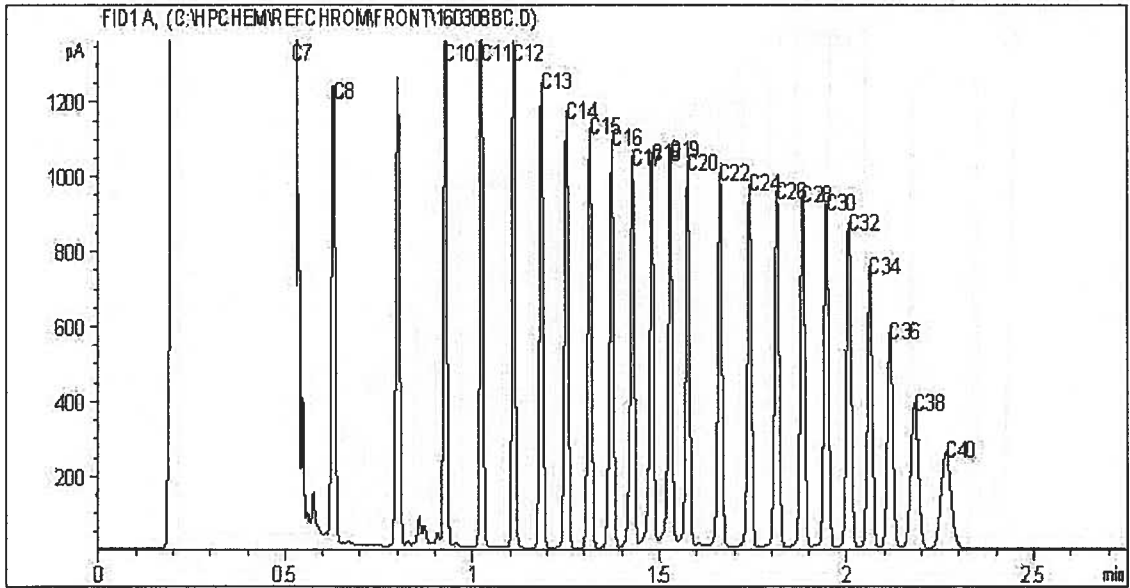
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram

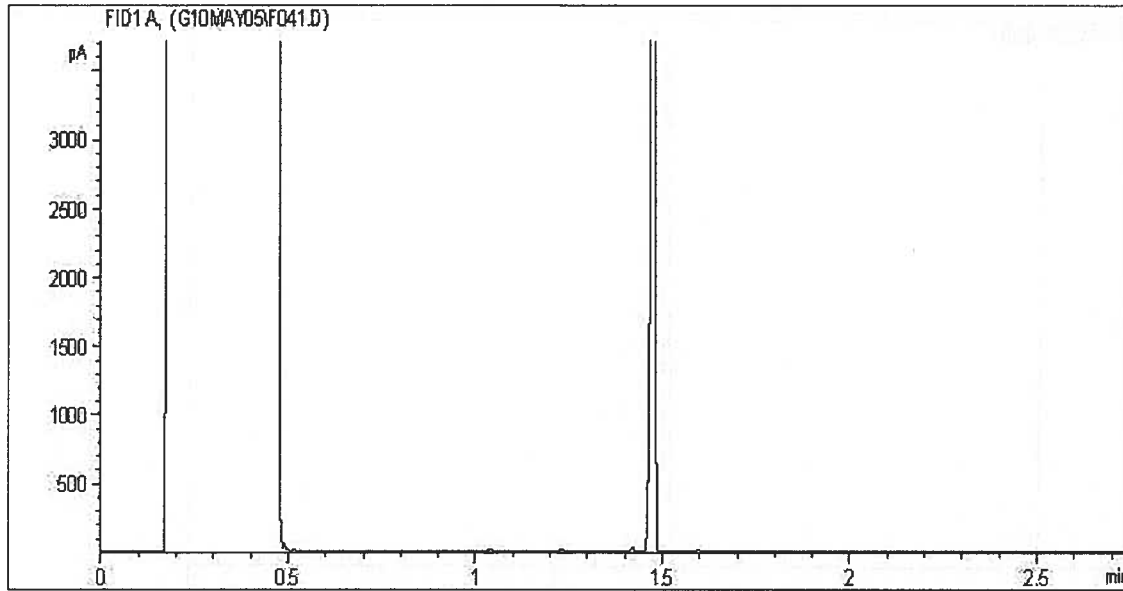


TYPICAL PRODUCT CARBON NUMBER RANGES

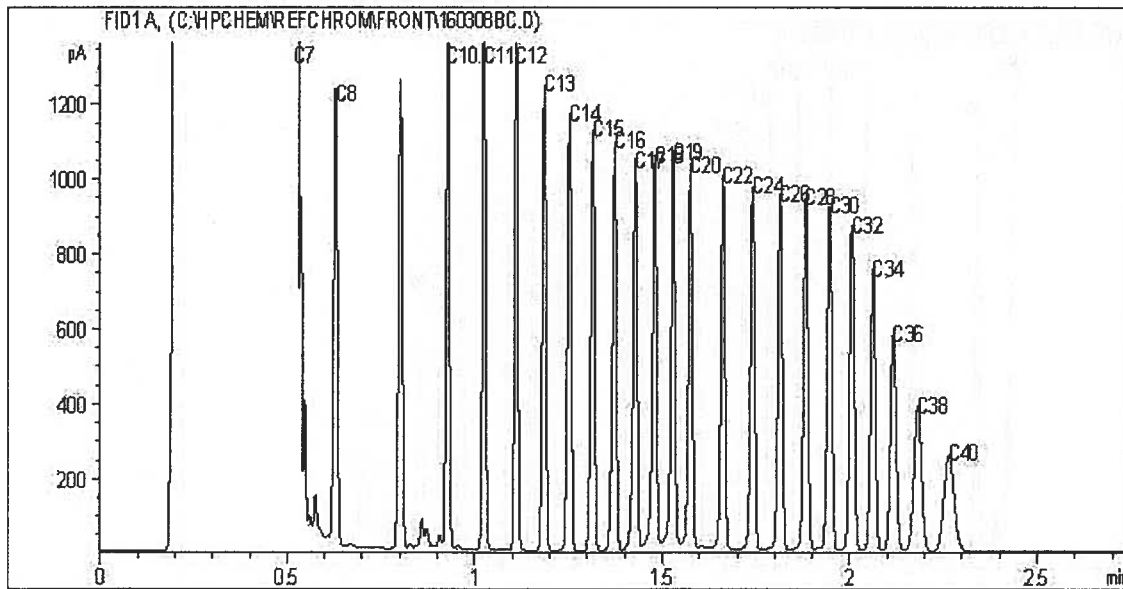
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram

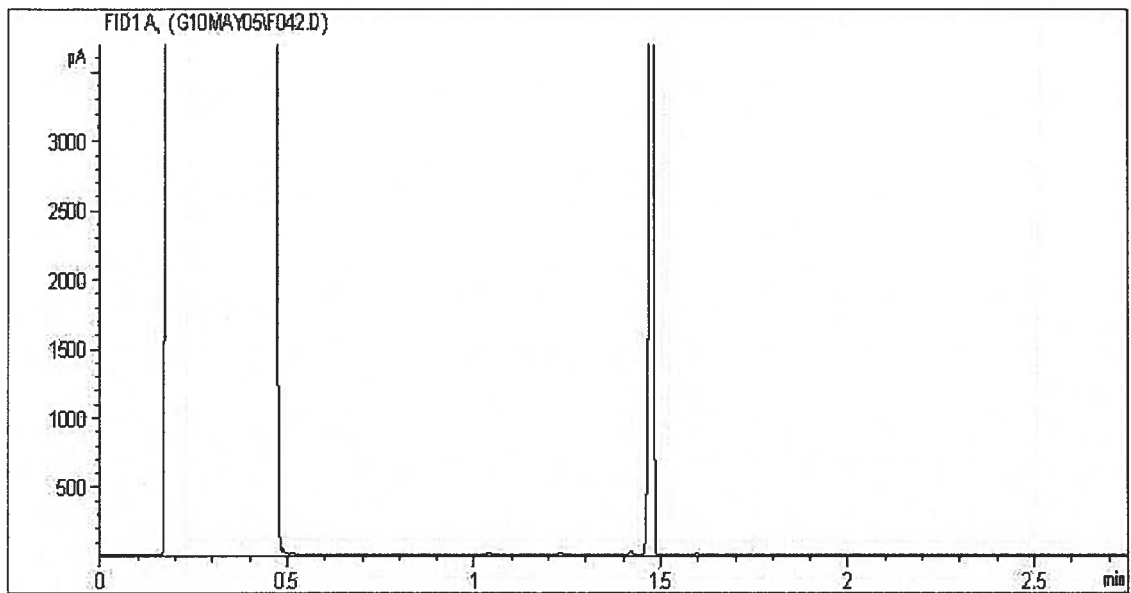


TYPICAL PRODUCT CARBON NUMBER RANGES

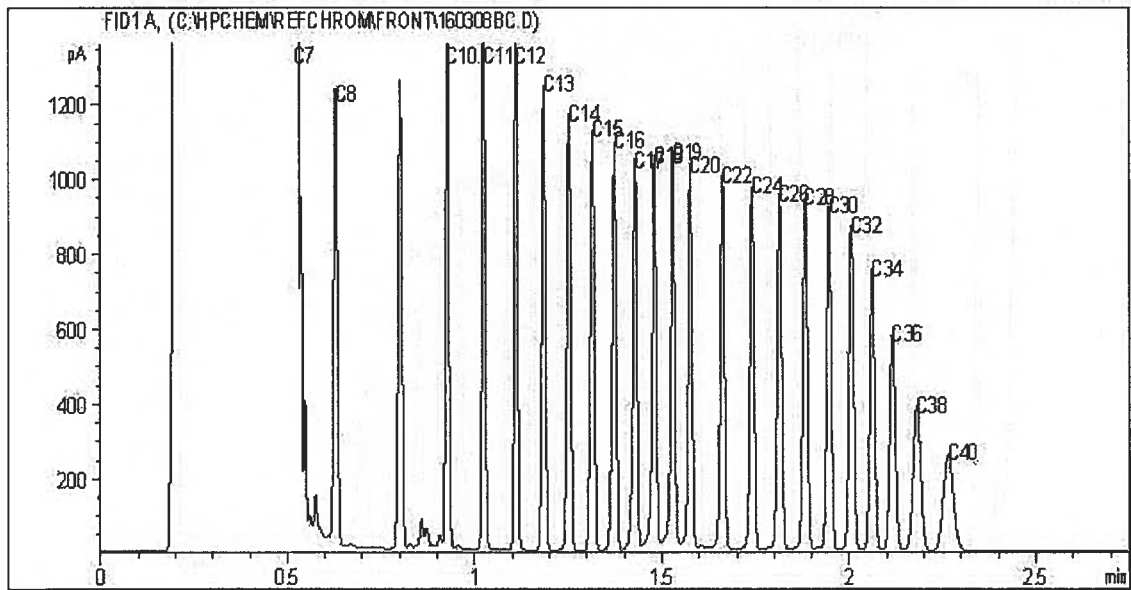
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline: C4 - C12

Diesel: C8 - C22

Varsol: C8 - C12

Lubricating Oils: C20 - C40

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Exova  
#104, 19575-55 A Ave.  
Surrey, British Columbia  
V3S 8P8, Canada

T: +1 (604) 514-3322  
F: +1 (604) 514-3323  
E: Surrey@exova.com  
W: www.exova.com



## Report Transmission Cover Page

Bill To: Maxxam Analytics	Project:	Lot ID: <b>1135145</b>
Report To: Maxxam Analytics	ID: Job#B632396	Control Number:
4606 Canada Way	Name:	Date Received: May 2, 2016
Burnaby, BC, Canada	Location:	Date Reported: May 6, 2016
V5G 1K5	LSD:	Report Number: 2100159
Attn: Customer Service	P.O.:	
Sampled By:	Acct code:	
Company:		

Contact & Affiliation	Address	Delivery Commitments
Accounts Payable Maxxam Analytics	#500 1919 Minnesota Court, Mississauga, Ontario L5N 0C9 Phone: (866) 611-1118 Fax: (905) 288-2169 Email: accountspayablebc@maxxam.ca	On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report
Customer Service Maxxam Analytics	4606 Canada Way Burnaby, British Columbia V5G 1K5 Phone: (604) 734-7276 Fax: (604) 731-2386 Email: customerservicebc@maxxam.ca	On [Lot Verification] send (COA) by Email - Single Report On [Report Approval] send (COC, Test Report) by Email - Merge Reports
Shanaz Akbar Maxxam Analytics	4606 Canada Way Burnaby, British Columbia V5G 1K5 Phone: (604) 734-7276 Fax: (604) 731-2386 Email: sakbar@maxxam.ca	On [Lot Verification] send (COA) by Email - Single Report On [Report Approval] send (Test Report, COC) by Email - Merge Reports

### Notes To Clients:

- Analysis was performed on sample # 1135145-1 that exceeded the recommended holding time for surfactants analysis.

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Exova  
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**Analytical Report**

Bill To: Maxxam Analytics  
 Report To: Maxxam Analytics  
 4606 Canada Way  
 Burnaby, BC, Canada  
 V5G 1K5  
 Attn: Customer Service  
 Sampled By:  
 Company:

Project:  
 ID: Job#B632396  
 Name:  
 Location:  
 LSD:  
 P.O.:  
 Acct code:

Lot ID: **1135145**  
 Control Number:  
 Date Received: May 2, 2016  
 Date Reported: May 6, 2016  
 Report Number: 2100159

	Reference Number	1135145-1	1135145-2	1135145-3		
	Sample Date	Apr 29, 2016	Apr 29, 2016	Apr 29, 2016		
	Sample Time	10:00	10:05	10:10		
	Sample Location					
	Sample Description	ON6562-01\G056	ON6563-01\G057	ON6564-01\G058		
	Matrix	Water	Water	Water		
Analyte	Units	Results	Results	Results	Nominal Detection Limit	
<b>Aggregate Organic Constituents</b>						
Surfactants	Methylene Blue Active	mg/L	<0.05	<0.05	0.07	0.05





**Analytical Report**

Bill To: Maxxam Analytics  
Report To: Maxxam Analytics  
4606 Canada Way  
Burnaby, BC, Canada  
V5G 1K5  
Attn: Customer Service  
Sampled By:  
Company:


Project:  
ID: Job#B632396  
Name:  
Location:  
LSD:  
P.O.:  
Acct code:

Lot ID: **1135145**  
Control Number:  
Date Received: May 2, 2016  
Date Reported: May 6, 2016  
Report Number: 2100159

Reference Number 1135145-4  
Sample Date Apr 29, 2016  
Sample Time 10:15  
Sample Location  
Sample Description ON6565-01\G059

Matrix Water

Analyte	Units	Results	Results	Results	Nominal Detection Limit
<b>Aggregate Organic Constituents</b>					
Surfactants	Methylene Blue Active	mg/L	<0.05		0.05

Approved by:   
Carol Nam, Dipl. T.  
Quality Officer

**Methodology and Notes**

Bill To: Maxxam Analytics	Project:	Lot ID: <b>1135145</b>
Report To: Maxxam Analytics	ID: Job#B632396	Control Number:
4606 Canada Way	Name:	Date Received: May 2, 2016
Burnaby, BC, Canada	Location:	Date Reported: May 6, 2016
V5G 1K5	LSD:	Report Number: 2100159
Attn: Customer Service	P.O.:	
Sampled By:	Acct code:	
Company:		

---

**Method of Analysis**

Method Name	Reference	Method	Date Analysis Started	Location
Surfactants in water - anionic (Surrey)	APHA	* Anionic Surfactants as MBAS, 5540 C	04-May-16	Exova Surrey

*\* Reference Method Modified*

**References**

APHA Standard Methods for the Examination of Water and Wastewater

**Comments:**

- Analysis was performed on sample # 1135145-1 that exceeded the recommended holding time for surfactants analysis.

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.



**SUBCONTRACTING REQUEST FORM**

**To: Sub Vancouver to Exova BC**

**Job# B632396**

- Yes  No Charge us Rush charge (If rush charges are required to meet due date and Yes box is not checked, please call us)  
 Yes  No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)  
 Yes  No Special Protocol (if yes, Protocol \_\_\_\_\_)

Sample ID	Matrix	Test(s) Required	Container	Date Sampled	Date Required
ON6562-01R\G056	WATER	MBAS Surfactants Subcontract	1-1LAG	2016/04/29 10:00	2016/05/13
ON6563-01R\G057	WATER	MBAS Surfactants Subcontract	1-1LAG	2016/04/29 10:05	2016/05/13
ON6564-01R\G058	WATER	MBAS Surfactants Subcontract	1-1LAG	2016/04/29 10:10	2016/05/13
ON6565-01R\G059	WATER	MBAS Surfactants Subcontract	1-1LAG	2016/04/29 10:15	2016/05/13

	Temp. 1	Temp. 2	Temp. 3			
Cooler #1	9	8	9	Custody Seal Present	YES	NO
				Custody Seal Intact	YES	NO
				Ice Present Upon Receipt	YES	NO
Cooler #2				Custody Seal Present	YES	NO
				Custody Seal Intact	YES	NO
				Ice Present Upon Receipt	YES	NO
Cooler #3				Custody Seal Present	YES	NO
				Custody Seal Intact	YES	NO
				Ice Present Upon Receipt	YES	NO

Receiving Maxxam Location: Sub Vancouver to Exova BC JOB # \_\_\_\_\_

Relinquished by (Sign) [Signature] (print) MANINTOSH Date and Time Apr. 29/16

Received by (Sign) [Signature] (print) ICEVIN CHONG Date and Time 2016/04/29  
17:20

NOTES:

- 1) Please call us if due date cannot be met. Please reference Sample ID on your report.
- 2) Include copy of this completed form, Client COC & signed final report to [CustomerServiceBc@MaxxamAnalytics.com](mailto:CustomerServiceBc@MaxxamAnalytics.com) and to [SAkbar@maxxam.ca](mailto:SAkbar@maxxam.ca)

Reporting Requirements:

**Lot: 1135145** COC

RECEIVED

National:



MAY 02 2016

Regional:

*gc*

**Shipping Instructions**

- Ship Immediately (highlight Yellow)  Ship Cold  
 Requires 9am  Ship Room Temp  
 Requires Sat. Delivery  Ship Frozen  
 Regular Ship next available day  
 Sender (Print) \_\_\_\_\_ Initial \_\_\_\_\_

**Shipping Department Checklist**

- Correct Shipping location  
 Correct Sample Ids (Paperwork vs Bottles)  
 Yes  No Special-Cooler, Ice, Tape-custody seal, Date&Sign  
 Date Shipped \_\_\_\_\_ Number of coolers \_\_\_\_\_  
 Shipper (Print) \_\_\_\_\_ Initial \_\_\_\_\_

Your Project #: F AND G  
Site Location: COMOX LAKE  
Your C.O.C. #: G114689

**Attention:Dusty Silvester**

Current Environmental  
244 - 4th Street  
Courtenay, BC  
Canada V9N 1G6

**Report Date: 2016/09/19**  
**Report #: R2263641**  
**Version: 1 - Final**

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B672774**

**Received: 2016/08/25, 16:30**

Sample Matrix: Water  
# Samples Received: 4

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Coliforms & E.coli by Quantitray (MPN)	4	N/A	2016/08/25	CTYSOP-00002	Based on SM-9223
EPH in Water when PAH required (1)	4	2016/08/29	2016/09/02	BBY8SOP-00029	BCMOE EPH w 12/00 m
PAH in Water by GC/MS (SIM) (1)	4	2016/08/29	2016/08/29	BBY8SOP-00021	EPA 8270d R4 m
Total LMW, HMW, Total PAH Calc (1)	4	N/A	2016/08/30	BBY WI-00033	Auto Calc
EPH less PAH in Water by GC/FID (1)	4	N/A	2016/09/02	BBY WI-00033	Auto Calc
MBAS Surfactants Subcontract (2)	4	2016/09/19	2016/09/19		

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Vancouver

(2) This test was performed by Sub Vancouver to Exova BC

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

BC Env Customer Service, BC Environmental Customer Service

Email: Enviro.CS.BC@maxxam.ca

Phone# (250) 338 7786

=====  
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**RESULTS OF CHEMICAL ANALYSES OF WATER**

<b>Maxxam ID</b>		PJ0859	PJ0860	PJ0861	PJ0862	
<b>Sampling Date</b>		2016/08/25 13:30	2016/08/25 13:30	2016/08/25 13:35	2016/08/25 13:40	
<b>COC Number</b>		G114689	G114689	G114689	G114689	
	<b>UNITS</b>	<b>G056-2</b>	<b>G057-2</b>	<b>G058-2</b>	<b>G059-2</b>	<b>QC Batch</b>
<b>Parameter</b>						
Subcontract Parameter	N/A	ATTACHED	ATTACHED	ATTACHED	ATTACHED	8403287

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**MICROBIOLOGY (WATER)**

Maxxam ID		PJ0859	PJ0860	PJ0861	PJ0862		
Sampling Date		2016/08/25 13:30	2016/08/25 13:30	2016/08/25 13:35	2016/08/25 13:40		
COC Number		G114689	G114689	G114689	G114689		
	<b>UNITS</b>	<b>G056-2</b>	<b>G057-2</b>	<b>G058-2</b>	<b>G059-2</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Microbiological Param.</b>							
Total Coliforms	MPN/100mL	>200.5	144.5	47.8	42.9	1	8378212
E. coli	MPN/100mL	2.0	2.0	<1	<1	1	8378212
RDL = Reportable Detection Limit							

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (WATER)**

Maxxam ID		PJ0859	PJ0860	PJ0861	PJ0862		
Sampling Date		2016/08/25 13:30	2016/08/25 13:30	2016/08/25 13:35	2016/08/25 13:40		
COC Number		G114689	G114689	G114689	G114689		
	UNITS	G056-2	G057-2	G058-2	G059-2	RDL	QC Batch
<b>Polycyclic Aromatics</b>							
Low Molecular Weight PAH's	ug/L	<0.24	<0.24	<0.24	<0.24	0.24	8375992
High Molecular Weight PAH's	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8375992
Total PAH	ug/L	<0.24	<0.24	<0.24	<0.24	0.24	8375992
Naphthalene	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	8380243
2-Methylnaphthalene	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	8380243
Quinoline	ug/L	<0.24	<0.24	<0.24	<0.24	0.24	8380243
Acenaphthylene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Acenaphthene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Fluorene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Phenanthrene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	8380243
Acridine	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Fluoranthene	ug/L	<0.020	<0.020	<0.020	<0.020	0.020	8380243
Pyrene	ug/L	<0.020	<0.020	<0.020	<0.020	0.020	8380243
Benzo(a)anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	8380243
Chrysene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Benzo(b&j)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Benzo(a)pyrene	ug/L	<0.0090	<0.0090	<0.0090	<0.0090	0.0090	8380243
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Dibenz(a,h)anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	8380243
<b>Calculated Parameters</b>							
LEPH (C10-C19 less PAH)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8375993
HEPH (C19-C32 less PAH)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8375993
<b>Ext. Pet. Hydrocarbon</b>							
EPH (C10-C19)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8380259
EPH (C19-C32)	mg/L	<0.20	<0.20	<0.20	<0.20	0.20	8380259
<b>Surrogate Recovery (%)</b>							
O-TERPHENYL (sur.)	%	92	94	93	96		8380259
D10-ANTHRACENE (sur.)	%	107	110	112	111		8380243
D8-ACENAPHTHYLENE (sur.)	%	107	111	111	110		8380243
RDL = Reportable Detection Limit							

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (WATER)**

Maxxam ID		PJ0859	PJ0860	PJ0861	PJ0862		
Sampling Date		2016/08/25 13:30	2016/08/25 13:30	2016/08/25 13:35	2016/08/25 13:40		
COC Number		G114689	G114689	G114689	G114689		
	<b>UNITS</b>	<b>G056-2</b>	<b>G057-2</b>	<b>G058-2</b>	<b>G059-2</b>	<b>RDL</b>	<b>QC Batch</b>
D8-NAPHTHALENE (sur.)	%	94	98	100	106		8380243
D9-Acridine	%	82	83	84	85		8380243
TERPHENYL-D14 (sur.)	%	102	102	104	106		8380243
RDL = Reportable Detection Limit							



Maxxam Job #: B672774  
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Current Environmental  
Client Project #: F AND G  
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**GENERAL COMMENTS**

Results relate only to the items tested.

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**QUALITY ASSURANCE REPORT**

QA/QC			Parameter	Date	Value	Recovery	UNITS	QC Limits			
Batch	Init	QC Type		Analyzed							
8378212	MVS	RPD	Total Coliforms	2016/08/25	NC		%	N/A			
			E. coli	2016/08/25	NC		%	N/A			
			Total Coliforms	2016/08/25	NC		%	N/A			
			E. coli	2016/08/25	NC		%	N/A			
			Total Coliforms	2016/08/25	NC		%	N/A			
			E. coli	2016/08/25	NC		%	N/A			
			Total Coliforms	2016/08/25	NC		%	N/A			
			E. coli	2016/08/25	39		%	N/A			
			8380243	LS2	Matrix Spike	D10-ANTHRACENE (sur.)	2016/08/29		110	%	60 - 130
D8-ACENAPHTHYLENE (sur.)	2016/08/29					117	%	50 - 130			
D8-NAPHTHALENE (sur.)	2016/08/29					77	%	50 - 130			
D9-Acridine	2016/08/29					98	%	50 - 130			
TERPHENYL-D14 (sur.)	2016/08/29					94	%	60 - 130			
Naphthalene	2016/08/29					NC	%	50 - 130			
2-Methylnaphthalene	2016/08/29					NC	%	50 - 130			
Quinoline	2016/08/29					NC	%	50 - 130			
Acenaphthylene	2016/08/29					135 (1)	%	50 - 130			
Acenaphthene	2016/08/29					NC	%	50 - 130			
Fluorene	2016/08/29					NC	%	50 - 130			
Phenanthrene	2016/08/29					NC	%	60 - 130			
Anthracene	2016/08/29					104	%	60 - 130			
Acridine	2016/08/29					93	%	50 - 130			
Fluoranthene	2016/08/29					96	%	60 - 130			
Pyrene	2016/08/29					95	%	60 - 130			
Benzo(a)anthracene	2016/08/29					102	%	60 - 130			
Chrysene	2016/08/29					97	%	60 - 130			
Benzo(b&j)fluoranthene	2016/08/29					97	%	60 - 130			
Benzo(k)fluoranthene	2016/08/29					90	%	60 - 130			
Benzo(a)pyrene	2016/08/29					89	%	60 - 130			
Indeno(1,2,3-cd)pyrene	2016/08/29					74	%	60 - 130			
Dibenz(a,h)anthracene	2016/08/29					75	%	60 - 130			
Benzo(g,h,i)perylene	2016/08/29					70	%	60 - 130			
8380243	LS2	Spiked Blank				D10-ANTHRACENE (sur.)	2016/08/29		115	%	60 - 130
						D8-ACENAPHTHYLENE (sur.)	2016/08/29		114	%	50 - 130
						D8-NAPHTHALENE (sur.)	2016/08/29		107	%	50 - 130
			D9-Acridine	2016/08/29		103	%	50 - 130			
			TERPHENYL-D14 (sur.)	2016/08/29		111	%	60 - 130			
			Naphthalene	2016/08/29		102	%	50 - 130			
			2-Methylnaphthalene	2016/08/29		108	%	50 - 130			
			Quinoline	2016/08/29		114	%	50 - 130			
			Acenaphthylene	2016/08/29		108	%	50 - 130			
			Acenaphthene	2016/08/29		109	%	50 - 130			
			Fluorene	2016/08/29		106	%	50 - 130			
			Phenanthrene	2016/08/29		107	%	60 - 130			
			Anthracene	2016/08/29		112	%	60 - 130			
			Acridine	2016/08/29		106	%	50 - 130			
			Fluoranthene	2016/08/29		106	%	60 - 130			
			Pyrene	2016/08/29		105	%	60 - 130			
			Benzo(a)anthracene	2016/08/29		116	%	60 - 130			
			Chrysene	2016/08/29		113	%	60 - 130			
			Benzo(b&j)fluoranthene	2016/08/29		122	%	60 - 130			
			Benzo(k)fluoranthene	2016/08/29		120	%	60 - 130			
			Benzo(a)pyrene	2016/08/29		117	%	60 - 130			
			Indeno(1,2,3-cd)pyrene	2016/08/29		116	%	60 - 130			

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits			
8380243	LS2	Method Blank	Dibenz(a,h)anthracene	2016/08/29		117	%	60 - 130			
			Benzo(g,h,i)perylene	2016/08/29		111	%	60 - 130			
			D10-ANTHRACENE (sur.)	2016/08/29		115	%	60 - 130			
			D8-ACENAPHTHYLENE (sur.)	2016/08/29		113	%	50 - 130			
			D8-NAPHTHALENE (sur.)	2016/08/29		107	%	50 - 130			
			D9-Acridine	2016/08/29		90	%	50 - 130			
			TERPHENYL-D14 (sur.)	2016/08/29		112	%	60 - 130			
			Naphthalene	2016/08/29	<0.10		ug/L				
			2-Methylnaphthalene	2016/08/29	<0.10		ug/L				
			Quinoline	2016/08/29	<0.24		ug/L				
			Acenaphthylene	2016/08/29	<0.050		ug/L				
			Acenaphthene	2016/08/29	<0.050		ug/L				
			Fluorene	2016/08/29	<0.050		ug/L				
			Phenanthrene	2016/08/29	<0.050		ug/L				
			Anthracene	2016/08/29	<0.010		ug/L				
			Acridine	2016/08/29	<0.050		ug/L				
			Fluoranthene	2016/08/29	<0.020		ug/L				
			Pyrene	2016/08/29	<0.020		ug/L				
			8380243	LS2	RPD	Benzo(a)anthracene	2016/08/29	<0.010		ug/L	
						Chrysene	2016/08/29	<0.050		ug/L	
Benzo(b&j)fluoranthene	2016/08/29	<0.050					ug/L				
Benzo(k)fluoranthene	2016/08/29	<0.050					ug/L				
Benzo(a)pyrene	2016/08/29	<0.0090					ug/L				
Indeno(1,2,3-cd)pyrene	2016/08/29	<0.050					ug/L				
Dibenz(a,h)anthracene	2016/08/29	<0.050					ug/L				
Benzo(g,h,i)perylene	2016/08/29	<0.050					ug/L				
Naphthalene	2016/08/30	5.5					%	40			
2-Methylnaphthalene	2016/08/30	6.1					%	40			
Quinoline	2016/08/30	NC (2)					%	40			
Acenaphthylene	2016/08/30	NC					%	40			
Acenaphthene	2016/08/30	7.1					%	40			
Fluorene	2016/08/30	6.6					%	40			
Phenanthrene	2016/08/30	4.9					%	40			
Anthracene	2016/08/30	9.6					%	40			
Acridine	2016/08/30	NC					%	40			
Fluoranthene	2016/08/30	NC					%	40			
Pyrene	2016/08/30	NC					%	40			
8380259	IT1	Matrix Spike				Benzo(a)anthracene	2016/08/30	NC		%	40
			Chrysene	2016/08/30	NC		%	40			
			Benzo(b&j)fluoranthene	2016/08/30	NC		%	40			
			Benzo(k)fluoranthene	2016/08/30	NC		%	40			
			Benzo(a)pyrene	2016/08/30	NC		%	40			
			Indeno(1,2,3-cd)pyrene	2016/08/30	NC		%	40			
			Dibenz(a,h)anthracene	2016/08/30	NC		%	40			
			Benzo(g,h,i)perylene	2016/08/30	NC		%	40			
			O-TERPHENYL (sur.)	2016/09/02		98	%	50 - 130			
			EPH (C10-C19)	2016/09/02		94	%	50 - 130			
			EPH (C19-C32)	2016/09/02		93	%	50 - 130			
			8380259	IT1	Spiked Blank	O-TERPHENYL (sur.)	2016/09/02		95	%	50 - 130
						EPH (C10-C19)	2016/09/02		94	%	50 - 130
						EPH (C19-C32)	2016/09/02		92	%	50 - 130
			8380259	IT1	Method Blank	O-TERPHENYL (sur.)	2016/09/02		98	%	50 - 130
						EPH (C10-C19)	2016/09/02	<0.20		mg/L	
						EPH (C19-C32)	2016/09/02	<0.20		mg/L	

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**QUALITY ASSURANCE REPORT(CONT'D)**

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8380259	IT1	RPD	EPH (C10-C19)	2016/09/02	2.6		%	30
			EPH (C19-C32)	2016/09/02	NC		%	30

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

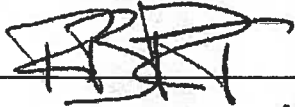
(2) Detection limits raised due to matrix interference.

Maxxam Job #: B672774  
Report Date: 2016/09/19

Current Environmental  
Client Project #: F AND G  
Site Location: COMOX LAKE

**VALIDATION SIGNATURE PAGE**

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



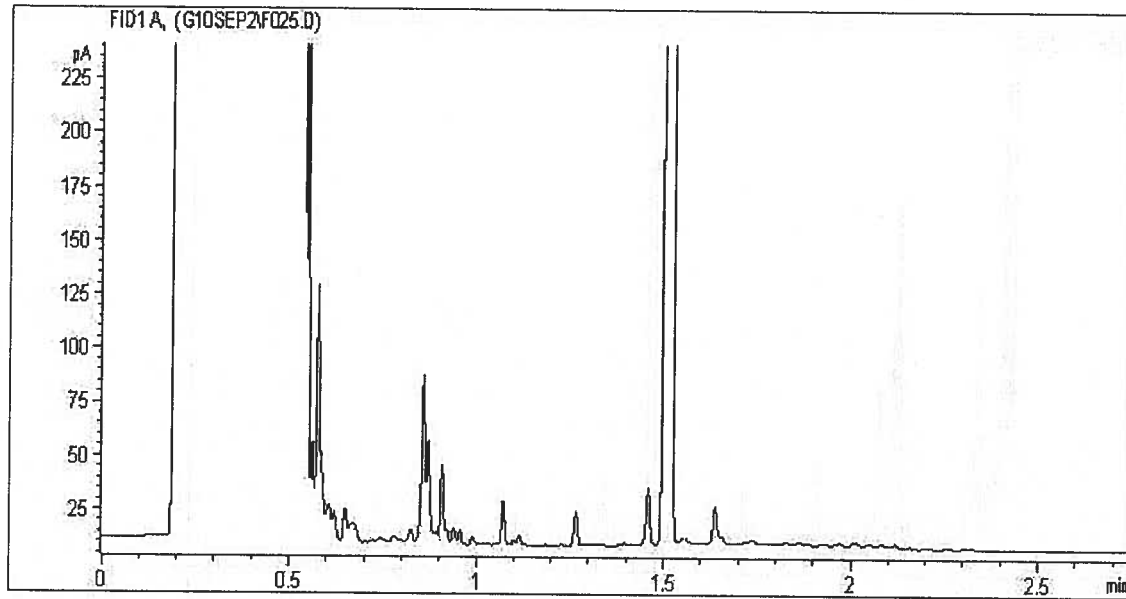
Rob Reinert, B.Sc., Scientific Specialist

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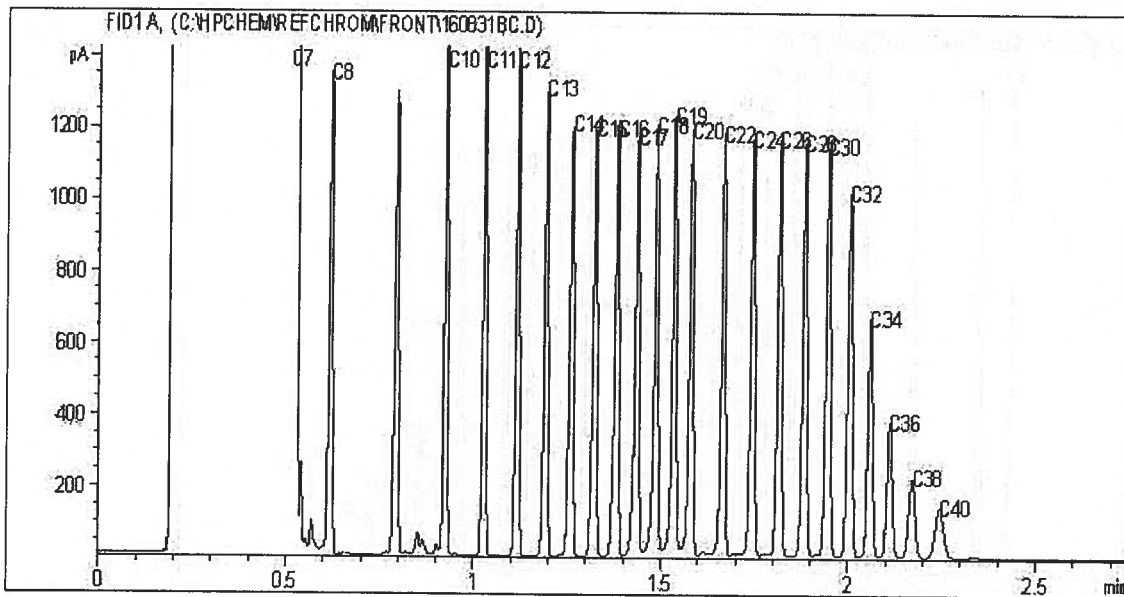
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EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline: C4 - C12

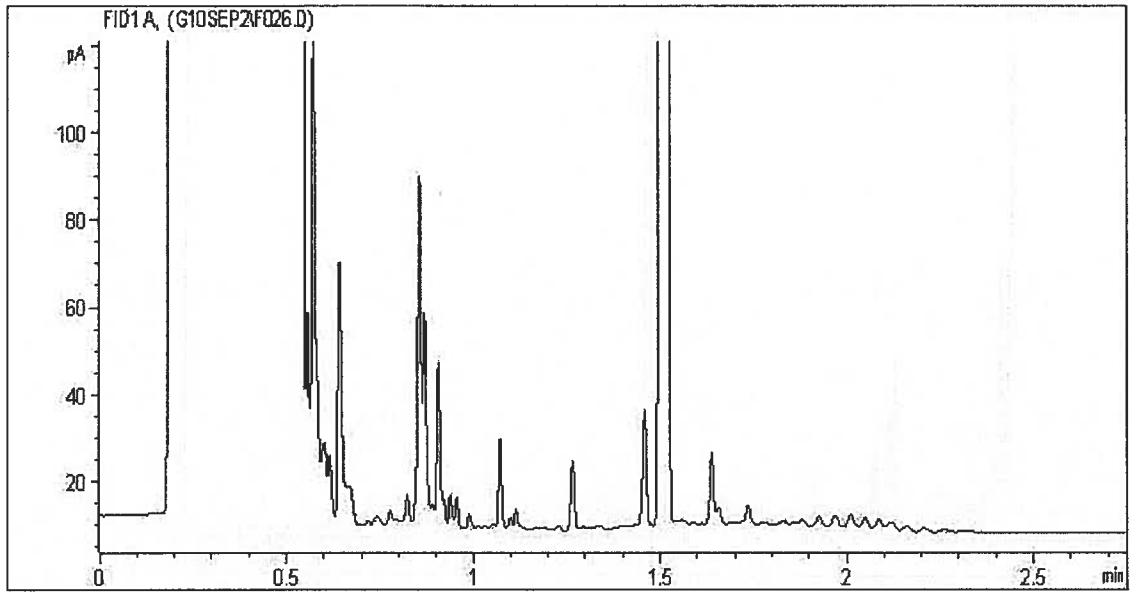
Diesel: C8 - C22

Varsol: C8 - C12

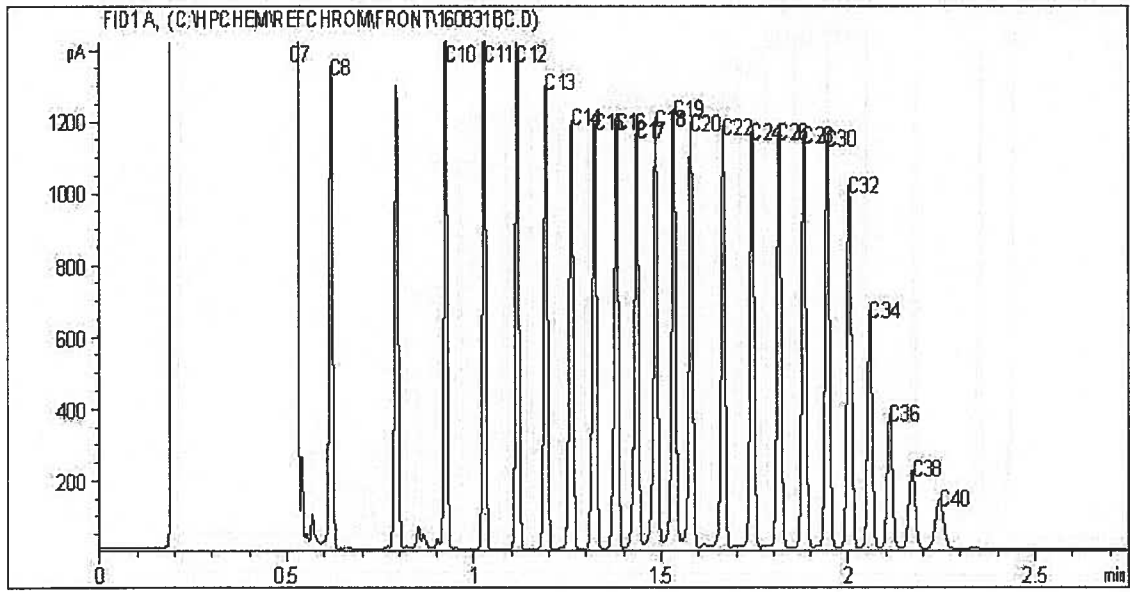
Lubricating Oils: C20 - C40

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram



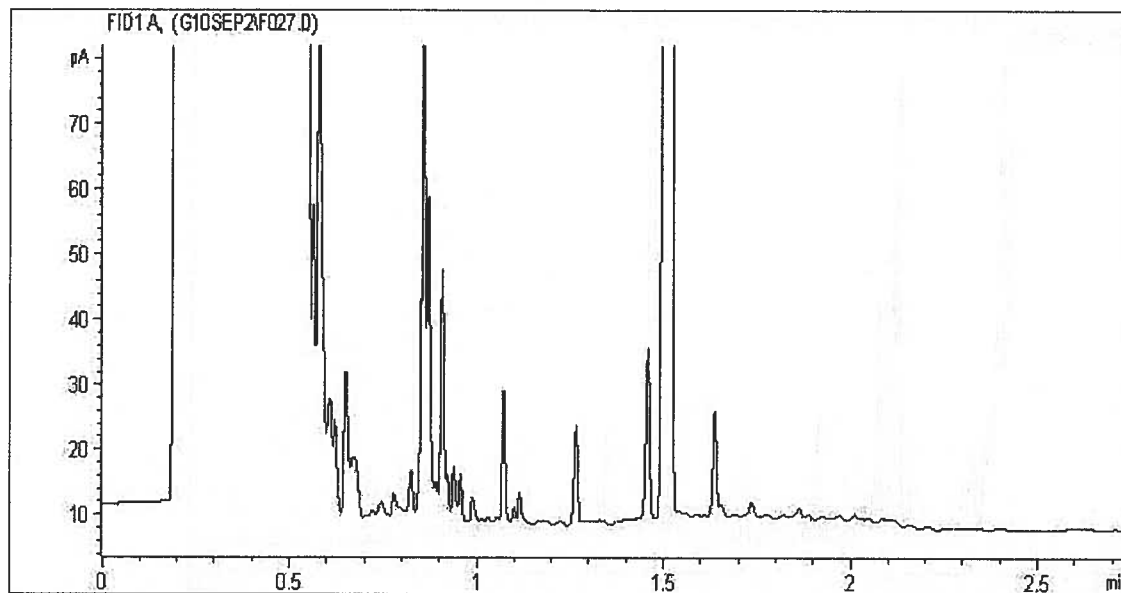
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40

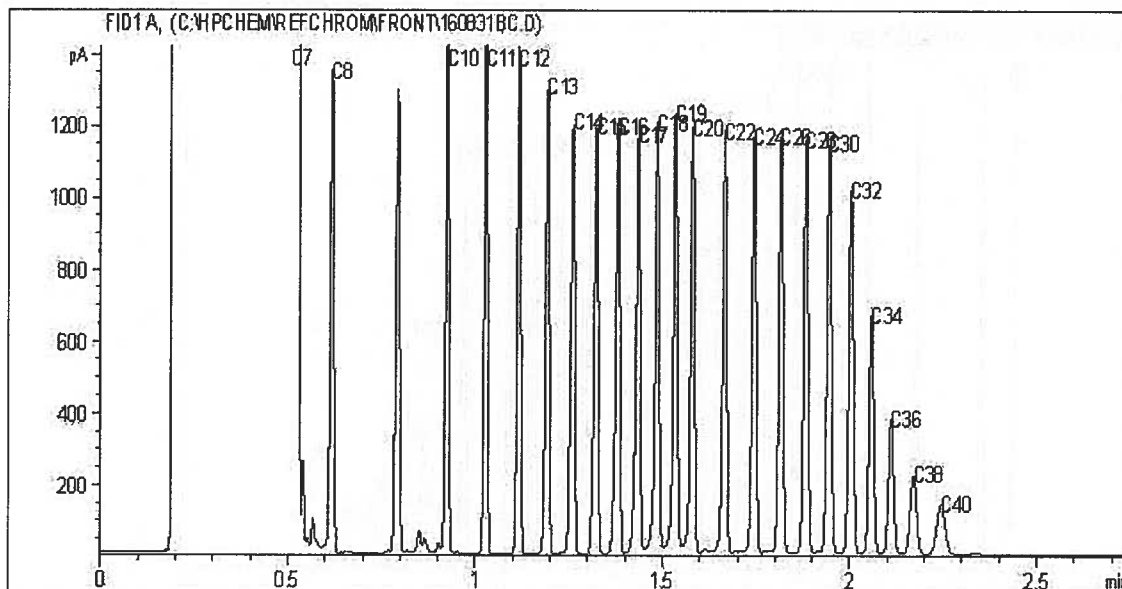
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.



EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram

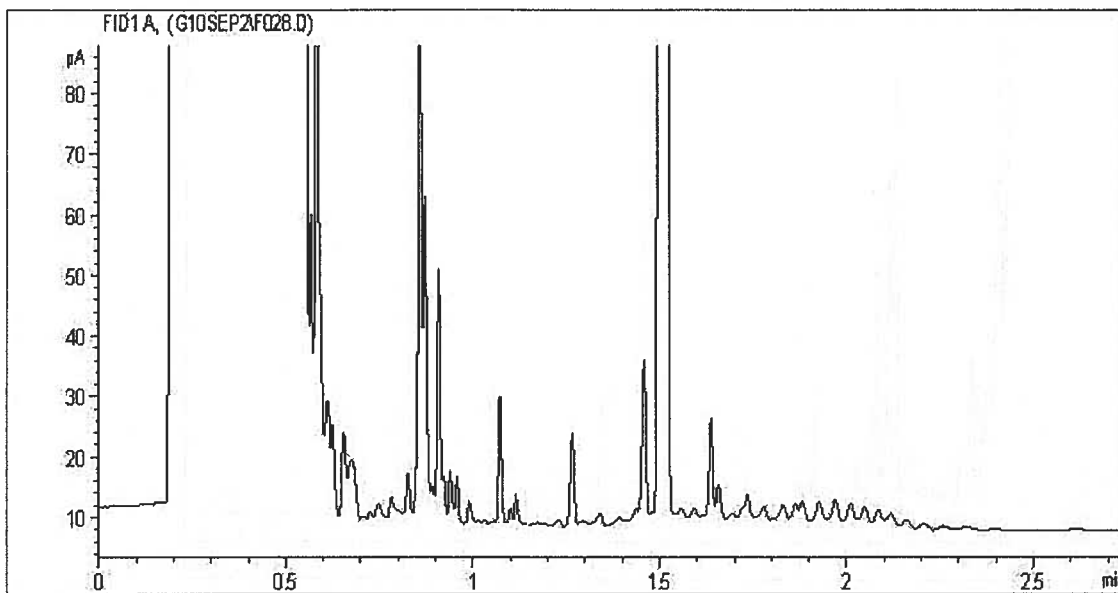


TYPICAL PRODUCT CARBON NUMBER RANGES

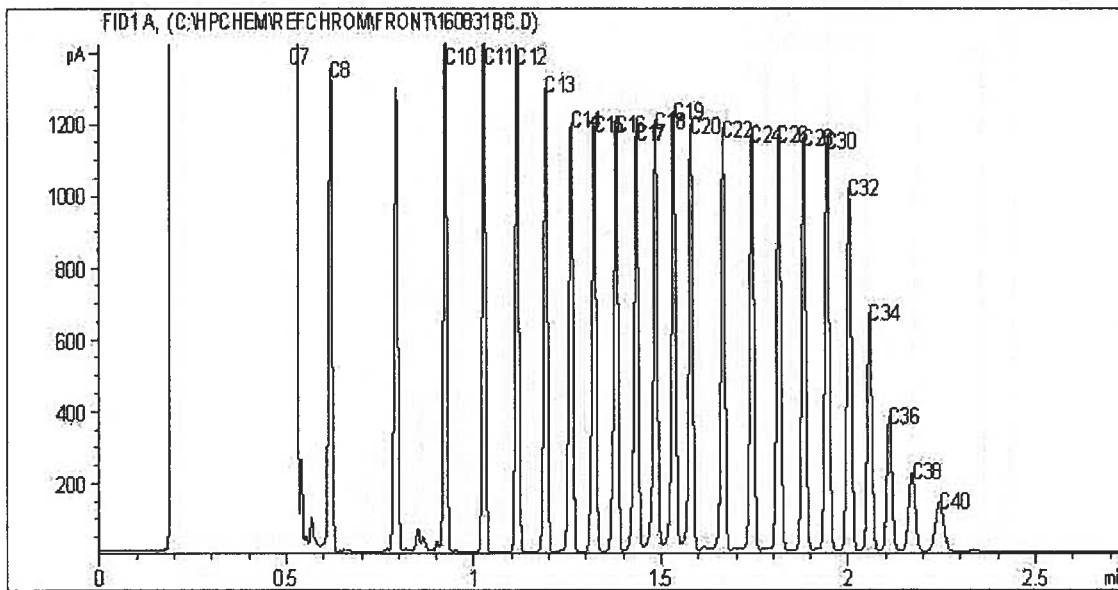
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline: C4 - C12  
 Varsol: C8 - C12

Diesel: C8 - C22  
 Lubricating Oils: C20 - C40

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

**Report Transmission Cover Page**

Bill To: Maxxam Analytics	Project:	Lot ID: <b>1157742</b>
Report To: Maxxam Analytics	ID: Job#B672774	Control Number:
4606 Canada Way	Name:	Date Received: Aug 29, 2016
Burnaby, BC, Canada	Location:	Date Reported: Sep 2, 2016
V5G 1K5	LSD:	Report Number: 2128425
Attn: Customer Service	P.O.:	
Sampled By:	Acct code:	
Company:		

Contact & Affiliation	Address	Delivery Commitments
Accounts Payable Maxxam Analytics	#500 1919 Minnesota Court, Mississauga, Ontario L5N 0C9 Phone: (866) 611-1118 Fax: (905) 288-2169 Email: accountspayablebc@maxxam.ca	On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report
Customer Service Maxxam Analytics	4606 Canada Way Burnaby, British Columbia V5G 1K5 Phone: (604) 734-7276 Fax: (604) 731-2386 Email: customerservicebc@maxxam.ca	On [Lot Verification] send (COA) by Email - Single Report On [Report Approval] send (COC, Test Report) by Email - Merge Reports
Enviro Maxxam Analytics	4606 Canada Way Burnaby, British Columbia V5G 1K5 Phone: (604) 734-7276 Fax: (604) 731-2386 Email: enviro.cs.bc@maxxam.ca	On [Lot Verification] send (COA) by Email - Single Report On [Report Approval] send (Test Report, COC) by Email - Merge Reports

**Notes To Clients:**

- Analysis was performed on sample # 1157742-1-4 that exceeded the recommended holding time for surfactants analysis.

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**Analytical Report**

Bill To: Maxxam Analytics	Project:	Lot ID: <b>1157742</b>
Report To: Maxxam Analytics	ID: Job#B672774	Control Number:
4606 Canada Way	Name:	Date Received: Aug 29, 2016
Burnaby, BC, Canada	Location:	Date Reported: Sep 2, 2016
V5G 1K5	LSD:	Report Number: 2128425
Attn: Customer Service	P.O.:	
Sampled By:	Acct code:	
Company:		

	Reference Number	1157742-1	1157742-2	1157742-3		
	Sample Date	Aug 25, 2016	Aug 25, 2016	Aug 25, 2016		
	Sample Time	13:30	13:30	13:35		
	Sample Location					
	Sample Description	PJ0859-01R\G056-2	PJ0860-01R\G057-2	PJ0861-01R\G058-2		
	Matrix	Water	Water	Water		
Analyte	Units	Results	Results	Results	Nominal Detection Limit	
<b>Aggregate Organic Constituents</b>						
Surfactants	Methylene Blue Active	mg/L	<0.05	<0.05	0.11	0.05



**Analytical Report**


Bill To: Maxxam Analytics  
Report To: Maxxam Analytics  
4606 Canada Way  
Burnaby, BC, Canada  
V5G 1K5  
Attn: Customer Service  
Sampled By:  
Company:

Project:  
ID: Job#B672774  
Name:  
Location:  
LSD:  
P.O.:  
Acct code:

Lot ID: **1157742**  
Control Number:  
Date Received: Aug 29, 2016  
Date Reported: Sep 2, 2016  
Report Number: 2128425

**Reference Number** 1157742-4  
**Sample Date** Aug 25, 2016  
**Sample Time** 13:40  
**Sample Location**  
**Sample Description** PJ0862-01RIG059-2

Analyte	Matrix		Results	Results	Results	Nominal Detection Limit
	Units	Water				
<b>Aggregate Organic Constituents</b>						
Surfactants	Methylene Blue Active	mg/L	<0.05			0.05

Approved by:   
Carol Nam, Dipl. T.  
Quality Officer

## Methodology and Notes

Bill To: Maxxam Analytics	Project:	Lot ID: <b>1157742</b>
Report To: Maxxam Analytics	ID: Job#B672774	Control Number:
4606 Canada Way	Name:	Date Received: Aug 29, 2016
Burnaby, BC, Canada	Location:	Date Reported: Sep 2, 2016
V5G 1K5	LSD:	Report Number: 2128425
Attn: Customer Service	P.O.:	
Sampled By:	Acct code:	
Company:		

---

## Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Surfactants in water - anionic (Surrey)	APHA	* Anionic Surfactants as MBAS, 5540 C	02-Sep-16	Exova Surrey

*\* Reference Method Modified*

## References

APHA Standard Methods for the Examination of Water and Wastewater

## Comments:

- Analysis was performed on sample # 1157742-1-4 that exceeded the recommended holding time for surfactants analysis.

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

2755-B Moray Avenue  
Courtenay, British Columbia, V9N 8M9  
(250) 338 7786  
(250) 338 7553

Lot: 1157742 COC



Maxxam PM BC Env Customer Service

To: Sub Vancouver to Exova BC

Job# B672774

- Yes  No Charge us Rush charge (If rush charges are required to meet due date and Yes box is not checked, please call us)
- Yes  No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
- Yes  No Special Protocol (if yes, Protocol \_\_\_\_\_)

Sample ID	Matrix	Test(s) Required	Container	Date Sampled	Date Required
PJ0859-01R\G056-2	WATER	MBAS Surfactants Subcontract	1-1LP	2016/08/25 13:30	2016/09/09
PJ0860-01R\G057-2	WATER	MBAS Surfactants Subcontract	1-1LP	2016/08/25 13:30	2016/09/09
PJ0861-01R\G058-2	WATER	MBAS Surfactants Subcontract	1-1LP	2016/08/25 13:35	2016/09/09
PJ0862-01R\G059-2	WATER	MBAS Surfactants Subcontract	1-1LP	2016/08/25 13:40	2016/09/09

	Temp. 1	Temp. 2	Temp. 3		YES	NO
Cooler #1				Custody Seal Present	YES	NO
				Custody Seal Intact	YES	NO
				Ice Present Upon Receipt	YES	NO
Cooler #2				Custody Seal Present	YES	NO
				Custody Seal Intact	YES	NO
				Ice Present Upon Receipt	YES	NO
Cooler #3				Custody Seal Present	YES	NO
				Custody Seal Intact	YES	NO
				Ice Present Upon Receipt	YES	NO

RECEIVED  
AUG 29 2016  
5.4°C

Receiving Maxxam Location: Sub Vancouver to Exova BC

JOB # \_\_\_\_\_

Relinquished by (Sign) [Signature] (print) MM Intersh Date and Time Aug 25/16

Received by (Sign) \_\_\_\_\_ (print) \_\_\_\_\_ Date and Time \_\_\_\_\_

- NOTES:
- Please call us if due date cannot be met. Please reference Sample ID on your report.
  - Include copy of this completed form, Client COC & signed final report to [CustomerServiceBc@MaxxamAnalytics.com](mailto:CustomerServiceBc@MaxxamAnalytics.com) and to [Enviro.CS.BC@maxxam.ca](mailto:Enviro.CS.BC@maxxam.ca)

Reporting Requirements:

National:  
Regional:

Shipping Instructions

- Ship Immediately (highlight Yellow)
- Requires 9am
- Requires Sat. Delivery
- Regular Ship next available day
- Sender (Print) \_\_\_\_\_ Initial \_\_\_\_\_
- Ship Cold
- Ship Room Temp
- Ship Frozen

Shipping Department Checklist

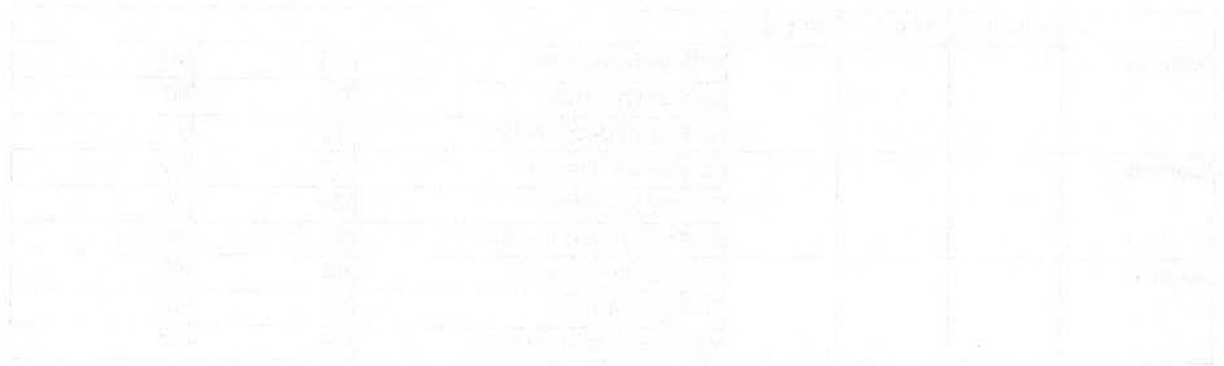
- Correct Shipping location
- Correct Sample Ids (Paperwork vs Bottles)
- Yes  No Special-Cooler, Ice, Tape-custody seal, Date&Sign
- Date Shipped \_\_\_\_\_ Number of coolers \_\_\_\_\_
- Shipper (Print) \_\_\_\_\_ Initial \_\_\_\_\_

# Technical Memorandum



558 England Ave  
Courtenay, BC V9N 2N3  
p: 250.871.1944  
w: currentenvironmental.ca

## APPENDIX B - COURTENAY AND DISTRICT FISH AND GAME PROTECTIVE ASSOCIATION - PROPERTY, CAMPGROUND, AND BOAT LAUNCH REGULATIONS





**COURTENAY AND DISTRICT FISH & GAME PROTECTIVE ASSOCIATION****GENERAL PROPERTY REGULATIONS**

1. Members are responsible for acceptable, considerate, quiet and non-abusive behaviour from themselves, their family and guests at all time while on Association property. Abuse of rules could result in an Ethics Committee appearance and/or loss of membership.
2. Members are not to loan their gate key or membership cards at any time. Random gate checks are held to enforce this.
3. Speed limits on Association property are to be followed for the safety of members and families.
4. No ATVs, dirt/trail bikes, mini bikes, etc. are to be used on property with the exception of use by the Association for special events and or work projects.
5. All pets must be kept on leash, quiet and under control at all times. Droppings must be promptly cleaned up, bagged and disposed of in garbage containers. No dogs are allowed in the swimming area.
6. All members, family and their guests are to stay off main grounds and clubhouse area across the walk bridge when a private function is taking place.
7. Archery range trails and gun ranges (including Cowboy Action Range and Boomtown) are strictly out of bounds to non-users. No unsupervised minors are to be within archery trails, fish hatchery and tank area, or gun ranges at any time.
8. Absolutely NO USE OF ILLEGAL DRUGS on Association property.
9. No consumption of alcohol in the swimming area or while walking around the campground. COMMON SENSE AND DISCRETION TO BE USED; do not carry OPEN alcoholic beverages while moving from one campsite to another. That is the law. Consumption of alcohol at the main hall is in designated areas only and not on the grounds. Absolutely no consumption of alcohol on any shooting ranges including archery.
10. No bicycles, skateboards, roller blades, long boards etc. outside campground without adult supervision.

**CAMPGROUND REGULATIONS**

1. Camping rules and privileges are for all members. The campground caretaker has the authority to evict campers from campsite and the Association reserves the right to have a member come before the Ethics Committee for discipline or revocation of membership for flagrant disregard for other members and/or the regulations. Members are responsible for their guests at all times.
2. Check in time is 12:30PM and check out time is 11:30AM.
3. All campers (members and guests) are to stop at office upon arrival for registration and to stop at office when checking out as well.
4. Campers are to sign ledger acknowledging they will read and abide by the rules (handed out at sign in).
5. Campground caretaker has authority for site assignment and occupancy. Rates are \$15 per day per unit for each site and shall be paid in advance for the full stay. Campers wishing to book additional nights must let the caretaker know by 8PM on the evening before the scheduled departure. Failure to do so means that you may lose your site the next morning and you have to vacate by the 11:30AM checkout time. Some sites can accommodate more than one unit, please park accordingly to keep within your site area. Remember all units, vehicles and trailers, must be parked on your site.
6. If a site is booked for 10 days and another member joins their site part way through, that site is to be vacated at the end of the original 10 day booking. The new member cannot continue to occupy that site.
7. If a member leaves the evening before checkout, the site will remain vacant until 12:30 check-in the next day.
8. Members may bring one guest unit (\$20 more per night) to SHARE a site with the occupying member for the length of their stay. Guests will not be given their own site. Waterfront sites A-G are for self-contained units only.
9. First come, first served. However, you can PAY for and temporarily hold that site as long as you return with your unit within that same day/evening. Also, a member can pay for a site for one other extra member (must provide name and membership #). Out of town members may call ahead to find out if there are any vacant sites available, but the site cannot be reserved.
10. Guests must be accompanied at all times by a member. A spouse/partner that does not hold a Spousal membership is considered a guest as well and must also be accompanied by a member. Children and minors are also considered as guests and must have adult supervision at all times.
11. Maximum stay is ten (10) days per month and encompasses one weekend only. Campsite must be vacated for 5 days to allow other campers the use of the campground. Your stay could be extended if multiple vacancies exist but only on a nightly basis.
12. All fires must be in the assigned campsite rings and must be extinguished before retiring for the evening or leaving the campsite. At no time are they permitted on the beach regardless of water levels. Campsite rings are not to be moved to the beach area. No cutting of live trees or burning of wet or dirty garbage.
13. Leave your area cleaner than you found it. Please dispose of cigarette butts properly and pick up and dispose of any garbage, bottle caps, glass, nails, etc. Garbage and recycle containers are provided. It is critical that no plastic bags or disposable diapers be put in the outhouses as they will plug up the sewage disposal trucks. Smoking is permitted in the campsites only.
14. "Quiet time" is 10PM. No loud music, partying or other noise after 10PM. All music should be turned down to a low level at all times for courtesy to your neighbours.
15. Generators, if required, are to run only between 12:30PM until 4:30PM. Courtesy and consideration of other campers is expected.
16. Vehicles including boat trailers, are only to be parked within the site, not on the road or outside the campground gate. Vehicles from waterfront sites and Geritol Heights are to be parked perpendicular to the lake unless approval granted by campground caretaker.
17. For safety reasons, there will be no riding of bikes or swimming after dark.
18. Hard shell water recreation, all floating objects/toys such as canoes, kayaks, boards, etc. are NOT permitted in the swimming area for the safety of swimmers.
19. Health regulations will be enforced – release of gray or black water is not permitted on Association property. Emptying of holding tanks should be at proper discharge locations in town. No bathing or washing of hair, dishes or laundry in the lake. Swimmers should follow Health Canada and Center for Disease Control guidelines for infants in diapers and individuals with diarrhoea illness.
20. The entire campground or certain camp sites and/or the boat launch may be closed to members on occasion for special events authorized by the Board. Notice will be given through email, website calendar and announced at General Meetings.
21. CDFGPA will not be held responsible for any lost, stolen or damaged items or equipment brought onto property.

**BOAT LAUNCH REGULATIONS**

1. All motorized boats must be launched from the boat ramp only.
2. No motorized boats, kayaks or canoes are to be within the swimming area.
3. Boats are to be beached with a stern/bow line attached to shore in posted areas only and shall not remain moored, beached or unattended overnight. All boats shall be removed from the water by sunset with the exception of boats used in special events and with the approval of the Board.
4. No jet-ski/seadoo type watercraft will be launched or operated from or within the Association's property.
5. All boats and trailers shall be free of any organic material before launching into Comox Lake, especially when coming from another body of water.
6. No fuelling, maintenance or repairs of boats and motors while on the lake or within 100 feet (30 meters) of the shoreline.
7. Holding tanks are not to be emptied on the lake or on Association property. Bilge drain plugs will not be pulled while on the Association property. Both should only be emptied at approved sites.
8. All Provincial and Federal boating safety regulations must be followed.
9. Whatever is taken on the lake is to be taken off the lake.
10. No rafting of unattended power boats will be permitted while on Association property.
11. Speed limit of 5 KPH or trolling (idle) speed only within log boom sticks inner area. No wake please.
12. If the member has a boat, a guest boat will not be permitted to launch or operate on Association property. If the member does not have a boat, his or her guest's boat is permitted with a daily launch fee of \$10.
13. Boats may be on the property for use while camping or fishing. Boats are not to be left parked on the property for any other purpose including For Sale purposes.

General Property, Boat Launch and Campground rules apply to everyone using any and ALL parts of Association property. The Courtenay and District Fish & Game Protective Association or the Caretakers are not responsible or liable for any personal injury, theft or damage of personal property while on the Association property at any time. Launching, boating, and camping are at your own risk. Remember that as an Association member, you are a steward of the land and the lake and as such, we all share ownership and responsibility for this property. Responsible, considerate behaviour and common courtesy to others is expected from all members at all times and it is up to members to police it. Don't be afraid to speak to those who appear to be breaking rules. Sometimes talking will solve the issue. If necessary, report any problems to the campground caretaker, club caretaker or any Board member. Abuse of rules could result in loss of membership.





**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

Comox Valley Regional District  
**RECEIVED**

File:

JUN 29 2017

To:

cc:

# Appendix D

# Site Profile

COMMUNITY DEVELOPMENT



RECEIVED  
Community Development District

File:

JUN 24 2013

File:

File:

COMMUNITY DEVELOPMENT

COMMUNITY DEVELOPMENT

Comox Valley Regional District  
**RECEIVED**

File:

Nov. 26, 2014  
NOV 29 2017

Ministry of Environment.

To:

Site ID No. 13392

To Whom It May Concern,

It is my understanding that the processing of this information may cause a delay in the consideration of our rezoning application by the R.D.

The rezoning request does not involve any actual changes to the existing uses of our property. The rezoning will bring the existing uses and the zoning into conformity with one another.

Taking the above into consideration we would ask that you allow the R.D. to proceed with our application.

Should you require additional information or have any questions we will respond in a timely manner.

Comox Valley Regional District

File:

**RECEIVED**  
Thanking You for Your Considerations.  
RZ1C14  
NOV 27 2014

To:

Robert McClure  
jandbmccclure@shaw.ca  
250-339-1179

cc:

Comox Valley Regional District  
RECEIVED

**I CONTACT IDENTIFICATION**

**A. Name of Site Owner:**  
Last \_\_\_\_\_ First \_\_\_\_\_ Middle Initial(s) \_\_\_\_\_ (and/or, if applicable)  
Company Courtenay & District Fish & Game Protective Association  
Owner's Civic Address 3780 Colake Road, Comox Lake,  
City Courtenay Province/State BC  
Country Canada Postal Code/ZIP V9N 9M9

**B. Person Completing Site Profile (Leave blank if same as above):**  
Last McClure First Robert Middle Initial(s) J. (and/or, if applicable)  
Company Vice President Courtenay Fish & Game

**C. Person to Contact Regarding the Site Profile:**  
Last McClure First Robert Middle Initial(s) J. (and/or, if applicable)  
Company VP - Courtenay Fish & Game  
Mailing Address 1662 Cowichan Court (jandbmccclure@shaw.ca)  
City Comox Province/State BC  
Country Canada Postal Code/ZIP V9M 1B5  
Telephone (250) 339-1179 Fax ( ) \_\_\_\_\_

**II SITE IDENTIFICATION**

Please attach a site location map

All Property \* MOE SITE ID No. 13392

Coordinates (using the North American Datum 1983 convention) for the centre of the site:  
Latitude: Degrees 49 Minutes 38 Seconds 30  
Longitude: Degrees 125 Minutes 05 Seconds 00

Please attach a map of appropriate scale showing the boundaries of the site. - attachment #1

**For Legally Titled, Registered Property**  
Site Street Address (if applicable) 3780 Colake Road, Comox Lake  
City Courtenay Postal Code ~~V9M~~ V9N 9M9

Comox Valley Regional District

RECEIVED

File: RZ 1C14  
NOV 27 2014

\* 6 attachments

To:



PID numbers and associated legal descriptions. *Attach an additional sheet if necessary.*

<u>PID</u>	<u>Legal Description</u>
000-863-840	} Please see the attached title searches for complete legals.
000-864-846	
026-200-881	
000-864-889	

\*attached #2 #3 #4 #5

Total number of titled parcels represented by this site profile is: 4

**For Untitled Crown Land**

PIN numbers and associated Land Description. *Attach an additional sheet if necessary.*

<u>PIN</u>	<u>Land Description</u>

Total number of untitled crown land parcels represented by this site profile is: \_\_\_\_\_

(and, if available)

Crown land file numbers. *Attach an additional sheet if necessary.*

\_\_\_\_\_

**III COMMERCIAL AND INDUSTRIAL PURPOSES OR ACTIVITIES**

Please indicate below, in the format of the example provided, which of the industrial and commercial purposes and activities from Schedule 2 have occurred or are occurring on this site.

**EXAMPLE**

<u>Schedule 2 Reference</u>	<u>Description</u>
E1	appliance, equipment or engine repair, reconditioning, cleaning or salvage
F10	solvent manufacturing or wholesale bulk storage

*Please print legibly. Attach an additional sheet if necessary*

<u>Schedule 2 Reference</u>	<u>Description</u>
<u>E6</u>	<u>rifle or pistol firing ranges</u>

IV AREAS OF POTENTIAL CONCERN			
	Is there currently or to the best of your knowledge has there previously been on the site any (please mark the appropriate column opposite the question):	YES	NO
A.	Petroleum, solvent or other polluting substance spills to the environment greater than 100 litres?		✓
B.	Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?		✓
C.	Discarded barrels, drums or tanks?		✓
D.	Contamination resulting from migration of substances from other properties?		✓
V FILL MATERIALS			
	Is there currently or to the best of your knowledge has there previously been on the site any deposit of (please mark the appropriate column opposite the question):	YES	NO
A.	Fill dirt, soil, gravel, sand or like materials from a contaminated site or from a source used for any of the activities listed under Schedule 2?		✓
B.	Discarded or waste granular materials such as sand blasting grit, asphalt paving or roofing material, spent foundry casting sands, mine ore, waste rock or float? <i>Dealt with previously.</i>	✓	
C.	Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?		✓
VI WASTE DISPOSAL			
	Is there currently or to the best of your knowledge has there previously been on the site any landfilling, deposit, spillage or dumping of the following materials (please mark the appropriate column opposite the question):	YES	NO
A.	Materials such as household garbage, mixed municipal refuse, or demolition debris?		✓
B.	Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?		✓
C.	Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?		✓
D.	Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?		✓
E.	Waste products from photographic developing or finishing laboratories; asphalt tar manufacturing; boilers, incinerators or other thermal facilities (e.g. ash); appliance, small equipment or engine repair or salvage; dry cleaning operations (e.g. solvents); or from the cleaning or repair of parts of boats, ships, barges, automobiles or trucks, including sandblasting grit or paint scrapings?		✓

\* see not page 5.



VII TANKS OR CONTAINERS USED OR STORED, OTHER THAN TANKS USED FOR RESIDENTIAL HEATING FUEL			
	Are there currently or to the best of your knowledge have there been previously on the site any (please mark the appropriate column opposite the question):	YES	NO
A.	Underground fuel or chemical storage tanks other than storage tanks for compressed gases?		✓
B.	Above ground fuel or chemical storage tanks other than storage tanks for compressed gases?		✓
VIII HAZARDOUS WASTES OR HAZARDOUS SUBSTANCES			
	Are there currently or to the best of your knowledge have there been previously on the site any (please mark the appropriate column opposite the question):	YES	NO
A.	PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?		✓
B.	Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?		✓
C.	Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?		✓
IX LEGAL OR REGULATORY ACTIONS OR CONSTRAINTS			
	To the best of your knowledge are there currently any of the following pertaining to the site (please mark the appropriate column opposite the question):	YES	NO
A.	Government orders or other <u>notifications</u> pertaining to environmental conditions or quality of soil, water, groundwater or other environmental media? <i>Sept. 26, 2011 letter</i>	✓	
B.	Liens to recover costs, restrictive covenants on land use, or other charges or encumbrances, stemming from contaminants or wastes remaining onsite or from other environmental conditions?		✓
C.	Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?		✓
X ADDITIONAL COMMENTS AND EXPLANATIONS			
<p>(Note 1: Please list any past or present government orders, permits, approvals, certificates and <u>notifications</u> pertaining to the environmental condition, use or quality of soil, surface water, groundwater or biota at the site.</p> <p>Note 2: If completed by a consultant, receiver or trustee, please indicate the type and degree of access to information used to complete this site profile. Attach extra pages, if necessary):</p> <p>① <u>Letter from M.O.E. Sept. 26, 2011 outlining our responsibilities and giving us SITE ID No. 13392</u>  <u>Our response (initial) was sent to Ms. Coleen Heckinen (MOE) October 3, 2011. (copy attached)</u>  <u>* attachment # 6</u></p> <p>② <u>✓ Fill Materials, Hem B, asphalt paving. This was identified some years ago as part of a report completed by our Environmental Consultants. The material was removed at that time.</u></p>			

\* See notes below

**XI SIGNATURES**

The person completing the site profile states that the above information is true based on the person's current knowledge as of the date completed.

Robert McClure 2014/11/25  
 Signature of person completing site profile Date completed: (YY-MM-DD)

**XII OFFICIAL USE**

**Local Government Authority**

Reason for submission (Please check one or more of the following) Soil removal

Subdivision application  Zoning application  Development permit  Variance permit  Demolition permit

Date received: Nov 27/2014	Local Government contact: Name <u>Brian Chow, planner</u> Agency <u>Comox Valley Regional District</u> Address <u>600 Comox Rd</u> <u>Courtenay, BC V9N 3P6</u> Telephone <u>250-334-6017</u> Fax <u>250-334-8156</u>	Date submitted to Site Registrar: <u>Dec 1/2014</u>	Date forwarded to Director of Waste Management:
-------------------------------	--	--	---

**Director of Waste Management**

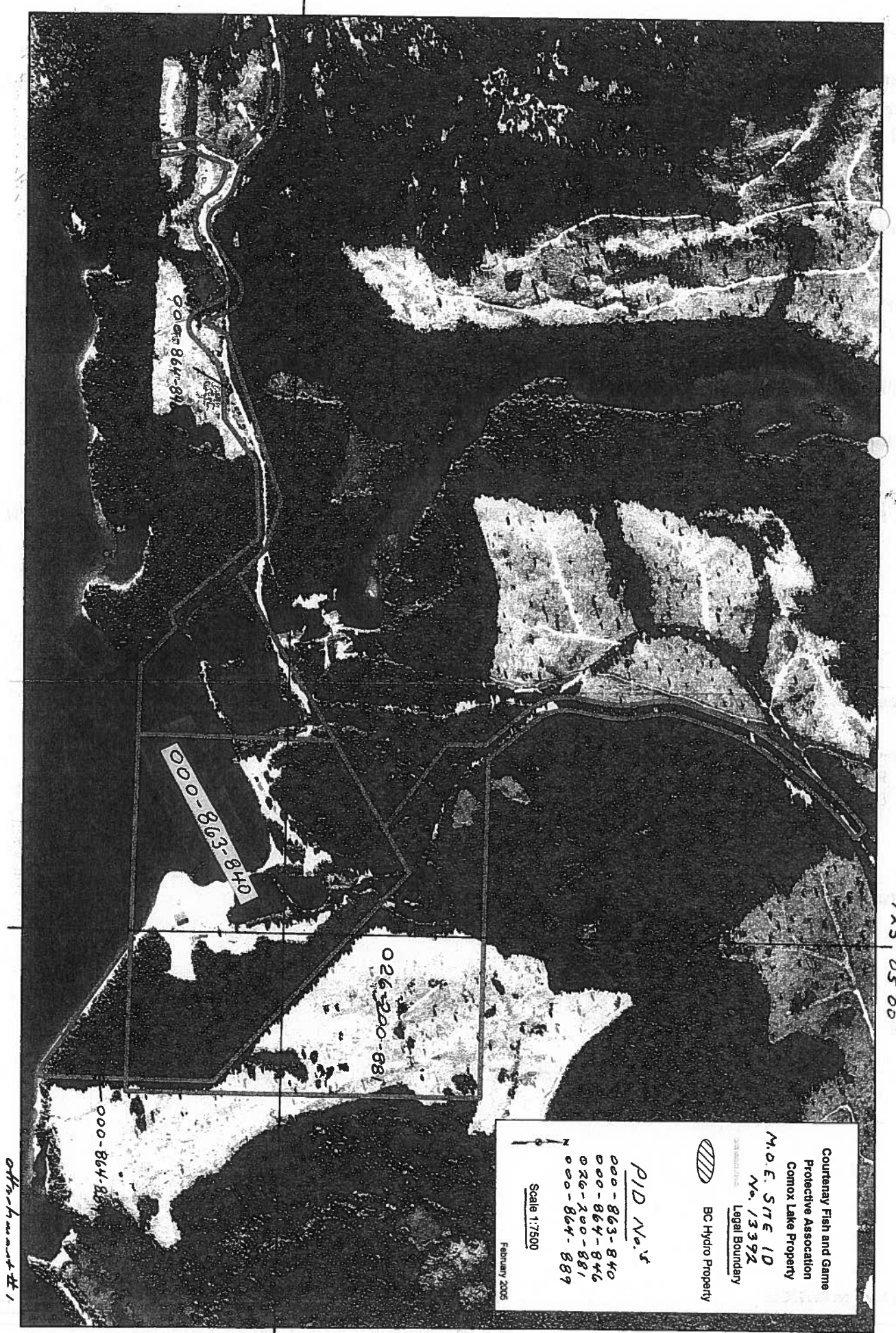
Reason for submission (Please check one or more of the following)

Under Order  Site decommissioning  Foreclosure

Date received:	Assessed by: Name _____ Region _____ Telephone _____ Fax _____ If site profile entered, SITE ID # _____	Investigation Required?  YES NO	Decision date:
----------------	---	---------------------------------------	----------------

**Site Registrar**

Date received:	Entered onto Site Registry by:	SITE ID #:	Entry date:
----------------	--------------------------------	------------	-------------



125° 05' 00"

49° 38' 30"

offshore water #1

Courtenay Fish and Game  
 Protective Association  
 Comox Lake Property  
 M.O.E. SITE ID  
 No. 13392  
 Legal Boundary  
 BC Hydro Property

**PID No.'s**  
 000-863-840  
 000-864-846  
 036-100-881  
 000-864-889

Scale 1:7500  
 February 2005

**TITLE SEARCH PRINT**

2013-12-05, 08:42:52

Requestor: PL73375  
Folio/File Reference:04971

**\*\*CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN\*\***

**Land Title District** VICTORIA  
Land Title Office VICTORIA

**Title Number** EL123213  
From Title Number EH66254

**Application Received** 1997-10-24

**Application Entered** 1997-11-05

**Registered Owner in Fee Simple**  
Registered Owner/Mailing Address: COURTENAY & DISTRICT FISH & GAME PROTECTIVE ASSOCIATION,  
INC.NO. S-4778  
2201 ROBERT LANG DRIVE  
P.O. BOX 3177  
COURTENAY, BC  
V9N 5N4

**Taxation Authority** COURTENAY ASSESSMENT AREA

**Description of Land**

Parcel Identifier: 000-863-840

Legal Description:  
THAT PART OF SECTION 33, TOWNSHIP 10, COMOX DISTRICT, PLAN 552-H,  
INCLUDED WITHIN THE AREA SHOWN OUTLINED IN RED ON PLAN 788 RW

**Legal Notations**

THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 26 OF THE LOCAL  
GOVERNMENT ACT, SEE EX77599

THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 26 OF THE LOCAL  
GOVERNMENT ACT, SEE FB429824

THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 26 OF THE LOCAL  
GOVERNMENT ACT, SEE FB466043

*\*attachment #2*

**TITLE SEARCH PRINT**

2013-12-05, 08:42:52

Requestor: PL73375  
Folio/File Reference:04971

**\*\*CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN\*\***

**Land Title District**  
Land Title Office

VICTORIA  
VICTORIA

**Title Number**  
From Title Number

EL123212  
EH66253

**Application Received**

1997-10-24

**Application Entered**

1997-11-05

**Registered Owner in Fee Simple**  
Registered Owner/Mailing Address:

COURTENAY & DISTRICT FISH & GAME PROTECTIVE ASSOCIATION,  
INC.NO. S-4778  
2201 ROBERT LANG DRIVE  
P.O. BOX 3177  
COURTENAY, BC  
V9N 5N4

**Taxation Authority**

COURTENAY ASSESSMENT AREA

**Description of Land**

Parcel Identifier:

000-864-846

Legal Description:

THAT PART OF SECTION 32, TOWNSHIP 10, COMOX DISTRICT, PLAN 552H,  
INCLUDED WITHIN THE AREA SHOWN OUTLINED IN RED ON PLAN 788 RW

**Legal Notations**

THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 26 OF THE LOCAL  
GOVERNMENT ACT, SEE EX77599

**Charges, Liens and Interests**

Nature:

RIGHT OF WAY

Registration Number:

48453G

Registration Date and Time:

1922-11-27 11:27

Registered Owner:

THE INTERNATIONAL TIMBER COMPANY LIMITED  
PART OF S.E. 1/4 (INTER ALIA) BEING AN ASSIGNMENT  
OF AN UNDIVIDED 1/2 INTEREST IN 9231D,  
SEE DD 10844), C.B. 33.353

Remarks:

*\*attachment #3*

**TITLE SEARCH PRINT**

2013-12-05, 08:46:10

Requestor: PL73375  
Folio/File Reference:04971

**\*\*CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN\*\***

**Land Title District** VICTORIA  
Land Title Office VICTORIA

**Title Number** EX23435  
From Title Number EX17828

**Application Received** 2005-03-04

**Application Entered** 2005-03-15

**Registered Owner in Fee Simple**  
Registered Owner/Mailing Address: COURTENAY & DISTRICT FISH & GAME PROTECTIVE ASSOCIATION,  
INC.NO. 54778  
P.O.BOX 3177, STN. MAIN  
COURTENAY, BC  
V9N 5N4

**Taxation Authority** VILLAGE OF CUMBERLAND

**Description of Land**  
Parcel Identifier: 026-200-881  
Legal Description:  
LOT 1 SECTION 33 TOWNSHIP 10 COMOX DISTRICT PLAN VIP78343

**Legal Notations**  
HERETO INTER ALIA IS ANNEXED EASEMENT EN64857 OVER THAT PART OF LOT A PLAN 9343 EXCEPT PART IN PLANS 14995, 29301, 2165R, AND EXCEPT PART OUTLINED IN RED ON 1799RW AND BOUNDED AS FOLLOWS:COMMENCING AT THE MOST SLY CORNER OF 1799RW THENCE N.3 DEG.27 MIN. W.FOR 170 FT.,THENCE S.86 DEG. 33 MIN.W. FOR 125.87 FT, THENCE S.39 DEG. 57 MIN EAST FOR 211.45 FT. TO THE POINT OF COMMENCEMENT, AND SHOWN WITHIN THE BOUNDARIES OF PLAN VIP69252

HERETO INTER ALIA IS ANNEXED EASEMENT EN64861 OVER THAT PART OF SEC.32 TWP.10 COMOX DIST. PLAN 552H INCLUDED WITHIN THE AREA OUTLINED IN RED ON 788RW, AND OVER THAT PART OF SEC. 33 TWP. 10 COMOX DISTRICT, PLAN 552H INCLUDED WITHIN THE AREA OUTLINED IN RED ON 788RW

*\*attachment #14*

PARCEL IDENTIFIER (PID): 000-864-889

SHORT LEGAL DESCRIPTION: S/552H/////////28  
MARG: PT IN PL 788 RW\*

TAXATION AUTHORITY:  
1 COURTENAY ASSESSMENT AREA

FULL LEGAL DESCRIPTION: CURRENT  
THAT PART OF SECTION 28, TOWNSHIP 10, COMOX DISTRICT, PLAN 552H,  
INCLUDED WITHIN THE AREA SHOWN OUTLINED IN RED ON PLAN 788 RW

MISCELLANEOUS NOTES:  
788 RW  
VIP62567 PP

ASSOCIATED PLAN NUMBERS:  
SUBDIVISION PLAN VIP40391  
PLAN VIP40392  
SUBDIVISION PLAN VIP40393  
SUBDIVISION PLAN VIP40394  
SUBDIVISION PLAN VIP40395  
SUBDIVISION PLAN VIP40396  
PLAN VIP46055  
PLAN VIP46056  
PLAN VIP46057  
PLAN VIP46059  
PLAN VIP46060  
PLAN VIP46062  
PLAN VIP46065  
PLAN VIP46089  
PLAN VIP46090  
PLAN VIP46091  
PLAN VIP46092  
PLAN VIP46095  
PLAN VIP46096  
PLAN VIP46097  
PLAN VIP46098  
PLAN VIP46099  
PLAN VIP46100  
PLAN VIP46101  
PLAN VIP46102  
SUBDIVISION PLAN VIP552H  
POSTING PLAN VIP62567  
RIGHT OF WAY PLAN VIP788RW  
PLAN VIP886

AFB/IFB: MN: Y PE: 1 SL: 1 TI: 1

*\* attachment #5*



**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122 Mail: P.O. Box 3177, Courtenay, B.C. V9N 5N4



October 3, 2011

Ministry of Environment  
2<sup>nd</sup> Floor, 10470 152 Street  
SURREY, BC, V3R 0Y3

Attention: Ms. Coleen Hackinen, Senior Contaminated Sites Officer

Dear Ms. Hackinen: Re: Courtenay & District Fish and Game Protective Association  
Your SITE ID No. 13392

Your letter of September 26, 2011 concerning our shooting ranges has been discussed by the Directors. We share your concerns and are generally aware of our responsibilities under the Environmental Management Act. Some Directors of course have a deeper understanding and appreciation of this than others (this year we had 30 Directors plus our Executive).

We do have a Committee working towards a Best Management Practices Plan for our range facilities. The Committee Chair, Bob McClure, has indicated that the information you have provided in your correspondence is included in the materials they have been and are working with. These will, however, now be double checked and reviewed with our Consultant just to make sure nothing has been missed.

The following is provided to help clarify our present situation. We have purposely:

1. made the decision some time ago to use only non-toxic clay birds;
2. not removed any soil from any range after it became operational;
3. not relocated any contaminated soil within any of our ranges;
4. incorporated this into our budgeting process and this will evolve with the Plan; and
5. the Committee is finalizing a Contract for Environmental Services with our Consultant and this should be recommended to the Board of Directors at the next meeting. This includes an evaluation of current soil and groundwater conditions and the development of a long-term soil and groundwater monitoring program. The details of remediation and management plans will flow from this information.

We appreciate your taking the time to provide such succinct yet detailed information on the process we are involved in. Please contact us should you have any questions or wish further information. We will keep you informed as our plan evolves.

Yours In Conservation,

  
Keith MacKenzie, President

copies; Directors, Dr. Enns, Kerry Mayo, David Durrant.

*Attachment #6*





**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

Comox Valley Regional District  
**RECEIVED**

File:

JUN 29 2017

To:

cc:

# Appendix E

# CDFGPA Constitution and Bylaws



Faint, illegible text at the top of the page, possibly a header or title.

RECEIVED  
Comox Valley Regional District

File:  
JUN 28 2013

To:  
cc:

Approved

COMMUNITY DEVELOPMENT

and bylaws

**Constitution and By-Laws of the Courtenay and District  
Fish and Game Protective Association**

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**Comox Valley Regional District  
RECEIVED**

**File:**

**JUN 29 2017**

**To:**

**cc:**

8/26/2015

## **1. Constitution of the Courtenay and District Fish and Game Protective Association**

### **Article 1 Name of the Society**

The name of the Society is "Courtenay and District Fish and Game Protective Association".

### **Article 2 Purposes of the Association**

The purposes of the Courtenay and District Fish and Game Protective Association ("the Association") are as follows:

- a) To conserve, enhance, and promote the wise use of all natural resources,
- b) To raise monies to restore fish and wildlife populations and their habitat,
- c) To support scientifically sound conservation,
- d) To practice and promote safe and ethical sportsmanship,
- e) To promote hunting and fishing as rights to be enjoyed by all Canadians and to affiliate and work with like-minded organizations,
- f) To provide education, training, skills, and social development relating to conservation, hunting, fishing, shooting sports, and associated outdoor activities, and
- g) To provide facilities for pursuing these purposes for Association members.

### **Article 3 Dissolution**

Upon the dissolution of the Association all assets of whatever kind and nature will be disposed of and, after payment of all outstanding debts, obligations, and costs of the Association, the balance will be distributed to organizations with similar purposes to the Association. This article shall be unalterable.

### **Article 4 Area of Operation**

The operation of the Association is to be carried on in the Province of British Columbia.

This article shall be alterable. **2. By-Laws of the Courtenay and District Fish and Game Protective Association**

In these By-laws,

- a) "Directors" means the directors of the "Association" for the time being;
- b) "Society Act" means the Society Act of the Province of British Columbia from time to time in force and all amendments to it;
- c) "Registered address" of a member means his address as recorded in the register of members;
- d) "Term" means the time between the annual general meeting and the immediate next annual general meeting;
- e) "Officer term" has the same meaning as "term".

The definitions in the Society Act on the date these By-laws become effective apply to these By-laws. Words importing the singular include the plural and vice versa; and words importing a male person include a female person and a corporation.

### **Article 1, Section A Part 1 Membership**

1. The members of the Association are the applicants for incorporation of the Association, and those persons who subsequently have become members in accordance with the By-laws, and, in either case, have not ceased to be members.
2. An individual 19 years of age or over shall become a regular member upon majority acceptance of the Board of Directors (hereinafter called the "Board") at Executive Meetings, and the majority of the Association members at the next general meeting. The Directors may at any time postpone, on terms and conditions, the consideration of all or some applications for membership.
3. Each member shall inform the Secretary or his designate in writing of his up to date address and e-mail address (if any) and fax number (if any) for the purposes of receiving notices from the Association. This is an ongoing obligation.
4. Voting privileges will be extended to new members following three months valid membership.
5. These Bylaws allow the Association to create a Junior Membership, a Corporate Membership, an Associate Membership, and a Life Membership.
6. The annual dues shall be a sum proposed by the Board, as may be decided from time to time and approved by a majority vote of the members present at a general meeting
7. Memberships are for the calendar year, January 1 to December 31.
8. All new members must sign a declaration acknowledging receipt of the following documents; Constitution, By-laws and General Rules of Conduct, and agree to uphold the Constitution and comply with these By-laws and Rules.
9. Members are encouraged to contribute volunteer time in each calendar year.
10. Members and Good Standing

All members are in good standing except a member who has failed to pay his current annual membership fee or other subscription or debt due and owing by him to the Association. Unless the Directors otherwise decide, a member who has not paid his membership fee may, at any time, bring himself into good standing by paying his membership fee even though it is past due.

**Article 1, Section A Part 2 Repealed March 2, 2015**

**Article 1, Section B Part 1 Cessation of Membership**

A person shall cease to be a member of the Association:

1. by delivering his resignation in writing to the Secretary of the Association or by mailing or delivering it to the address of the Association;
2. on his death;
3. on being expelled; or
4. having not been a member in good standing for a period of 30 days.

**Article 1, Section B Part 2 Expulsion of Members Generally**

An Ethics Committee consisting of three members in good standing and chaired by a Vice President shall be appointed annually by the Board. This committee shall review complaints pertaining to the conduct of any member and make recommendations to the Board and/or General membership as requested. According to these Bylaws the members or the Board may only expel a member by the two alternatives described below:

1. A member may be expelled by a special resolution of the members passed at a general meeting. Notice of the special resolution must be made at least 14 days prior to a hearing. The notice of special resolution for expulsion shall be accompanied by a brief statement of the reason(s) for the proposed expulsion. If a complaint is supported by more than one member or non member the names of those members or non members must be included in the resolution. The person who is the subject of the proposed resolution for expulsion shall be given an opportunity to be heard in person or by agent at the general meeting before the special resolution is put to a vote. Any member who knowingly provides false information will be subject to disciplinary action by the Board.
2. The Board may, by a two-thirds vote of those present, expel a member for just cause. A member subject to a vote for expulsion must be given at least 14 days written notice of such a meeting, and a brief description of the reason(s). He will also be given the opportunity to defend in person or by agent prior to the vote.

**Article 1, Section B Part 3 Removal of a Director or an Officer**

1. The members may, by special resolution, remove a Director or Officer from his elected position for just cause before the expiration of his term in office and may elect, by majority vote, a successor to serve until the next annual general meeting.
2. The notice of special resolution for removal shall be accompanied by a brief statement of the reason(s) for the proposed removal.
3. The person who is the subject of the proposed resolution for removal shall be given an opportunity to be heard in person or by agent at the general meeting before the special resolution is put to a vote.

**Article 2, Section A Meetings**

1. The Association shall hold monthly general meetings on the first Monday of the month, except when another date may be set by the Board.
  - a) An Extraordinary General Meeting must be called by the Board on the requisition of 10% or more of the voting members of the Association.
  - b) The Board may also call an Extraordinary General Meeting. A notice of such extraordinary general meeting and its purpose shall be mailed, or otherwise made known, to each regular member at his address appearing on the books of the Association, at least 14 calendar days prior to meeting.
  - c) Notice of a general meeting shall specify the place, the day and the hour of meeting and in case of special business, the general nature of that business. The accidental omission to give notice of a general meeting to, or the non-receipt of a notice by, any of the members entitled to receive notice does not invalidate proceedings at that meeting.
2. All policy rules, orders and charges for the Association and for the day to day operation of the Association and its facilities, shall be approved by the Board and passed by a majority of members at a general meeting. These items shall then be available and posted in an appropriate location.
3. A non-member may be permitted to attend a general meeting of this Association as a guest, and must be introduced at the start of the meeting.
4. The order of business at general meetings shall be as follows, unless it is suspended or altered by a simple majority of members present:
  - a) Call to order by presiding officer and introduction of guests.
  - b) Approval of Agenda
  - c) Reading or circulation of minutes from the previous month's general and Board meetings.
  - d) Approval of previous month's general meeting minutes
  - e) Business arising from the minutes of the previous general and Board meetings
  - f) Correspondence and communications
  - g) Treasurer's report (paid and unpaid bills)
  - h) Committee, Old unfinished, and New Business must be brought to a Board meeting prior to inclusion in General Meeting agenda. The Presiding Officer may allow for additions to the General Meeting agenda if advised of the item prior to commencement of the General meeting. The Presiding Officer, at his discretion, may then direct the item to the appropriate committee for action as deemed necessary
  - i) Good of the Association and announcements.

5. Any member may request a secret ballot be exercised on any voting matter. The Chair will oversee issuance of ballots upon proof of voting privileges. Voting is by show of hands, unless the members present otherwise decide. A member in good standing present at a meeting of members is entitled to one vote. Voting by proxy is prohibited.
6. The Association shall utilize Roberts Rules of Order as a guideline in conducting all general and executive meetings of the Association. As a general practice all agenda items shall be approved prior to the commencement of a meeting.
7. No business, other than the election of a Chairperson and the adjournment or termination of the meeting, shall be conducted at an annual general meeting at a time when a quorum is not present. If, at any time during an annual general meeting, there ceases to be a quorum present, business then in progress shall be suspended. If, within 30 minutes from the time appointed for a members' meeting, a quorum is not present, the meeting shall stand adjourned to the same day in the next week, at the same time and place, and if, at the adjourned meeting, a quorum is not present within 30 minutes from the time appointed for the meeting, the members present constitute a quorum, provided there are at least 3 members present.
8. The President of the Association, a Vice President or, in their absence, one of the other Directors present, shall preside as Chairperson of a general meeting.
9. If at a general meeting:
  - a) there is no President, Vice President, or other Director present within 15 minutes after the time appointed for holding the meeting; or
  - b) the President and all the other Directors present are unwilling to act as Chairperson; the members present shall choose one of their number to be Chairperson.
10. A general meeting may be adjourned from time to time and from place to place, but no business shall be transacted at an adjourned meeting, other than the business left unfinished at the meeting from which the adjournment took place. When a meeting is adjourned for 10 days or more, notice of the adjourned meeting shall be given as in the case of the original meeting.

**Article 2, Section B Annual General Meeting**

The annual general meeting of the Association shall be held on the first Monday in December. The close of the fiscal year shall be August 31.

**Article 3, Quorum Definition**

1. For General and Extraordinary Meetings a quorum shall consist of 51 members in good standing, including officers.
2. A quorum of the Board shall consist of a majority of the Board.
3. A quorum of the Finance Committee shall consist of a majority of the Finance Committee.
4. A quorum of any committee shall consist of a majority of members duly named to that committee.
5. Only members who have paid their dues for the current year shall be eligible to vote, and on request of the chair must furnish proof of such payment by producing a valid membership card.

**Article 4, Section 1 Elections of Officers**

The Officers of the Association shall consist of:

1. A President, two Vice-Presidents, a Treasurer and a Secretary – all of whom shall be elected at the December annual general meeting of the Association.
2. Duly elected Officers shall be installed and assume their duties of office for one year at the annual general meeting held in December.
3. A special election may be held to fill an official vacancy at a general meeting upon at least 14 days notice of such election to Association members.
4. The Board may at any time appoint a Director to fill any Officer vacancy.
5. Any Officer so appointed shall serve the unexpired officer term of the Officer he is replacing.
6. A Nominating Committee (five members), consisting of up to three Past Presidents of the Association and members in good standing appointed by the Board, will provide a slate of candidates for nomination as Officers at the December meeting. Nominations will also be accepted from the floor.

**Article 4, Section 2 Elections of Directors**

1. The Board consists of the Officers of the Association plus eight (8) Directors at Large (members in good standing).
2. The Directors at Large are elected at the December annual general meeting for two year terms. Terms shall overlap to ensure that four Directors at Large are elected each December.
3. Directors may not sit as Chairpersons of any standing Committee. The immediate past President may, at the discretion of the President, serve as an ex officio (non-voting) member of the Board for one year, to aid with the smooth transition of Board business following elections.
4. A Nominating Committee (five members), consisting of up to three Past Presidents of the Association and members in good standing appointed by the Board, will provide a slate of candidates for nomination as Directors at the December meeting. Nominations will also be accepted from the floor.

**Article 5, Section 1 Powers and Duties of the Board**

1. The Board may exercise all such powers and do all such acts and things as the Association may exercise and do, and which are not by these By-laws or by statute or otherwise lawfully directed or required to be exercised or done by the Association in the general meeting, but subject, nevertheless, to the provision of:
  - a) all laws affecting the Association;
  - b) these By-laws; and
  - c) rules, not being inconsistent with these By-laws, which are made from time to time by the Association in the general meeting.
2. No rule made by the Association in the general meeting invalidates a prior act of the Board that would have been valid if that rule had not been made.

3. a) The Board shall meet one week prior to the general meeting, or as required.
- b) The Board shall manage the affairs of the Association, recommend the admittance of new members and call extraordinary meetings.
- c) The Board shall formulate the policies, orders and charges of the Association, set a program for the general meeting, vote on and recommend activities for club programs.
- d) The President shall appoint Vice Presidents and Directors at Large to a program or activity area of the Association. As required these Board members will be responsible to communicate and meet with the associated committees or functions under each program or activity area, and report to the Board.
- e) Program or activity areas of the Association shall be operated by Standing Committees which may change at the direction of the Board.
- f) Any committee chair, his designate, or member in good standing may address the Board upon invitation of a Board member, or following seven days written notice to any Board member, of his intent to address the Board on a specific agenda item.

#### **Article 5, Section 2 Duties of Officers**

1. The President shall preside at and direct Association meetings, unless the members or Board otherwise decide, and enforce rules and perform duties prescribed by the Board.
  - a) The President is:
    - the Chief Executive Officer of the Association;
    - the chief spokesperson for the Association; and
    - the supervisor of other Directors and Officers;
  - b) Annually, on the recommendation of a committee and the Board, the President shall approve the appointment of the Chair of the committee. This shall apply to all standing committees. There is no limit on the number of terms a chair may serve.
  - c) The President shall be an ex-officio member of all Committees.
2. The Vice Presidents shall assist the President and carry out the duties and exercise the powers of the President during his absence.
3. The Secretary shall:
  - a) conduct the correspondence of the Association;
  - b) issue notice of meetings of the Association and Board;
  - c) keep minutes of all meetings of the Association and Board;
  - d) have custody of all records and documents of the Association except those required to be kept by the Treasurer; and
  - e) have custody of the common seal of the Association
4. The Treasurer shall:
  - a) keep such financial records, including books of account, as are necessary to comply with the Society Act.
  - b) render financial statements to the Board, members and others when required.
5. Any of the Officers of the Association may be signing Officers of the Association.

#### **Article 5, Section 3 Duties of the Board**

1. The Board is required to first and foremost serve the betterment of the Association and expects of itself and its members ethical and business like conduct. Within the context of responsible governance a member may hold and represent the Association in one official position only, with the exception of appointments to the Finance and Ethics Committees and by the President to "Ad Hoc" or "short term" task forces with specific goals.
2. The Board shall:
  - a) especially hold in trust all matters pertaining to finance, capital expenditure, assets of the Association, and all By-Laws of the Association. As the executive and directors individually have fiduciary accountability, the Board shall have the power to veto any motion; however, any motion must first be referred back to the membership for reconsideration before veto privilege is exercised.
  - b) enter in the register the names of applicants for incorporation and the name of every other person admitted as a member of the Association, together with the following particulars of each: the full name and residence address; the date on which a person is admitted as a member; and the date on which a person ceases to be a member.
  - c) ensure that all reports, including financial reports, required by law to be prepared by the Association for the annual general meeting are prepared.
  - d) ensure that all reports that have to be filed after the annual meeting are filed as required by the Society Act and Income Tax Act or other law.
  - e) ensure the Association has at least one account with a chartered bank, credit union, or trust company for the deposit of funds.
  - f) keep proper accounting records in respect of all financial or other transactions and, without limiting the foregoing, shall keep records of:
    - I. all money received and disbursed by the Association and the manner in respect of which the receipt and disbursement took place;
    - II. every asset and liability of the Association; and
    - III. every other transaction affecting the financial position of the Association.
  - g) prepare draft agenda for the following general meeting for approval of the membership.
  - h) suspend the duties of an Officer, Director, or Committee Chair should that member be charged or be under investigation of any offence that could be viewed as not becoming of an Officer, Director, or Committee Chair of the Association, pending resolution of the matter.

#### **Article 5, Section 4 Duties of Individual Board Members**

1. In carrying out their responsibilities Board members may not attempt to exercise individual authority over the organization, except as explicitly set forth in policy directives. Any real or apparent conflicts of interest that emerge during the conduct of normal Board activities must be revealed to the Board, who will decide how such conflicts will be addressed and the resulting decisions will be recorded.
2. A Board member shall:
  - a) act honestly and in good faith and in the best interests of the Association.
  - b) when directly or indirectly interested in a proposed contract or transaction with the Association disclose, fully and promptly, the nature and extent of his interest to each Director and otherwise comply with the requirements of the Society Act.
  - c) exercise the care, diligence and skill of a reasonable and prudent person in exercising power and performing functions as a Board member.

#### **Article 5, Section 5 Miscellaneous Duties of the Board**

1. The Board may, at any time, and the Secretary on the request of two Board members shall, convene a meeting of the Board.
2. Other Officers, if any, shall perform such duties as the members may decide at a general meeting or an extraordinary general meeting.
3. The Board or members may add additional duties or powers to any Director or Officer or transfer duties or powers among Directors or Officers.
4. In the absence of the Secretary from a meeting, the Board shall appoint another person to act as recording Secretary at the meeting.
5. Should the Association employ a Business Manager, duties may be assigned to this position on the approval of the Board. This may include day to day duties normally associated with members of the Board. Any staff employed by the Association shall be responsible to, and report to, the Board.
6. Remuneration of any staff shall be at the direction of the Board and approved in the Annual Association Budget.

#### **Article 5, Section 6 Committees of the Board**

1. The Board may delegate any, but not all, of their powers to Committees consisting of such persons as they think fit, and may name the Committee, after consultation with the committee chair.
2. A Committee so formed in the exercise of the powers so delegated shall conform to any rules that may, from time to time, be imposed on it by the Board, and shall report every act or thing done in exercise of those powers to the Board.
3. Subject to directions of the Board, the Committee shall determine its own procedure.
4. The members of a Committee may meet and adjourn as they think proper.
5. A Finance Committee to consist of the President, the Vice-Presidents, the Treasurer, two elected Directors and two members in good standing (appointed by the Board) will assist the Treasurer in formulating Association financial policy.
6. The Finance Committee is responsible for preparation of the Annual Operating Budget of the Association to be ratified by the Board and the General Membership at the Annual General Meeting.
7. Non budgeted expenditures (not in the Annual Budget) under \$1,000.00 must be authorized by the Finance Committee. Non budgeted expenditures under \$2,000 must be reviewed by the Finance Committee prior to presentation to the Board, who may then authorize such amount. Any non budgeted expenditures in excess of \$2,000 must be submitted to the Finance Committee at least 30 days prior to the next Board meeting in writing and contain all relevant information, including drawings where applicable. Upon recommendation by the Finance Committee and the Board, such expenditure must be approved by the General Membership. Emergency non budgeted expenditures (as determined by the Board) must be approved by the Board.
8. **Chairperson's responsibilities:**
  - a) Responsible for the administration of the committee's mandate and will report on the committee's progress to the Board on a regular basis, or as requested by the Board.
  - b) Will recommend committee members
  - c) Will designate an alternate in his or her absence.
  - d) Except in emergency situations, no work will be carried out by the committee without the Chairperson's approval.
  - e) Will be responsible for the administration of expenditures as approved in the Annual Budget, or under Article 5, Section 6, 7). All invoices must spell out what the expenditure is for and be initialed by the Chairperson before payment is made by the Treasurer.
  - f) As per Article 9, sections 9 & 10) for both budgeted and non budgeted expenditures the Chairperson will ensure that three quotes are obtained for contractual works / services and expenditures over \$1000, and ensure that both the Chair and the Director sign off on such prior to awarding contracts or making expenditures.
  - g) Prior to contractual work being awarded or expenditures being made, the Chair will notify the Treasurer or the appropriate Director.
  - h) The Chairperson will record names of all members attending work parties and provide such to the Board upon request.

#### **Article 6, Section 1 Borrowing Money**

The Association may borrow, raise or secure payment of money, provided however, that in no case shall money be borrowed without the enacting of an extraordinary resolution of the Association.

#### **Article 6 Section 2 Investment Standards**

1. The funds and property of the Association must be used and dealt with only for its purposes in accordance with its bylaws.
2. "Prudent standards" are those that, in the overall context of an investment, a prudent person would apply to investments made on behalf of another person to whom there is owed a fiduciary duty to make investments without undue risk of loss and with a reasonable expectation of a fair return on the investments.
3. The Association must adhere to prudent standards in making investment and lending decisions.



#### **Article 7 Audit**

1. Each year the accounts of the Association shall be examined and the correctness thereto asserted by an Audit Committee of three (3) who shall be elected at the General meeting in September, or failing such election, be appointed by the Board.
2. The audit committee shall not be members of the Board. The Association may call on the services of a professional independent auditor for this purpose.
3. The Audit Committee shall make a report of the accounts examined by them and on every balance sheet laid before them, to the membership at the annual general meeting. Any member may inspect the books and records of the Association and on demand be furnished with a copy of the latest financial statement.

#### **Article 8 Property Control**

The Association shall not purchase or dispose of any real property without a special resolution requiring an extraordinary meeting being called and being sanctioned by a majority of members attending that meeting. For the purposes of this article 75% shall be considered a majority.

#### **Article 9 Miscellaneous**

1. **Return of Documents and Property**  
At any time the Board may require, on terms and conditions, a Director, Officer, member, or a former Director, Officer, or member to return any property or document belonging to the Association that happens to be in the control or possession of such Director, Officer, member, or such former Director, Officer or member.
2. **Resolutions in Writing**  
A resolution in writing, signed by at least two-thirds of the existing Board or Committee members and placed with the minutes of the Board or the Committee, is as valid and effective as if regularly passed at a meeting of the Board or the Committee.
3. **In Camera Meetings**  
The Board and its Committees may hold meetings in camera. Every Board member shall keep confidential information obtained in such a meeting unless the release of such information is required by law or is allowed for by a decision or policy of the Board.
4. Association meetings in whole or in part will not be electronically recorded without the express permission of the presiding officer, who must announce at the beginning of the meeting that he has granted such permission.
5. Other than equipment operating at the request of the Board or a standing committee the servicing of, or access to, equipment for servicing is not allowed on, from, over or through Association property without prior approval of the Board. All servicing involving petroleum products or other hazardous materials must be carried out in a designated safe area.
6. The use of Association property for commercial purposes in any manner whatsoever is not allowed without prior approval of the Board.
7. There will be no launching, or access to, houseboats, float house, float camps or live aboard vessels from, through or over Association property.
8. No Director or Officer shall be remunerated for being or acting as a Director or Officer, but a Director or officer may be reimbursed for all expenses necessarily and reasonably incurred by him while engaged in the affairs of the Association.
9. Where ever possible utilizing the services of Association members should be encouraged and considered, where such action is not inconsistent with the Association Bylaws.
10. Where it can be reasonably expected, no contractual work or services shall be awarded, or expenditures over \$1000 made, by the Association or its members without three quotes being obtained.
11. Prior to awarding contracts or making such expenditures the Committee Chair and the Director advising the Board for that committee / activity must sign off on such contract or expenditure, for both budgeted and non-budgeted items.

#### **Article 10 Amendments**

These by-laws may be altered or amended by special resolution. Members are to be notified through newsletter and / or email immediately following approval of changes to guidelines and rules. (Special resolution requires not less than 75% of the votes of those members of the Association who, being entitled to do so, vote in person – Society Act).





**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

Comox Valley Regional District  
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**File:**

**JUN 29 2017**

**To:**

**cc:**

# Appendix F

# Campground Regulations



COMMUNICATIONS SECTION

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Administrative

Communications

Regulation



# COURTENAY AND DISTRICT FISH & GAME PROTECTIVE ASSOCIATION

Office: (250) 338-0835 or (250) 338-9122 Campground: (250) 338-5159 Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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## CAMPGROUND REGULATIONS

File:

Welcome to the Courtenay Fish & Game Campground. The facility is for the exclusive use of current Members and their registered guests, and in order to make your camping experience and that of your neighbors as enjoyable as possible, we ask that you review and adhere to the regulations outlined below.

We hope you enjoy our wonderful facility and wish you a great holiday experience.

To:

cc:

### Site Occupancy

1. There are 54 sites available for rental in various areas and configurations. When checking in at the Campground office, the Manager will detail what is available for rental. Check-in is 12:30PM and checkout is 11:00AM. If a Member leaves the evening before checkout, the site will stay vacant until 12:30PM next day.
2. Sites are allocated on a first come first served "in person" basis. No reservations will be accepted. Members may call the Campground Manager at 250-338-5159 to inquire as to availability of sites but no site will be held.
3. Members must come to the Campground and select and pay for their site for the duration of their stay. Another Member may select and pay for night 1 on behalf of a Member joining him/her, both subject to the following:
4. Sites will be held until 7:00PM for occupancy and setting up of the camping equipment to be used by the Members. If not in place by 7:00PM, or as extended by the Campground Manager at his/her sole discretion, the site will be put back up for rental, and the payment for that night forfeited.
5. ***Once a site has been paid and allocated, it will not be acceptable to park a lawn chair or pup tent type structure on the site for several days before the actual camping unit is placed. This is a backhanded way of reserving a site and will not be allowed. For example, if you wish to camp the long weekend and come out the prior Tuesday to ensure a site, and pay for 7 days, your equipment must be in place for the 7 days, and attended at least once a day by the renting member regardless of actual occupancy. The same day 7:00PM rule above applies. The rental may be cancelled at the Manager's discretion if this rule is abused.***
6. Rental rate is \$15.00 per night per site. Members may bring Guests to share their site, subject to availability of sites suitable for 2 units. Guests will not be allowed to rent individual sites, and must be in the company of a Member while on our property. Rental rate for guests is \$20.00 per night in addition to the Member fee. Both rates include GST. ***All rentals are non-refundable. There are no weather refunds or rain checks.***
7. Sites may be occupied by a member for a maximum of 10 days in a calendar month per CVRD regulations, and include 1 weekend. After the Member has occupied the site for 10 days, he/she will be eligible to return in the next month for further camping, up to a maximum of 10 days each time, on the same basis, subject to availability. Your stay may be extended on a day to day basis only, at the sole discretion of the Campground Manager and subject to availability and demand. If another member has requested your site when your 10 days is up, any extension will be subject to a move if available.
8. If a site is booked for 1 to 10 days and during the occupancy a second Member joins the occupying Member, the joining Member must vacate on the original checkout date with the original Member.
9. Members staying for shorter terms than 10 days will be eligible to return after 24 hours for further camping until their aggregate reaches 10 days, when the calendar month rule will be implemented and the cycle started over. Members wishing to extend their current stay must notify the Campground Manager by 8:00PM and pay for the additional day(s). Failure to do so may result in their site being rented to another Member.
10. ***Waterfront sites A through G have been the subject of a Provincial Riparian Restoration Order, along with the former day picnic area between those sites and the boat ramp. The restored area is separated from the allowable use area by a fence, which is bisected in 2 places by a 2 meter wide beach access corridor. Please respect the restoration and remain outside the fenced area which is deemed "No Access" under the Order.***
11. All vehicles, and camping units must be contained within the bounds of the rented site. No blocking of roadways or hampering egress from the sites will be permitted.

## Campsite Etiquette

12. **Courtenay Fish & Game Campground is a family facility and occupancy must reflect that fact. The campground Manager, at his/her sole discretion, is authorized to evict any member or guest for inappropriate or illegal behavior, including calling the authorities to assist if necessary. Membership of persons so involved may be subject to review of the Ethics Committee or the Board and may be cancelled without appeal.**
13. **From time to time it may be necessary to close some sites to members in order to accommodate participants in hosted events, or Board approved work parties at the upper ranges. There is nothing that can be done about this at this time and we request your understanding & co-operation.**
14. Fire regulations require that campfires be contained in the provided fire rings. Fires are not allowed on the beach at any time, and fire pits are not to be materially moved except for convenience and safety within the site. One pit per site please.
15. Firewood is available from the Campground Manager at \$5.00 for a level wheelbarrow load. No cutting of trees or brush, or burning of wet wood or garbage is allowed. Bringing your own wood is fine. The Campground office has for sale ice, frozen treats, soft drinks and confectionary items.
16. ***Quiet time is 10:00PM. Music is to be turned off or down to a level not audible beyond your campsite. Campfires are to be extinguished by 11:30PM and music turned off.***
17. Please dispose of cigarette butts properly. Throwing them in the general area of the fire pit is not acceptable and all butts must be picked up and disposed of. Please thoroughly clean your site when checking out. Police your area and pick up any garbage, butts, cans, bottles - you know the drill. Garbage cans and recycle bins are located throughout the campground. Clean your fire pit and make sure no cans, diapers, garbage or similar items are in the pit.
18. Pets are to be on a leash at all times. Poop stations are located throughout the campground and are to be used without fail. ***No pets are permitted in campground swimming areas by Health Dep't. regulations.***
19. ***No guest vehicles are to be parked in the campground - they must be parked in the Clubhouse parking area and the guests walk in and advise the Manager whom they are visiting, unless the main hall is rented for a function. Parking is available in the lot at the base of the road leading to the upper ranges. Temporary access is allowed to drop off or pick up supplies & people but the car is to be moved out when done. Guests must be off property by 10:00PM. DO NOT PARK IN THE ROADWAY OUTSIDE OF THE CAMPGROUND GATE. This restricts emergency access and large delivery vehicles.***
20. Alcohol consumption is allowed only in campsites. This is the law. SAY AGAIN - THIS IS THE LAW. If you are going to another campsite to visit, do not carry open liquor. Take you refreshments with you and open and enjoy at your destination. No alcohol is allowed on the beaches or any area outside of the campground. Please do not drink and drive. No illegal drugs of any description are to be brought onto, or consumed on, Club property.
21. Generators may be run between 12:30PM and 4:30PM only.
22. All units in sites A-G must be fully self-contained. There are no sewer disposal points on our property. Water is available throughout the campground. At this time, however, the water is NOT POTABLE. Clean pit toilets are located throughout the campground, and are serviced daily. No bathing, shampooing, washing of dishes etc. is permitted in the Lake. Coin-op showers are available at the Archery Venue. A key is available from the Campground Caretaker. Please leave the showers clean for the next member.
23. For safety's sake, no bike riding or swimming will be allowed after sundown. There are no Lifeguards on duty. Bikes, skateboards etc. and unaccompanied children must stay within the campground - many areas of our property are active shooting ranges. Minors and guests are only allowed in those areas when accompanied by an adult member.
24. Hard Shell Water Recreation - Water craft such as canoes; kayaks; boards etc. must stay outside of the swimming boundaries. As a rule of thumb - if it's hard it's out.
25. No quads or motorized dirt bikes may be operated within Club property.
26. For the safety and privacy of members, the use of drones operated from or over the property of Courtenay and District Fish & Game is not permitted with the exception for use at special events or work projects approved by the board

**Courtenay Fish and Game Protective Association will not be responsible for loss or damage to any property brought onto Club property by Members for any reason.**



**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5M4

Comox Valley Regional District  
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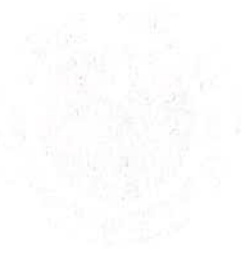
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# Appendix G

## General Property Regulations and Boat Launch Regulations



COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF REVENUE

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Appendix B

General Property  
Regulations and Board  
Lunch Regulations





## **COURTENAY AND DISTRICT FISH & GAME PROTECTIVE ASSOCIATION**

Office: (250) 338-0835 or (250) 338-9122 Campground: (250) 338-5159 Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

JUN 29 2017

### **GENERAL PROPERTY REGULATIONS**

To:

1. Members are responsible for acceptable, considerate, quiet and non-abusive behaviour from themselves, their family and guests at all time while on Association property. Abuse of rules could result in an Ethics Committee appearance and/or loss of membership.
2. Members are not to loan their gate key or membership cards at any time. Random gate checks are held to enforce this.
3. Speed limits on Association property are to be followed for the safety of members and families.
4. No ATVs, dirt/trail bikes, mini bikes, etc. are to be used on property with the exception of use by the Association for special events and or work projects.
5. All pets must be kept on leash, quiet and under control at all times. Droppings must be promptly cleaned up, bagged and disposed of in garbage containers. No dogs are allowed in the swimming area.
6. All members, family and their guests are to stay off main grounds and clubhouse area across the walk bridge when a private function is taking place.
7. Archery range trails and gun ranges (including Cowboy Action Range and Boomtown) are strictly out of bounds to non-users. No unsupervised minors are to be within archery trails, fish hatchery and tank area, or gun ranges at any time.
8. Absolutely NO USE OF ILLEGAL DRUGS on Association property.
9. No consumption of alcohol in the swimming area or while walking around the campground. COMMON SENSE AND DISCRETION TO BE USED; do not carry OPEN alcoholic beverages while moving from one campsite to another. That is the law. Consumption of alcohol at the main hall is in designated areas only and not on the grounds. Absolutely no consumption of alcohol on any shooting ranges including archery.
10. No bicycles, skateboards, roller blades, long boards etc. outside campground without adult supervision.
11. For the safety and privacy of members, the use of drones operated from or over the property of Courtenay and District Fish & Game property is not permitted with the exception for use at special events or work projects approved by the Board.

### **BOAT LAUNCH REGULATIONS**

1. All motorized boats must be launched from the boat ramp only.
2. No motorized boats, kayaks or canoes are to be within the swimming area.
3. Boats are to be beached with a stern/bow line attached to shore in posted areas only and shall not remain moored, beached or unattended overnight. All boats shall be removed from the water by sunset with the exception of boats used in special events and with the approval of the Board.
4. No jet-ski/seadoo type watercraft will be launched or operated from or within the Association's property.
5. All boats and trailers shall be free of any organic material before launching into Comox Lake, especially when coming from another body of water.

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6. No fuelling, maintenance or repairs of boats and motors while on the lake or within 100 feet (30 meters) of the shoreline.
7. Holding tanks are not to be emptied on the lake or on Association property. Bilge drain plugs will not be pulled while on the Association property. Both should only be emptied at approved sites.
8. All Provincial and Federal boating safety regulations must be followed.
9. Whatever is taken on the lake is to be taken off the lake.
10. No rafting of unattended power boats will be permitted while on Association property.
11. Speed limit of 5 KPH or trolling (idle) speed only within log boom sticks inner area. No wake please.
12. If the member has a boat, a guest boat will not be permitted to launch or operate on Association property. If the member does not have a boat, his or her guest's boat is permitted with a daily launch fee of \$10.
13. Boats may be on the property for use while camping or fishing. Boats are not to be left parked on the property for any other purpose including For Sale purposes.

**General Property, and Boat Launch rules apply to everyone using any and ALL parts of Association property. The Courtenay and District Fish & Game Protective Association or the Caretakers are not responsible or liable for any personal injury, theft or damage of personal property while on the Association property at any time. Launching, and boating are at your own risk. Remember that as an Association member, you are a steward of the land and the lake and as such, we all share ownership and responsibility for this property. Responsible, considerate behaviour and common courtesy to others is expected from all members at all times and it is up to members to police it. Don't be afraid to speak to those who appear to be breaking rules. Sometimes talking will solve the issue. If necessary, report any problems to the campground caretaker, club caretaker or any Board member. Abuse of rules could result in loss of membership.**



**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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# Appendix H

## Courtenay and District Fish & Game Club Information sheet



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Comox Valley Regional District

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COURTENAY AND DISTRICT FISH AND GAME PROTECTIVE ASSOCIATION  
Phone: (250)338-9122 Mail: PO Box 3177, Courtenay, BC V9N 5N4

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To:

cc:

Member

JUN 29 2017



## COURTENAY AND DISTRICT FISH & GAME CLUB INFORMATION

JANUARY 2016

### MEMBERSHIP

The membership year is from 1 January to 31 December. Regular members must be 19 – 64 years of age. A Regular Membership costs \$106 and a Spousal or Family Membership (children up to 17 yrs) costs \$144. A senior membership (65 years of age or older) is \$101 and a Junior membership (18 years of age) is \$36. Juniors and youth 17 and under do not have a vote. Club membership includes membership in the BC Wildlife Federation and \$5,000,000 third party liability insurance policy with Hub Insurance for recreational activities.

It **does not** include **ATV coverage**.

### GENERAL MEETINGS

General meetings are held the first Monday of each month except on holidays, then it moves to the following Monday.

### ACCESS TO PROPERTY

Access to the club property is via a locked gate off the Comox Logging road. Keys cost \$3 each and are only sold to members. The lock is changed yearly on January 1. Members are allowed to bring guests to club activities. Guests must be accompanied at all times and must leave when the member leaves. If you are expecting guests, meet them at the gate. **DO NOT LOAN YOUR MEMBERSHIP CARD OR KEY TO NON-MEMBERS.**

### FACILITIES

The **MEETING HALL** is normally closed except for functions and meetings. The hall can be rented by members for social activities. Call the caretaker @ 250-338-9122 for rates or bookings.

The **CAMPGROUND** is open all year and supervised by the campground caretaker from May to Sep. Fees are \$15 nightly for members, \$20 for guests. Members can bring one guest unit to stay on the member's site. No reservations, first come, first served. There are 50 non-serviced sites but garbage and latrine are available. Maximum stay is 10 nights but not over two weekends. Campground rules are posted or obtained from campground caretaker.

**PICNIC** area is open all year with no fee. No camping in picnic area.

**BOAT LAUNCH** fees are included in your membership. Boats are not to be left in the water overnight.

**ARCHERY RANGES** are open all year unless closed for a purpose. There is a 3D range and a practice range. Range fees included in membership.

**INDOOR RANGE** for 25 yard handgun and small bore rifle. Open Tues, Wed, and Thurs evening from 6:30pm to 9pm, subject to availability of range officers. Closed during the summer.

**OUTDOOR RANGES** – 25 and 100 yard ranges open daily from 8am to 8pm unless closed at 3pm for social events. Firearms ranges may also be closed when rented to law enforcement agencies. Closures are announced by club email and club website calendar. Covered firing points. Range fees included in membership.

**SHOTGUN RANGE** with 4 skeet ranges and 4 trap ranges is open Thursday & Sunday 10am to 2pm and Saturday 10am to 12pm. Sporting Clays on the first Saturday of each month.

**COWBOY ACTION RANGE** is open third Saturday of the month. Safety briefing at 8:30am followed by shooting at 9am. Spectators must have hearing and eye protection.

**BLACK POWDER** trail and 90 yard blackpowder/cowboy action range adjacent to CA range. Held on the 2nd Sunday of the month from 10 AM - 1 PM.

**NEWSLETTER** is published quarterly – March, June, September and December. Read it at <http://www.courtenayfishandgame.org> or pick up at the General Meetings. Current information is emailed to members. Get on-line by contacting the club at [the-office@courtenayfishandgame.org](mailto:the-office@courtenayfishandgame.org) in order to receive information emails.

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To:

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**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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# Appendix I

# Rental regulations

Comox Valley Regional District  
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**COURTENAY AND DISTRICT  
FISH & GAME PROTECTIVE ASSOCIATION**

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**RENTAL REGULATIONS**

**To:**

**CC:**

1. Members in good standing may rent the hall after 3 months of membership when voting privileges have been extended.
2. For their own safety, children must be supervised by adults during a function. Children are not to be allowed to run around the hall, grounds or ranges.
3. Parents are to purchase children's beverages from the bar.
4. Alcohol is only to be consumed in the hall and on the patio. No alcohol is to be consumed or taken outside of these areas. (e.g.: parking lot surrounding grounds).
5. No alcohol to be brought onto club property. Any violation of alcohol regulations will result in bar closure, and put your membership at risk.
6. Vehicles are to be parked in the designated areas only. In particular, vehicles will not be allowed to park in front of or beyond the "CONED" BARRIERS. Please observe handicapped areas.
7. There is to be no littering on the grounds.
8. No smoking in hall. Smoking on patio only.
9. Dishes and cutlery are included in the basic rental fee. They are to be cleaned by the kitchen staff (caterers or renters), counted, and put away under the supervision of the caretaker. There will be a charge for any breakage or missing pieces.
10. **Renters are not permitted in the range building or the shooting areas. Ranges will remain open until 3:30pm. Rental time starts at 4:00pm.**
11. Kitchen and equipment available only on day of rental. All cooking and serving equipment are renter's responsibility. (pots, pans, warming trays, etc.)
12. Renters duties consist of:
  - a.) Tables are to be cleared and cleaned. All empty bottles are to be returned to the bar at the end of the function.
  - b.) Left over drinks must be emptied in the container provided.
  - c.) All renters' decorations are to be removed. Decorations in designated areas only.
  - d.) All left over food and renter's belongings are to be removed from the kitchen and hall at the end of the function, unless otherwise arranged.
  - e.) Crayons, paints art works and decorations left on floor or walls will be considered extra clean-up and will be deducted from damage deposit.
  - f.) No confetti, rice or soap machines allowed on premises or surrounding grounds; otherwise full damage deposit may be assessed.
  - g.) Stove top and oven are to be cleaned of any spills.
  - h.) Dishwasher cycle to be run through at least 2 times before washing dishes. (to make sure water is hot)

NOTE: Tables are not to be overloaded, sat on or stood on. Tacks, staples etc., are not to be used on the tables (masking tape and scotch tape allowed). Otherwise, damages will be assessed.

.....  
**The caretaker is not responsible for the cleanup. Please remember, there could be another function planned the day after yours! Thank you for your cooperation.**

Thank you for your cooperation,  
Management of the COURTENAY AND DISTRICT FISH & GAME PROTECTIVE ASSOCIATION

Comox Valley Regional District  
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2017-06-29

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MARCH 21, 2016

**COURTENAY AND DISTRICT**  
**FISH & GAME PROTECTIVE ASSOCIATION**

File:

JUN 29 2017

**BAR RULES & REGULATIONS**

To:

cc:

1. Bar Hours are 4:00 pm - 12:00 midnight; or whatever start time you want after 4:00 pm.
2. **All liquor must be purchased through the Fish & Game Bar.** Any person found consuming alcohol not purchased from our bar will be asked to leave the property, this includes the parking lots.
3. **Homemade wine, beer or any other type of homebrew liquor is NOT permitted.**
4. All bartenders are volunteers. Please include them in your catering numbers.
5. **We will NOT run any Toonie Bars.**
6. Prior arrangements can be made to use a Ticket System to pay for drinks.
7. Specialty wines are subject to a \$4.00 corkage fee per bottle or per litre of boxed wine.
8. We can only purchase our liquor from a Government Liquor Store. We cannot buy from Private Liquor Stores or Specialty Wine Shops.
9. No alcohol is to be consumed outside our Licenced Area (see map attached). No alcohol is to be consumed prior to or during any event on the grassed area in front of and to the side of the Clubhouse. The host member will be in jeopardy of losing his or her membership. Too many guests think that because they are at a function at the club that it is a private function, but we must obey all the liquor laws or we are in jeopardy of losing our liquor licence.
10. All bar sales are cash as we do not accept debit or credit cards. There is an ATM located on site. Please advise your guests.
11. No alcohol is to be consumed in the kitchen area by catering staff unless it is purchased from the Fish and Game Bar.
12. Unruly behavior and complete disregard for our club rules and regulations will mean a quick trip to the gate and a possible ride in the white car.
13. Remember you, as the renter and a club member, are responsible for ensuring that all your guests abide by the rules and regulations of our club.

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1. The Comox Valley Regional District (CVRD) is pleased to announce that it has received a grant from the British Columbia Ministry of Environment and Climate Change Strategy (MCECS) to fund a project to improve the water quality of the Comox River.

The project will focus on reducing the amount of sediment and nutrients entering the river from agricultural and residential sources. This will be achieved through a combination of riparian zone revegetation, erosion control measures, and improved farm and residential practices.

The project is part of the CVRD's ongoing efforts to protect and improve the water quality of its watersheds. The CVRD is committed to working with the community to ensure that our water resources are protected for future generations.

For more information about the project or to learn how you can get involved, please contact the CVRD at (250) 853-3333 or [www.comoxvalley.ca](http://www.comoxvalley.ca).

Comox Valley Regional District

The CVRD is a local government that provides a wide range of services to the communities of Comox Valley, including water supply, waste management, and land use planning.

The CVRD is committed to providing high-quality services to its residents and businesses. We are always looking for ways to improve our services and make our communities a better place to live and work.

The CVRD is a member of the Regional Districts Association of British Columbia (RDABC). The RDABC is a national organization that represents the interests of regional districts across the province.

The CVRD is also a member of the Comox Valley Chamber of Commerce. The Chamber is a business organization that provides a wide range of services to its members, including marketing, public relations, and legal services.

The CVRD is a member of the Comox Valley Health Services Board. The Board is responsible for providing a wide range of health services to the community, including primary care, mental health, and substance abuse services.

The CVRD is a member of the Comox Valley Fire Department. The Fire Department provides fire protection services to the community, including fire suppression, emergency medical services, and fire prevention.

The CVRD is a member of the Comox Valley Police Department. The Police Department provides law enforcement services to the community, including crime prevention, investigation, and enforcement of the law.

The CVRD is a member of the Comox Valley Library Board. The Board is responsible for providing a wide range of library services to the community, including book lending, computer access, and community programs.

The CVRD is a member of the Comox Valley Senior Centre. The Centre provides a wide range of services to seniors, including meals, transportation, and social activities.

The CVRD is a member of the Comox Valley Youth Centre. The Centre provides a wide range of services to youth, including recreational activities, counseling, and job training.



**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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# Appendix K

# CDFGPA membership Declaration



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To:

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Administrative

COX VALLEY REGIONAL DISTRICT

Administrative

## **DECLARATION**

This is to certify that I \_\_\_\_\_ (please print first & last name)  
have received copies of the Constitution and Association rules governing my conduct and  
that my spouse, partner , immediate family members or guests while on Association  
property.

I Further understand that it is my responsibility to acquaint myself with changes to these  
rules and record all amendments published by the Association. (e-mail & newsletter)

Date \_\_\_\_\_

Signature \_\_\_\_\_







**COURTENAY AND DISTRICT  
FISH AND GAME PROTECTIVE ASSOCIATION**

Phone: (250) 338-9122

Mail: P.O. Box 3177 Courtenay, BC V9N 5N4

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# Appendix L

## Letter from Ministry of Environment (2014)



BRITISH COLUMBIA  
MINISTRY OF ENVIRONMENT

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Comox Valley Regional District

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Appendix 1

Letter from Ministry of  
Environment (2014)



Comox Valley Regional District  
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JUN 29 2017

To:

Victoria File: 26250-20/13392  
SITE: 13392

10 December, 2014

**VIA EMAIL ONLY: [jandbmclure@shaw.ca](mailto:jandbmclure@shaw.ca) and [bchow@comoxvalleyrd.ca](mailto:bchow@comoxvalleyrd.ca)**

Courtenay and District Fish and Game Protective Association  
3780 Colake Road  
Courtenay BC V9N 9M9  
**Attention: Robert McClure**

Comox Valley Regional District  
600 Comox Road  
Courtenay, BC V9N 3P6  
**Attention: Brian Chow**

Dear Robert McClure and Brian Chow:

**Re: Site Profile Submission – Zoning Application**  
**3780 Colake Road, Courtenay**  
**PIDs: 000-863-840, 000-864-846, 000-864-889 and 026-200-881**

This letter is to acknowledge receipt of a satisfactorily completed site profile pertaining to the above-referenced site.

Based on the information provided by the applicant, the ministry is prepared to provide the necessary release so that the Comox Valley Regional District may proceed with approval of the zoning applications. To that end, please accept this letter as notice pursuant to the *Local Government Act* (section 946.2(2)(b) the Comox Valley Regional District may approve the zoning application under this section because the Director does not require site investigation prior to approval of the zoning application. This decision is for the limited purpose of the zoning application.

In accordance with section 7(1) of the Contaminated Sites Regulation (Regulation), the Director requires a preliminary site investigation for the subject site following completion of the zoning application. Investigation of all environmental media must be conducted until the full extent of contamination is determined at the site and which has migrated from the site. Section 58 and 59 of the Contaminated Sites Regulation describe the requirements for the conduct of preliminary and detailed site investigation and the content of reports based on those investigations.

Pursuant to the *Local Government Act* (section 946.2), or the *Land Title Act* (section 85.1) in the case of subdivision, this decision will suspend approval of future applications for the site identified in section 40 of the Act, until:

- the proponent has applied for, and obtained one of the following instruments, as applicable: a Determination that the site is not a contaminated site, a Voluntary Remediation Agreement, an Approval in Principle of a remediation plan or a Certificate of Compliance confirming the satisfactory remediation of the site. A copy of the legal instrument must be provided to the approving authority; or
- the approving authority has received notice from the ministry that it may approve a specific application because a) in the opinion of the Director, the site would not present a significant threat or risk if the specified application were approved; b) the Director has received and accepted a Notification of Independent Remediation with respect to the site; or c) the Director has indicated that a site investigation is not required prior to the approval of the specified application.

For more information regarding the freeze and release provisions of the site profile process, refer to Fact Sheet 37, "Site Profile Freeze and Release Provisions" and Administrative Guidance 6, "Site Profile Decisions and Requesting Release Where Local Government Approvals are Required" available on the Land Remediation Section Website at <http://www.env.gov.bc.ca/epd/remediation/>.

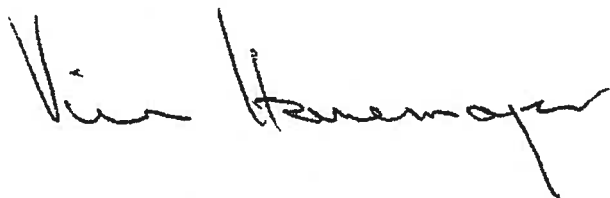
Please be advised of the following:

- The absence of a requirement to undertake a site investigation does not necessarily mean that the site is not a contaminated site. It is recommended that the proponent retain a qualified environmental consultant to identify and characterize any soil and/or groundwater of suspect environmental quality encountered during any subsurface work at the subject site;
- Those persons undertaking site investigations and remediation at contaminated sites in British Columbia are required to do so in accordance with the requirements of the Act and its regulations. The ministry considers these persons responsible for identifying and addressing any human health or environmental impacts associated with the contamination; and
- Penalties for noncompliance with the contaminated sites requirements of the Act and Regulation are provided in section 120(17) of the Act.

Decisions of a Director may be appealed under part 8 of the Act.

Please contact the undersigned at 604 582-5377 if you have any questions about this letter.

Yours truly,

A handwritten signature in black ink, appearing to read "Vin Hanemayer". The signature is written in a cursive style with a large initial "V" and a long, sweeping underline.

Vincent Hanemayer  
for Director, *Environmental Management Act*

vch\

