## RE: Parks Use Permit 102714 Amendment Application 2017 -Tracking Number 363734

Friday, October 13, 2017 11:08 AM

Subject	RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734
From	Dalziel, Rod ENV:EX
To	'Michael Day'
Cc	'Janette.Loveys@scrd.ca'
Sent	Monday, August 21, 2017 11:29 AM
Attachments	2017-08-08 Park use p

Hello Michael,

We are in the process of adjudicating the PUP amendment application. I have some comment and request for additional information in your attached document.

Please let me know if you have any questions.

I noticed we did not move to Stage 3 Water Restrictions last week. Did the brief rainfall event last weekend help much? What is the current situation?

#### Regards,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

: PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0 2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

: Rod.Dalziel@gov.bc.ca

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From: Michael Day [mailto:Michael.Day@scrd.ca]

Sent: Friday, August 11, 2017 11:13 AM

To: Coupar, Meghan FLNR:EX Cc: Dalziel, Rod ENV:EX

Subject: RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Thanks, Meghan,

I called into FrontCounter and didn't get anyone, left a voice message.

I will be paying this by credit card.

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer Infrastructure Services I Sunshine Coast Regional District 1975 Field Road, Sechelt, BC, V0N 3A1

Phone: 604.885.6810

From: Coupar, Meghan FLNR:EX [mailto:Meghan.Coupar@gov.bc.ca]

Sent: Friday, August 11, 2017 11:01 AM
To: Michael Day < Michael. Day@scrd.ca>

Cc: Dalziel, Rod ENV:EX < Rod. Dalziel@gov.bc.ca>

Subject: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Tracking Number: 363734 (Amendment 2017)

Authorization Number: 102714

Permittee: Sunshine Coast Regional District

Park: Tetrahedron Park

Term: February 1, 2014 to January 31, 2024

Hello Michael,

Thank you for submitting an application for an Amendment to Park Use Permit 102714.

Sunshine Coast Regional District's Amendment Application for Tetrahedron Park has been entered under **Tracking Number 363734**. Please quote this Tracking Number on future inquiries.

Your application has been assigned to Rod Dalziel - BC Parks Area Supervisor for review. You may contact him at 604 885-6755 or email Rod.Dalziel@gov.bc.ca.

The **Amendment Application Fee of \$525.00 (GST included)** is due. Payments can be made over the phone by credit card with the FrontCounter BC Surrey office at (604) 586-4400 or Toll Free: 1-877-855-3222.

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FrontCounter BC Surrey 200 – 10428 153<sup>rd</sup> Street Surrey BC V3R 1E1

Please do not hesitate to contact me or the BC Parks Area Supervisor with any questions you may have.

Thank you,

#### Meghan Coupar

Parks Permit Clerk
FrontCounter BC - South Coast Regional Office
South Coast, Haida Gwaii/South Island Sections

Tel: (604) 586-4439 Fax: (604) 586-4434

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From: Aikman, Jennie S ENV:EX

Sent: Thursday, August 10, 2017 11:14 AM To: 'Michael Day'; Dalziel, Rod ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys; Coupar, Meghan FLNR:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon (updated design drawing)

Hello Michael,

Thank you for the permit amendment application. I have included the Sunshine Coast Area Supervisor, Rod Dalziel, as Rod is the lead contact on the park use permit. If you have any questions regarding the permit renewal process, please contact Rod at (604) 885-6755.

I have provided your application to our permit clerk, Meghan Coupar, for processing and Meghan may be following up

with you regarding any additional requirements.

With kind regards, Jennie

Jennie Aikman

Regional Director, South Coast Region BC Parks | Ministry of Environment Office phone: (604) 924-2227 Cell phone: (778) 875-8494

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From: Michael Day [mailto:Michael.Day@scrd.ca] Sent: Wednesday, August 9, 2017 11:33 AM

To: Aikman, Jennie S ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon (updated design drawing)

Jennie,

I have been provided with a more current and correct design drawing than the one I attached earlier.

The prior version was correct in principal, but not in detail.

Please substitute this for the original.

#### Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, V0N 3A1

Phone: 604.885.6810

From: Michael Day

Sent: Wednesday, August 09, 2017 10:48 AM

To: Jennie.Aikman@gov.bc.ca

Cc: Remko Rosenboom (Remko.Rosenboom@gov.bc.ca) < Remko.Rosenboom@gov.bc.ca>; Janette Loveys

<Janette.Loveys@scrd.ca>

Subject: Parks Use Permit 102714 Amendment Application re: temporary siphon

Dear Jennie,

#### Re: Parks Use Permit 102714 Amendment Application

As per CAO Loveys earlier email, please note the attached Parks Use Permit (PUP) Amendment application form and associated supporting documents.

I discussed this proposed temporary PUP amendment with Sechelt Nation staff on August 4th and followed up again today. Chris August, Implementation and Compliance Manager, has verbally expressed his willingness to provide a letter of support for the temporary siphon application. I have received some assurance a letter of support will be provided by Monday, August 14th.

I will also be forwarding the PUP amendment application to Squamish First Nation under separate cover.

If you have any questions or concerns, please contact me directly at:

E-mail: michael.day@scrd.ca Office: +1 (604) 885-6810

s.16 Mobile:

Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services and Regional Engineer Infrastructure Services I Sunshine Coast Regional District 1975 Field Road, Sechelt, BC, V0N 3A1

Phone: 604.885.6810 Fax: 604.885.7909

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Park Use Permit application (temporary amendment) – Sunshine Coast Regional District – Siphon at Chapman Lake

Part 3:

#### Section A - Proposed Activity

#### a. Purpose of Land use or occupancy

The purpose of this amendment to Park Use Permit 102714 (PUP) held by the Sunshine Coast Regional District (SCRD) is to increase the available late summer water supply from Chapman Creek through the installation of a temporary siphon system in Chapman Lake, which is located in the Tetrahedron Provincial Park.

Chapman Creek is the primary water supply to the Regional Water System on the Sunshine Coast and supplies water to approximately 23,000 people. In two out of the last five years, this water supply has become nearly depleted due to prolonged periods of drought and increased water demand during the summer season. To alleviate potential acute water shortage in 2017 and 2018, the SCRD is seeking approval from BC Parks (and the Ministry of Forests, Lands and Natural Resource Operations), to access an additional five meters of water storage (1 million cubic meters) in Chapman Lake should doing so become necessary.

In the immediate term, the SCRD is proposing to have the necessary permits in place to allow the temporary installation of a siphon in the event that the region experience another water shortage from a prolonged period of drought. The main drivers behind this request for a temporary amendment to the SCRD's PUP are:

- Meeting increased environmental flow targets for Chapman Creek established by the Ministry of Forests Lands and Natural Resource Operations (FLNRO) to facilitate fish migration as per recommendations from a fisheries biologist and requirements under the Water Sustainability Act;
- Uncertainties in short term weather projections: recent climate studies suggest that prolonged periods of drought in the South Coast could occur more frequently but shorter term weather forecasts of precipitation are highly unreliable; and
- Meeting increased summer season water demand (water use nearly doubles in the summer season from irrigation and tourism).

In order to both reduce demand and increase water supply from sources other than Chapman Creek, the SCRD is implementing demand and supply management in accordance with the Comprehensive Regional Water Plan (CRWP), including such measures as water metering, well protection measures, and groundwater resource investigation.

Also in accordance with the CRWP and outside of the scope of this amendment application, the SCRD is also in the process of obtaining approvals to deepen the channel in Chapman Lake which will permanently enhance redundancy in the water system. This is an essential measure in the medium term prior to the construction of long term source development projects specified in the SCRD's CRWP are constructed.

 Details of existing uses, vegetation cover, wildlife present, water resources, geology, and historical and cultural significance

#### **Existing uses**

The existing uses for the proposed area within this PUP amendment application are for water impoundment and a helicopter pad.

#### **Vegetation Cover**

#### Vegetation Overview

Forest cover around Chapman Lake and the upper Chapman Creek watershed consists of Mountain Hemlock (Tsuga mertensiona), Yellow Cedar (Chamaecyparis nootkatensis) and Pacific Silver (Amabilis) fir (Abies amabilis), while lower elevations in Tetrahedron Provincial Park contain Western Hemlock (Tsuga heterophylla) and Western Red Cedar (Thuja plicata; Triton 2006). The canopy formed by the tree cover varies from relatively open to dense. Throughout the park, semi-open meadows, marsh complexes, and areas of dense shrub [e.g., blueberry (Vaccinium sp.)] are also found.

The mid and lower reaches of the Chapman Creek watershed, outside the park boundaries, fall within the Coastal Western Hemlock biogeoclimatic zone (CWHm), and are characterized by forests dominated by Douglas fir (*Pseudotsuga menziesii* var. menziesii), Western Hemlock, Western Red Cedar and a variety of understory shrub species. Widespread logging and associated disturbance and revegetation have resulted in a change in forest composition from old-growth conifer forests to communities with a higher proportion of broadleaved trees. Much of the riparian zone in the mid and lower reaches of Chapman Creek now consists of alder stands. The park is situated within the Southern Pacific Ranges ecosection and Coastal Western Hemlock/Mountain Hemlock biogeoclimatic zones. The park contains one of the oldest undisturbed forests in Canada with stands containing trees over 1,000 years. Semi-open meadows, marsh complexes and dense understorey (e.g. blueberry) are characteristic of the park, which also contains ten lakes.

#### Riparian Vegetation

Riparian vegetation surveys were completed in 1998 as part of impact assessment from the 5 m lake depth to 5 m above the high water level. The riparian area is largely forested to the high water level with several smaller areas where shrubs and/or herbaceous species predominate. The four habitat types identified include forest, shrub land, wet meadow and wetland/aquatic. Forest vegetation consisted of Mountain Hemlock and Amabilis Fir with some Yellow Cedar. The shrub layer was dominated by Alaskan blueberry (*Vaccinium alaskaense*) and oval-leaved blueberry (*Vaccinium ovalifolium*) with the herb layer consisting of moss. Meadow and wetland areas contained a graduation from one to the other with an increase in soil moisture. Meadow areas tended to be moist due to subsurface drainage from hillslope areas. Vegetation growth within the lake that was less than 2 m in depth was considered part of the wetland habitat.

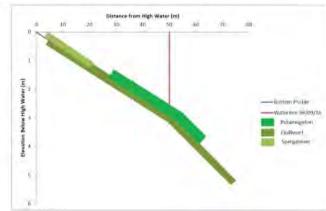
Comment [RD1]: Why no mention of surveys from 2016 IA anywhere in this application?

#### **Aquatic Vegetation**

Aquatic vegetation transects were conducted in Chapman Lake during late summer of 1998. Aquatic plants surveyed were limited to submergent species; however, water levels in the lake were below normal high water levels. The dominant species inventoried consisted of bristle-like quillwort (Isoefes echinospora) and was observed growing on suitable substrates throughout the lake. Dominant plant species typically occur between the 1 m and 4 m below the high water level. Narrow-leaved bur-reed (Sparganium sp.) and pondweed (Potamogeton sp.) were observed on the exposed or shallow lake areas, particularly at the east end of the lake. Figure 1 illustrates the zonation of aquatic vegetation in Chapman Lake from the survey transects for the study completed in 1998.

The main disturbance to aquatic vegetation during operations was identified as desiccation due to drying; however, it was noted that drying stress is already present seasonally in the littoral zone where most of the aquatic vegetation occurs and the dominant plant (quillwort) appeared to be very tolerant to desiccation under existing water level fluctuations in the reservoir. It is likely that the reduced growing season caused by existing drawdown leads to increased thermal drying stress on bur-reed and pondweed and abundance levels were low.

Figure 1. Zonation of Aquatic Vegetation in Chapman Lake



Source: Whitehead 1999

#### Sensitive Species

A list of plant species potentially within the study area was compiled using the BC Conservation Data Centre database. The same search categories as above were used to compile the information. Table 1 provides a summary of the resulting species, including the BC designation and Species at Risk statuses. A total of seven sensitive BC species were identified, with no SARA listed species results.

Table 1. Sensitive Plant Species in the Sunshine Coast Forest District

Common Name	Scientific Name	Species Type	BC Status	SARA Status
elegant Jacob's-ladder	Polemonium elegans	Dicot	Blue	
Kamchatka spike-rush	Eleocharis kamtschatica	Monocot	Blue	
poison oak	Toxicodendron diversilobum	Dicot	Blue	
Roell's brotherella	Brotherella roellii	Nonvascular plant	Red	
slimleaf onion	Allium amplectens	Monocot	Blue	
small spike-rush	Eleocharis parvula	Monocot	Blue	
snow bramble	Rubus nivalis	Dicot	Blue	

A search was also conducted in the BC Conservation Data Centre database for terrestrial ecological communities in the area surrounding Chapman Lake. Criteria used to focus the search results was applied using the regional and forest districts for the Sunshine Coase filters. In addition, the biogeoclimatic zone of Coastal Western Hemlock, subzone very wet maritime and montane (CHWvm2) variant filters were applied. Table 2 below provides the results of the ecological community database search of the area, which includes BC sensitive species status.

Table 2. Sensitive Ecological Community Plant Species in the Sunshine Coast, Coastal Western Hemlock Biogeoclimatic Zone (CHWvm2)

Common Name	Scientific Name	BC Status	Endemic
Amabilis fir - Sitka Spruce / devil's club	Abies amabilis - Picea sitchensis / Oplopanax horridus	Blue	
Amabilis fir - Western Red cedar / salmonberry Very Wet Maritime	Abies amabilis - Thuja plicata / Rubus spectabilis Very Wet Maritime	Yellow	
amabilis fir - western red cedar / three- leaved foamflower Very Wet Maritime	Abies amabilis - Thuja plicata / Tiarella trifoliata Very Wet Mantime	Yellow	
Sitka sedge / peat-mosses	Carex sitchensis / Sphagnum spp.	Red	Y
Sitka willow / Sitka sedge	Salix sitchensis / Carex sitchensis	Blue	Y
western redcedar - western hemlock / sword fern	Thuja plicata - Tsuga heterophylla / Polystichum munitum	Blue	
western redcedar - yellow-cedar / spleenwort-leaved goldthread	Thuja plicata - Xanthocypans nootkatensis / Coptis aspleniifolia	Yellow	
western redcedar - yellow-cedar / skunk cabbage	Thuja plicata - Xanthocyparis nootkatensis / Lysichiton americanus	Yellow	
western hemlock - amabilis fir / deer fern	Tsuga heterophylla - Abies amabilis / Blechnum spicant	Blue	
western hemlock - amabilis fir / Alaskan blueberry	Tsuga heterophylla - Abies amabilis / Vaccinium alaskaense	Yellow	
western hemlock - lodgepole pine / grey reindeer	Tsuga heterophylla - Pinus contorta / Cladina rangiferina	Yellow	Y
western hemlock - western redcedar / salal Very Wet Maritime	Tsuga heterophylla - Thuja plicata / Gaultheria shallon Very Wet Maritime	Blue	Y
yellow-cedar / peat-mosses	Xanthocyparis nootkatensis / Sphagnum	Yellow	

Wildlife Resources

Wildlife values within the Chapman Creek watershed are not well known and information is limited. The watershed appears to support populations of Columbian black-tailed deer (Odocoileus hemionus columbianus), black bear (Ursus americanus), cougar (Puma concolor) and other furbearing animals. Other wildlife known to use the watershed include: waterfowl, gulls, shorebirds, raptors, upland game birds, woodpeckers, a variety of songbirds, small mammals, amphibians and reptiles. Species recorded in Tetrahedron Provincial Park include: mountain goat (Oreamnos americanus), coyote (Canis latrans), mink (Mustela vison), marten (Martes Americana), river otter (Lontra canadensis) and bobcat (Lyrix rufus), a variety of rodents, rock ptarnigan (Lagopus muta), woodpecker, grouse, ravens (Corvus corax), and marbled murrelets (Brachyramphus marmoratus; MELP 1997). It is thought that many of the larger animals tend to be transient users wildlife corridors to pass through the park. Hunting is prohibited within the park; however, the lower reaches of the watershed provide recreational hunting opportunities. There are no approved Wildlife Habitat Areas in the assessment area. There is a lack of emergent vegetation (e.g., cattail, bulrush) within the high water perimeter of Chapman Lake, however, some limited opportunities for nesting birds is available in this area.

#### Sensitive Wildlife Species

A list of sensitive wildlife species potentially found in the study area was compiled using the BC Conservation Data Centre database. The search categories used to compile the information included a search of the Sunshine Coast Forest District and refining the search results using the Coastal Western Hemlock and Mountain Hemlock biogeoclimatic zones. Habitat types used to further filter survey results included forest, grassland/shrub, lakes, riparian, stream/river and wetland. BC Red listed species include any plant, animal or plant community that is extirpated, endangered or threatened and Blue listed species are considered to be of special concern in BC, but are not extirpated, endangered or threatened. The Species at Risk Act, Schedule 1, is federal government legislation enacted to protect extirpated, endangered and threatened species and species of special concern across Canada. A total of 45 sensitive BC wildlife species were identified, with 16 SARA listed species results.

#### Water Resources

The Chapman Creek watershed (Watershed Code: 900-120400) is located approximately 5 km east of Secheit, BC and provides approximately 85% of the drinking water and fire protection for more than 21,000 residents between Langdale and Earl's Cove, including the District of Sechelt. Water storage is provided by both Chapman and Edwards Lakes which are located on the Tetrahedron Plateau in Tetrahedron Provincial Park. A control structure on Edwards Lake allows water to be released when required to augment flows in Chapman Creek.

Chapman Creek flows south from the Tetrahedron Plateau for approximately 24 km and discharges into the Strait of Georgia. Chapman Creek watershed is approximately 73 km² in area and the drinking water intake is located approximately 175 m above sea level and 7.5 km upstream of the mouth of Chapman Creek. Approximately 65 km² of the Chapman Creek watershed is located above the SCRD water intake.

Comment [RD2]: Why no fish

Comment [DB3]: I think the number mentioned earlier in the report was 10k

Comment [RD4]: Why did we receive a reviewed unedited copy?

#### Chapman Lake

Chapman Lake lies at an elevation of 976 m above sea level in steeply sloping terrain; surrounding ridgetops and peaks typically reach more than 1,500 m elevation. The lake has a surface area of 31.2 ha and a maximum depth of approximately 30 m, making it the largest lake in the Chapman Creek watershed. The catchment area of the lake is 6.58 km², and the lake is fed by 2 main streams, both of which enter at the east end of the lake. The lake volume at the high water level is approximately 3.7 million m³ with an average outflow rate of 0.476 m³/s. Based on these data, the average retention time of water in the lake is approximately 90 days. The short retention time reflects the high level of precipitation in the watershed. Outflow from the lake is controlled by a concrete dam and valve located on the west side of the lake and operated by the SCRD. During a typical year, water stored behind the dam is allowed to overflow naturally until there is a need to supplement the flows to Chapman Creek, at which time the dam is opened to release stored water from the reservoir. The annual lake level variation is currently between 1.5 m to 3 m.

Chapman Lake Water Quality

Whitehead (1999) reported the results of limited water quality monitoring on Chapman Lake. Parameters measured included Secchi disc transparency, temperature and dissolved oxygen. The Secchi disk indicated clear water with a reading at 6.5 metres. Temperature and dissolved oxygen results ranged from 16°C at the surface to 7°C at depth and from 16 mg/l at the surface to 6.5 mg/l at depth, and indicated the lake was stratified with a thermocline between 2 m and 3 m. During the monitoring program gas bubbles were observed throughout the lake and particularly at the east end in the shallower areas. Based on the smell of hydrogen sulphide it was concluded the gas bubbles were originating from anaerobic decomposition originating in the lake sediments.

Chapman Lake Water Quantity

A water demand and supply analysis under changing climatic conditions was conducted on the Chapman water system on the Sunshine Coast. The study assessed the impacts of climate change on water consumption and water supply within the Chapman watershed. Historic temperature, precipitation and discharge data were collected to determine historic trends. The impacts from Pacific Decadal. Oscillations and El Niño Southern Oscillations on climate and discharge were analyzed to determine the impacts of climate change.

The results from this study indicated that climate patterns on the Sunshine Coast have changed over the last 50 years, with annual average temperatures increasing by approximately 2°C and average total annual precipitation decreasing by 24 mm. Climate trends were determined to impact the available water supply as temperatures and snowpack elevation were increasing. This increased temperatures and diminishing snow pack is causing the snow to melt earlier and more rapidly during the spring season and existing streamflow regime in Chapman Creek is shifting towards a more rain dominated regime, which would change the entire water holding dynamic of the watershed. Discharge data further showed that peak discharge occurred earlier in the spring, which affects summer base flows when demand for domestic distribution and environmental services was highest. Climate conditions during the summer season were also determined to be impacting supply as the increasing temperatures were assumed to cause the snowpack to be depleted earlier in the summer season and the decreasing trends in precipitation were resulting in less recharge to storage reservoirs.

Comment [RD5]: Engineering diagram states top of dam at 974m

Comment [DB6]: Check number. This is a little high for the elevation and temperature The increases in temperature and decreases in precipitation trends were shown to be correlated to water consumption during the summer season when water supplies are the most limited. The significant correlation between water consumption and temperature and precipitation identifies how climate change may impact water consumption behaviors on the Sunshine Coast.

Sunshine Coast climate is characterized by cool and wet winters and warm and dry summers (Figure 3). The summer season is the critical time of year for water supply, as this is when water demand is highest and available water supply is most limited. Trends over the last 50 years are suggesting that summer temperatures are increasing (Figure 4) and total summer precipitation is decreasing (Figure 5).

Figure 2. Annual average total monthly precipitation and average monthly temperature in Gibsons, BC (1962 to 2013)

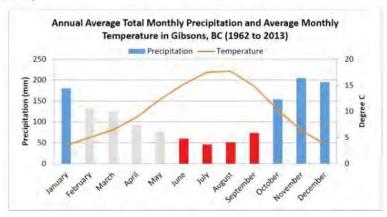


Figure 3. Historic monthly mean temperatures for July to September collected in Gibsons, BC from 1962 to 2013

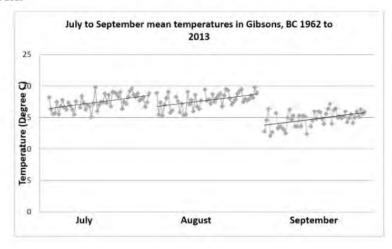
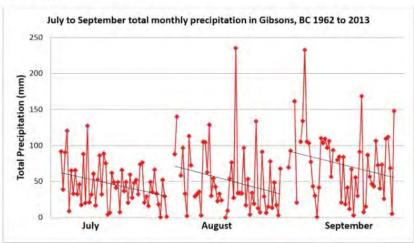


Figure 4: Historic monthly total monthly precipitation for July to October collected in Gibsons, BC from 1962 to 2013



As part of the study, a sensitivity analysis was completed and identified that the total water consumption during the summer could regularly exceed the equivalent to the available water supply in the next 10 years if water demand does not change, snow pack continues to decrease in the winter, summer temperatures increase by an average 1 or 2 °C, and prolonged droughts become more common.

#### Geology

Chapman Lake lies within an area of granite rock of the late Jurassic and early Cretaceous ages (156 to 114 million years old), characterised as quartz diorite. Coastal watersheds underlain by rock types such as quartz diorite tend to be slightly acidic due to the low buffering capacity of these rocks and the natural low pH of rainfall.

The dominant soil-types within the Chapman watershed contain large concentrations of organically combined iron and aluminium in their subsoils. In poorly-drained soils on the Tetrahedron Plateau organic matter is not broken down as quickly as in areas of well-drained soils, which means that organic and clay colloids, and aluminium and iron compounds are common elements in the water supply and characterize the natural water quality in this area.

#### Historical and Cultural Significance

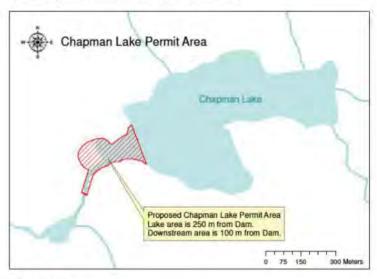
There were no available records of archaeological, historical and cultural heritage values at Chapman Lake. Chapman Lake lies within the traditional aboriginal territory of the shishalh Nation. An assessment by Global Village Research Consultants (1998) confirmed the 'no sites recorded....within a 9 to 10 mile vicinity of Chapman Lake and the upper drainage of Chapman Creek". AECOM recently reviewed the BC archaeological site database for any newly recorded sites in the project area and no new records have been added.

#### c. Location and size of all proposed and current improvements

#### Location

The location of the proposed permit area is outlined in the Figure below.

Figure 5. Proposed amended permit area at Chapman Lake



#### Siphon Design

The siphon consists of five parallel 200 mm HDPE pipes that are 255 m in length. The siphon will run over the existing dam structure from Chapman Lake into Chapman Creek. The inlet will be installed at an elevation of 963 m which is approximately 11 m below the top of the dam and will reach into the lake approximately 180 m from the existing dam. The inlets will be secured and anchored in place using concrete blocks and buoys. The outlet of the pipe will be located approximately 50 meters downstream of the existing dam at an approximate elevation of 965 m. Refer to attached engineering design drawings.

#### **Siphon Construction**

The installation of the siphon system will involve transportation of pre-fused sections of HDPE pipe to Chapman Lake via helicopter. The installation process will begin with laying the outlet pipe (with attached gate valve) then will proceed with laying the subsequent lengths of that pipe, ending with the inlet pipe (with attached check valve and buoy). The sections of pipe will be bolted together at Chapman Lake and the inlet pipe will be tied-off to lake bed anchor blocks. This process will be duplicated for a second complete siphon length. Once the first two pipe lengths are assembled and in place, the

pump/vacuum and blow-off ports will be constructed at the high point of each pipe. The siphons will be primed and commissioned as soon as possible after completion of construction. The operation of the first two siphons will be monitored for 24 hours by the SCRD Siphon Technicians. If the operation of the first two siphon lengths is considered to be a success, the remaining lengths will be constructed through the same process as the previous two. For construction details, refer to the Detailed Construction Plan.

Comment [RD7]: Where is this?

If the siphon is considered to be unsuccessful after 24 hours of operation, alternative options will be considered in consultation with First Nations, BC Parks, and MFLNRO.

#### If applicable, details of the physical changes to the site that would be required to meet the needs of the proposal and the proposed mitigation of such changes

The physical changes and the proposed mitigation strategies are outlined in the table below.

Table 3. Physical changes and proposed mitigation measures from the proposed works

Physical changes	Proposed mitigation
Lake bed disturbance from machine activity when assembling the pipes	Operating the machine in the upper areas of the exposed lake bed where the ground cover is compacted and disturbance is minimal.  In sensitive areas where lake grasses are present or ground conditions are softer, %" plywood will be placed on the ground to form a track and reduce any significant disturbance from a machine.
Excavating benches where necessary within the lake bed for the level placement of the lock blocks	An excavator will be used to dig out a flat area for placement of the lock blocks. The area to be disturbed will be sized according the size the size of the lock blocks to minimize disturbance. This work will occur when the lake level is below the location where the lock block will be placed to minimize any sedimentation into the lake.
Soil disturbance from machine activity	Machine access routes will be flagged at predetermined locations and routes in advance to minimize vegetation disturbance and to concentrate all disturbance from the machine into a small of an area as possible.

#### e. Construction Schedule (if applicable) for proposed new permanent and/or temporary facilities

A project of this nature has numerous variables that impact timing (e.g. weather, water demand etc.). The dates for the construction schedule are unknown until it is realized that the siphon is needed, which is when the water supply has approximately 30 days remaining.

From when the decision is made to install the siphon, construction and commissioning are estimated at 35 days of which approximately eight days will be in channel/lake work.

#### f. Photographs of the site and area adjacent to the proposed land use/occupancy

Figure 6. The proposed site at Chapman Lake showing the proposed alignment of the siphon lines and the sensitive aquatic grassy area to be protected as detailed in Table 3.



Figure 7. Site plan at Chapman Lake showing the camp area, access pad, proposed alignment of the siphon pipes, and general assembly area.

Copyright

#### g. Type of transportation and access route to the proposed site

Helicopter will be the primary mode of transport to and from the proposed site.

#### h. Initial five year operational plan

Because this is a short term plan, there is no intention of operating this siphon system for five years. Once the siphons are operational, the operational plan will consist of having at least one person on site at all times to ensure that the siphons are in operation and to also address any issues with operation in a timely manner.

#### Section B - Experiences of the Applicant

Park Use Permit - The SCRD has held a Park Use Permit (PUP) for the purposes of maintaining water impoundment infrastructure at Chapman and Edwards Lake and a helicopter pad at Chapman Lake in Tetrahedron Park since the park was established. The SCRD's PUP was renewed February 1, 2014 and the current PUP No. 102714 is valid until January 31, 2024

Constructing waterworks – The Sunshine Coast Regional District's waterworks crew consist of staff members who have been installing waterworks infrastructure for over 30 years.

Environmental management/monitoring – The SCRD has personal on staff who have extensive experience in environmental management, including experience in designing, implementing and monitoring Environmental Monitoring Plans.

#### Section C - Potential Impacts

#### a. Impacts and mitigation measures on vegetation, wildlife and watercourses

Table 4. Impacts and mitigation measures on vegetation, wildlife, and watercourses

	Introduction of invasive plants	All machines and equipment to be used for this project will be cleaned and inspected prior to being used at the lake for the construction and operation of the siphon. This strategy is intended to prevent the spread or introduction of invasive plants through the transport of machines and equipment.	
	Soil and vegetation disturbance from temporary camp to be used during	The periphery of areas required for accommodation, staging and construction will be marked with flagging. All personnel who will be working on site will be directed during orientation to concentrate all	
1	installation and operation of the siphon	of the activity and foot traffic to select areas only.	ł
	Disturbance to Wildlife	All wildlife observations and encounters will be recorded. This will include any instances where wildlife activity is disturbed from personnel working at the site.	
		Minimizing attractants to wildlife will be achieved through sound waste management. Food waste or any other waste that may attract wildlife will be contained in a lockable bear-proof container. The waste generated from the site will be removed on an as needed basis. A portable toilet will be available and all human waste will be collected in the toilet and flown off site as needed.	
1	Disturbance from a pertochemiacal spill	To mitigate the impacts from any potential petrochemical spill, all machinery with hydraulics will use vegetable oil wherever possible. A	
		spill kit will be on stand-by to contain any spills should they occur and spill response training will be provided to operators and staff. While fueling equipment, containment will be maintained by using soaker cloth under the area of where the filling is occurring. The pumps used for priming the siphons will be housed in containment boxes lined with plastic.	
		In the event of a spill, the spill will be reported to the Spills Reporting Line and the Lead Environmental Monitor (EM) will be contacted and will provide mitigation advice. Depending on the severity of the spill the EM will be brought to the site as soon as possible to oversee mitigation measures. An onsite staff or operator will be required to record the causes of the spill, the response undertaken and the apparent effects of the spill.	
	Disturbance from erosion and sediment laden run-off	The risk of erosion and sedimentation is highest when periods of intense rainfall coincide with active construction. These risks will be minimized by ensuring the construction takes place during dry conditions. The exposed lake bed on the south side of the outlet channel will be where the assembly and moving of the pipe will occur and the setting of lock blocks to anchor the pipe. Construction activity will occur on the most compacted ground accessible below the high	

water mark where the substrate consists of a shallow layer of sandy loam above glacial till and bedrock. This area is considered to be stable and the risk that planned activities will result in a rise in creek turbidity over the background level is considered to be low.

s.13

#### b. Impacts to watercourses or water bodies

Refer to Table 3.

c. Special features

N/A

d. Impacts on Park access

Access to the park will not be impacted from the proposed works.

e. Impacts to aesthetics and visual values

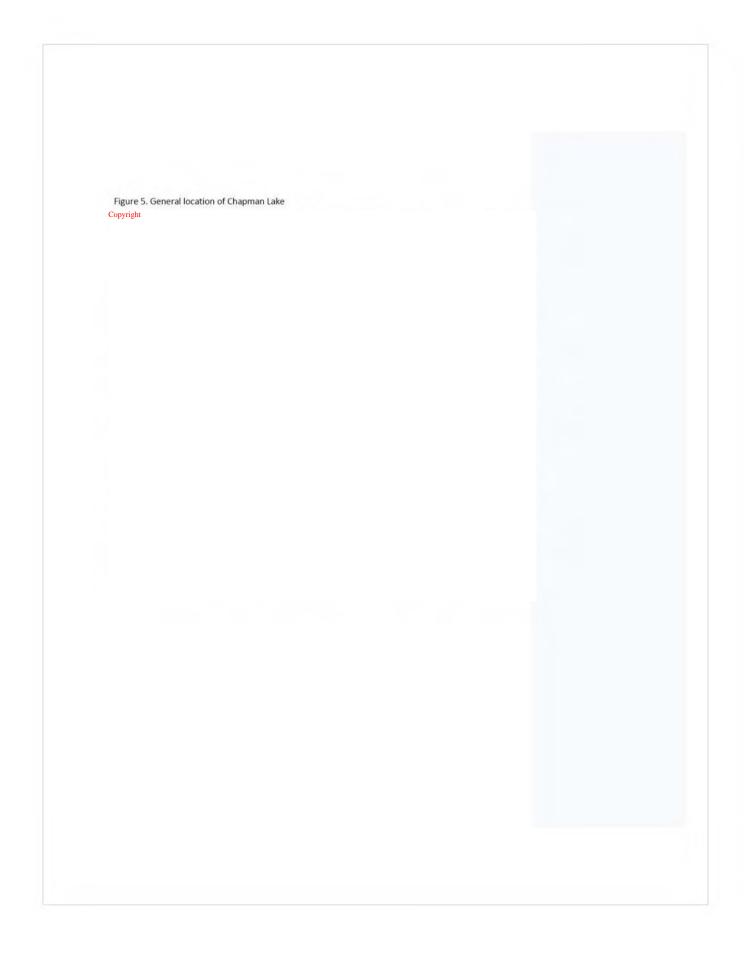
The location of the proposed works is not visible from any trails with the park and therefore is expected to have no impacts to landscape aesthetics or visual values (see also section g).

#### f. Impacts on cultural values including traditional use by First Nations

There were no available records of archaeological, historical and cultural heritage values at Chapman Lake, Chapman Lake lies within the traditional aboriginal territory of the shishalh Nation. An assessment by Global Village Research Consultants (1998) confirmed the 'no sites recorded....within a 9 to 10 mile vicinity of Chapman Lake and the upper drainage of Chapman Creek". AECOM recently reviewed the BC archaeological site database for any newly recorded sites in the project area and no new records have been added.

#### g. Impacts to park users

Although no park trails intersect with the proposed location for the works, park users who are on any nearby trails may be impacted when the siphon pipes, equipment, or personnel are being transported by helicopter. This potential disturbance to park users will be mitigated through notification of schedule of works to BC parks and appropriate signage within the park to notify users of the works.



#### Page 14: [1] Comment [RD10]

#### Dalziel, Rod ENV:EX

2017-08-16 3:44:00 PM

Within the temporary camp area, the area subject to previous disturbance during the original construction. The footprint of the construction area needs to be very carefully managed and minimized in order to protect sensitive values. Site clearing should be kept to a minimum and limited to previously disturbed areas

#### Page 14: [2] Comment [RD16]

#### Dalziel, Rod ENV:EX

2017-08-16 3:46:00 PM

Equipment and machinery to be involved in project: BC Parks would like construction plans to identify the amount and types of equipment/machinery that will be involved in the project and where it will be placed on site.

## FW: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Thursday, October 12, 2017 11:07 AM

Subject	FW: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734
From	Michael Day
To	Dave Crosby; Dalziel, Rod ENV:EX
Cc	Janette Loveys
Sent	Monday, August 21, 2017 11:43 AM
Attachments	2017-08-08 Park use p

We didn't move to Stage 3 as a result of the rainfall event Saturday/Sunday two weeks ago. The amount of precipitation offset approximately one week of water demand (about 5 cm @ Chapman Lake). We are meeting again this afternoon so I can determine if we need now to move to Stage 3. If so, I will inform you by end of day.

I've copied the reviewed part 3 document to Dave Crosby, project manager, so he can review and document a response to the comments and questions (with our consultant Dave Bates, as required).

Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer

Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, VON 3A1

Phone: 604.885.6810

From: Dalziel, Rod ENV:EX [mailto:Rod.Dalziel@gov.bc.ca]

Sent: Monday, August 21, 2017 11:30 AM

To: Michael Day Cc: Janette Loveys

Subject: RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Hello Michael,

We are in the process of adjudicating the PUP amendment application. I have some comment and request for additional information in your attached document.

Please let me know if you have any questions.

I noticed we did not move to Stage 3 Water Restrictions last week. Did the brief rainfall event last weekend help much?

What is the current situation?

Regards, Rod Dalziel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

: PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC VON 3A0

2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

: Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca



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From: Michael Day [mailto:Michael.Day@scrd.ca]

Sent: Friday, August 11, 2017 11:13 AM

To: Coupar, Meghan FLNR:EX Cc: Dalziel, Rod ENV:EX

Subject: RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Thanks, Meghan,

I called into FrontCounter and didn't get anyone, left a voice message.

I will be paying this by credit card.

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer

Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, VON 3A1

Phone: 604.885.6810

From: Coupar, Meghan FLNR:EX [mailto:Meghan.Coupar@gov.bc.ca]

Sent: Friday, August 11, 2017 11:01 AM

To: Michael Day < Michael.Day@scrd.ca>
Cc: Dalziel, Rod ENV:EX < Rod.Dalziel@gov.bc.ca>

Subject: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Tracking Number: 363734 (Amendment 2017)

Authorization Number: 102714

Permittee: Sunshine Coast Regional District

Park: Tetrahedron Park

Term: February 1, 2014 to January 31, 2024

Hello Michael,

Thank you for submitting an application for an Amendment to Park Use Permit 102714.

Sunshine Coast Regional District's Amendment Application for Tetrahedron Park has been entered under Tracking

Number 363734. Please quote this Tracking Number on future inquiries.

Your application has been assigned to Rod Dalziel - BC Parks Area Supervisor for review. You may contact him at 604 885-6755 or email Rod.Dalziel@gov.bc.ca.

The Amendment Application Fee of \$525.00 (GST included) is due. Payments can be made over the phone by credit card with the FrontCounter BC Surrey office at (604) 586-4400 or Toll Free: 1-877-855-3222.

If you would like to mail in a cheque, please make cheques payable to the 'Minister of Finance' and mail to the following address:

FrontCounter BC Surrey

200 - 10428 153rd Street

Surrey BC V3R 1E1

Please do not hesitate to contact me or the BC Parks Area Supervisor with any questions you may have.

Thank you,

Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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\*\*\*\*\*\*\*\*\*\*

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\*\*\*\*\*\*\*\*\*

From: Aikman, Jennie S ENV:EX

Sent: Thursday, August 10, 2017 11:14 AM To: 'Michael Day'; Dalziel, Rod ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys; Coupar, Meghan FLNR:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon (updated design drawing)

Hello Michael,

Thank you for the permit amendment application. I have included the Sunshine Coast Area Supervisor, Rod Dalziel, as Rod is the lead contact on the park use permit. If you have any questions regarding the permit renewal process, please contact Rod at (604) 885-6755.

I have provided your application to our permit clerk, Meghan Coupar, for processing and Meghan may be following up with you regarding any additional requirements.

With kind regards,

Jennie

Jennie Aikman

Regional Director, South Coast Region BC Parks | Ministry of Environment Office phone: (604) 924-2227

Cell phone: (778) 875-8494

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From: Michael Day [mailto:Michael.Day@scrd.ca]
Sent: Wednesday, August 9, 2017 11:33 AM

To: Aikman, Jennie S ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon (updated design drawing) Jennie,

I have been provided with a more current and correct design drawing than the one I attached earlier.

The prior version was correct in principal, but not in detail.

Please substitute this for the original.

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer

Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, VON 3A1

Phone: 604.885.6810 From: Michael Day

Sent: Wednesday, August 09, 2017 10:48 AM

To: Jennie.Aikman@gov.bc.ca

Cc: Remko Rosenboom (Remko.Rosenboom@gov.bc.ca) < Remko.Rosenboom@gov.bc.ca>; Janette Loveys

<Janette.Loveys@scrd.ca>

Subject: Parks Use Permit 102714 Amendment Application re: temporary siphon

Dear Jennie

#### Re: Parks Use Permit 102714 Amendment Application

As per CAO Loveys earlier email, please note the attached Parks Use Permit (PUP) Amendment application form and associated supporting documents.

I discussed this proposed temporary PUP amendment with Sechelt Nation staff on August 4<sup>th</sup> and followed up again today. Chris August, Implementation and Compliance Manager, has verbally expressed his willingness to provide a letter of support for the temporary siphon application. I have received some assurance a letter of support will be provided by Monday, August 14<sup>th</sup>.

I will also be forwarding the PUP amendment application to Squamish First Nation under separate cover.

If you have any questions or concerns, please contact me directly at:

E-mail: michael.day@scrd.ca Office: +1 (604) 885-6810

Mobile: **s.16**Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services and Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, VON 3A1

Phone: 604.885.6810 Fax: 604.885.7909 Visit us: <u>www.scrd.ca</u>

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## RE: Chapman Lake Siphon application - 2005

Monday, October 16, 2( 3:30 PM

Subject RE: Chapman Lake Siphon application - 20056	
From	Davies, James W FLNR:EX
To	Dalziel, Rod ENV:EX
Cc	Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie S ENV:EX; Smit
Sent	Tuesday, August 22, 2017 12:32 PM

Rod Dalziel BC Parks

RE: Chapman Lake Siphon application

The applicant paid for a 2-year Use Approval, which is reflected in th

We will add a clause that the PUP must be in good standing for both years of the

#### **Thanks**

James Davies, P.Eng.
Regional Hydrologist - Water Allocatior
MFLNRO - South Coast Natural Resource Region - Authorizations - Water .
Tel: (604) 586-5637 FAX: (604) 586-4
email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 12:23 Pl

To: Smith, Malissa FLNR: EX; Davies, James W FLNF

Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie

Subject: RE: Chapman Lake Siphon application

Hello Malissa,

I noticed that as well. The SCRD has requested a term end date for the PUP of 30 timing needed for additional drawdown will probably extend thru September dep precipitation but not Nov 30<sup>th</sup>. We will give them at least an additional 2 weeks p water licence term in order to remove the infrastructure from the park.

I would suggest a mid to late Sept 2018 end date with an option to extend for

Jennie your thoughts?

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

POBox 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

Rod.Dalziel@gov.bc.ca

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From: Smith, Malissa FLNR:EX

Sent: Tuesday, August 22, 2017 12:13 Pt

To: Davies, James W FLNR: EX; Dalziel, Rod ENV

Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLN

Subject: RE: Chapman Lake Siphon application

Hi Jim,

I just noticed Remko didn't cc' you on his previous conversations re: the PUP. Here attached email regarding the term.

I suggest to do a 1 yr term, especially given that BC Parks can only consider issuing emergency circumstances and the anticipation that by next year at the end of the term solution has been found for the current regulatory hurdles. It is very easy to with one more year, if required.

I think there was preference to align it with Parks timeframes. Rod, any changes the term length from your team?

Thank you, Malissa

Malissa Smith | MRM | RPBio | PAg Senior Licenced Authorizations Officer - Wat Ministry of Forests, Lands, Natural Resource Operations and Rural Deve

Address: 200-10428 153rd Street, Surrey, BC, V3R

Phone: 604-586-5634

Email: Malissa.Smith@gov.bc.ca

From: Davies, James W FLNR:EX

Sent: Tuesday, August 22, 2017 11:33 Al

To: Dalziel, Rod ENV:EX

Cc: Smith, Malissa FLNR: EX; Rosenboom, Remko FLNR: EX; Robinson, Bryar

Subject: RE: Chapman Lake Siphon application

Rod Dalziel

RE: Chapman Lake Siphon application

The term of Use Approval 2005641 for Chapman Lake is recommended as August : 23, 2019; 2-year.

Use Approval 2005641 has not been adjudicated, waiting for FN Letter to be

Thanks

James Davies, P.Eng. Regional Hydrologist - Water Allocation MFLNRO - South Coast Natural Resource Region - Authorizations - Water

Tel: (604) 586-5637 FAX: (604) 586-4

email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 11:28 Al

To: Robinson, Bryan FLNR:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Davies, James W.

Subject: RE: Chapman Lake Siphon applicati

Hello Bryan,

Has the temp water licence document been completed? I would just like to incluname, # and term in my PUP document.

Cheers,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

POBox 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca





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From: Aikman, Jennie S ENV:EX

Sent: Friday, August 18, 2017 12:16 PM

To: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLN

**Cc:** Dalziel, Rod ENV:EX; Smith, Malissa FLNR: **Subject:** RE: Chapman Lake Siphon application

Thank you Remko – we will mirror your term with our PUP. Hope you have a grea

Bryan, please keep Rod and I in the loop on your decis

From: Rosenboom, Remko FLNR:EX Sent: Friday, August 18, 2017 8:33 AM

To: Aikman, Jennie S ENV:EX

Cc: Dalziel, Rod ENV:EX; Smith, Malissa FLNR:EX; Robinson, Bryan F

Subject: Re: Chapman Lake Siphon application

Hi Jennies,

I think that that term will definitely work for u

5.22 James Davies is preparing the document

Robinson will become the SDM in my absence.

I suggest to do a 1 yr term, especially given that BC Parks can only consider issuing

emergency circumstances and the anticipation that by next year at the end of the term solution has been found for the current regulatory hurdles. It is very easy to e

Cheers! Remko

Manager Water Authorizations South Coast Natural Resource Region Ministry of Forests, Lands and Natural Resource Operat

Office: 604-586- 2803 Fax: 604-586-4444

Email: remko.rosenboom@gov.bc.ca

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On Aug 18, 2017, at 8:16 AM, Aikman, Jennie S ENV:EX < Jennie. Aikman@gov.bc.

Hi Remko,

I have included Rod Dalziel in the email as he is leading the PUP application hoping to be able to make a decision on our permit by the end of next week issuance comes shortly before that, I am okay with that and that way we car tenure in the park use permit terms.

What term are your issuing the tenure for

Jennie

From: Rosenboom, Remko FLNR:EX Sent: Thursday, August 17, 2017 5:39 PI

**To:** Aikman, Jennie S ENV:EX **Cc:** Smith, Malissa FLNR:EX

Subject: Chapman Lake Siphon application

Hi Jennie,

with the PUP-application? We are not completely ready yet, but are getting v would it feel for you if we were to issue our Use Approval prior to you your Pl an issue for you? Feel free to say Yes and we will hold of doing so.

Cheers,
Remko
<image003.jpg>
Manager Water Authorizations
South Coast Natural Resource Region
Ministry of Forests, Lands and Natural Resource Operations and Rural Dev

Office: 604-586- 2803 Assistant: 604-586-5626

Email: remko.rosenboom@gov.bc.ca

www.gov.bc.ca/water

# RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Friday, October 13, 2017 10:55 AM

Subject	RE: Parks Use Permit 102714 Amendment Application re: temporary siphon
From	Aikman, Jennie S ENV:EX
То	Coupar, Meghan FLNR:EX; Dalziel, Rod ENV:EX
Sent	Tuesday, August 22, 2017 11:12 AM

Hi Meghan and Rod,

Meghan, as we are preparing for a decision on this permit, can you advise that we have all the required information and fee payments from the SCRD?

s.22

- when do you target having the permit

to me?

Jennie

From: Coupar, Meghan FLNR:EX

Sent: Thursday, August 10, 2017 11:22 AM

To: Dalziel, Rod ENV:EX
Cc: Aikman, Jennie S ENV:EX

Subject: FW: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hi Rod,

Currently SCRD has an open Amendment job under Authorization #102714 from 2016 that is with you to Conduct Technical Review and Draft Permit (T #349679). The 2016 Amendment is for the "Installation of gravity fed water withdrawal system to access additional water from Chapman Lake to provide water to SCRD system during a drought."

Could you please advise if the Amendment Application for 2017 is for the same purpose as 2016 and if so can it be added to the existing Amendment Job (T #349679)?

Thanks,

#### Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections

Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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\*\*\*\*\*\*\*

From: Aikman, Jennie S ENV:EX

Sent: Thursday, August 10, 2017 9:26 AM

To: Dalziel, Rod ENV:EX; Coupar, Meghan FLNR:EX

Subject: FYI: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hello Rob and Meghan,

We have received the attached PUP amendment application from the SCRD.

Meghan, I will direct Michael to submit this directly to Front Counter BC, but I wanted you to be aware that this is coming as this permit amendment is a high priority.

Thanks. Jennie

Jennie Aikman

Regional Director, South Coast Region BC Parks | Ministry of Environment Office phone: (604) 924-2227 Cell phone: (778) 875-8494

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From: Michael Day [mailto:Michael.Day@scrd.ca]
Sent: Wednesday, August 9, 2017 10:48 AM

To: Aikman, Jennie S ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys

Subject: Parks Use Permit 102714 Amendment Application re: temporary siphon

Dear Jennie,

#### Re: Parks Use Permit 102714 Amendment Application

As per CAO Loveys earlier email, please note the attached Parks Use Permit (PUP) Amendment application form and associated supporting documents.

I discussed this proposed temporary PUP amendment with Sechelt Nation staff on August 4<sup>th</sup> and followed up again today. Chris August, Implementation and Compliance Manager, has verbally expressed his willingness to provide a letter of support for the temporary siphon application. I have received some assurance a letter of support will be provided by Monday, August 14<sup>th</sup>.

I will also be forwarding the PUP amendment application to Squamish First Nation under separate cover.

If you have any questions or concerns, please contact me directly at:

E-mail: <u>michael.day@scrd.ca</u>
Office: +1 (604) 885-6810

Mobile: s.16

Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services and Regional Engineer

Infrastructure Services I Sunshine Coast Regional District 1975 Field Road, Sechelt, BC, V0N 3A1 Phone: 604.885.6810 Fax: 604.885.7909

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## RE: Chapman Lake Siphon applicati

Monday, October 16, 20 3:26 PM

Subject	RE: Chapman Lake Siphon application
From	Dalziel, Rod ENV:EX
To	Robinson, Bryan FLNR:EX
Cc	Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Davies, Jam
Sent	Tuesday, August 22, 2017 11:27 AM

Hello Bryan,

Has the temp water licence document been completed? I would just like to incluname, # and term in my PUP document.

Cheers,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

POBox 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

Rod.Dalziel@gov.bc.ca

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From: Aikman, Jennie S ENV:EX

Sent: Friday, August 18, 2017 12:16 PM

To: Rosenboom, Remko FLNR: EX; Robinson, Bryan FLN

**Cc:** Dalziel, Rod ENV:EX; Smith, Malissa FLNR: **Subject:** RE: Chapman Lake Siphon application

Thank you Remko - we will mirror your term with our PUP. Hope you have a grea

Bryan, please keep Rod and I in the loop on your decis

From: Rosenboom, Remko FLNR:EX Sent: Friday, August 18, 2017 8:33 AN

To: Aikman, Jennie S ENV:EX

Cc: Dalziel, Rod ENV:EX; Smith, Malissa FLNR:EX; Robinson, Bryan F

Subject: Re: Chapman Lake Siphon application

Hi Jennies,

I think that that term will definitely work for u

s.22

Robinson will become the SDM in my absence.

I suggest to do a 1 yr term, especially given that BC Parks can only consider issuing emergency circumstances and the anticipation that by next year at the end of the term solution has been found for the current regulatory hurdles. It is very easy to with one more year, if required.

Cheers! Remko

Manager Water Authorizations South Coast Natural Resource Region Ministry of Forests, Lands and Natural Resource Operat

Office: 604-586- 2803 Fax: 604-586-4444

Email: remko.rosenboom@gov.bc.ca

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On Aug 18, 2017, at 8:16 AM, Aikman, Jennie S ENV:EX < Jennie. Aikman@gov.bc.

Hi Remko,

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What term are your issuing the tenure for

Jennie

From: Rosenboom, Remko FLNR:EX Sent: Thursday, August 17, 2017 5:39 Pl

To: Aikman, Jennie S ENV:EX Cc: Smith, Malissa FLNR:EX

Subject: Chapman Lake Siphon applicatic

Hi Jennie,

s.22

and was wondering what the progres with the PUP-application? We are not completely ready yet, but are getting v would it feel for you if we were to issue our Use Approval prior to you your Pl an issue for you? Feel free to say Yes and we will hold of doing so.

Cheers,
Remko
<image003.jpg>
Manager Water Authorizations
South Coast Natural Resource Region
Ministry of Forests, Lands and Natural Resource Operations and Rural Dev

Office: 604-586- 2803 Assistant: 604-586-5626

## RE: Chapman Lake Siphon applicati

Monday, October 16, 20 3:26 PM

Subject	RE: Chapman Lake Siphon application
From	Davies, James W FLNR:EX
To	Dalziel, Rod ENV:EX
Cc	Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Robinson, B
Sent	Tuesday, August 22, 2017 11:32 AM

#### Rod Dalziel

RE: Chapman Lake Siphon application

The term of Use Approval 2005641 for Chapman Lake is recommended as August : 23, 2019; 2-year.

Use Approval 2005641 has not been adjudicated, waiting for FN Letter to be

#### Thanks

James Davies, P.Eng.
Regional Hydrologist - Water Allocatior
MFLNRO - South Coast Natural Resource Region - Authorizations - Water .
Tel: (604) 586-5637 FAX: (604) 586-4
email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 11:28 Al

To: Robinson, Bryan FLNR:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Davies, James W.

Subject: RE: Chapman Lake Siphon application

Hello Bryan,

Has the temp water licence document been completed? I would just like to incluname, # and term in my PUP document.

Cheers,

Rod Dalziel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

POBox 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

2 Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca

From: Aikman, Jennie S ENV:EX

Sent: Friday, August 18, 2017 12:16 PN

To: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLN

Cc: Dalziel, Rod ENV:EX; Smith, Malissa FLNR: Subject: RE: Chapman Lake Siphon application

Thank you Remko – we will mirror your term with our PUP. Hope you have a grea

Bryan, please keep Rod and I in the loop on your decis

From: Rosenboom, Remko FLNR:EX Sent: Friday, August 18, 2017 8:33 AN

To: Aikman, Jennie S ENV:EX

Cc: Dalziel, Rod ENV:EX; Smith, Malissa FLNR:EX; Robinson, Bryan F

Subject: Re: Chapman Lake Siphon application

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I think that that term will definitely work for u

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Cheers! Remko

Manager Water Authorizations South Coast Natural Resource Region Ministry of Forests, Lands and Natural Resource Operat

Office: 604-586- 2803 Fax: 604-586-4444

Email: remko.rosenboom@gov.bc.ca

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On Aug 18, 2017, at 8:16 AM, Aikman, Jennie S ENV:EX < Jennie. Aikman@gov.bc.

Hi Remko,

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Jennie

From: Rosenboom, Remko FLNR:EX Sent: Thursday, August 17, 2017 5:39 PI

To: Aikman, Jennie S ENV:EX Cc: Smith, Malissa FLNR:EX

Subject: Chapman Lake Siphon applicatic

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s.22

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Cheers,
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<image003.jpg>
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Office: 604-586- 2803 Assistant: 604-586-5626

Email: remko.rosenboom@gov.bc.ca

www.gov.bc.ca/water

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# RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Friday, October 13, 2017 10:54 AM

Subject	RE: Parks Use Permit 102714 Amendment Application re: temporary siphon
From	Dalziel, Rod ENV:EX
То	Aikman, Jennie S ENV:EX; Coupar, Meghan FLNR:EX
Sent	Tuesday, August 22, 2017 11:37 AM

Hello Jennie,

It is a high prioritis. 22

I have requested further information (plans for fuel storage, environmental monitoring, temp camp, restoration) from SCRD and am still waiting for the FN letter of support the SCRD indicated they would provide. Also waiting on some detail from Remko's group. Otherwise close to ready to go. I could state that the requested plans must be submitted for BC Parks approval prior to any construction works in the PUP provisions.

Cheers,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC VON 3A0

2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca





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From: Aikman, Jennie S ENV:EX

Sent: Tuesday, August 22, 2017 11:13 AM

To: Coupar, Meghan FLNR:EX; Dalziel, Rod ENV:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Hi Meghan and Rod,

Meghan, as we are preparing for a decision on this permit, can you advise that we have all the required information and fee payments from the SCRD?

s.22

- when do you target having the permit

to me?

Jennie

From: Coupar, Meghan FLNR:EX

Sent: Thursday, August 10, 2017 11:22 AM

To: Dalziel, Rod ENV:EX
Cc: Aikman, Jennie S ENV:EX

Subject: FW: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hi Rod,

Currently SCRD has an open Amendment job under Authorization #102714 from 2016 that is with you to Conduct Technical Review and Draft Permit (T #349679). The 2016 Amendment is for the "Installation of gravity fed water withdrawal system to access additional water from Chapman Lake to provide water to SCRD system during a drought."

Could you please advise if the Amendment Application for 2017 is for the same purpose as 2016 and if so can it be added to the existing Amendment Job (T #349679)?

Thanks,

## Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections

Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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\*\*\*\*\*\*\*\*\*

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Or visit us at: www.frontcounterbc.gov.bc.ca

\*\*\*\*\*\*\*

From: Aikman, Jennie S ENV:EX

Sent: Thursday, August 10, 2017 9:26 AM

To: Dalziel, Rod ENV:EX; Coupar, Meghan FLNR:EX

Subject: FYI: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hello Rob and Meghan,

We have received the attached PUP amendment application from the SCRD.

Meghan, I will direct Michael to submit this directly to Front Counter BC, but I wanted you to be aware that this is coming as this permit amendment is a high priority.

Thanks. Jennie

Jennie Aikman

Regional Director, South Coast Region BC Parks | Ministry of Environment Office phone: (604) 924-2227 Cell phone: (778) 875-8494

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From: Michael Day [mailto:Michael.Day@scrd.ca]
Sent: Wednesday, August 9, 2017 10:48 AM

To: Aikman, Jennie S ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys

Subject: Parks Use Permit 102714 Amendment Application re: temporary siphon

Dear Jennie,

## Re: Parks Use Permit 102714 Amendment Application

As per CAO Loveys earlier email, please note the attached Parks Use Permit (PUP) Amendment application form and associated supporting documents.

I discussed this proposed temporary PUP amendment with Sechelt Nation staff on August 4<sup>th</sup> and followed up again today. Chris August, Implementation and Compliance Manager, has verbally expressed his willingness to provide a letter of support for the temporary siphon application. I have received some assurance a letter of support will be provided by Monday, August 14<sup>th</sup>.

I will also be forwarding the PUP amendment application to Squamish First Nation under separate cover.

If you have any questions or concerns, please contact me directly at:

E-mail: <u>michael.day@scrd.ca</u>
Office: +1 (604) 885-6810

Mobile: s.16

Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services and Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, V0N 3A1 Phone: 604.885.6810 Fax: 604.885.7909

Visit us: www.scrd.ca

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This email was scanned by Bitdefender

# FW: Chapman Lake Siphon application

Thursday, October 12, 2017 11:06 AM

Subject	FW: Chapman Lake Siphon application
From	Dalziel, Rod ENV:EX
То	Aikman, Jennie S ENV:EX
Sent	Tuesday, August 22, 2017 11:47 AM

It appears FLNRO is planning to issue their temp permit for a 2 year term (until 23 Aug 19). It will be ending right in the middle of the timeframe required for additional drawdown. The SCRD has requested their temp PUP term to be until 30 Nov 18. How would you like to see our term identified? Remember last time we gave an additional 2 weeks past the Water Permit term for time to remove the infrastructure from the park.

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0

2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca





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From: Davies, James W FLNR:EX

Sent: Tuesday, August 22, 2017 11:33 AM

To: Dalziel, Rod ENV:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX

Subject: RE: Chapman Lake Siphon application

Rod Dalziel

RE: Chapman Lake Siphon application

The term of Use Approval 2005641 for Chapman Lake is recommended as August 24, 2017 to August 23, 2019; 2-year.

Use Approval 2005641 has not been adjudicated, waiting for FN Letter to be provided.

**Thanks** 

James Davies, P.Eng. Regional Hydrologist - Water Allocation

MFLNRO - South Coast Natural Resource Region - Authorizations - Water Allocation

Tel: (604) 586-5637 FAX: (604) 586-4434

email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 11:28 AM

To: Robinson, Bryan FLNR:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Davies, James W FLNR:EX

Subject: RE: Chapman Lake Siphon application

Hello Bryan,

Has the temp water licence document been completed? I would just like to include the permit name, # and term in my PUP document.

## Cheers,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0

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Sent: Friday, August 18, 2017 12:16 PM

To: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX

Cc: Dalziel, Rod ENV:EX; Smith, Malissa FLNR:EX Subject: RE: Chapman Lake Siphon application

Thank you Remko – we will mirror your term with our PUP. \$.22

Bryan, please keep Rod and I in the loop on your decision.

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To: Aikman, Jennie S ENV:EX

Cc: Dalziel, Rod ENV:EX; Smith, Malissa FLNR:EX; Robinson, Bryan FLNR:EX

Subject: Re: Chapman Lake Siphon application

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I suggest to do a 1 yr term, especially given that BC Parks can only consider issuing this PUP under emergency circumstances and the anticipation that by next year at the end of the summer a long term solution has been found for the current regulatory hurdles. It is very easy to extent it next year with one more year, if required.

Cheers! Remko

Manager Water Authorizations South Coast Natural Resource Region Ministry of Forests, Lands and Natural Resource Operations

Office: <u>604-586-2803</u> Fax: 604-586-4444

Email: remko.rosenboom@gov.bc.ca

Our Vision: Economic prosperity and environmental sustainability

On Aug 18, 2017, at 8:16 AM, Aikman, Jennie S ENV:EX < Jennie.Aikman@gov.bc.ca > wrote:

Hi Remko,

I have included Rod Dalziel in the email as he is leading the PUP application review. I am hoping to be able to make a decision on our permit by the end of next week – so if your issuance comes shortly before that, I am okay with that and that way we can reference your tenure in the park use permit terms.

What term are your issuing the tenure for?

Jennie

From: Rosenboom, Remko FLNR:EX Sent: Thursday, August 17, 2017 5:39 PM

To: Aikman, Jennie S ENV:EX Cc: Smith, Malissa FLNR:EX

Subject: Chapman Lake Siphon application

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and was wondering what the progress is at your site with the PUP-application? We are not completely ready yet, but are getting very close. How would it feel for you if we were to issue our Use Approval prior to you your PUP, would that be an issue for you? Feel free to say Yes and we will hold of doing so.

Cheers,
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<image003.jpg>
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Office: 604-586- 2803 Assistant: 604-586-5626

Email: remko.rosenboom@gov.bc.ca

www.gov.bc.ca/water

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## RE: Chapman Lake Siphon applicati

Monday, October 16, 20 3:27 PM

Subject	RE: Chapman Lake Siphon applicatio
From	Smith, Malissa FLNR:EX
То	Davies, James W FLNR:EX; Dalziel, Rod ENV:E
Cc	Rosenboom, Remko FLNR:EX; Robinson, Bryan
Sent.	Tuesday, August 22, 2017 12:12 PM
Attachments	RE Chapman Lake Sipho

Hi Jim,

I just noticed Remko didn't cc' you on his previous conversations re: the PUP. Here is a snip fro regarding the term.

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I think there was preference to align it with Parks timeframes. Rod, any changes to preference from your team?

Thank you, Malissa

Malissa Smith | MRM | RPBio | PAg Senior Licenced Authorizations Officer - Wat Ministry of Forests, Lands, Natural Resource Operations and Rural Deve

Address: 200-10428 153rd Street, Surrey, BC, V3R

Phone: 604-586-5634

Email: Malissa.Smith@gov.bc.ca

From: Davies, James W FLNR:EX Sent: Tuesday, August 22, 2017 11:33 Al

To: Dalziel, Rod ENV:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Robinson, Bryar

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MFLNRO - South Coast Natural Resource Region - Authorizations - Water
Tel: (604) 586-5637 FAX: (604) 586-4

email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 11:28 Al

To: Robinson, Bryan FLNR:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Davies, James W.

Subject: RE: Chapman Lake Siphon applicati

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Cheers,

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Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

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- Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-..

Rod Dalziel@gov.bc.ca

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Office: 604-586- 2803 Assistant: 604-586-5626

Email: remko.rosenboom@gov.bc.ca

www.gov.bc.ca/water

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## Goulet, Giselle CSNR:EX

From: Aikman, Jennie S ENV:EX

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To: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX

Cc: Dalziel, Rod ENV:EX: Smith, Malissa FLNR:EX:
Subject: RE: Chapman Lake Siphon application

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Remko

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Email: remko.rosenboom@gov.bc.ca www.gov.bc.ca/water

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# RE: Chapman Lake Siphon applicati

Monday, October 16, 20 3:29 PM

Subject	RE: Chapman Lake Siphon application
From	Dalziel, Rod ENV:EX
To	Smith, Malissa FLNR:EX; Davies, James W FLNR:E)
Cc	Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jer
Sent	Tuesday, August 22, 2017 12:22 PM

Hello Malissa,

I noticed that as well. The SCRD has requested a term end date for the PUP of 30 timing needed for additional drawdown will probably extend thru September dep precipitation but not Nov 30<sup>th</sup>. We will give them at least an additional 2 weeks p water licence term in order to remove the infrastructure from the park.

I would suggest a mid to late Sept 2018 end date with an option to extend for

Jennie your thoughts?

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

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Sent: Tuesday, August 22, 2017 12:13 Pl

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Phone: 604-586-5634

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James Davies, P.Eng.
Regional Hydrologist - Water Allocatior
MFLNRO - South Coast Natural Resource Region - Authorizations - Water
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Sunshine Coast Area Supervisor

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Email: remko.rosenboom@gov.bc.ca

www.gov.bc.ca/water

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# RE: Chapman Lake Siphon application - 2005

Monday, October 16, 20 3:29 PM

Subject	RE: Chapman Lake Siphon application - 20056
From	Davies, James W FLNR:EX
То	Dalziel, Rod ENV:EX
Cc	Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie S ENV:EX; Smit
Sent	Tuesday, August 22, 2017 12:32 PM

Rod Dalziel BC Parks

RE: Chapman Lake Siphon application

The applicant paid for a 2-year Use Approval, which is reflected in th

We will add a clause that the PUP must be in good standing for both years of the

### **Thanks**

James Davies, P.Eng.
Regional Hydrologist - Water Allocatior
MFLNRO - South Coast Natural Resource Region - Authorizations - Water .
Tel: (604) 586-5637 FAX: (604) 586-4
email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 12:23 Pl

To: Smith, Malissa FLNR: EX; Davies, James W FLNF

Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie

Subject: RE: Chapman Lake Siphon applicati

Hello Malissa,

I noticed that as well. The SCRD has requested a term end date for the PUP of 30 timing needed for additional drawdown will probably extend thru September dep precipitation but not Nov 30<sup>th</sup>. We will give them at least an additional 2 weeks p water licence term in order to remove the infrastructure from the park.

I would suggest a mid to late Sept 2018 end date with an option to extend for

Jennie your thoughts?

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

POBox 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca

# RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Friday, October 13, 2017 11:50 AM

Subject	RE: Parks Use Permit 102714 Amendment Application re: temporary siphon
From	Aikman, Jennie S ENV:EX
То	Dalziel, Rod ENV:EX; Coupar, Meghan FLNR:EX
Sent	Tuesday, August 22, 2017 1:17 PM

Thanks Rod. I like your suggestion of going with a provision requiring the SCRD to submit plans prior to siphon installation.

Any update from Michael Day re: the letter from shishalh?

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 11:37 AM

To: Aikman, Jennie S ENV:EX; Coupar, Meghan FLNR:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Hello Jennie,

I have requested further information (plans for fuel storage, environmental monitoring, temp camp, restoration) from SCRD and am still waiting for the FN letter of support the SCRD indicated they would provide. Also waiting on some detail from Remko's group. Otherwise close to ready to go. I could state that the requested plans must be submitted for BC Parks approval prior to any construction works in the PUP provisions.

Cheers.

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0

2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

Rod.Dalziel@gov.bc.ca

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From: Aikman, Jennie S ENV:EX

Sent: Tuesday, August 22, 2017 11:13 AM

To: Coupar, Meghan FLNR:EX; Dalziel, Rod ENV:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Hi Meghan and Rod,

Meghan, as we are preparing for a decision on this permit, can you advise that we have all the required information and fee payments from the SCRD?

s.22

to me?

Jennie

From: Coupar, Meghan FLNR:EX

Sent: Thursday, August 10, 2017 11:22 AM

To: Dalziel, Rod ENV:EX
Cc: Aikman, Jennie S ENV:EX

Subject: FW: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hi Rod,

Currently SCRD has an open Amendment job under Authorization #102714 from 2016 that is with you to Conduct Technical Review and Draft Permit (T #349679). The 2016 Amendment is for the "Installation of gravity fed water withdrawal system to access additional water from Chapman Lake to provide water to SCRD system during a drought."

Could you please advise if the Amendment Application for 2017 is for the same purpose as 2016 and if so can it be added to the existing Amendment Job (T #349679)?

Thanks,

## Meghan Coupar

Parks Permit Clerk
FrontCounter BC - South Coast Regional Office
South Coast, Haida Gwaii/South Island Sections
Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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appreciate your input.

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\*\*\*\*\*\*\*

From: Aikman, Jennie S ENV:EX

Sent: Thursday, August 10, 2017 9:26 AM

To: Dalziel, Rod ENV:EX; Coupar, Meghan FLNR:EX

Subject: FYI: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hello Rob and Meghan,

We have received the attached PUP amendment application from the SCRD.

Meghan, I will direct Michael to submit this directly to Front Counter BC, but I wanted you to be aware that this is coming as this permit amendment is a high priority.

Thanks. Jennie Jennie Aikman

Regional Director, South Coast Region BC Parks | Ministry of Environment Office phone: (604) 924-2227 Cell phone: (778) 875-8494

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From: Michael Day [mailto:Michael.Day@scrd.ca]
Sent: Wednesday, August 9, 2017 10:48 AM

To: Aikman, Jennie S ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys

Subject: Parks Use Permit 102714 Amendment Application re: temporary siphon

Dear Jennie,

## Re: Parks Use Permit 102714 Amendment Application

As per CAO Loveys earlier email, please note the attached Parks Use Permit (PUP) Amendment application form and associated supporting documents.

I discussed this proposed temporary PUP amendment with Sechelt Nation staff on August 4<sup>th</sup> and followed up again today. Chris August, Implementation and Compliance Manager, has verbally expressed his willingness to provide a letter of support for the temporary siphon application. I have received some assurance a letter of support will be provided by Monday, August 14<sup>th</sup>.

I will also be forwarding the PUP amendment application to Squamish First Nation under separate cover.

If you have any questions or concerns, please contact me directly at:

E-mail: <u>michael.day@scrd.ca</u>
Office: +1 (604) 885-6810

Mobile: s.16

Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services and Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, V0N 3A1 Phone: 604.885.6810 Fax: 604.885.7909

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# RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Friday, October 13, 2017 10:53 AM

Subject	RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734
From	Dalziel, Rod ENV:EX
То	'Michael Day'
Sent	Tuesday, August 22, 2017 2:04 PM

Hello Michael,

Have you received the Letter of Support from shishalh Nation yet?

Regards,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

M: PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0

2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

: Rod.Dalziel@gov.bc.ca

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From: Michael Day [mailto:Michael.Day@scrd.ca]

**Sent:** Monday, August 21, 2017 11:43 AM **To:** Dave Crosby; Dalziel, Rod ENV:EX

Cc: Janette Loveys

**Subject:** FW: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734 We didn't move to Stage 3 as a result of the rainfall event Saturday/Sunday two weeks ago. The amount of precipitation offset approximately one week of water demand (about 5 cm @ Chapman Lake). We are meeting again this afternoon so I can determine if we need now to move to Stage 3. If so, I will inform you by end of day.

I've copied the reviewed part 3 document to Dave Crosby, project manager, so he can review and document a response to the comments and questions (with our consultant Dave Bates, as required). Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, V0N 3A1

Phone: 604.885.6810

From: Dalziel, Rod ENV:EX [mailto:Rod.Dalziel@gov.bc.ca]

Sent: Monday, August 21, 2017 11:30 AM

To: Michael Day < Michael. Day@scrd.ca >

Cc: Janette Loveys < Janette. Loveys@scrd.ca >

Subject: RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734 Hello Michael,

We are in the process of adjudicating the PUP amendment application. I have some comment and request for additional information in your attached document.

Please let me know if you have any questions.

I noticed we did not move to Stage 3 Water Restrictions last week. Did the brief rainfall event last weekend help much? What is the current situation? Regards,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

M: PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0

2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

: Rod.Dalziel@gov.bc.ca

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From: Michael Day [mailto:Michael.Day@scrd.ca]

Sent: Friday, August 11, 2017 11:13 AM

To: Coupar, Meghan FLNR:EX Cc: Dalziel, Rod ENV:EX

Subject: RE: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Thanks, Meghan,

I called into FrontCounter and didn't get anyone, left a voice message.

I will be paying this by credit card.

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer

Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, V0N 3A1

Phone: 604.885.6810

From: Coupar, Meghan FLNR:EX [mailto:Meghan.Coupar@gov.bc.ca]

Sent: Friday, August 11, 2017 11:01 AM
To: Michael Day < Michael. Day@scrd.ca>

Cc: Dalziel, Rod ENV:EX <Rod.Dalziel@gov.bc.ca>

Subject: Parks Use Permit 102714 Amendment Application 2017 - Tracking Number 363734

Tracking Number: 363734 (Amendment 2017)

Authorization Number: 102714

Permittee: Sunshine Coast Regional District

Park: Tetrahedron Park

Term: February 1, 2014 to January 31, 2024

Hello Michael,

Thank you for submitting an application for an Amendment to Park Use Permit 102714. Sunshine Coast Regional District's Amendment Application for Tetrahedron Park has been entered under <u>Tracking Number 363734</u>. Please quote this Tracking Number on future inquiries.

Your application has been assigned to Rod Dalziel - BC Parks Area Supervisor for review. You may contact him at 604 885-6755 or email Rod.Dalziel@gov.bc.ca.

The **Amendment Application Fee of \$525.00 (GST included)** is due. Payments can be made over the phone by credit card with the FrontCounter BC Surrey office at (604) 586-4400 or Toll Free: 1-877-855-3222.

If you would like to mail in a cheque, please make cheques payable to the 'Minister of Finance' and mail to the following address:

FrontCounter BC Surrey 200 – 10428 153<sup>rd</sup> Street

Surrey BC V3R 1E1

Please do not hesitate to contact me or the BC Parks Area Supervisor with any questions you may have.

Thank you,

Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections

Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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From: Aikman, Jennie S ENV:EX

**Sent:** Thursday, August 10, 2017 11:14 AM **To:** 'Michael Day'; Dalziel, Rod ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys; Coupar, Meghan FLNR:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon (updated

design drawing) Hello Michael,

Thank you for the permit amendment application. I have included the Sunshine Coast Area Supervisor, Rod Dalziel, as Rod is the lead contact on the park use permit. If you have any questions regarding the permit renewal process, please contact Rod at (604) 885-6755.

I have provided your application to our permit clerk, Meghan Coupar, for processing and Meghan may be following up with you regarding any additional requirements.

With kind regards,

Jennie

Jennie Aikman

Regional Director, South Coast Region BC Parks | Ministry of Environment Office phone: (604) 924-2227 Cell phone: (778) 875-8494

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From: Michael Day [mailto:Michael.Day@scrd.ca]
Sent: Wednesday, August 9, 2017 11:33 AM

To: Aikman, Jennie S ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon (updated

design drawing)

Jennie,

I have been provided with a more current and correct design drawing than the one I attached earlier.

The prior version was correct in principal, but not in detail.

Please substitute this for the original.

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, V0N 3A1

Phone: 604.885.6810 From: Michael Day

Sent: Wednesday, August 09, 2017 10:48 AM

To: Jennie.Aikman@gov.bc.ca

Cc: Remko Rosenboom (Remko.Rosenboom@gov.bc.ca) < Remko.Rosenboom@gov.bc.ca>; Janette

Loveys < Janette.Loveys@scrd.ca>

Subject: Parks Use Permit 102714 Amendment Application re: temporary siphon

Dear Jennie,

Re: Parks Use Permit 102714 Amendment Application

As per CAO Loveys earlier email, please note the attached Parks Use Permit (PUP) Amendment application form and associated supporting documents.

I discussed this proposed temporary PUP amendment with Sechelt Nation staff on August 4<sup>th</sup> and followed up again today. Chris August, Implementation and Compliance Manager, has verbally

expressed his willingness to provide a letter of support for the temporary siphon application. I have received some assurance a letter of support will be provided by Monday, August 14th.

I will also be forwarding the PUP amendment application to Squamish First Nation under separate

If you have any questions or concerns, please contact me directly at:

E-mail: michael.day@scrd.ca Office: +1 (604) 885-6810

Mobile: s.16 Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services and Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, V0N 3A1 Phone: 604.885.6810 Fax: 604.885.7909 Visit us: www.scrd.ca Follow us on Twitter at sunshinecoastrd Like us on Facebook

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# RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Friday, October 13, 2017 2:06 PM

Subject	RE: Parks Use Permit 102714 Amendment Application re: temporary siphon
From	Dalziel, Rod ENV:EX
То	Aikman, Jennie S ENV:EX
Sent	Tuesday, August 22, 2017 2:06 PM

OK I will prepare the provision option. No shíshálh LoS yet (I have sent Michael another note).

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

E: PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0

2: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca





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From: Aikman, Jennie S ENV:EX

Sent: Tuesday, August 22, 2017 1:18 PM

To: Dalziel, Rod ENV:EX; Coupar, Meghan FLNR:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Thanks Rod. I like your suggestion of going with a provision requiring the SCRD to submit plans prior to siphon installation.

Any update from Michael Day re: the letter from shishalh?

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 11:37 AM

To: Aikman, Jennie S ENV:EX; Coupar, Meghan FLNR:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Hello Jennie,

It is a high priorit, S.22 . I have requested further information (plans for fuel storage, environmental monitoring, temp camp, restoration) from SCRD and am still waiting for the FN letter of support the SCRD indicated they would provide. Also waiting on some detail from Remko's group. Otherwise close to ready to go. I could state that the requested plans must be submitted for BC Parks approval prior to any construction works in the PUP provisions.

Cheers,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

M: PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3A0

2 Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

Rod.Dalziel@gov.bc.ca

Visit the BC Parks website @ bcparks.ca





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From: Aikman, Jennie S ENV:EX

Sent: Tuesday, August 22, 2017 11:13 AM

To: Coupar, Meghan FLNR:EX; Dalziel, Rod ENV:EX

Subject: RE: Parks Use Permit 102714 Amendment Application re: temporary siphon

Hi Meghan and Rod,

Meghan, as we are preparing for a decision on this permit, can you advise that we have all the required information and fee payments from the SCRD?

s.22

when do you target having the permit

to me?

Jennie

From: Coupar, Meghan FLNR:EX

Sent: Thursday, August 10, 2017 11:22 AM

To: Dalziel, Rod ENV:EX
Cc: Aikman, Jennie S ENV:EX

Subject: FW: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hi Rod.

Currently SCRD has an open Amendment job under Authorization #102714 from 2016 that is with you to Conduct Technical Review and Draft Permit (T #349679). The 2016 Amendment is for the "Installation of gravity fed water withdrawal system to access additional water from Chapman Lake to provide water to SCRD system during a drought."

Could you please advise if the Amendment Application for 2017 is for the same purpose as 2016 and if so can it be added to the existing Amendment Job (T #349679)?

Thanks.

## Meghan Coupar

Parks Permit Clerk
FrontCounter BC - South Coast Regional Office
South Coast, Haida Gwaii/South Island Sections

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From: Aikman, Jennie S ENV:EX

Sent: Thursday, August 10, 2017 9:26 AM

To: Dalziel, Rod ENV:EX; Coupar, Meghan FLNR:EX

Subject: FYI: Parks Use Permit 102714 Amendment Application re: temporary siphon

Importance: High

Hello Rob and Meghan,

We have received the attached PUP amendment application from the SCRD.

Meghan, I will direct Michael to submit this directly to Front Counter BC, but I wanted you to be aware that this is coming as this permit amendment is a high priority.

Thanks. Jennie

#### Jennie Aikman

Regional Director, South Coast Region BC Parks | Ministry of Environment Office phone: (604) 924-2227 Cell phone: (778) 875-8494

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From: Michael Day [mailto:Michael.Day@scrd.ca]
Sent: Wednesday, August 9, 2017 10:48 AM

To: Aikman, Jennie S ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Janette Loveys

Subject: Parks Use Permit 102714 Amendment Application re: temporary siphon

Dear Jennie,

## Re: Parks Use Permit 102714 Amendment Application

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I will also be forwarding the PUP amendment application to Squamish First Nation under separate cover.

If you have any questions or concerns, please contact me directly at:

michael.day@scrd.ca E-mail: Office: +1 (604) 885-6810

Mobile: s.16

Best Regards,

Michael Day, P. Eng. I General Manager, Infrastructure Services and Regional Engineer Infrastructure Services I Sunshine Coast Regional District 1975 Field Road, Sechelt, BC, V0N 3A1 Phone: 604.885.6810

Fax: 604.885.7909

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# RE: Chapman Lake Siphon application - 2005

Monday, October 16, 2( 12:46 PM

Subject	RE: Chapman Lake Siphon application - 2
From	Dalziel, Rod ENV:EX
То	Davies, James W FLNR:EX
Sent	Tuesday, August 22, 2017 2:35 PM

Thanks, James.

The temporary amendment from 2015 was described as "Section 8 application - 10 Term Water Use on Chapman Lake - Approval 2003865" expire on 23 August 2016 describe it in our new PUP amendment?

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

POBox 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

2 Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

€ Rod.Dalziel@gov.bc.ca

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From: Davies, James W FLNR:EX

Sent: Tuesday, August 22, 2017 12:32 Pt

To: Dalziel, Rod ENV:EX

Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie S EN

Malissa FLNR:EX

Subject: RE: Chapman Lake Siphon application - 2005

Rod Dalziel BC Parks

RE: Chapman Lake Siphon application

The applicant paid for a 2-year Use Approval, which is reflected in th

We will add a clause that the PUP must be in good standing for both years of the

Thanks

James Davies, P.Eng.
Regional Hydrologist - Water Allocation
MELNRO - South Coast Natural Resour

MFLNRO - South Coast Natural Resource Region - Authorizations - Water.

Tel: (604) 586-5637 FAX: (604) 586-4

email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 12:23 Pt

To: Smith, Malissa FLNR: EX; Davies, James W FLNF

Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie

Subject: RE: Chapman Lake Siphon applicati

Hello Malissa,

I noticed that as well. The SCRD has requested a term end date for the PUP of 30 timing needed for additional drawdown will probably extend thru September depprecipitation but not Nov  $30^{\rm th}$ . We will give them at least an additional 2 weeks p water licence term in order to remove the infrastructure from the park.

I would suggest a mid to late Sept 2018 end date with an option to extend for

Jennie your thoughts?

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

Rod.Dalziel@gov.bc.ca

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From: Smith, Malissa FLNR:EX

Sent: Tuesday, August 22, 2017 12:13 Pt

To: Davies, James W FLNR: EX; Dalziel, Rod ENV

Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLN

Subject: RE: Chapman Lake Siphon application

Hi Jim,

I just noticed Remko didn't cc' you on his previous conversations re: the PUP. Here attached email regarding the term.

I suggest to do a 1 yr term, especially given that BC Parks can only consider issuing emergency circumstances and the anticipation that by next year at the end of the term solution has been found for the current regulatory hurdles. It is very easy to with one more year, if required.

I think there was preference to align it with Parks timeframes. Rod, any changes the term length from your team?

Thank you, Malissa

Malissa Smith | MRM | RPBio | PAg Senior Licenced Authorizations Officer - Wat Ministry of Forests, Lands, Natural Resource Operations and Rural Deve

Address: 200-10428 153rd Street, Surrey, BC, V3R

Phone: 604-586-5634

Email: Malissa.Smith@gov.bc.ca

From: Davies, James W FLNR:EX

Sent: Tuesday, August 22, 2017 11:33 Al

To: Dalziel, Rod ENV:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Robinson, Bryar

Subject: RE: Chapman Lake Siphon application

Rod Dalziel

RE: Chapman Lake Siphon application

The term of Use Approval 2005641 for Chapman Lake is recommended as August 23, 2019; 2-year.

Use Approval 2005641 has not been adjudicated, waiting for FN Letter to be

### Thanks

James Davies, P.Eng.
Regional Hydrologist - Water Allocation
MFLNRO - South Coast Natural Resource Region - Authorizations - Water.
Tel: (604) 586-5637 FAX: (604) 586-4
email: James.Davies@gov.bc.ca

From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 11:28 Al

To: Robinson, Bryan FLNR:EX

Cc: Smith, Malissa FLNR:EX; Rosenboom, Remko FLNR:EX; Davies, James W.

Subject: RE: Chapman Lake Siphon application

Hello Bryan,

Has the temp water licence document been completed? I would just like to incluname, # and term in my PUP document.

Cheers,

Rod Dalyiel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

POBox 950, 6451 Sechelt Inlet Road, Sechelt, BC V0N 3

2 Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2

Rod.Dalziel@gov.bc.ca

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From: Aikman, Jennie S ENV:EX

Sent: Friday, August 18, 2017 12:16 PN

To: Rosenboom, Remko FLNR: EX; Robinson, Bryan FLN

**Cc:** Dalziel, Rod ENV:EX; Smith, Malissa FLNR: **Subject:** RE: Chapman Lake Siphon application

Thank you Remko - we will mirror your term with our PUP. Hope you have a grea

Bryan, please keep Rod and I in the loop on your decis

From: Rosenboom, Remko FLNR:EX Sent: Friday, August 18, 2017 8:33 AN

To: Aikman, Jennie S ENV:EX

Cc: Dalziel, Rod ENV:EX; Smith, Malissa FLNR:EX; Robinson, Bryan F

Subject: Re: Chapman Lake Siphon application

Hi Jennies,

I think that that term will definitely work for t

s.22 James Davies is preparing the document Robinson will become the SDM in my absence.

I suggest to do a 1 yr term, especially given that BC Parks can only consider issuing emergency circumstances and the anticipation that by next year at the end of the term solution has been found for the current regulatory hurdles. It is very easy to with one more year, if required.

Cheers! Remko

Manager Water Authorizations South Coast Natural Resource Region Ministry of Forests, Lands and Natural Resource Operat

Office: 604-586- 2803 Fax: 604-586-4444

Email: remko.rosenboom@gov.bc.ca

Our Vision: Economic prosperity and environmental sustaince

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From: Rosenboom, Remko FLNR:EX Sent: Thursday, August 17, 2017 5:39 Pl

To: Aikman, Jennie S ENV:EX Cc: Smith, Malissa FLNR:EX

Subject: Chapman Lake Siphon applicatic

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<image003.jpg>
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www.gov.bc.ca/water

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# RE: Chapman Lake Siphon application - 2005

Monday, October 16, 2( 12:46 PM

Subject	RE: Chapman Lake Siphon application - 2
From	Davies, James W FLNR:EX
То	Dalziel, Rod ENV:EX
Sent	Tuesday, August 22, 2017 2:43 PM

### Rod Dalziel

How should I describe it in our new PUP amendme

"Water Sustainability Act, Section 10 application - 100220141 - Short Term Water

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Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environme

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Sent: Tuesday, August 22, 2017 12:32 Pl

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Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie S EN

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Subject: RE: Chapman Lake Siphon application - 2005

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email: James.Davies@gov.bc.ca From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 12:23 Pt

To: Smith, Malissa FLNR: EX; Davies, James W FLNF

Cc: Rosenboom, Remko FLNR:EX; Robinson, Bryan FLNR:EX; Aikman, Jennie

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## BRITISH BC Parks



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**Cc:** Dalziel, Rod ENV:EX; Smith, Malissa FLNR: **Subject:** RE: Chapman Lake Siphon application

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Subject RE: Chapman Lake Siphon application - 2	
From	Dalziel, Rod ENV:EX
To Davies, James W FLNR:EX	
Sent	Tuesday, August 22, 2017 2:56 PM

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Subject RE: Chapman Lake Siphon application -	
From	Davies, James W FLNR:EX
То	Dalziel, Rod ENV:EX
Sent	Tuesday, August 22, 2017 2:59 PM

Rod Dalziel

RE: Chapman Lake Siphon application - 200564

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Tel: (604) 586-5637 FAX: (604) 586-4434

email: James.Davies@gov.bc.ca From: Dalziel, Rod ENV:EX

Sent: Tuesday, August 22, 2017 2:57 PM

To: Davies, James W FLNR:EX

**Subject:** RE: Chapman Lake Siphon application - 2005 Thanks, James. Are you able to provide once adjudicat

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Email: remko.rosenboom@gov.bc.ca

Our Vision: Economic prosperity and environmental sustains

On Aug 18, 2017, at 8:16 AM, Aikman, Jennie S ENV:EX <Jennie.Aikman@gov.bc.

#### Hi Remko,

I have included Rod Dalziel in the email as he is leading the PUP application hoping to be able to make a decision on our permit by the end of next week issuance comes shortly before that, I am okay with that and that way we can tenure in the park use permit terms.

What term are your issuing the tenure for

Jennie

From: Rosenboom, Remko FLNR:EX Sent: Thursday, August 17, 2017 5:39 Pl

**To:** Aikman, Jennie S ENV:EX **Cc:** Smith, Malissa FLNR:EX

Subject: Chapman Lake Siphon applicatic

Hi Jennie,

s.22 and was wondering what the progres

with the PUP-application? We are not completely ready yet, but are getting v would it feel for you if we were to issue our Use Approval prior to you your PI

an issue for you? Feel free to say Yes and we will hold of doing so.

Cheers,

Remko

Manager Water Authorizations

South Coast Natural Resource Region

Ministry of Forests, Lands and Natural Resource Operations and Rural Dev

Office: 604-586- 2803 Assistant: 604-586-5626

Email: remko.rosenboom@gov.bc.ca

www.gov.bc.ca/water

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#### Plans

- (i) SCRD must submit and which must to be approved by BC Parks prior to construction the following:
  - i. Environmental monitoring plan
  - ii. Temporary camp design and plan
  - iii. Fuel storage plan
  - iv. Spill prevention and response plan
  - v. Construction and equipment plan
  - vi. Restoration/Remediation/Reclamation plan-

# The following requirements must be met in the plans submitted by the SCRD as described in Special Provision 10(b) see above

#### (b) Temporary additional infrastructure

- (i) This will include equipment and materials required to access the additional water drawdown of Chapman Lake as permitted under the "Water Sustainability Act, Section 10 application -100220141 – Short Term Water Use on Chapman Lake – Use Approval 2005641" which will include pipes, intakes, valves, screens, lock blocks, pumps, small dock, rowboat, ladders, containment unit (fuel, pumps and equipment) as described in the Section 8 Development Plan (August 14, 2015).
- (ii) Any amendments to this plan must be approved by the Area Supervisor.

#### (c) Temporary accommodation area

- (i) The temporary accommodation will be constructed for use by the installation crew and the 24/7 onsite 2 person operator crew.
- (ii) The location of temporary accommodation area must be approved by the Area Supervisor.
- (iii) Food and garbage associated with accommodation area must be stored in bear-proof containers or otherwise protected from access by wildlife to prevent wildlife attraction. Garbage must be disposed of off-site and removed regularly to prevent odours and wildlife attraction.
- (iv) The Permittee will remove human waste in portable toilet as required.
- (v) The temporary accommodation area facilities shall be removed when no longer required for the season to the satisfaction of the Area Supervisor.

#### (d) Environmental Monitor

- The Permittee shall retain a qualified Environmental Monitor to monitor Chapman Lake and Chapman Creek.
- (ii) The Environmental Monitor shall be onsite during construction phase and weekly thereafter until lake water levels have returned to levels where the siphon is no longer required and in use
- (iii) The Environmental Monitor must have the authority to order suspension of work if necessary to prevent significant negative environmental effects from occurring.

Comment [RD1]: Waiting on update and new name here

Comment [RD2]: Requested Temporary camp design and plan

Comment [RD3]: Requested EM Plan

 The Environmental Monitor will contact the Area Supervisor should there be any deviation from the prescribed works, negative or substantial changes to the environment and/or park resources.

#### (e) Temporary Equipment and fuel storage

- Equipment that could cause negative environmental impacts during operations, such as siphon intakes, pumps and generators, should be regularly inspected.
- (ii) Ensure equipment and machinery are in good operating condition (power washed), free of leaks, excess oil, and grease prior to transporting to site and inspected regularly.
- (iii) All pumps and fuel will be contained in spill proof containment unit.
- (iv) Equipment refuelling or servicing must be undertaken within the spill proof containment unit.
- Ensure all hydraulic machinery uses environmentally sensitive hydraulic fluids that are non-toxic to aquatic life and that are readily or inherently biodegradable.
- (vi) Keep a spill containment kit readily accessible onsite in the event of a release of a deleterious substance to the environment. Train onsite staff in its safe and proper use. Immediately report any spill of a substance that is toxic, polluting, or deleterious to aquatic life of reportable quantities to the Provincial Emergency Program 24-hour phone line at 1-800-663-3456.
- (vii) The footprints associated with the areas for staging, installation and accommodation areas should all be minimized.
- (viii)Foot and equipment traffic should be confined to designated lowest impact corridors or trails to minimize trampling impacts.

#### (f) Monitoring

(i) As identified in the Whitehead 1999 Impact Assessment monitoring of the impacts of additional drawdown on the following values will be conducted - water quality, fish and amphibians (as indicators of lake ecology), and riparian vegetation in and around Chapman Lake. The monitoring plan will be developed to the satisfaction of BC Parks.

#### (g) Removal and restoration

- Permit area clean-up and equipment removal following the 2018 temporary operations shall be completed to the satisfaction of the Area Supervisor.
- (ii) Removal of temporary additional infrastructure must be completed by 30 October 2018 to the satisfaction of the Area Supervisor.
- (iii) Restoration of the temporary permit area must be completed to the satisfaction of the Area Supervisor.

Comment [RD4]: Requested plans from SCRD

s.13,s.22

Comment [RD6]: Requested Restoration Plan



### PARK USE PERMIT

#### LAND USE / OCCUPANCY

This Park Use Permit No. 102714 (the "Permit") is issued under the authority of the Park Act

(the "Park")

See "Management Plan Schedule, Permit Area Description" for a complete list of Parks and Protected Areas

FROM:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, represented by the Minister responsible for the *Park Act* (the "Province") at the following address:

TO:

Sunshine Coast Regional District

(the "Permittee") at the following address:

Ministry of Environment and Climate Change Strategy BC Parks South Coast Region 200 - 10470 - 152nd Street Surrey BC V3R 0Y3 1975 Field Road Sechelt, BC V0N 3A1

#### THE PROVINCE AND THE PERMITTEE AGREE AS FOLLOWS:

#### ARTICLE I - GRANT OF PERMIT

1.01 The Province, on the terms and conditions of this Permit, grants to the Permittee permission to enter upon and use that part of the Park (the "Permit Area") described, and for the purposes described, in the Management Plan Schedule.

#### **ARTICLE II - TERM**

2.01 The duration of this Permit is for a term of 10 years commencing on February 1, 2014 (the "Commencement Date") and ending on January 31, 2024 (the "Expiration Date"), unless cancelled, terminated or renewed in accordance with the terms and conditions of this Permit.

#### **ARTICLE III - FEES**

- 3.01 The Permittee must pay to the Province a minimum fee (the "Permit Fee") of \$500.00 (plus applicable taxes) prior to Commencement date and on each anniversary of the commencement date during the term of this Permit.
- 3.02 The Province may, by notice to the Permittee not less than 30 days prior to each anniversary of the Commencement Date, increase the Permit Fee to an amount solely determined by the Province at its discretion, and the Permittee must pay the increased amount.

102714 - Sunshine Coast Regional District (replacement permit 2014-2024) page 1 of 14

3.03 The Permittee must pay interest to the Province on money payable by the Permittee and owing to the Province under this Permit, at the rate of interest prescribed by the Financial Administration Act in respect of money owing to the Province, which interest will be calculated from the date that the money becomes payable to the Province.

#### ARTICLE IV - INDEMNITY

4.01 The Permittee will indemnify and save harmless the Province, its servants, employees and agents against all losses, claims, damages, actions, costs and expenses that the Province, its servants, employees and agents may sustain, incur, suffer or be put to at any time arising, directly or indirectly, from any act or omission of the Permittee, its employees, agents, contractors and licensees under this Permit, except for any liability arising from any independent, negligent act of the Province.

#### ARTICLE V - SECURITY AND INSURANCE

- 5.01 On the Commencement Date, you will deliver to us Security in the amount of \$0.00 which will: Not Required
  - (a) guarantee the performance of your obligations under this Permit;
  - (b) be in the form required by us; and
  - (c) remain in effect until we certify, in writing, that you have fully performed your obligations under this Permit
- 5.02 Despite section 5.01, your obligations under that section are suspended for so long as you maintain in good standing other security acceptable to us to guarantee the performance of your obligations under this Permit and all other Dispositions held by you.
- 5.03 We may use the Security for the payment of any costs and expenses incurred by us to perform any of your obligations under this Permit that are not performed by you and, if such event occurs, you will, within 30 days of that event, deliver further Security to us in an amount equal to the amount drawn down by us.
- 5.04 After we certify, in writing, that you have fully performed your obligations under this Permit, we will return to you the Security maintained under section 5.01, less all amounts drawn down by us under section 5.03.
- 5.05 You acknowledge that we may, from time to time, notify you to
  - (a) change the form or amount of the Security; and
  - (b) provide and maintain another form of Security in replacement of or in addition to the Security posted by you under this Permit;

and you will, within 60 days of receiving such notice, deliver to us written confirmation that the change has been made or the replacement or additional form of Security has been provided by you.

- 5.06 You must
  - (a) without limiting your obligations or liabilities under this Permit, at your expense, effect and keep in force during the Term the following insurance with insurers licensed to do business in Canada:
    - (i) Commercial General Liability insurance in an amount of not less than two million dollars \$2,000,000.00 inclusive per occurrence insuring against liability for personal injury, bodily injury (including death) and property damage, including coverage for all accidents or occurrences on the Permit Area or any improvements. Such policy will include cross liability, liability assumed under contract, provision to provide 30 days advance notice to us of material change or cancellation, and include us as an additional insured;
  - (b) ensure that all insurance required to be maintained by you under this Permit is primary and does not require the sharing of any loss by any of our insurers;
  - (c) within 10 working days of the Commencement Date of this Permit, provide to us evidence of all required insurance in the form of a completed "Province of British Columbia Certificate of Insurance";

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- (d) if the required insurance policy or policies expire or are cancelled before the end of the Term of this Permit, provide within 10 working days of the cancellation or expiration, evidence of new or renewal policy or policies of all required insurance in the form of a completed "Province of British Columbia Certificate of Insurance":
- (e) notwithstanding subsections (c) or (d) above, if requested by us, provide to us certified copies of the required insurance policies to be maintained by you under this Permit.
- 5.07 We may, acting reasonably, from time to time, require you to
  - (a) change the amount of insurance set out in subsection 5.06(a); and
  - (b) provide and maintain another type or types of insurance in replacement of or in addition to the insurance previously required to be maintained by you under this Permit;

and you will, within 60 days of receiving such notice, cause the amounts and types to be changed and deliver to us a completed "Province of British Columbia Certificate of Insurance" for all insurance then required to be maintained by you under this Permit.

- 5.08 You shall provide, maintain, and pay for any additional insurance which you are required by law to carry, or which you consider necessary to insure risks not otherwise covered by the insurance specified in this Permit in your sole discretion.
- 5.09 You waive all rights of recourse against us with regard to damage to your own property.

#### ARTICLE VI - COVENANTS OF THE PERMITTEE

#### 6.01 The Permittee must:

- pay the Permit Fee and other money payable under this Permit when due at the address of the Province first written above or at such place as the Province may specify from time to time;
- (b) pay when due all taxes, levies, charges and assessments that relate to operations of the Permittee under this Permit;
- (c) comply with all laws, bylaws, orders, directions, ordinances and regulations of any competent governmental authority in any way affecting the Permit Area, the Park, its use and occupation or the Permittee's operations under this Permit;
- (d) advise its employees, contractors, licensees, and agents of the laws and regulations respecting provincial parks and recreation areas and the conditions of this Permit respecting conduct in the permit Area;
- (e) keep the Permit Area in a safe, clean and sanitary condition to the satisfaction of the Province and make safe, clean and sanitary any portion of the Permit Area that the Province may direct by notice in writing to the Permittee;
- (f) remove from the Permit Area and the Park all garbage, debris and effluent resulting from its use of the Park and Permit Area under this Permit, except as otherwise permitted in the Management Plan Schedule;
- (g) comply with all orders and directions made, verbally or in writing, by a park officer (as defined in the Park Act) relating to the Park, this Permit or the Permit Area;
- (h) not construct, erect, place, repair, maintain or alter any building, fixture, equipment, structure or improvement in the Permit Area except as may be permitted by this Permit or with the prior written consent of the Province;
- (i) take all reasonable precautions to prevent and suppress fires in the Permit Area;
- not interfere with free public access through, across and upon the Permit Area, unless otherwise specified in the Management Plan Schedule;
- (k) not interfere with or disrupt the activities and operations of other Permittee's or users in the Park;

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- (I) use and occupy the Permit Area only in accordance with the provisions of this Permit;
- (m) not remove, destroy, damage, disturb or exploit any natural resource (as that term is defined in the Park Act) or any archaeological or cultural artefact found in or on the Permit Area except as may be permitted by this Permit, and only then in accordance with the Park Act and all other applicable laws;
- (n) not commit or allow any wilful or voluntary waste, damage or destruction in or upon the Permit Area;
- pay for or repair, as determined by the Province, any damage caused to the property of the Province by the Permittee, its employees, agents, contractors, or licensees;
- (p) upon the expiration, cancellation or termination of this Permit:
  - (i) peaceably quit and deliver up possession of the Permit Area to the Province,
  - (ii) remove all chattels and improvements of the Permittee from the Permit Area within 30 days of the expiration, cancellation or sooner termination of this Permit, unless otherwise advised in writing, by the Province,
  - (iii) deliver to the Province possession of all equipment, furnishings, fixtures, chattels and improvements owned by the Province in a state of good repair and working order, and
  - (iv) restore the Permit Area to the satisfaction of the Province;
  - (v) and to the extent necessary, this covenant will survive the expiration, cancellation or termination of this Permit; and
- (q) comply with all provisions of the schedules to this Permit.

#### ARTICLE VII - RIGHTS OF THE PROVINCE

- 7.01 The Province retains all rights in respect of the Park and Permit Area which are not expressly granted to the Permittee under this permit, including, without limitation:
  - the right at all times for the Province, its authorized representatives, employees, and agents to have unimpeded access over and along all portions of the Permit Area and to inspect any portions of the Permit Area;
  - (b) the right at all times to construct, repair, alter and maintain buildings, equipment, structures and improvements upon the Permit Area; and
  - (c) the right to grant further rights in respect of the Park and Permit Area, provided that such rights do not unreasonably impede, obstruct or compete with the rights of the Permittee under this Permit.

#### ARTICLE VIII - NOTICE

- 8.01 Any notice required to be given by either party to the other will be deemed to be given if it is in writing and is delivered by hand or prepaid registered mail to the address first written above or any other address that may be specified in writing by a party and a notice will be deemed to be delivered, if mailed, eight days after the time of mailing except, in the case of a postal interruption, actual receipt is required.
- 8.02 Notwithstanding section 8.01, any written notice to be given by the Province to the Permittee under this Permit will be effectively given if it is posted in a conspicuous place on the Permit Area.

#### ARTICLE IX - RENEWAL

- 9.01 Not later than 140 days prior to the Expiration Date, the Permittee may, by notice in writing delivered to the Province, apply to the Province for a renewal of this Permit.
- 9.02 Provided that the Permittee is not in default under this Permit and subject to the terms of the Park Act, the Province may renew this Permit upon the terms and conditions determined by the Province.

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9.03 The Permittee acknowledges that nothing in this Permit obligates the Province to renew this Permit and the Province's decision in that respect is entirely within its discretion

#### ARTICLE X - TRANSFER

- 10.01 The Permittee must not assign, transfer, sublicence or grant any of the rights or privileges granted by this Permit without the prior written consent of, and on the terms and conditions determined by, the Province.
- 10.02 If the Permittee is a corporation then a change in the control (as that term is defined in subsection 2(3) of the Business Corporations Act) of the Permittee without the prior written consent of the Province is deemed to be a breach of section 10.01.

#### **ARTICLE XI - CANCELLATION**

- 11.01 In the event that
  - (a) the Permittee defaults in the payment of the Permit Fee or other money payable under this Permit, and the default continues for 7 days after the giving of written notice of the default by the Province to the Permittee;
  - (b) the Permittee fails to perform or observe any of the terms or conditions of this Permit, other than the payment of money, and the failure is not remedied within a period specified by the Province;
  - (c) the Permittee has wilfully misrepresented information:
    - (I) on the application form which led to the granting of this Permit, or
    - (ii) required to be provided under the terms and conditions of this Permit;
  - (d) the Permit Area is damaged or destroyed by any cause whatsoever;
  - (e) the Park is closed by the Province;
  - the Permittee files a petition in bankruptcy, is adjudged bankrupt, is petitioned into bankruptcy, makes an assignment for the benefit of its creditors, becomes insolvent or takes the benefit or protection of any statute for bankrupt or insolvent debtors;
  - (g) any of the Permittee's assets is seized in execution from the Permit Area;
  - the Permittee, its employees, agents, contractors or licensees performs any act which in the opinion of the Province, affects the good standing or reputation of the Park, or adversely affects any other permit holder or park user within the Park;

the Province may cancel this Permit immediately by written notice to the Permittee.

- 11.02 In the event that the Permittee and the Province mutually agree in writing to terminate this Permit, the parties will be released and discharged from their obligations under this Permit, except as otherwise provided in this Permit.
- 11.03 The obligation of the Permittee
  - (a) to pay the Permit Fee and other money payable under this Permit; and
  - (b) to comply with Sections 4.01, 6.01(e), 6.01(o) and 6.01(p);

will survive the expiration, cancellation or termination of this Permit.

11.04 The Permittee will not be entitled to any compensation from the Province, in damages or otherwise, in respect of a cancellation or termination of this Permit.

#### ARTICLE XII - MISCELLANEOUS

- 12.01 This Permit may be inspected by the public at such times and at such places as the Province may determine.
- 12.02 Time is of the essence in this Permit.

102714 - Sunshine Coast Regional District (replacement permit 2014-2024)

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- 12.03 Nothing in this Permit will be considered to have been waived by the Province unless such waiver is in writing.
- 12.04 During the term of this Permit, the Permittee will be an independent contractor and not the agent, employee or partner of the Province.
- 12.05 The Province will not be liable for any loss, damage, cost or expense resulting from the destruction of or damage to the Permittee's property or a disruption of the Permittee's operations under this Permit which result from strikes, flooding or other acts of God, vandalism, or any other interference to the Permittee's operation or property.

#### ARTICLE XIII- INTERPRETATION

- 13.01 In this Permit, unless the context otherwise requires, the singular includes the plural and the masculine includes the feminine, a corporation and body politic.
- 13.02 The captions and headings contained in the Permit are for convenience only and are not to be construed as defining or in any way limiting the scope or intent of the provisions of this Permit.
- 13.03 In this Permit, a reference to an enactment of the Province of British Columbia or of Canada includes a reference to any subsequent enactment of like effect, and unless the context otherwise requires, all statutes referred to in this Permit are enactments of the Province of British Columbia.
- 13.04 If any part of this Permit is found to be illegal or unenforceable, that part will be considered separate and severable and the remaining parts will be enforceable to the fullest extent permitted by law.
- 13.05 If all or part of the Permit Area is in a recreation area established or continued under the Park Act, this Permit is deemed to be a resource use permit as that term is defined in the Park Act.
- 13.06 All schedules to this Permit form an integral part of this Permit.

#### IN WITNESS WHEREOF the parties have duly executed this Permit.

SIGNED and DELIVERED on behalf of the Province by a duly authorized representative of the Province.

# [Sign]image:WordInterfaceSignatureImgObjld Duly Authorized Representative Jennie Aikman Print Name Regional Director Print Title

[Sign]WordInterfaceCurrentDate

Date

102714 - Sunshine Coast Regional District (replacement permit 2014-2024)

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#### (b) Plans

- The Permittee must provide the following plans to the Province for approval prior to any construction or camp establishment:
  - Environmental plan including wildlife management, vegetation management waste management, invasive species prevention, sediment and erosion control plan, restoration and remediation plan, and archaeological plan.
  - n. Construction and equipment plan including: fuel storage plan, spill prevention and response plan, safety and evacuation plan, and temporary camp plan Temporary camp plan must include: managing wildlife attractants, managing greywater, installation of an electric fence around food preparation, eating, and greywater disposal areas, and no smoking or open burning of any kind.

These plans must be supported by necessary drawings, reports, maps, photos, permits, authorizations and specifications, prepared, where required by law or BC Parks, by registered professionals.

#### (c) Guidelines

(i) All works and monitoring shall be conducted as described in BC Standards and Best Practices for Instream Works
(http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf) (Appendix A) and should be informed by the 1999 Impact Assessment for the proposed floating pump station at Chapman Lake (Whitehead 1999) (Appendix B) and Chapman Lake Water Supply Expansion (AECOM Nov 2106) (Appendix C) and shall comply with Park Use Permit Application (temporary amendment) – Sunshine Coast Regional District – Siphon at Chapman Lake Part 3 (Appendix D) and comply with the "Chapman Lake Siphon System Workplan and Timeline" (Appendix E) and the requirements listed in Special Provision 10(b) above

#### (d) Reporting

- The Permittee will immediately report any spills or other incidents to the Area Supervisor.
- (ii) After 24 hours, the Permittee will report to the Area Supervisor on the success of the first phase of installation and confirm the employment of the remaining two siphons.
- The Permittee will provide to BC Parks environmental monitoring reports resulting from visits by the Environmental Monitor on a weekly basis.
- (iv) Additional reporting as required under Water Sustainability Act, Section 10 application - 100220141 – Short Term Water Use on Chapman Lake – Use Approval 2005641 will also be provided to BC Parks on a weekly basis.
- The Permittee will provide to BC Parks a copy of the Preliminary Field Reconnaissance for archaeology report.

APPENDIX A - Standards and Practices for Instream Works (attached)

APPENDIX B - Impact Assessment Report - Whitehead 1999 (attached)

APPENDIX C - Chapman Lake Water Supply Expansion - AECOM Nov 2016 (attached)

APPENDIX D — Park Use Permit Application (temporary amendment) — Sunshine Coast Regional District — Siphon at Chapman Lake Part 3 (attached)

APPENDIX E - Chapman Lake Siphon System Workplan and Timeline (attached)



102714 - Sunshine Coast Regional District (replacement permit 2014-2024)

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September 6, 2017 Approval File: 2005641

Michael Day Sunshine Coast Regional District 1975 Field Road Sechelt, BC, V0N 3A1

Dear Mr. Day:

#### Re: Short Term use of Water - Use Approval 2005641 - on Chapman Lake

Your application of August 10, 2017 for a Use Approval has been granted and the approval document verifying this is attached. This approval or a copy of it should be kept at the work site so that it may be shown to a government official upon request.

This document represents the terms and conditions under which the Province is prepared to approve your application for short term use of water but it does not relieve you of any legal obligations under other local government, provincial or federal legislation.

Should you encounter any difficulties meeting the requirements as set out in this approval, or should it be necessary to amend the approval, please contact this office prior to any work or diversion of water.

The eastern end of the Chapman Lake is to be monitored for potential stream or lakebed responses resulting from changes to the water levels and precipitation events; this may be done as part of the Environmental Monitor weekly visit.

Each siphon pipe is to be given a unique identifier, such that assessments, reviews, volume of water diverted through a pipe, and incidents can be referenced to a specific pipe.

You are to prepare a plan for maintaining or removing the siphon works installed under this Approval. All works associated with the siphon diversion are to be maintained or removed in accordance with a plan to the satisfaction of the Water Manager.

You are required to report the volume of water diverted under this Use Approval. Based on the volume of water diverted via the siphon, additional Water fees may be requested from the Sunshine Coast Regional District.

If the event of an incident or failure of the siphon, you are referred to the S.38 of the *Fisheries Act*, in which you have the Duty to Notify the Department of Fisheries and Oceans.

Major changes to the construction plan, such as blasting, cut slopes, infill of land, must be approved by the Water Manager.

Fax: (604) 586-4444

You are requested to forward lake levels to the shishalh Nation, such that they can coordinate the Preliminary Field Reconnaissance of the exposed lake bed with your staff.

A right of appeal from this decision lies to the Environmental Appeal Board. Notice of any appeal must:

- 1. Be in writing;
- 2. Include grounds for the appeal;
- 3. Be directed by registered mail or personally delivered to:

Chair, Environmental Appeal Board PO Box 9425 STN PROV GOVT Victoria BC V8W 9V1

- 4. Be delivered within 30 days from the date notice of the decision is given, and;
- 5. Be accompanied by a fee of \$25, payable to the Minister of Finance.

If you have any questions or concerns please contact the Water Information Technician at 604-586-4400.

Yours truly,

Remko Rosenboom, M.Sc., A.Ag.

Water Manager

Enclosure

pc: Rod Dalziel, Sunshine Coast Area Supervisor, BC Parks, Rod.Dalziel@gov.bc.ca Sechelt First Nations, Jasmine Paul, Stewardship and Territorial Land Management Division, jpaul@sechetnation.net



## Water Sustainability Act

File: 2005641

# APPROVAL WATER SUSTAINBILITY ACT - SECTION 10 (1) (Use Approval)

#### Sunshine Coast Regional District

is hereby authorized to divert, store and use water in the following manner:

- (a) The source of the water is Chapman Lake.
- (b) The purpose for which the water may be used is waterworks (local authority).
- (c) The land to which the water is to be used and to which this approval is appurtenant, is the land within the boundaries of the Sunshine Coast Regional District.
- (d) The point of diversion is located near the outlet of Chapman Lake.
- (e) The works authorized are screened intakes, pipes, valves, priming pumps, lock block anchors.
- (f) The maximum quantity of water which may be diverted is 1,000,000 cubic meters in total at a maximum rate of 17,280 cubic meters per day.
- (g) The diversion of water under this Approval is subject to the following:
  - The July 16, 2017 Order issued by Remko Rosenboom, Water Manager, for regulating Water Licence C050724 (file 0309244).
- (h) The period during which the water may be used is from August 24, 2017 to August 23, 2019.
- (i) The holder of this Approval shall take reasonable care to avoid damaging any land, works, trees or other property, and shall make full compensation to the owners for any damage or loss resulting from the exercise of the rights granted with this Approval.
- (j) This Approval does not authorize entry onto privately held land.
- (k) This Approval does not constitute authority of any other agency.
- Park Use Permit 102714 must be active during the term of this Approval.
- (m) The holder of this Approval shall retain a qualified Environmental Monitor to monitor Chapman Lake and Chapman Creek while water is being diverted under this Approval.

Page 2 Approval File: 200564129

In the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, the Environmental Monitor shall notify the Water Manager (604-586-4400), within 24 hours.

- (n) All works shall comply with:
  - Water Development Plan Emergency Siphon System, dated August 8, 2017, prepared by Sunshine Coast Regional District;
  - Chapman Lake Emergency Water Supply Siphon Lines, drawings D-028B5.00-G1/G2, dated August 12, 2015, prepared for Sunshine Coast Regional District, prepared by Opus DaytonKnight Consultants.
- (o) The discharge location of the siphon must be constructed, maintained and used so as not to obstruct the flow of water in the stream or to cause erosion or scour in the stream (streambank).
- (p) Before the lake level drops below 970-metres and flow is no longer released from the Chapman Lake Dam Weir, the holder of this Approval will designate an appropriately qualified environmental professional to salvage any fish and amphibians present in the stream channel between the Chapman Lake Dam Weir and the discharge location of the siphon(s). It is the responsibility of the holder of this Approval to obtain any permits needed prior to the salvage.
- (q) A spill containment kit and drip tray must be readily accessible on-site.
- (r) An as-built report (photos, construction markup) must be provided to the Water Manager, within 30-days of completing the installation of the siphon works.
- (s) A copy of this Approval must be available for inspection, upon request, at the siphon works.
- (t) All works associated with the siphon diversion are to be maintained or removed in accordance with a plan to the satisfaction of the Water Manager.
- (u) The holder of this Approval must provide a Weekly Report to the satisfaction of the Water Manager, the report shall containing the following:
  - 1. The Environmental Monitor report of his visit to Chapman Lake;
    - The water quality parameters (turbidity, temperature, pH, conductivity, and colour) as measured at the SCRD Point of Diversion, or at a specified location on Chapman Creek or Chapman Lake;
    - 3. The water levels of Chapman Lake; and
    - 4. The volume of water diverted via the siphon during this time period, and the accumulated volume to date.
- (v) The diversion of water authorized under this Approval may be restricted, prohibited, cancelled or suspended, at any time by an order in writing by the Water Manager.

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(w) All work shall be carried out in accordance with the Ministry of Environment's "Standards and Best Practices for In-stream Works". The Ministry's guidance can be found at the following link: <a href="http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf">http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf</a>

- (x) The intake must be screened to prevent the entry of fish and amphibians. For further guidance, you may refer to the Fisheries and Oceans "Freshwater Intake End-of-Pipe Fish Screen Guideline" at the following link: <a href="http://www.dfo-mpo.gc.ca/Library/223669.pdf">http://www.dfo-mpo.gc.ca/Library/223669.pdf</a>.
  - The requirement for a screened intake on each uniquely identified siphon pipe may be removed, subject to the following assessments being conducted by a qualified professional.
    - An assessment of the as-built siphon, from the intake to the discharge end of the identified siphon, such as valves, pumps, pipe wall, pipe corners, or depth of water for fish plunging from the siphon exit, and finds no concerns for the potential of fish mortality or injury;
    - The inlet flow velocity of the identified siphon is measured as 0.14 metres per second or less; and
  - iii. These assessments are to be provided to the Water Manager in the Weekly Report as required by clause (u).
- (y) The holder of this Approval is required to adhere to all other applicable Federal and Provincial Regulations.
- (z) The holder of this Approval is required to provide updates to the shishalh Nation, including dates for potential emergency siphon deployment, design drawings and monitoring reports as they are available.

Remko Rosenboom, M.Sc., A.Ag.

Water Manager

File: 2005641 Precinct: 29C-Howe Sound Date issued: September 6, 2017

# **Chapman Lake Siphon System**

Work Plan and Timeline



October 12, 2017

Prepared by: SCRD Infrastructure Services

Comment [RD1]: This was received from Dave Crosby on 25 Aug 2017

# **Chapman Lake Siphon System**

Work plan and Timeline

Last revised: October 12, 2017

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#### Introduction

Chapman Creek is the main water supply for the Sunshine Coast. It supplies water to approximately 85% of the area residents (23,000 people) as well as large numbers of seasonal visitors and tourists. During the summer months, instream flows in Chapman Creek are regulated through impoundment structures on Chapman and Edwards Lakes, which are the main water storage reservoirs for the water system and both are situated within the Tetrahedron Provincial Park. The total available water storage capacity for withdrawal is 1.7 million m³.

When the available water supply may become at risk of depletion as a result of the increased water demand for environmental values and potable water during the dry summer months. The Sunshine Coast Regional District may deploy a siphon system in Chapman Lake to access an additional 1,000,000 m³ of water in order to ensure the ongoing delivery of potable water to area residents, water for environmental values, and adequate fire protection flows. The additional drawdown represents 5 meters of additional storage for a total of 8 meters.

This plan will outline the steps and procedures needed to deploy and operate the siphon system.

#### Background

#### Siphon Design

The siphon consists of five parallel 200 mm HDPE pipes that are 255 m in length. The siphon will run over the existing dam structure from Chapman Lake into Chapman Creek. The inlet will be installed at an elevation of 963 m which is approximately 11 m below the top of the dam and will reach into the lake approximately 180 m from the existing dam. The inlets will be secured and anchored in place using concrete blocks and buoys. The discharge will be located approximately 50 meters downstream of the existing dam at an approximate elevation of 960 m. Refer to Appendix A for engineering design drawings.

#### Construction Overview

The installation of the siphon system will involve transportation of pre-fused sections of HDPE pipe to Chapman Lake. Each siphon will consist of four sections. The sections will be installed as per Appendix A. The installation process will begin with laying the outlet pipe with attached gate valve then will proceed with laying the subsequent lengths of that pipe, ending with the inlet pipe with attached check valve and buoy. The sections of pipe will be bolted together onsite and the inlet pipe will be tied-off to lake bed anchor blocks. This process will be duplicated for a second complete siphon length. Once the first two siphon pipes are assembled and in place, the pump/vacuum and blow-off ports will be constructed at the high point of each pipe. The siphons will be primed and commissioned as soon as possible after completion of construction.

The operation of the first two siphons will be monitored for 24 hours by the SCRD Siphon Technicians. If the operation of the first two siphon lengths is considered to be a success, the remaining lengths will be constructed through the same process as the previous two.

If the siphon is considered to be unsuccessful after the initial 24 hours of operation, alternative options will be considered in consultation with First Nations, BC Parks, and FLNRO.

The staging area for tent accommodation, portable toilets, and eating areas will be on the north side of the outlet channel.

The staging area for equipment will be above the high water mark at the end of the North side of the channel at the outlet of the lake. There are no access roads to the site. All access will be by helicopter or potentially by foot should bad weather conditions prevent flying and only personnel movement be required.

#### Siphon Installation Timing

In making a determination to install the Chapman Lake Siphon the General Manager, Infrastructure Services / Regional Engineer will consider the following:

- I. Time of year and seasonal trends
- II. Storage volume of water source and draw down rates
- III. Stream flows and monitoring data
- IV. Weather, recent conditions and forecasts
- V. Water usage, recent consumption and trends
- VI. Water Supply system performance
- VII. The 25 days required to commission the siphons

Upon determination by the General Manager, Infrastructure Services / Regional Engineer that the Chapman Lake Siphon installation is required the Manager, Utilities Services will proceed with the siphon installation as outlined in this document.

#### Staff Training

Staff will require training prior to working in the Tetrahedron Provincial Park.

Area of training	Instructor		
Lone worker training	SCRD SMS Section 19 will apply to teams of 2 employees		
Bear Aware / Wild Life Safety	Bear aware program coordinator and / or SCRD SMS Section 2 &18		
Leave no trace	SCRD Environmental Technician		
Helicopter Safety	Helicopter Contractor		
Slippery surfaces/ Uneven ground	SCRD Utilities Coordinator		
Spill Containment	SCRD Policy		
Lifting Heavy and /or Awkward Objects	SCRD SMS Section 11		
Water Hazards	SCRD Environmental Technician		

#### Personnel

#### **Dakota Ridge Crew**

Director Helicopter Employee

SCRD Crew Coordinator Utility Senior Operator

Labourer SCRD Utility Operator 1

Labourer SCRD Utility Operator 1

Excavator Operator Contractor

#### Chapman Lake Crew

Director Helicopter Employee

SCRD Crew Coordinator SCRD Utilities Coordinator
Labourer SCRD Utility Operator 2

Labourer SCRD Utility Operator 1

Excavator Operator SCRD Pipe layer

First Aid Attendant Contractor

Possible back up person if needed SCRD Staff

#### Siphon Operation Crew

SCRD Siphon Coordinator SCRD Technician 2 or Utility

Coordinator

SCRD Siphon Operator SCRD Staff
First Aid Attendant Contractor

Construction Timeline

Date	+7 C7 77 T7 07 CT 0T /T 0T CT +1 CT 71 T1 0T C 0 / 0 C + C 7 T Shinds	67 47
Planning		
Confirm availability of helicopter contractor and First Aid		
Review construction and operation plan		
Review parts/equipment lists and place order for any missing items		
Retain helicopter contractor and first aid		
Initiate permit discussion with BC Parks and FLNRO		
Crews - Identify and assign Dakota Ridge and Chapman Lake Crews		
Notifications		
Notice to shishalh Nation		
Notice to BC Parks		
Notify Biologist		
Notify FLNRO		
Equipment Preparation		
Inspect pipe and fittings at Dakota Ridge, re-label if necessary		
Inspect all parts and fittings at Works Yard for Siphon assembly (refer to parts list in Appendix B)		

Arrange excavator and replace hydraulic fluid w/ vegetable oil	
Arrange excavator for Dakota Ridge	
Prep Emergency survival backpack	
Training	
Lone worker training	
Bear Aware/ Wild Life Safety	
Leave no trace	
Helicopter Safety	
Slippery surfaces/uneven ground	
Spill containment	
Lifting Heavy/Awkward Objects	
Water Hazard	
Crew sites orientation	
Pre-construction Chapman site meeting with Utilities Mgr,	
Helicopter Operator 1 and 2,	
Project Mgr, SCKD Chapman Crew Coordinator, Excavator	
Operator	
Construction of Siphon	
Transport port-a-potty	
equipment, excavator, small tools, camp supplies to Dakota	
Dakota Ridge Crew on-site	
Chapman Lake Crew on-site	
Airspan crew	

Transport equipment, excavator, small tools, camp supplies to Chapman Lake. Start with equipment for Site Prep	Site Prep (1Bench edge of channel at lock block locations)	Fly in sand bags and assemble dam to submerge outlet	dam and two anchor blocks at the dam and two anchor blocks on the channel side of each of the remaining pipe joints. See construction drawings for detail.	Install two target lock block with buoy and five 10 m long tag lines in lake as per drawings, approximately 180m from dam, Coordinate with Helicopter contractor.	Fly pipe to lake (1st two lengths). Refer to Construction drawings for order. Tag lines attached to the pipes will be received by ground crews who will tie-off to anchor blocks as the pipe is lowered. A buoy will mark the location where the pipe will be placed in the water and a floating line attached so lake crew can connect pipe to anchor. Pipe will be installed as per Appendix A. check valve will have float.	Assemble pipe

Assemble siphon ports and secure in place	Prime siphon and bring on-line	Fly remaining pipe lengths to lake	Assemble remaining pipe and ports	Prime remaining siphon lengths and bring on-line

## Operation Plan

#### TECHNICAL CONSIDERATIONS AND SIPHON OPERATION

Name/Job	Tasks	Main Responsibility/Shared Responsibility
Prime Siphon	i) Close downstream pipe valves.	SCRD Chapman Lake Coordinator/ SCRD Siphon Coordinator
	ii) Utilizing pipe saddles / ports, remove air with water jet pump or fill pipes with water pump.	SCRD Chapman Lake Coordinator/ SCRD Siphon Coordinator
Engage Siphon	<ul> <li>i) Open downstream valves and confirm siphon is operating.</li> </ul>	SCRD Chapman Lake Coordinator
	<ul> <li>ii) Contact Chapman Creek Water Treatment Plant operator via satellite phone to inform that system is in operation.</li> </ul>	SCRD Chapman Lake Coordinator
Monitor Siphon System	<ul> <li>i) Visually monitor system hourly during daylight hours.</li> </ul>	SCRD Siphon Coordinator
	<ul> <li>ii) During non-daylight hours, vacuum gauge alarm will notify if there are siphon issues.</li> <li>Contact the Utility Technician Coordinator if siphon flow has dropped to levels determined to be problematic.</li> </ul>	SCRD Siphon Coordinator
	<ul> <li>iii) Record in field notebook visual observations and/or changes in diagnostic measurements of siphon flow.</li> </ul>	SCRD Siphon Coordinator
Siphon Interruption	<ul> <li>i) If visual or diagnostic information indicates that the siphon is experiencing interruption in flow or decreased levels of flow the system must be re-primed.</li> </ul>	SCRD Siphon Coordinator
	<ul> <li>ii) If a siphon interruption or a meaningful decrease occurs during daylight hours follow steps identified in 1. Prime Siphon (above).</li> </ul>	SCRD Siphon Coordinator
	iii) If siphon interruption/decrease occurs during non-daylight hours, contact Utility Technician Coordinator or alternate and re-prime siphon at	SCRD Siphon Coordinator / Utility Technician Coordinator

#### earliest possible chance during daylight.

iv) If a siphon interruption is determined to h	nave
possible impact on Chapman WTP operation	n,
contact the Utility Technician Coordinator of	r
alternate via satellite phone so that adjustm	ents
can be made at the plant	

SCRD Siphon Coordinator / Utility Technician Coordinator or Alternate

Lake Draw Down Level for

v) Once the lake level is below maximum drawdown a PFR (Preliminary Field Archeology PFR Reconnaissance) study is required by SIB.

SCRD Siphon Coordinator, SCRD Field office staff, SIB staff

#### CAMP LOGISTICS - CHAPMAN LAKE

Name/Job	Tasks	Main Responsibility/Shared Responsibility
Mobilization of SCRD Camp	Helicopter transports primary lodging and living supplies for initial setup (i.e. tent, cookware, fuel, food/water, outhouse, first aid supplies, etc.).	Utilities Coordinator / Manager of Utility Services
Camp Setup	Initial setup of camp at old camping site by Chapman Lake.	Utilities Coordinator
72 hour shifts	SCRD staff alternate 72hr shifts up at Chapman Lake monitoring and operating the siphon system.	SCRD Siphon coordinator and First Aid Attendant
Re-supply	During shift change re-supply camp supplies as needed.	Utilities Coordinator

# Communication Protocol

Name/Job	Tasks	Main Responsibility/Shared Responsibility
SCRD Siphon Coordinator 2x Daily Check-In	SCRD Siphon Coordinator contacts Manager of Utility Services twice daily (morning/evening). Timing table will be developed for appropriate time of year and will be based on 1hour after sunrise and 3 hours before sunset.	SCRD Siphon Coordinator/ Manager, Utility Services
	If contact is not made within 1hr; mobilize helicopter and attend Chapman Lake to investigate.	Manager, Utility Services
Siphon System Interruption or WTP Impact	See Operation Plan	SCRD Siphon Coordinator/ Utility Technician Coordinator
Siphon System Operation or Non- Emergency	Contact Manager, Utility Services or most relevant staff member.	Manager, Utility Services / Will vary
Medical Emergency	Contact protocol based on emergency type and time of day. See "Safety Plan - Emergency Contacts".	Will vary see Safety Plan for contact

# Safety plan

# Emergency Contacts

all injuries/incidents to	be reported to the ima	mager, ounties serv	ICES MOME
Incident	Agency to Contact	Phone Number	Secondary Contact Number
Injury at Dakota Ridge (non-life threatening)	SCRD	604-885-6800	1-866-291-4545
Injury at Dakota Ridge (life threatening)-cell phone	BC Ambulance	911	604-885-2224
Injury at Chapman Lake (non-life threatening - daytime)	SCRD	604-885-6800	
Injury at Chapman Lake (life threatening - daytime) using Iridium	BC Ambulance	001-604-872-5151	
Satellite Phone	Helicopter Contractor	604-885-7474	
	Followed by SCRD	Phone #	
		604-885-6800	
Injury at Chapman Lake (non-life threatening - nighttime)	SCRD	1-866-291-4645	
Injury at Chapman Lake (life threatening -	SCRD Search and Rescue	604-586-4390	
nighttime)	SCRD EMP Coordinator	604-885-6887	604-741-1181

## Helicopter Safety

SCRD staff must be briefed by their helicopter pilot on each of the safety topics listed below prior to helicopter travel. This briefing is given to new passengers and when a pilot deems the information needs to be reviewed.

Safe approach/departure to/from the helicopter

Loading/unloading procedures

Cargo loading/unloading procedures

Door operation (including baggage compartment and cargo baskets)

Seatbelt operation

Lifejacket operation (where required)

First Aid kit location

Survival kit location (when carried)

Emergency exit location and operation

Emergency Locator Transmitter (ELT) location and operation

SCRD crew must carry a satellite phone and establish procedures for communicating with their pilot in the instance that they have to be dropped off for later pickup.

SCRD crew should carry a GPS with Tetrahedron Provincial Park cabin locations.

Each staff member should carry their own personal survival kit in a compact carry bag (to be worn/kept on-person during flight) that includes:

- Flashlight or headlamp and extra batteries
- Fire making kit
- Signaling device (i.e. whistle)
- Extra food and water
- · Extra clothing (even in summer, temperatures and conditions can vary dramatically)
- Navigational devices (i.e. compass, maps showing topography and locations of cabins and winter and summer travel routes - http://www.tetoutdoor.ca/maps.html)
- First aid kit
- Emergency blanket/shelter
- Pocket knife
- Sun protection

One SCRD crew member should be trained and have current certification in Wilderness First Aid.

<sup>&</sup>lt;sup>1</sup> Passenger safety briefing information provided by Airspan Helicopters Ltd. (in email from Hannibal Preto, Chief Pilot, Airspan Helicopters Ltd., February 10, 2017) based on Airspan Helicopter's Company Operations Manual which is a controlled document that is approved by Transport Canada.

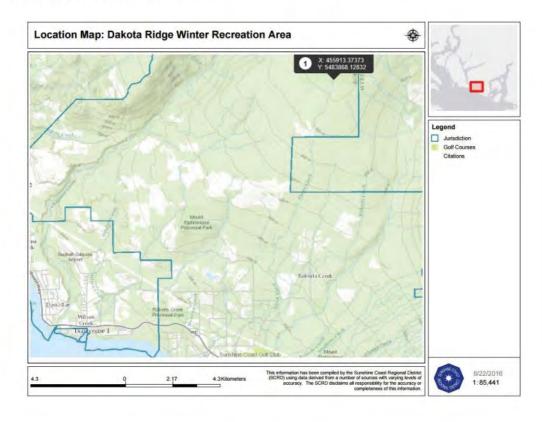
# Dakota Ridge Work Area - Emergency Details

GPS Coordinates: UTM Zone 10 5483868 N, 455913 E

Directions by Road:

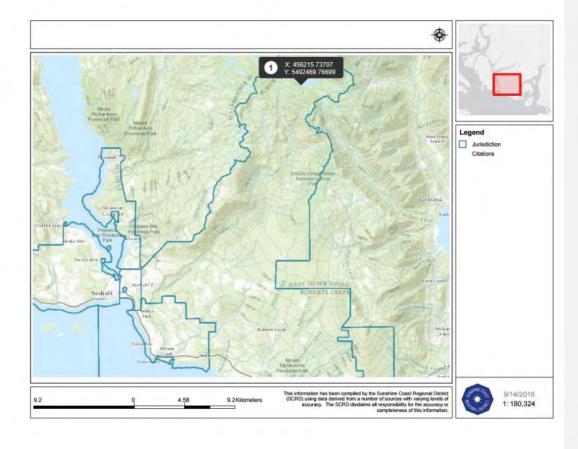
Drive north on Field Rd to terminus. Turn right onto Sechelt-Wilson FSR, continue on main branch for approximately 12 km to Dakota Ridge Winter Recreation Area parking lot.

SCRD Infrastructure Services Field Road staff member will meet Ambulance at top of Field Road to escort to site if time permits.



# <u>Chapman Lake Work Area – Emergency Details</u>

GPS Coordinates: UTM Zone 10 5492470 N, 456215 E



# Project Operations daily contact list

Date: #######

<b>Project Operation</b>	ns				
Position	Name	Agency	Main Phone	Alternate Phone	Email Address
Dakota Director					-
Dakota Crew Coordinator					4
Dakota Excavator Operator					-
Chapman Director	r				
Chapman Coordinator					Ę
SCRD Siphon Coordinator					5
First Aid Attendan	t				-
Helicopter Pilot					1

Position	Name	Office Phone	Home Contact	Work Cell Phone	Email Address
SCRD-Field Road	Office	604-885- 6800		s.16	
General Manager, Infrastructure Services/Regional Manager	Michael Day	604-885- 6810		5,10	Michael.day@scrd.ca
Manager, Utility Services	Shane Walkey	604-885- 6821	s.22		shane.walkey@scrd.ca
Manager, Utility Services - Special Projects	Dave Crosby	604-885- 6800 ext.6494			dave.crosby@scrd.ca
Engineering Technician	Trevor Rutley	604-885- 6800 ext.6484			trevor.rutley@scrd.ca
Environmental Technician	Lynda Fyfe	604-885- 6800 ext.6489			lynda.fyfe@scrd.ca
Water & Energy Projects Coordinator	Raphael Shay	Ext 6481	-s.22		raph.shay@scrd.ca
SCRD-Mason Road	Shop	604-885- 6895			
Utilities Superintendent	Codi	604-885- 6895	s.22	s,16	Codi.abbott@scrd.ca
Utilities Coordinator	Dan Hemstalk	604-885- 6800 ext.6320			dan.hemstalk@scrd.ca
Pipe Layer II	Ray Crosthwaite	604-885- 6895			ray.crosthwaite@scrd.ca
Senior Utility Operator	Gary Popp	604-885- 6895			gary.popp@scrd.ca
Utility Operator II	Glenn Eaton	604-885- 6895			glenn.eaton@scrd.ca

Utility Operator II	Gary Grohs	604-885 s.22 6895	s.16	gary.grohs@scrd.ca
Utility Operator I	Brad Ozanne	604-885- 6895		Brad.Ozanne@scrd.ca
Labourer I	Linden Feniak	604-885- 6895		linden.feniak@scrd.ca
Works Labourer I	Brian McIntosh	604-885- 6895		brian.mcintosh@scrd.ca

#### **Sunshine Coast Regional District** Position Office Work **Email Address** Name Home Phone Contact Cell Phone SCRD-CCWTP 604-885-6890 s.16 604-885-SCADA dale.sapach@scrd.ca Dale Technician Sapach 6895 Utility Sean 604-885sean.vanstrepen@scrd.ca Technician VanStrepen 6895 Coordinator Utility Technician II 604-885stuart.kimm@scrd.ca Stuart Kimm 6895 Utility Technician II 604-885-Paul paul.sheridan@scrd.ca Sheridan 6895 Utility Technician II Emily Emily.Lussin@scrd.ca Lussin Utility Technician I Don Murray 604-885don.murray@scrd.ca 6895 Utility Technician II 604-885-James james.eaton@scrd.ca Eaton 6895 Utility Operator II 604-885-Ron Hunter ron.hunter@scrd.ca 6895 Wastewater 604-885-Jason jason.oakford@scrd.ca Technician Oakford 6895 604-885cecilia.garcia@scrd.ca Media Liaison Cecilia

s.22 s.16

Garcia

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6800 ext.6407

Emergency Program Coordinator

Bill Elsner

604-885-6800 ext.6887 bill.elsner@scrd.ca

Agencies			
Place	Name	Office Phone	Email Address
Police, Fire and Ambulance		911	
Sechelt Hospital		604-885-2224	
BC Parks – Sechelt Branch	Rod Dalziel	604-885-6755	rod.dalziel@gov.bc.ca
shíshálh Nation	Jasmine Paul	604-740-5600	jpaul@secheltnation.net
Ministry of Environment		1-800-663-7867	www.env.gov.bc.ca
Ministry of Transportation	Colin Midgley	604-740-8987	
Federal Department of Fisheries		1-800-465-7735	info@dfo-mpo.gc.ca
Provincial Emergency Coordination Center (PEP)		1-800-663-3456	
Regional Dam Safety, Surrey Office	Mike Bristol	604-586-5642	mike.bristol@gov.bc.ca
BC Wildfire Service		1-800-663-5555	
Sechelt Fire Hall		604-885-7017	
Sechelt Fire Department 24-Hour Duty Officer		604-740-2595	
TV Station Cable 11		604-885-3224	cable11@coastcable.com
CKAY FM Radio Station		604-741-9170	
CBC Radio		1-866-306-4636	
Coast Advertiser Newspaper		604-740-0005	
Coast Reporter Newspaper		604-885-4811	pkyarnstrom@coastreporter.net
The Local Weekly		604-885-3134	editor@thelocalweekly.ca

Replay Answering Services and Lone Worker Checks

1-866-291-4645

SCRD alarm lone worker account s.16

Suppliers and	d Contractors				
Services	Company	Contact	Office Phone	Cell Phone	Email Address
HDPE Piping	Sandale Utility Products (Surrey Branch)	Randy Flello	604-882- 2080	s.22	rflello@emcoltd.com
Butterfly Valves	Corix	Chris Rhodes	604-455- 3500		chris.rhodes@corix.com
Rotary Vane Vacuum Pump	Busch Vacuum Technics Inc.	Alberto Cortes	450-419- 3914		albertoc@busch.ca
Check Valves	Unified Alloys	Darren Smith	604-607- 6750		d.smith@unifedalloys.com
Hose, Adapter, Coupler, Ball Valves	Newline Hose and Fittings	Wayne Maure	604-455- 5400 ext. 216		wmaure@new-line.com
Jet Pump	Coastline Power Sports	Blair Collie	604-885- 4616		÷
Helicopter	Airspan Helicopters Ltd.	Paul Tosczak	604-885- 7474		alrspan@dccnet.com
	Blackcomb Helicopters		604-740- 0880		14
Archaeology	In Situ Consulting	Kenzie Jessome	604-349- 2355		kenzie@insituconsulting.ca
Biologist	FSCI Biological Consultants	Dave Bates	604-740- 2637		dbates@fsci-biological.ca
Submersible Pump and Generator	Xylem Rentals	Moss Martinez	604-941- 6664		moss.martinez@xyleminc.com

# Environmental Monitoring Program

The purpose of this Environmental Monitoring (EM) plan is to assure that an appropriate level of protection is in place at all times to minimize or prevent undesirable, intermittent, or unauthorized impacts to the environment during installation and operation of a siphon system at Chapman Lake.

# Key areas of concern and mitigation strategy

#### Areas of Concern

#### Mitigation Strategy

The risk of erosion and sedimentation is highest when periods of intense rainfall coincide with active construction. These risks will be minimized by ensuring the construction takes place during dry conditions. The exposed lake bed on the south side of the outlet channel will be where the assembly and moving of the pipe will occur and the setting of lock blocks to anchor the pipe. Construction activity will occur within 3 meters below the high water mark where the substrate consists of a shallow layer of silty loam above glacial till and bedrock.

### Erosion and Sediment laden run-off

The exposed lake bed may be subject to erosion due to runoff and wave action. Runoff during heavy rainfall may result in some degree of erosion and transport of sediment into the water and this impact will be greatest immediately following intense rains. However, the lake itself will act as a settling pond and is expected to naturally mitigate the potential for high levels of turbidity in the creek. Additionally, wave action creates turbulence that may re-suspend sediments, however, the impact of erosion from wave action is not considered significant.<sup>2</sup>

Additional work on slope stability was conducted in 2016 and concluded the impact of increased drawdown would be limited.<sup>3</sup> There are no areas with slopes great than 1:1 (horizontal: vertical). Areas with a slope between 1:1 and 2:1 are limited and mostly below the maximum eight meter drawdown.

An excavator will be used to create benches to set three 150 cm by 75 cm lock blocks which will anchor the pipe on the lake bed below the high water mark. The footprint of this activity is anticipated to be three to four m2 per lock block. To minimize erosion and sedimentation, any disturbance to soil required to stabilize the lock blocks will take place during dry conditions.

Whitehead, 1999, Impact Assessment – Sunshine Coast Proposed Water Storage Project (Floating Pump Station) on Chapman Lake in Tetrahedron Provincial Park

<sup>&</sup>lt;sup>3</sup> AECOM. 2016, Nov. Chapman Lake Water Supply Expansion Project Environmental Assessment

Lake bed disturbance

Should machine movement be unavoidable in more sensitive areas of the lake bed - those areas identified as containing aquatic grasses and softer ground conditions (see Site Plan) - 2 layers of <sup>3</sup>/<sub>4</sub>" plywood will be placed to spread out the surface area for the machine weight and to reduce track compaction.

Introduction of Invasive Plants Vehicles and equipment to be used for this project will be inspected and cleaned at the staging area prior to being transported to the active project site.

To mitigate the impacts from a fuel spill, all machinery with

hydraulics will use vegetable oil wherever possible. A spill kit will be on stand-by on the south side of the channel to contain any spills should they occur and spill response training will be provided to operators and staff. While fueling equipment, containment will be maintained by using soaker cloth under the area where the filling is occurring. The pumps used for priming the siphons will be housed in containment boxes lined with plastic. In the event of a spill, the Lead EM will be contacted and will provide mitigation advice and/or depending on the severity of the spill will be brought to the site as soon as possible to oversee mitigation measures. An onsite staff or operator must record the reason for the spill, the response

Hydrocarbon spill

Waste and animal attractants

A strict waste management plan will be implemented. Food waste or any other waste that may attract wildlife will be contained using proper wilderness food storing techniques and removed from the site during staff changes. A portable toilet will be available and all human waste will be collected in the toilet.

Vegetation disturbance will be limited to areas required for

undertaken and the apparent effects of the spill.

accommodation (either a trailer or a tent cabin) and will be the same area that was used in the 1990's when the dam was constructed; the staging area for equipment and materials (the area around the heli pad - approximately 100 m² of area adjacent to the lake); the construction area (area on the exposed lake bed above the existing channel to the outlet and below the outlet to clear vegetation obstructing siphon path); machine access routes; and walking paths between all of the active areas. Machine access routes will be limited to the exposed lake bed and flagged in advance to minimize vegetation disturbance. The periphery of areas required for accommodation, staging and construction will be marked with flagging/all personnel who will be working on site will be informed during orientation in order to concentrate all of the activity and foot traffic to select areas only. See Appendix C for map of work area.

Vegetation disturbance

# Disturbing fish and wildlife

All wildlife observations and encounters will be recorded in field notebooks by staff. This will include any instances where wildlife activity is disturbed from personnel working at the site. Any potential impacts to fish and fish habitat within the Chapman Lake and in Chapman Creek from erosion and sediment release will be minimized by following the strategies detailed above.

## Key Environmental Monitoring Personnel

- Lead Environmental Monitor (Lead EM)

   FSCI Biological Consultants Senior Biologist-Dave Bates, RPBio
- Environmental Monitor (EM) Environmental Technician, SCRD

### Roles

The role of environmental monitoring personnel is to assure that appropriate levels of protection are in place; assure that the project is in compliance with laws, requirements and BMPs, provide practical advice on environmental management issues and to observe, record and report.

The Environmental Monitor (EM) will establish photo monitoring stations to capture existing conditions prior to the start of construction. During the construction period the EM will be onsite at least every two days and will maintain communication with the Manager, Utility Services after every site visit at a minimum.

The Lead EM will be onsite at least once a week to examine the environmental conditions and will report their findings to the Manager, Utility Services. In the event that a significant environmental disturbance occurs (e.g. landslide, major sluffing along the lake bed, major fuel spill, or uncontained water with extreme levels of turbidity etc.), all works within the areas of disturbance will be stopped immediately and the Lead EM will be called to the site by the Site or Siphon Coordinator.

## Regular Reporting

An EM report will be produced for every site visit that occurs. The EM report will contain the following:

- Date and time
- Weather
- Name of EM
- Construction activities for that day including environmental management efforts
- Environmental issues
- Response (description of the actions proposed and undertaken- to address identified impacts)
- Water quality data (turbidity and pH readings at locations above and below the work area)

 Photos taken at photo monitoring stations and additional photos as required to capture construction and environmental management activities.

## Environmental Impact Emergency Response

In the event that a significant environmental impact occurs (e.g. landslide, major sluffing along the lake bed, dam failure, major fuel spill, or uncontained water with extreme levels of turbidity etc.) the contacts listed below will be notified immediately.

# Emergency contacts

For any significant environmental impact occurrence:

- Dave Bates FSCI Biological consultants (Lead EM) 604 740 2637
- Rod Dalziel BC Parks Area Supervisor 604 885 6755
- Shane Walkey SCRD Manager, Utility Service: 5.22
- Lynda Fyfe– SCRD Environmental Technicians.22

Depending on the type of environmental impact occurrence, one or more of the following agencies will be contacted:

Environmental Impact	Agency to contact	Phone Number
Contaminated Site/Spill	Ministry of Environment	1 800 663 7867
	Emergency Management BC	604 586 4390
Dam failure	SCRD Emergency Program	604 885 6887 or
	Coordinator	604 741 1181
Water quality impacts	SCRD Senior Water Technician	604 989 3237

# Public Relations Communications Plan

#### Goals

- To inform residents that the Chapman Water System siphon is being deployed and they will continue to have access to drinking water.
- To inform residents that the siphon system will help meet the SCRD requirements for environmental flows, fire protection and human health.
- Reinforce the conservation message of the DMP.

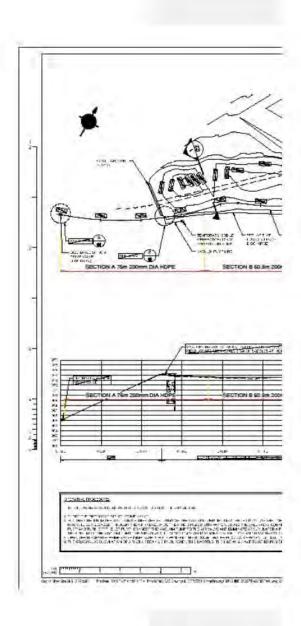
## Key messages

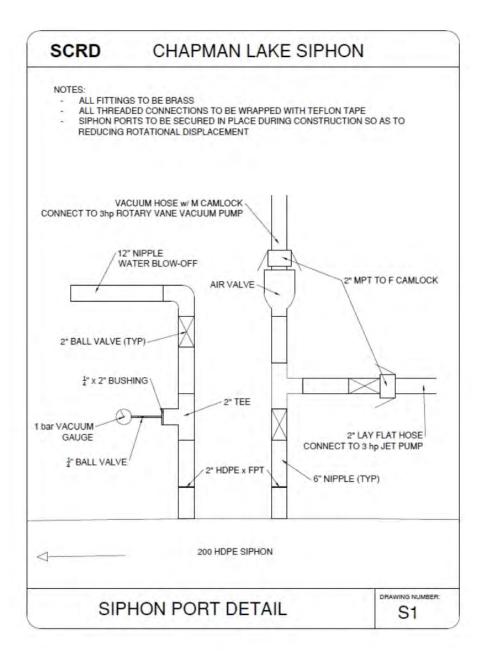
- A siphon system is being installed to access an additional five meters of water in Chapman Lake. This is in addition to the current three meters available for a total of eight meters.
- The additional water will help meet the needs for drinking water, firefighting, and fish flows in the creek.
- Updates will be posted to scrd.ca and social media as the installation progresses.
- The SCRD is asking the community to conserve water wherever possible to help extend the available water supply.

## Communication tactics

Tactic / purpose	Timeline	Responsible Person(s)
ractic / purpose	Timeline	responsible relatifies
News Release	Monday of week prior to expected deployment in order to make the press deadline for Friday publication	Communications Officer, Manager Utility Services, Water & Energy Project Coordinator
Website page on siphon system updates	Ready for when news release is sent out and updated when information available	Communications Officer, Water & Energy Project Coordinator
Social media posts	As project progresses	Communications Officer, Water & Energy Project Coordinator
Information sheets for Board	Ready for when news release is sent out	Communications Officer, Water & Energy Project Coordinator

### Appendix A - Chapman Siphon Engineering Design





# Appendix B - Equipment List

Tools and Equipment	Camp List
Tools and Equipment  Personal protective equipment  Excavator  10 – lock block single with lifting point  12 – buoys  10 – 10" pipe straps  Chainsaw, gas and oil, files, wrenches  Cut off saw	Camp List  Wall tent Camp stove 20 lb. propane tank Propane lights Cots Sleeping bags First aid kit
Generator and fuel Impact wrench and cordless drill with batteries and chargers 50' extension cord Socket and wrench set 3 – large pry bars 4 – spade shovels Sledge hammer, large and small Shackles, ropes, carabiners, blocks 16 – ratchet straps 2 – come-alongs Lined boxes for fuel containment and spill kit 20 – 4'X8' sheets ½" plywood Dunnage Transit, tripod, and rod Priming pump and lay-flat hose Back-up pump Ladders (10'and 20') Life Jackets Paddles	Sat phone Drinking water  Cooking utensils (pots, pans, cutlery, etc.) Tarps Folding table Chairs Wildlife safe food containment Garbage containment Port-a-Potty Duffle bags for clothing/footwear Flashlights Straps and camping stakes Bear spray
Fire extinguisher Field Notebook & pen	

# Appendix C - Work Area

# Dakota Ridge Work Area

Dakota Ridge Site Map

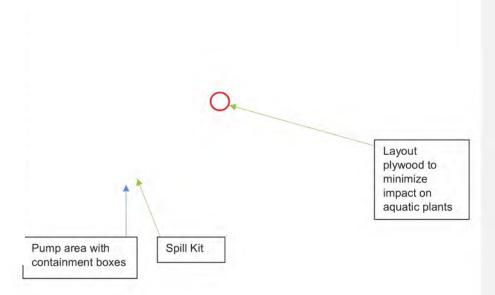


# Chapman Lake Work Area



# Chapman Lake Site Plan

Copyright



# RE: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit \*Approval\*

Friday, October 13, 2017 8:47 AM

Subject	RE: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit *Approval*
From	Michael Day
To	Dalziel, Rod ENV:EX
Cc	Coupar, Meghan FLNR:EX; Aikman, Jennie S ENV:EX; Janette Loveys
Sent	Tuesday, September 26, 2017 4:57 PM

I, Michael Day, General Manager, Infrastructure Services and Regional Engineer, SCRD, agree to the terms and conditions outlined in the draft park use permit, Tracking #363734, as forwarded to me on September 26th, 2017.

Further to the updated plan discussed below, Shishalh Nation, has, in accordance with their requirements, been informed today that we are commencing site preparation for siphon installation, and will be informed by the SCRD if operation of the siphon begins. Their expressed interest is to conduct an archeological investigation when the lake drops below historic low levels, and the SCRD is committed to facilitating this objective.

Additionally, I have directed my staff to avoid the installation of any camp area, if possible. Earlier this afternoon, staff at my direction forwarded the updated implementation plans ("Chapman Lake Siphon System Workplan and Timeline"), attention Rod Dalziel, under separate cover. The updates made to the implementation plans have been specifically made to address the requirements indicated in the draft PUP, specifically:

- Address additional requirements around the work camp plan to include installation of a
  portable electric fence around food preparation, eating, greywater disposal areas, proper
  greywater disposal plan, requirements around no burning or smoking on site.
- Address requirements for an environmental plan including wildlife management, vegetation
  management, waste management, invasive species prevention, sediment and erosion control
  plan, restoration and remediation plan, and archaeological plan.
- Address requirements for construction and equipment plan including: fuel storage plan, spill
  prevention and response plan, safety and evacuation plan, and temporary camp plan. Our
  plans for any temporary camp plan include: managing wildlife attractants, managing
  greywater, installation of an electric fence around food preparation, eating, and greywater
  disposal areas, and no smoking or open burning of any kind.
- Staff are actively developing detailed a restoration and remediation plan, in coordination with FSCI Biological Consultants. IF the siphon is installed, removal of the siphon infrastructure will proceed only once the plan is complete and reviewed by Parks.

# Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, VON 3A1

Phone: 604.885.6810

From: Dalziel, Rod ENV:EX [mailto:Rod.Dalziel@gov.bc.ca]

Sent: Tuesday, September 26, 2017 4:03 PM

To: Michael Day

Cc: Coupar, Meghan FLNR:EX; Aikman, Jennie S ENV:EX

Subject: RE: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit

Hello Michael,

Thanks to you and your staff for the meeting and providing details around the works for installing the emergency siphon system at Chapman Lake.

Please find attached the updated DRAFT permit document with your 2 points addressed. Please complete the statement below as previously provided by Meghan Coupar.

Dear Michael Day:

Please find enclosed a DRAFT copy of the Sunshine Coast Regional District's Amendment Park Use Permit for the term of February 1, 2014 to January 31, 2024.

In order to issue your permit, we require the following item be submitted to our office:

1. Email agreement or written agreement to the terms and conditions of the draft permit. Please carefully review the DRAFT copy of your permit before confirming you agree to the terms and conditions.

Example: "I, \_, agree to the terms and conditions outlined in the draft park use permit, Tracking #363734, as forwarded to me on September 26th, 2017."

As well please confirm to this email that the additional requirements have been made to the "Chapman Lake Siphon System Workplan and Timeline" to meet the PUP Special Provision 10.(b) (see below) and including:

- Need to develop a restoration and remediation plan
- Brief Archaeological Plan outlining how the request of the Shishalh Nation to conduct a PFA of arch values during a drawdown period has been addressed
- Additional requirements around the work camp plan to include installation of a portable electric fence around food preparation, eating, greywater disposal areas, proper greywater disposal plan, requirements around no burning or smoking on site.

Please provide updated document.

10 (b) Plans

- (i) The Permittee must provide the following plans to the Province for approval prior to any construction or camp establishment:
  - i. Environmental plan including wildlife management, vegetation management, waste management, invasive species prevention, sediment and erosion control plan, restoration and remediation plan, and archaeological plan.
  - ii. Construction and equipment plan including: fuel storage plan, spill prevention and response plan, safety and evacuation plan, and temporary camp plan. Temporary camp plan must include: managing wildlife attractants, managing greywater, installation of an electric fence around food preparation, eating, and greywater disposal areas, and no smoking or open burning of any kind.

We are working to get an issued approved temporary permit to you for your works to begin tomorrow.

Regards,

Rod Dalziel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC VON 3A0

a: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

: Rod.Dalziel@gov.bc.ca

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From: Dalziel, Rod ENV:EX

Sent: Tuesday, September 26, 2017 11:16 AM

To: 'Michael Day'

Cc: Coupar, Meghan FLNR:EX

Subject: RE: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit

Hello Michael,

As Meghan is out of the office until tomorrow I just wanted to confirm this step Meghan requested of you has been submitted. I have incorporated the changes you suggested (see below) into the DRAFT permit.

10.d.ii should read "three", not "two"

10.d.v requires us to provide documents which belong to the Shisalh Nation, not the SCRD. We will be happy to provide them if Shisalh allows us to, if not, the Province have to directly request them. Cheers,

Rod Dalziel

Sunshine Coast Area Supervisor

BC Parks - South Coast Region - Ministry of Environment

: PO Box 950, 6451 Sechelt Inlet Road, Sechelt, BC VON 3A0

a: Desk (604) 885-6755 Mobile (604) 741-1967 Fax (604) 885-2445

: Rod.Dalziel@gov.bc.ca

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From: Coupar, Meghan FLNR:EX

Sent: Thursday, September 21, 2017 4:25 PM

To: Dalziel, Rod ENV:EX

Subject: FW: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit

Hi Rod,

Please see the SCRD's email below with requested changes to the draft amendment permit.

Thanks,

#### Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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From: Michael Day [mailto:Michael.Day@scrd.ca]
Sent: Thursday, September 21, 2017 11:38 AM

To: Coupar, Meghan FLNR:EX

Subject: RE: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit

Meghan,

We've reviewed the Draft Permit requirements and have the following comments:

10.d.ii should read "three", not "two"

10.d.v requires us to provide documents which belong to the Shisalh Nation, not the SCRD. We will be happy to provide them if Shisalh allows us to, if not, the Province have to directly request them. With that said, can I now submit the "approval" form and expect appropriate changes to be included in the Draft?

Also, is it the case that the draft permit is indeed a permit (actionable), until those changes are made and the Final received?

Michael Day, P. Eng. I General Manager, Infrastructure Services / Regional Engineer Infrastructure Services I Sunshine Coast Regional District

1975 Field Road, Sechelt, BC, VON 3A1

Phone: 604.885.6810

From: Coupar, Meghan FLNR:EX [mailto:Meghan.Coupar@gov.bc.ca]

Sent: Thursday, August 31, 2017 3:51 PM

To: Michael Day < Michael. Day@scrd.ca>

Subject: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit

Importance: High

Hi Michael,

I apologize if you're receiving multiple emails from me. I called and left you a message, the emails

that I'm sending keep bouncing back as undeliverable due to the size.

I sent you the DRAFT Amendment Permit on its own, it should have gone through ok. I believe the size issue is with the Appendix attachments. I'm going to try to send two separate emails with two attachments each and hopefully they will go through ok.

You should have for your review the following:

1 - DRAFT Amendment Permit

4 - Appendix Attachements (A-D)

Please let me know if you have received all of the above.

Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections

Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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your input.

Or visit us at: www.frontcounterbc.gov.bc.ca

Sent: Thursday, August 31, 2017 3:13 PM

To: 'Michael.Day@scrd.ca'

Subject: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit

Importance: High

Attachments that go with the DRAFT Amendment Permit.

Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections

Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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From: Coupar, Meghan FLNR:EX

Sent: Thursday, August 31, 2017 3:05 PM

To: 'Michael.Day@scrd.ca'

Subject: Park Use Permit 102714 - Sunshine Coast Regional District - Amendment DRAFT Permit

Importance: High August 31, 2017

Tracking Number: 363734 (Amendment 2017)

Authorization Number: 102714

Permittee: Sunshine Coast Regional District

Park: Tetrahedron Park

Term: February 1, 2014 to January 31, 2024

Dear Michael Day:

Please find enclosed a **DRAFT** copy of the Sunshine Coast Regional District's Amendment Park Use Permit for the term of February 1, 2014 to January 31, 2024.

In order to issue your permit, we require the following item be submitted to our office:

 Email agreement or written agreement to the terms and conditions of the draft permit. Please carefully review the DRAFT copy of your permit before confirming you agree to the terms and conditions.

**Example:** "I, \_\_\_\_\_\_, agree to the terms and conditions outlined in the draft park use permit, Tracking #363734, as forwarded to me on August 31, 2017."

If you have any questions or concerns regarding the above, please call our office toll-free within BC at 1-877-855-3222 to be transferred to the Surrey office; contact us directly at (604) 586-4400, or please feel free to contact me directly as indicated below.

Sincerely,

#### Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections

Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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This email was scanned by Bitdefender

# Park Use Permit 102714 - Sunshine Coast Regional District - Validated Amendment Permit

Friday, October 13, 2017 8:37 AM

Subject	Park Use Permit 102714 - Sunshine Coast Regional District - Validated Amendment Permit
From	Coupar, Meghan FLNR:EX
To	'Michael Day'
Cc	Dalziel, Rod ENV:EX; Aikman, Jennie S ENV:EX; Heck, Carol FLNR:EX
Sent	Wednesday, September 27, 2017 9:22 AM
Attachments	Sunshine Coast Regi

September 27, 2017

Authorization Number: 102714

Permittee: Sunshine Coast Regional District

Park: Tetrahedron Park

Term: February 1, 2014 to January 31, 2024

Dear Michael Day:

Please find enclosed Sunshine Coast Regional District validated copy of Amendment Park Use Permit - Authorization Number: 102714 for the term of February 1, 2014 to January 31, 2024 for the purpose of maintaining water impoundment infrastructure at Chapman and Edwards Lake and helicopter pad at Chapman Lake in Tetrahedron Park.

If you have any questions or concerns regarding the above, you can contact me directly or call the FrontCounter BC Contact Centre, toll free at 1-877-855-3222 for assistance. If you would like to come into a FrontCounter BC office, the following link will provide you with a list of offices locations nearest you: <a href="https://www.frontcounterbc.ca/locations">www.frontcounterbc.ca/locations</a>.

Thank you,

### Meghan Coupar

Parks Permit Clerk

FrontCounter BC - South Coast Regional Office South Coast, Haida Gwaii/South Island Sections Tel: (604) 586-4439 Fax: (604) 586-4434

Toll Free: 1-877-855-3222

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# PARK USE PERMIT

#### LAND USE / OCCUPANCY

This Park Use Permit No. 102714 (the "Permit") is issued under the authority of the Park Act

(the "Park")

See "Management Plan Schedule, Permit Area Description" for a complete list of Parks and Protected Areas

FROM:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, represented by the Minister responsible for the *Park Act* (the "Province") at the following address:

TO:

Sunshine Coast Regional District

(the "Permittee") at the following address:

Ministry of Environment and Climate Change Strategy BC Parks South Coast Region 200 - 10470 - 152nd Street Surrey BC V3R 0Y3 1975 Field Road Sechelt, BC V0N 3A1

#### THE PROVINCE AND THE PERMITTEE AGREE AS FOLLOWS:

#### ARTICLE I - GRANT OF PERMIT

1.01 The Province, on the terms and conditions of this Permit, grants to the Permittee permission to enter upon and use that part of the Park (the "Permit Area") described, and for the purposes described, in the Management Plan Schedule.

#### **ARTICLE II - TERM**

2.01 The duration of this Permit is for a term of 10 years commencing on February 1, 2014 (the "Commencement Date") and ending on January 31, 2024 (the "Expiration Date"), unless cancelled, terminated or renewed in accordance with the terms and conditions of this Permit.

#### **ARTICLE III - FEES**

- 3.01 The Permittee must pay to the Province a minimum fee (the "Permit Fee") of \$500.00 (plus applicable taxes) prior to Commencement date and on each anniversary of the commencement date during the term of this Permit.
- 3.02 The Province may, by notice to the Permittee not less than 30 days prior to each anniversary of the Commencement Date, increase the Permit Fee to an amount solely determined by the Province at its discretion, and the Permittee must pay the increased amount.

102714 - Sunshine Coast Regional District (replacement permit 2014-2024) page 1 of 14

3.03 The Permittee must pay interest to the Province on money payable by the Permittee and owing to the Province under this Permit, at the rate of interest prescribed by the Financial Administration Act in respect of money owing to the Province, which interest will be calculated from the date that the money becomes payable to the Province.

#### ARTICLE IV - INDEMNITY

4.01 The Permittee will indemnify and save harmless the Province, its servants, employees and agents against all losses, claims, damages, actions, costs and expenses that the Province, its servants, employees and agents may sustain, incur, suffer or be put to at any time arising, directly or indirectly, from any act or omission of the Permittee, its employees, agents, contractors and licensees under this Permit, except for any liability arising from any independent, negligent act of the Province.

#### ARTICLE V - SECURITY AND INSURANCE

- 5.01 On the Commencement Date, you will deliver to us Security in the amount of \$0.00 which will; Not Required
  - guarantee the performance of your obligations under this Permit;
  - (b) be in the form required by us; and
  - (c) remain in effect until we certify, in writing, that you have fully performed your obligations under this Permit
- 5.02 Despite section 5.01, your obligations under that section are suspended for so long as you maintain in good standing other security acceptable to us to guarantee the performance of your obligations under this Permit and all other Dispositions held by you.
- 5.03 We may use the Security for the payment of any costs and expenses incurred by us to perform any of your obligations under this Permit that are not performed by you and, if such event occurs, you will, within 30 days of that event, deliver further Security to us in an amount equal to the amount drawn down by us.
- 5.04 After we certify, in writing, that you have fully performed your obligations under this Permit, we will return to you the Security maintained under section 5.01, less all amounts drawn down by us under section 5.03.
- 5.05 You acknowledge that we may, from time to time, notify you to
  - (a) change the form or amount of the Security; and
  - (b) provide and maintain another form of Security in replacement of or in addition to the Security posted by you under this Permit;

and you will, within 60 days of receiving such notice, deliver to us written confirmation that the change has been made or the replacement or additional form of Security has been provided by you.

- 5.06 You must
  - (a) without limiting your obligations or liabilities under this Permit, at your expense, effect and keep in force during the Term the following insurance with insurers licensed to do business in Canada:
    - (i) Commercial General Liability insurance in an amount of not less than two million dollars \$2,000,000.00 inclusive per occurrence insuring against liability for personal injury, bodily injury (including death) and property damage, including coverage for all accidents or occurrences on the Permit Area or any improvements. Such policy will include cross liability, liability assumed under contract, provision to provide 30 days advance notice to us of material change or cancellation, and include us as an additional insured;
  - (b) ensure that all insurance required to be maintained by you under this Permit is primary and does not require the sharing of any loss by any of our insurers;
  - (c) within 10 working days of the Commencement Date of this Permit, provide to us evidence of all required insurance in the form of a completed "Province of British Columbia Certificate of Insurance";

102714 - Sunshine Coast Regional District (replacement permit 2014-2024)

page 2 of 14

- (d) if the required insurance policy or policies expire or are cancelled before the end of the Term of this Permit, provide within 10 working days of the cancellation or expiration, evidence of new or renewal policy or policies of all required insurance in the form of a completed "Province of British Columbia Certificate of Insurance":
- (e) notwithstanding subsections (c) or (d) above, if requested by us, provide to us certified copies of the required insurance policies to be maintained by you under this Permit.
- 5.07 We may, acting reasonably, from time to time, require you to
  - (a) change the amount of insurance set out in subsection 5.06(a); and
  - (b) provide and maintain another type or types of insurance in replacement of or in addition to the insurance previously required to be maintained by you under this Permit;

and you will, within 60 days of receiving such notice, cause the amounts and types to be changed and deliver to us a completed "Province of British Columbia Certificate of Insurance" for all insurance then required to be maintained by you under this Permit.

- 5.08 You shall provide, maintain, and pay for any additional insurance which you are required by law to carry, or which you consider necessary to insure risks not otherwise covered by the insurance specified in this Permit in your sole discretion.
- 5.09 You waive all rights of recourse against us with regard to damage to your own property.

#### ARTICLE VI - COVENANTS OF THE PERMITTEE

#### 6.01 The Permittee must:

- pay the Permit Fee and other money payable under this Permit when due at the address of the Province first written above or at such place as the Province may specify from time to time;
- (b) pay when due all taxes, levies, charges and assessments that relate to operations of the Permittee under this Permit;
- (c) comply with all laws, bylaws, orders, directions, ordinances and regulations of any competent governmental authority in any way affecting the Permit Area, the Park, its use and occupation or the Permittee's operations under this Permit;
- advise its employees, contractors, licensees, and agents of the laws and regulations respecting
  provincial parks and recreation areas and the conditions of this Permit respecting conduct in the permit
  Area;
- (e) keep the Permit Area in a safe, clean and sanitary condition to the satisfaction of the Province and make safe, clean and sanitary any portion of the Permit Area that the Province may direct by notice in writing to the Permittee;
- (f) remove from the Permit Area and the Park all garbage, debris and effluent resulting from its use of the Park and Permit Area under this Permit, except as otherwise permitted in the Management Plan Schedule:
- (g) comply with all orders and directions made, verbally or in writing, by a park officer (as defined in the Park Act) relating to the Park, this Permit or the Permit Area;
- (h) not construct, erect, place, repair, maintain or alter any building, fixture, equipment, structure or improvement in the Permit Area except as may be permitted by this Permit or with the prior written consent of the Province;
- (i) take all reasonable precautions to prevent and suppress fires in the Permit Area;
- not interfere with free public access through, across and upon the Permit Area, unless otherwise specified in the Management Plan Schedule;
- (k) not interfere with or disrupt the activities and operations of other Permittee's or users in the Park;

102714 - Sunshine Coast Regional District (replacement permit 2014-2024)

page 3 of 14

- (I) use and occupy the Permit Area only in accordance with the provisions of this Permit;
- (m) not remove, destroy, damage, disturb or exploit any natural resource (as that term is defined in the Park Act) or any archaeological or cultural artefact found in or on the Permit Area except as may be permitted by this Permit, and only then in accordance with the Park Act and all other applicable laws;
- (n) not commit or allow any wilful or voluntary waste, damage or destruction in or upon the Permit Area;
- pay for or repair, as determined by the Province, any damage caused to the property of the Province by the Permittee, its employees, agents, contractors, or licensees;
- (p) upon the expiration, cancellation or termination of this Permit:
  - (i) peaceably quit and deliver up possession of the Permit Area to the Province,
  - (ii) remove all chattels and improvements of the Permittee from the Permit Area within 30 days of the expiration, cancellation or sooner termination of this Permit, unless otherwise advised in writing, by the Province,
  - (iii) deliver to the Province possession of all equipment, furnishings, fixtures, chattels and improvements owned by the Province in a state of good repair and working order, and
  - (iv) restore the Permit Area to the satisfaction of the Province;
  - (v) and to the extent necessary, this covenant will survive the expiration, cancellation or termination of this Permit; and
- (q) comply with all provisions of the schedules to this Permit.

### ARTICLE VII - RIGHTS OF THE PROVINCE

- 7.01 The Province retains all rights in respect of the Park and Permit Area which are not expressly granted to the Permittee under this permit, including, without limitation:
  - the right at all times for the Province, its authorized representatives, employees, and agents to have unimpeded access over and along all portions of the Permit Area and to inspect any portions of the Permit Area;
  - (b) the right at all times to construct, repair, alter and maintain buildings, equipment, structures and improvements upon the Permit Area; and
  - (c) the right to grant further rights in respect of the Park and Permit Area, provided that such rights do not unreasonably impede, obstruct or compete with the rights of the Permittee under this Permit.

#### **ARTICLE VIII - NOTICE**

- 8.01 Any notice required to be given by either party to the other will be deemed to be given if it is in writing and is delivered by hand or prepaid registered mail to the address first written above or any other address that may be specified in writing by a party and a notice will be deemed to be delivered, if mailed, eight days after the time of mailing except, in the case of a postal interruption, actual receipt is required.
- 8.02 Notwithstanding section 8.01, any written notice to be given by the Province to the Permittee under this Permit will be effectively given if it is posted in a conspicuous place on the Permit Area.

### ARTICLE IX - RENEWAL

- 9.01 Not later than 140 days prior to the Expiration Date, the Permittee may, by notice in writing delivered to the Province, apply to the Province for a renewal of this Permit.
- 9.02 Provided that the Permittee is not in default under this Permit and subject to the terms of the Park Act, the Province may renew this Permit upon the terms and conditions determined by the Province.

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9.03 The Permittee acknowledges that nothing in this Permit obligates the Province to renew this Permit and the Province's decision in that respect is entirely within its discretion

#### **ARTICLE X - TRANSFER**

- 10.01 The Permittee must not assign, transfer, sublicence or grant any of the rights or privileges granted by this Permit without the prior written consent of, and on the terms and conditions determined by, the Province.
- 10.02 If the Permittee is a corporation then a change in the control (as that term is defined in subsection 2(3) of the Business Corporations Act) of the Permittee without the prior written consent of the Province is deemed to be a breach of section 10.01.

### **ARTICLE XI - CANCELLATION**

- 11.01 In the event that
  - (a) the Permittee defaults in the payment of the Permit Fee or other money payable under this Permit, and the default continues for 7 days after the giving of written notice of the default by the Province to the Permittee;
  - the Permittee fails to perform or observe any of the terms or conditions of this Permit, other than the payment of money, and the failure is not remedied within a period specified by the Province;
  - (c) the Permittee has wilfully misrepresented information:
    - (I) on the application form which led to the granting of this Permit, or
    - (ii) required to be provided under the terms and conditions of this Permit;
  - (d) the Permit Area is damaged or destroyed by any cause whatsoever;
  - (e) the Park is closed by the Province;
  - the Permittee files a petition in bankruptcy, is adjudged bankrupt, is petitioned into bankruptcy, makes an assignment for the benefit of its creditors, becomes insolvent or takes the benefit or protection of any statute for bankrupt or insolvent debtors;
  - (g) any of the Permittee's assets is seized in execution from the Permit Area;
  - the Permittee, its employees, agents, contractors or licensees performs any act which in the opinion of the Province, affects the good standing or reputation of the Park, or adversely affects any other permit holder or park user within the Park;

the Province may cancel this Permit immediately by written notice to the Permittee.

- 11.02 In the event that the Permittee and the Province mutually agree in writing to terminate this Permit, the parties will be released and discharged from their obligations under this Permit, except as otherwise provided in this Permit.
- 11.03 The obligation of the Permittee
  - (a) to pay the Permit Fee and other money payable under this Permit; and
  - (b) to comply with Sections 4.01, 6.01(e), 6.01(o) and 6.01(p);

will survive the expiration, cancellation or termination of this Permit.

11.04 The Permittee will not be entitled to any compensation from the Province, in damages or otherwise, in respect of a cancellation or termination of this Permit.

#### ARTICLE XII - MISCELLANEOUS

- 12.01 This Permit may be inspected by the public at such times and at such places as the Province may determine.
- 12.02 Time is of the essence in this Permit.

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- 12.03 Nothing in this Permit will be considered to have been waived by the Province unless such waiver is in writing.
- 12.04 During the term of this Permit, the Permittee will be an independent contractor and not the agent, employee or partner of the Province.
- 12.05 The Province will not be liable for any loss, damage, cost or expense resulting from the destruction of or damage to the Permittee's property or a disruption of the Permittee's operations under this Permit which result from strikes, flooding or other acts of God, vandalism, or any other interference to the Permittee's operation or property.

#### ARTICLE XIII- INTERPRETATION

- 13.01 In this Permit, unless the context otherwise requires, the singular includes the plural and the masculine includes the feminine, a corporation and body politic.
- 13.02 The captions and headings contained in the Permit are for convenience only and are not to be construed as defining or in any way limiting the scope or intent of the provisions of this Permit.
- 13.03 In this Permit, a reference to an enactment of the Province of British Columbia or of Canada includes a reference to any subsequent enactment of like effect, and unless the context otherwise requires, all statutes referred to in this Permit are enactments of the Province of British Columbia.
- 13.04 If any part of this Permit is found to be illegal or unenforceable, that part will be considered separate and severable and the remaining parts will be enforceable to the fullest extent permitted by law.
- 13.05 If all or part of the Permit Area is in a recreation area established or continued under the Park Act, this Permit is deemed to be a resource use permit as that term is defined in the Park Act.
- 13.06 All schedules to this Permit form an integral part of this Permit.

IN WITNESS WHEREOF the parties have duly executed this Permit.

SIGNED and DELIVERED on behalf of the Province by a duly authorized representative of the Province.

Duly Authorized Representative

Jennie Aikman

Print Name

Regional Director

Print Title

September 26, 2017

Date

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# MANAGEMENT PLAN SCHEDULE

#### PERMIT AREA DESCRIPTION

The Permittee is authorized to enter the Permit Area described below and outlined on the attached map.

### **Permit Area Overview Map**

- Tetrahedron Park
- Area adjacent to the outlet of Chapman Lake
- . Area adjacent to the outlet of Edwards Lake

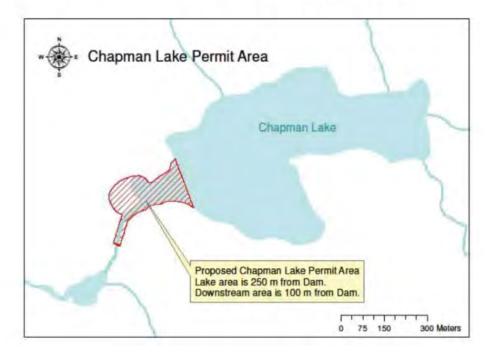
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## Temporary Chapman Lake Permit Area (valid until 30 October 2018)



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## FEE(s)

Protected Land: Tetrahedron Park

Activities: Water Impoundments (dams and dykes)

Purpose: Rights of way and miscellaneous land use without structures - The use of a

defined area for a powerline, telephone line, pipeline or other service or utility right of way and other miscellaneous land use without structures - Company or local

government. Fee charged for this purpose is for each protected land.

Fee Description: \$500 or \$60 per hectare whichever is greater

Schedule K Ref: Part 3, Column 2, Item 4(b)

Fees:

 Item
 Number
 Rate
 Total

 Minimum Fee
 1
 \$500.00
 \$500.00

 Hectares
 1
 \$60.00
 \$60.00

Sub Total (based on Fee Description above): \$500.00

Sub Total: \$500.00

Minimum Fee Required: \$500.00 (plus applicable taxes)

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#### SPECIAL PROVISIONS

#### Purpose

This Permit is issued to the Permittee for the purpose of for the purpose of maintaining water impoundment infrastructure at Chapman and Edwards Lake and helicopter pad at Chapman Lake in Tetrahedron Park.

#### 2. Permittee Designated Representative

The Permittee appoints the following representative to be responsible for liaison between BC Parks and the Permittee:

Name: Michael Day

Address: 1975 Field Road Sechelt, BC V0N 3A1

Telephone: 604-885-6810 office s.16
Email: Michael,Day@scrd.ca

#### 3. BC Parks Contact Information

The Designated Representative must contact the Area Supervisor with any requirements or questions regarding this Park Use Permit. To determine the Area Supervisor responsible for the protected land(s) listed below, contact the associated regional office for this information.

Park, Protected Area or Conservancy Name	Contact Information
Tetrahedron Park	Ministry of Environment and Climate Change Strategy, BC Parks South Coast Region 200 - 10470 - 152nd Street Surrey BC V3R 0Y3
	Regional Office: (604) 582-5200
	Fax: (604) 930-7119

#### 4. Conditions of Term

This permit shall be deemed valid until such time that it has expired under Article 2.01 and that the associated water licences are valid and in good standing and that activities carried out are permitted under:

- (a) the conditional water licences and;
- (b) this permit.

#### 5. Water Regulations

All activities relating to maintaining water impoundment structures and regulating water levels must be in accordance with the Water Act.

#### 6. Flight Access

- (a) The use of a helicopter for access to the structures is acceptable. The Permittee shall notify BC Parks as early as feasibly possible prior to any flights into Tetrahedron Park so that BC Parks may utilize available space or service of the helicopter for park operation purposes.
- (b) Recognizing that wildlife are sensitive to disturbance from helicopters, maintain an appropriate separation distance from animals (500 m line-of-sight is a recommended default) and take immediate action to increase separation distances if animals react to the helicopter.

- (c) If the Permittee chooses to use a helicopter company to access the structure the Permittee will cause any Person/Sub-licensee providing aviation services related to the Permittee's performance of this Permit to carry, and to provide evidence to the Province of their compliance with this requirement, Aviation Liability insurance on all aircraft operated or used in the performance of this Permit insuring against bodily injury, property damage, and passenger liability, in an amount not less than the limits of liability imposed by any Canadian Aviation Regulation and in any event not less than a per occurrence combined single limit of:
  - (i) \$3,000,000 for aircraft up to 5 passenger seats, or
  - \$3,000,000 plus \$1,000,000 for each additional passenger seat for aircraft up to 10 passenger seats, or
  - (iii) \$10,000,000 for aircraft over 10 passenger seats;

and this insurance must:

- (i) include the Province and the Permittee as additional insureds:
- be endorsed to provide the Province and the Permittee with 30 days advance written notice of cancellation or material change; and
- (iii) include a cross liability clause;

#### 7. Report Requirements

The Permittee shall provide the Province with a report, due upon the anniversary date of the Permit, describing all activities undertaken as a result of this Permit for the previous year. Please submit this report to the following address:

Ministry of Forests, Lands and Natural Resource Operations FrontCounter BC – Surrey 200 – 10428 153<sup>rd</sup> Street Surrey BC V3R 1E1 Toll Free: 1-877-855-3222

Website: <a href="http://www.frontcounterbc.gov.bc.ca/locations/index.html">http://www.frontcounterbc.gov.bc.ca/locations/index.html</a>

#### 8. Safety Regulations

The Permittee shall be responsible for all WorkSafe BC regulations and staff safety program and plans for all its staff and sub-contractors utilizing the Park to conduct activities authorized by this permit.

#### 9. Renewal

It is understood by BC Parks and the Sunshine Coast Regional District that this permit shall be renewed pending a review of the terms of this Management Plan Schedule and providing the Sunshine Coast Regional District continues to require water management and structures outlined in this permit and the conditional water licences.

#### 10. Temporary Permit Amendment Conditions

#### (a) Term

- The conditions of the temporary permit amendment will be valid during the period from permit approval until 30 October 2018.
- (ii) This temporary permit is subject to approval of the "Water Sustainability Act, Section 10 application - 100220141 – Short Term Water Use on Chapman Lake – Use Approval 2005641".

#### (b) Plans

- (i) The Permittee must provide the following plans to the Province for approval prior to any construction or camp establishment:
  - Environmental plan including wildlife management, vegetation management, waste management, invasive species prevention, sediment and erosion control plan, restoration and remediation plan, and archaeological plan.
  - ii. Construction and equipment plan including: fuel storage plan, spill prevention and response plan, safety and evacuation plan, and temporary camp plan. Temporary camp plan must include: managing wildlife attractants, managing greywater, installation of an electric fence around food preparation, eating, and greywater disposal areas, and no smoking or open burning of any kind.

These plans must be supported by necessary drawings, reports, maps, photos, permits, authorizations and specifications, prepared, where required by law or BC Parks, by registered professionals.

#### (c) Guidelines

(i) All works and monitoring shall be conducted as described in BC Standards and Best Practices for Instream Works (<a href="http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf">http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf</a>) (Appendix A) and should be informed by the 1999 Impact Assessment for the proposed floating pump station at Chapman Lake (Whitehead 1999) (Appendix B) and Chapman Lake Water Supply Expansion (AECOM Nov 2106) (Appendix C) and shall comply with Park Use Permit Application (temporary amendment) – Sunshine Coast Regional District – Siphon at Chapman Lake Part 3 (Appendix D) and comply with the "Chapman Lake Siphon System Workplan and Timeline" (Appendix E) and the requirements listed in Special Provision 10(b) above.

#### (d) Reporting

- The Permittee will immediately report any spills or other incidents to the Area Supervisor.
- (ii) After 24 hours, the Permittee will report to the Area Supervisor on the success of the first phase of installation and confirm the employment of the remaining three siphons.
- (iii) The Permittee will provide to BC Parks environmental monitoring reports resulting from visits by the Environmental Monitor on a weekly basis.
- (iv) Additional reporting as required under Water Sustainability Act, Section 10 application - 100220141 – Short Term Water Use on Chapman Lake – Use Approval 2005641 will also be provided to BC Parks on a weekly basis.
- (v) The Permittee if approved by shishalh Nation will provide to BC Parks a copy of the Preliminary Field Reconnaissance for archaeology report.

APPENDIX A - Standards and Practices for Instream Works (attached)

APPENDIX B - Impact Assessment Report - Whitehead 1999 (attached)

APPENDIX C - Chapman Lake Water Supply Expansion - AECOM Nov 2016 (attached)

APPENDIX D — Park Use Permit Application (temporary amendment) — Sunshine Coast Regional District — Siphon at Chapman Lake Part 3 (attached)

APPENDIX E - Chapman Lake Siphon System Workplan and Timeline (attached)

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Park Use Permit application (temporary amendment) – Sunshine Coast Regional District – Siphon at Chapman Lake

Part 3:

#### Section A - Proposed Activity

#### a. Purpose of Land use or occupancy

The purpose of this amendment to Park Use Permit 102714 (PUP) held by the Sunshine Coast Regional District (SCRD) is to increase the available late summer water supply from Chapman Creek through the installation of a temporary siphon system in Chapman Lake, which is located in the Tetrahedron Provincial Park.

Chapman Creek is the primary water supply to the Regional Water System on the Sunshine Coast and supplies water to approximately 23,000 people. In two out of the last five years, this water supply has become nearly depleted due to prolonged periods of drought and increased water demand during the summer season. To alleviate potential acute water shortage in 2017 and 2018, the SCRD is seeking approval from BC Parks (and the Ministry of Forests, Lands and Natural Resource Operations), to access an additional five meters of water storage (1 million cubic meters) in Chapman Lake should doing so become necessary.

In the immediate term, the SCRD is proposing to have the necessary permits in place to allow the temporary installation of a siphon in the event that the region experience another water shortage from a prolonged period of drought. The main drivers behind this request for a temporary amendment to the SCRD's PUP are:

- Meeting increased environmental flow targets for Chapman Creek established by the Ministry of Forests Lands and Natural Resource Operations (FLNRO) to facilitate fish migration as per recommendations from a fisheries biologist and requirements under the Water Sustainability Act;
- Uncertainties in short term weather projections: recent climate studies suggest that prolonged periods of drought in the South Coast could occur more frequently but shorter term weather forecasts of precipitation are highly unreliable; and
- Meeting increased summer season water demand (water use nearly doubles in the summer season from irrigation and tourism).

In order to both reduce demand and increase water supply from sources other than Chapman Creek, the SCRD is implementing demand and supply management in accordance with the Comprehensive Regional Water Plan (CRWP), including such measures as water metering, well protection measures, and groundwater resource investigation.

Also in accordance with the CRWP and outside of the scope of this amendment application, the SCRD is also in the process of obtaining approvals to deepen the channel in Chapman Lake which will permanently enhance redundancy in the water system. This is an essential measure in the medium term prior to the construction of long term source development projects specified in the SCRD's CRWP are constructed.

 Details of existing uses, vegetation cover, wildlife present, water resources, geology, and historical and cultural significance

#### **Existing uses**

The existing uses for the proposed area within this PUP amendment application are for water impoundment and a helicopter pad.

#### **Vegetation Cover**

#### Vegetation Overview

Forest cover around Chapman Lake and the upper Chapman Creek watershed consists of Mountain Hemlock (*Tsuga mertensiana*), Yellow Cedar (*Chamaecyparis nootkatensis*) and Pacific Silver (Amabilis) fir (*Abies amabilis*), while lower elevations in Tetrahedron Provincial Park contain Western Hemlock (*Tsuga heterophylla*) and Western Red Cedar (*Thuja plicata*; Triton 2006). The canopy formed by the tree cover varies from relatively open to dense. Throughout the park, semi-open meadows, marsh complexes, and areas of dense shrub [e.g., blueberry (*Vaccinium sp.*)] are also found.

The mid and lower reaches of the Chapman Creek watershed, outside the park boundaries, fall within the Coastal Western Hemlock biogeoclimatic zone (CWHm), and are characterized by forests dominated by Douglas fir (*Pseudotsuga menziesii var. menziesii*), Western Hemlock, Western Red Cedar and a variety of understory shrub species. Widespread logging and associated disturbance and revegetation have resulted in a change in forest composition from old-growth conifer forests to communities with a higher proportion of broadleaved trees. Much of the riparian zone in the mid and lower reaches of Chapman Creek now consists of alder stands. The park is situated within the Southern Pacific Ranges ecosection and Coastal Western Hemlock/Mountain Hemlock biogeoclimatic zones. The park contains one of the oldest undisturbed forests in Canada with stands containing trees over 1,000 years. Semi-open meadows, marsh complexes and dense understorey (e.g. blueberry) are characteristic of the park, which also contains ten lakes.

#### Riparian Vegetation

Riparian vegetation surveys were completed in 1998 as part of impact assessment from the 5 m lake depth to 5 m above the high water level. The riparian area is largely forested to the high water level with several smaller areas where shrubs and/or herbaceous species predominate. The four habitat types identified include forest, shrub land, wet meadow and wetland/aquatic. Forest vegetation consisted of Mountain Hemlock and Amabilis Fir with some Yellow Cedar. The shrub layer was dominated by Alaskan blueberry (*Vaccinium alaskaense*) and oval-leaved blueberry (*Vaccinium ovalifolium*) with the herb layer consisting of moss. Meadow and wetland areas contained a graduation from one to the other with an increase in soil moisture. Meadow areas tended to be moist due to subsurface drainage from hillslope areas. Vegetation growth within the lake that was less than 2 m in depth was considered part of the wetland habitat.