



## COWICHAN ESTUARY ENVIRONMENTAL MANAGEMENT PLAN COMMITTEE MEETING

THURSDAY, APRIL 3, 2014 AT 1:00 P.M.

COWICHAN VALLEY REGIONAL DISTRICT BOARD ROOM  
175 INGRAM STREET, DUNCAN, BC

### AGENDA

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The next regular meeting of the CEEMC is scheduled to be held at the call of the chair.

Cowichan Estuary Environmental Management Plan Committee  
Ron Diederichs, Chair, MFLNRO [ron.diederichs@gov.bc.ca](mailto:ron.diederichs@gov.bc.ca)  
Grant Gracher, MFLNRO [grant.gracher@gov.bc.ca](mailto:grant.gracher@gov.bc.ca)  
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Lori Iannidnardo, Area Director, CVRD [liannidnardo@cvrd.bc.ca](mailto:liannidnardo@cvrd.bc.ca)  
Rob Conway, CVRD [robcw@cvrd.bc.ca](mailto:robcw@cvrd.bc.ca)  
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Kate Miller, CVRD [smiller@cvrd.bc.ca](mailto:smiller@cvrd.bc.ca)  
Mike Tippett, CVRD [mipsett@cvrd.bc.ca](mailto:mipsett@cvrd.bc.ca)  
Laura Robertsen, CVRD [lrobertsen@cvrd.bc.ca](mailto:lrobertsen@cvrd.bc.ca)

M1

Minutes of the Cowichan Estuary Environmental Management Committee Meeting held on Thursday, January 30, 2014, at 9:00 a.m. in the Board Room at the Cowichan Valley Regional District, 175 Ingram Street, Duncan, BC

**PRESENT:**

Chair Ron Diederichs, Ministry of Forests, Lands and Natural Resource Operations  
Mark Harvey, Ministry of Forests, Lands and Natural Resource Operations  
Tracy Fleming, Cowichan Tribes  
Brigid Reynolds, District of North Cowichan  
Mike Tippet, Cowichan Valley Regional District  
Ann Kjerulf, Cowichan Valley Regional District  
Lori Iannidinardo, Cowichan Valley Regional District, Cowichan Bay Director

**OTHER:**

Rob Conway, Cowichan Valley Regional District  
Kate Miller, Cowichan Valley Regional District  
Laura Robertson, Cowichan Valley Regional District, Recording Secretary

**APPROVAL OF AGENDA**

The Chair noted changes to the agenda which included adding three items of New Business.

It was moved and seconded that the agenda as amended be approved.

**MOTION CARRIED**

**ADOPTION OF MINUTES**

**M1**

It was moved and seconded that the Minutes of the Cowichan Estuary Environmental Management Committee Meeting of June 6, 2013, be adopted.

**MOTION CARRIED**

**BUSINESS ARISING**

**Status of Foreshore Leases**

Mark Harvey had nothing to report on the status of Foreshore Leases at this time, he will report back to the Chair regarding the current lease situation.

**Should the Committee get information to the public regarding what it does?**

**Action:**

The Chair will draft the first newsletter/bulletin to circulate.  
Ann Kjerulf can distribute information through the Area D email list.

**Small Craft Harbours (SCH) should be reporting to the committee.**

Small Craft Harbours (SCH) should be reporting to the Committee, either in person or through correspondence regarding the Fisherman's Wharf redevelopment.

**Action:**

The Chair to request an update from SCH, which will be forwarded to the Recording Secretary to distribute to the CEEMC members.

**DELEGATIONS**

**D1**

Cowichan Estuary Restoration and Conservation Association (G. Shuerholz)  
Power Point presentation by CERCA, regarding Cowichan Estuary key issues of concern.

- Request to re-zone Lease 103103 for conservation Management.

- Breaching Causeway, two preferred options for proposed bridge construction input from DFO and CVRD is needed before getting started. Land status also needs clarification; if leased, CERCA will need to negotiate with leaseholder.
- Request for re-zoning of Lease 103107 for conservation management, the lease owner apparently open to suggestions for restoring.
- Licence of Occupation Grounding Log Booms.
- Research whether Western Forest Products uses mill pond for free.
- Rip Rap not removed on completion of dredging as required by DFO permit. Estimated 1000 logs decomposing on Mariners Island.
- Westcan Causeway needs to be cleaned up of invasive species; the most aggressive will slowly be removed by CERCA.
- Synchronization between North Cowichan and CVRD administrative boundaries is suggested. Two OCPs, un-synchronized policies and maps.

**It was moved and Seconded that the Cowichan Estuary Environmental Management Plan Committee request CERCA to forward further details of their proposal for breaching the causeway and replacing with a bridge to maintain access so that CEEMC can review and decide whether to support it.**

**MOTION CARRIED**

**Action:**

The Chair to follow up on post permits dredging, requesting DFO permit requirements.

**REPORTS**

**R1 – Unused  
Industrial Tenures**

Tracy Fleming presented a Letter dated January 10, 2014, from Cowichan Tribes to MOE and MoFLNRO, regarding Lease 103103, Habitat Management (see letter). Information for Committee.

**R2 – Proposed  
Cowichan Bay  
Campground**

Staff Report from Rob Conway, Manager, Development Services Division, regarding proposed Cowichan Bay Campground, Rezoning of Lot 2, Plan 70020, Lochmanetz Road.

**It was moved and seconded that the Cowichan Estuary Environmental Management Plan Committee is unable to support the proposed rezoning of Lot 2, Plan 70020, Lochmanetz Road (application 2-D-13RS) at this time due to concerns about the site ie; river floodplain, flooding due to sea level rise, impacts on potable water due to potential saltwater intrusion to wells, sewage disposal, and potential fish habitat loss.**

**MOTION CARRIED**

**R3 - Proposed  
Cowichan Bay Zoning  
Bylaws**

Staff Report from Ann Kjerulf, Senior Planner, Community & Regional Planning Division, regarding proposed Area D – Cowichan Bay Zoning Bylaws.

**It was moved and Seconded that due to CEEMP Committee concerns regarding shading and grounding impacts on the productive foreshore, that the CVRD be requested to explore the following regarding the proposed Cowichan Bay OCP and zoning amendments and bylaws, and report back to the Committee:**

- **Exclusion for low tide zone**
- **Limiting footprints of individual float homes and/or water lot coverage**
- **Height restrictions**
- **Development Permit Area incorporated**
- **W3 Zone – restriction of a subzone to moorage where depth is insufficient to prevent grounding impacts.**

**MOTION CARRIED**

**NEW BUSINESS**

**NB1 – Update by B. Reynolds**

Report from Brigid Reynolds, Municipality of North Cowichan, regarding the North Cowichan Zoning Bylaw Update.

Report was received as information.

**NB2 – Update by K. Miller**

Report from Kate Miller, Cowichan Valley Regional District, regarding an update on a climate impacts analysis being pursued by CVRD, Environmental Initiatives Division.

Report was received as information.

**NEXT MEETING**

Next meeting is scheduled for Thursday, April 3, 2014, at the Cowichan Valley Regional District office.

**ADJOURNMENT**

**It was moved and seconded that the meeting be adjourned.**

**MOTION CARRIED**

The meeting adjourned at 1:10 p.m.

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Chairperson

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Recording Secretary



## Cowichan Tribes

5760 Allenby Road Duncan, BC V9L 5J1  
Telephone (250) 748-3196 Fax: (250) 748-1233

File #:e462-220813

Hon. Mary Polak  
Minister of Environment  
PO Box 9047 Stn Prov  
Victoria, BC V8W 9E2  
Via Email: [ENV.Minister@gov.bc.ca](mailto:ENV.Minister@gov.bc.ca)

Hon. Steve Thomson  
Minister of Forestry, Lands, Natural Resources Operations  
PO Box 9049 Stn Prov  
Victoria BC V8W 9E2  
Via Email: [FLNR.Minister@gov.bc.ca](mailto:FLNR.Minister@gov.bc.ca)

January 10, 2014

Dear Minister Polak and Minister Thomson:

**Re.: Request for Re-zoning Intertidal Crown Lease 103103, Cowichan Bay, File Number 1405504 to Habitat Management**

We would like to request the re-zoning of the referenced Lease to "Habitat Management" in accordance with:

- the stipulations of the Cowichan Estuary Environmental Management Plan (CEEMP) stating that ultimately all Leases related to the industrial/commercial use of the Cowichan Estuary will be transferred to habitat management;
- the Agreement signed between BC Environment and BC Lands (transfer of areas for administration within Lot 160 – dated July 18, 1991) stating that it is:  
*"...the ultimate intent of transferring all those portions no longer used for industrial purposes to BC Environment for estuary management and conservation."*
- the 1992 "Agreement on Joint Stewardship of the Cowichan Estuary" signed between the Cowichan Tribes and the Minister of Environment Lands & Parks (1992) in recognition of the historic and continuing livelihood-, cultural-, and spiritual importance of the estuary to Cowichan Tribes.

- the Letter by the BC Ministry of Environment Lands and Parks dated July 29, 1994 (file # 44400-20/COWI) addressed to the Cowichan Bay Improvement Association which states that it

*"...will request the Licensees of 103103 that regular reports are provided by both companies (i.e. at the time MacMillan Bloedel Ltd., Carson Bulldozing Ltd., and Doman Forest Products Limited) on the amount of use of the Licence areas to determine the companies' need for the area. If it can be shown that the areas are not used and/or have been abandoned, the license(s)/Leases will be terminated."*

Lease 103103 (see attached Map), originally allocated to log storage by MacMillan Bloedel and BCFP, later transferred to Tidal Harmony Holdings Ltd., has not been in use for log storage or any other visible activity for many years. It is for this reason that this site has been chosen for a successful eelgrass recovery program spear-headed by a local not-for-profit group and funded by the Habitat Conservation Trust Fund (HCTF). There is consensus that this part of the estuary has turned into the most productive section of the Cowichan Estuary, playing a key role in the on-going Chinook salmon recovery program.

Against this background and in compliance with the long term goals of the Cowichan Estuary Environmental Management Plan it appears prudent to now re-zone this area for habitat management and conservation as a very important step within the rehabilitation process of the Cowichan Estuary.

### **Important Background Information**

Cowichan Tribes has a very long history of occupation and use of the Cowichan and Koksilah Rivers, Cowichan estuary and Cowichan Bay. The Hul'qumi'num Treaty Group Review of Ethnographic, Historical and Archaeological Resources, Revised: September 8, 2009 (HTG Report 2009) describes physical occupation by Cowichan Tribes of two village sites Thiek and Kilpahlas (i.e. the two Clemclemaluts villages identified by colonial survey 1859), and commonly held the lands of productive resource areas located in the vicinity of those villages (e.g. fishing places, shellfish beds, hunting grounds), as physically occupied through use by all the villagers for procuring a multitude of species. The report goes further to say

*"Cowichan Bay was rich in resources and was reportedly used by all Cowichan people. Herring were raked in the spring and smelts were taken during the spring and summer. A variety of beach foods such as clams, cockles, crabs and urchins were available. Shark and dogfish were caught in Cowichan Bay, as were a large number of species of groundfish. Harbour seals and sea-lions were available in Cowichan Bay and were hunted there. In addition, several kinds of nets were used to take ducks, geese and other migratory species." (p. 31)*

Many resources are to this day still procured by Cowichan Tribes' members from the Bay and Estuary. However for the past four decades or so, shellfish has been deemed unsafe

for human consumption in Cowichan Bay due to environmental degradation and pollution resulting from about a century of intensive logging use and industrial development. Evidence of this use is illustrated by the dozens of stray logs in the Estuary. Grounding and abrasion of logs (including grounded log booms) and woody debris has been identified as a major contributor to the disappearance and destruction of eelgrass growth and the absence of other vegetation, especially in the northern part of the Cowichan Estuary (Burt *et al.* 2002). Eelgrass disappearance currently poses the greatest threat to the ecological integrity of the Estuary.


Marine vegetation that still does occur in the Estuary is mostly concentrated in the southern part in the lower intertidal zone which happens to coincide with Lease area 103103. Today this area is populated with an assemblage of eelgrass, spaghetti red algae and sea lettuce. Eelgrass is considered to be the most valued fish habitat type and is a nursery for many marine creatures including chinook, chum, and coho salmon, as well as larval shellfish and crustaceans. As a source of eelgrass transplants, Lease 103103 has been essential to eelgrass restoration efforts in the northern part of the estuary.

Cowichan Tribes is also supporting a local not-for-profit group proposal to breach the WestCan Terminal access road which acts like a dike and functionally and ecologically separates the northern part of the Estuary from the south.

Given the evidence and information provided in this letter, Cowichan Tribes requests the rezoning of Lease 103103 to Habitat and Conservation Management designation as stipulated in the Cowichan Estuary Environmental Management Plan. Cowichan Tribes would also like to engage with your Ministries to explore any other Lease or License of Occupation areas in the Bay or Estuary that have lapsed with the objective of returning them to functioning and productive marine ecosystems.

Please do not hesitate to contact me or Tracy Fleming, Referrals Coordinator, at 250-748-3196, at any time if you require clarification or to arrange a meeting.

Yours truly,



Chief William C. Seymour

WS/tf

Attachment.

pc. Rudi Mayser, Manager of Authorizations, Forest, Lands, Natural Resources, [Rudi.Mayser@gov.bc.ca](mailto:Rudi.Mayser@gov.bc.ca)



C2

**Laura Robertson**

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**From:** Diederichs, Ron FLNR:EX <Ron.Diederichs@gov.bc.ca>  
**Sent:** Tuesday, March 18, 2014 2:35 PM  
**To:** Laura Robertson  
**Cc:** Ann Kjerulf  
**Subject:** FW: Agenda Item for April 3: Renewal of stilt house leases

FLNR Lands folks have requested formal review by the CEEMC of lease renewals for the "stilt houses" at Cowichan Bay.

The Committee reviewed a proposed renewal last year for a pair of leases occupied by Hylton McAlyster, but spent little time on the actual renewal and more energy on an accompanying separate application for a Specific Permission (private dock) within the lease boundaries. Apparently there is another lease currently under review and several more expected in the next year or so.

Lands would like the committee to consider several aspects:

1. Would the CEEMC like to
  - a. review each proposal individually or
  - b. are there any generic considerations that the CEEMC would like to see applied to renewals without specific review by the committee or
  - c. are these renewals considered low in ongoing impact and no review required?
2. Would the committee like to consider specific guidance for any renovations/ modifications to the leased structures or is this best handled by CVRD building restrictions or other bylaws.

Ron Diederichs  
Section Head  
Ecosystems Section  
Forests, Lands and Natural Resource Operations  
2080A Labieux Road  
Nanaimo, BC V9T 6J9 Ph: 250-751-3223 Fax:250-751-3208  
 Please consider the environment before printing this e-mail.

C3

18th of March, 2014

Ron Diederichs Section Head  
Ecosystems Section Forests, Lands and Natural Resource Operations  
**Chair of the CEEMC**  
2080A Labieux Road, Nanaimo, BC V9T 6J9



**Ref: Permit Inquiry**

Dear Mr. Diederichs,

Following the recent approval by the Pacific Salmon Commission of our funding proposal for breaching the Causeway of the Westcan Terminal in the Cowichan Bay Estuary CERCA would like to apply for a permit by the CEEMC for the implementation of the project. The timeline for breaching the man-made dike and for the bridge construction will be July/August pending final advise for the optimum time window by marine biologists familiar with the estuary.

Meanwhile we have submitted the on-line self-assessment form required by the DFO since November 2013 which serves as the official permit by the DFO for this project as verbally confirmed by the Pacific Region DFO Referral Coordinator by phone on March 10, 2014. We also have received verbal approval by BC's Archaeology Branch confirming that we will not need a written permit. However we have requested a written note to this respect for our records.

In a recent on-site meeting with representatives of Western Stevedoring as the legal Lessee of the Causeway and Westcan Terminal the location of the breach and logistics of bridge construction were discussed. Also present at the meeting were representatives of the CVRD, Marine Industrial, and Living Rivers who unanimously support the project. We have requested a written statement by Western Stevedoring to this respect.

The project implies breaching the man-made Causeway and removing the artificial fill down to the underlying natural contour level of the estuary minimizing potential soil disturbance. It is intended to span the 10 m- wide breach with a concrete bridge to be built by Surespan Company who provided detailed engineered plans for the construction in support of the funding proposal.

There appears to be unanimous agreement amongst Key stakeholders related to the Cowichan Estuary in support of the project. CERCA has received letters of support by Cowichan Tribes, the Cowichan Valley Regional District, the BC Wildlife Federation, Living Rivers, Ducks Unlimited and other environmental NGOs affiliated with restoration efforts related to the Cowichan Estuary.

Looking forward to your positive response,  
Respectfully,

**Dr. Goetz Schuerholz**  
*Chair CERCA*

## Southern Boundary Restoration and Enhancement Fund

### Project Concept Form: Proposals for 2014

**Project Title:** Removing Log Debris from a Key Marshland and shoreline in the Cowichan Estuary

**Proponents name:** Goetz Schuerholz (Chair CERCA)

**Affiliation:** Cowichan Estuary Restoration and Conservation Association (CERCA)

**E-mail address:** taesco@shaw.ca

**Phone:** 250-748-4878

Identify the one Goal and its applicable Objective that best describes the main intent of the proposal.

Dollar amount requested (specify currency)

Goal:

Objective:

\$ Can \$ 46,000

1. Improve management of stocks & fisheries
2. Address priority stocks of interest
3. Improved collaboration
4. Ecosystem based management

6 E,D and F

**Project Location:**

Cowichan Bay Estuary, Vancouver Island

Is this proposal a continuation of a project previously funded by the Southern Fund ? No

**Start Date:** 15/07/2014

**End Date:** 30/07/2014

- 1. Overview:** The project focuses on the removal of logs and woody debris washed up over time onto the marshes located to the south of the WFP mill pond in the heart of the Cowichan Estuary. A large section of these highly productive marshes is currently covered by a solid layer of logs in different stages of decomposition releasing CO<sub>2</sub> in the process and destroying valuable fish habitat. The project rationale is to rehabilitate approximately three hectares of prime marshes interspersed with inter-tidal pools and potentially highly productive side channels characterizing this section of the Cowichan Estuary. The targeted area provides food and shelter to a wide spectrum of fauna including Chinook, Coho and Chum smolt thriving along some of the still un-disturbed sections of shoreline and in the intertidal pools and side channels of the target area. A group of scientific, biological, and local knowledge experts, with over 300 years combined experience on the Cowichan, classified the Cowichan River and Estuary as critical Chinook habitat and a "habitat at risk" limiting the productive capacity of the Cowichan River Chinook fall run. The proposed removal of logs and woody debris is expected to significantly augment smolt survival in the target area.

2. **Stock:** Chinook is the target species of this proposal. The proposed intervention focusses on rebuilding Chinook stock from the low escapement of 2009, also benefiting Chum and Coho stocks which all use the Cowichan Estuary at critical periods of their life cycle. Chinook is considered one of the most important indicators of biological health of this ecosystem, the reason for the Southern Panel's decision to choose the Cowichan River as an Indicator River for Chinook abundance. There is increasing understanding that marine survival of Chinook in Georgia Strait is linked to the health of the Chinook leaving the river and estuary. This reflects the importance of estuary salt marshes and inter-tidal pools of brackish water critical for the survival of smolt. This has been highlighted by Rugerone (2010) who stressed the importance of the lower river and estuary in ensuring sufficient growth and refuge to maximize potential for survival in the marine waters.
3. **Conservation:** The Cowichan River and Estuary have and continue to undergo considerable change, bringing into question the health of the ecosystem. The Cowichan River Chinook, Coho and Chum depend on the lower river and estuary during the most critical time of their life cycle. Quality habitat in the estuary and marshlands is a key prerequisite for smolt survival. Logs and woody debris moved around by tidal changes and storms in the Cowichan Estuary and marshes prevent and disturb the growth of riparian- and marshland vegetation around inter-tidal pools which provide smolt with food and shelter. The return of Cowichan Chinook declined from 10,000 spawners in the early 1990s to a low of only a few hundred natural spawners in 2009. This habitat enhancement proposal addresses key limiting factors to Chinook smolts: quality habitat and habitat connectivity.
4. **Bilateral Fishery Relevance:** The Cowichan River is chosen as Indicator River for Chinook abundance. Unless the river and estuary will produce an increase in escapement it will limit the abundance of Chinook in Georgia Strait. The bilateral impacts/added values are estimated at "Medium".
5. **Fishery Benefits:** Cowichan River Chinook have increasingly been recorded along the West Coast of Vancouver Island and southern Alaska. Continuing stock re-building will therefore benefit fisheries along the west coast of Vancouver Island and the Alaska Panhandle. The economic value of Chinook is considered a key component of the southern BC recreational fishery and the WCVI commercial troll fishery. Gislason (2004) estimated the revenues and jobs arising from the lower half of Vancouver Island in the order of \$250M along with 1800 jobs. The Cowichan Tribes created a way of life around the Cowichan Chinook. The estimated potential benefit of the proposed intervention is "High".
6. **Context:** The people of the Cowichan Valley have agreed in numerous forums and plans, such as the Water Management Plan, the Cowichan Estuary Management Plan and the Regional State of the Environment Report that ensuring the health of Cowichan River and watershed ecosystem is an important goal for the community and a key priority for the Cowichan Tribes. Over the past years the Cowichan Valley has forged major partnerships related to watershed management, river quality enhancement and Chinook stock improvement in an effort to bring Cowichan Chinook back into sustainable fishery in Georgia Strait. The project concept has been discussed with and is supported by the Cowichan Tribes, the BC Wildlife Federation, the Nature Conservancy of Canada, and the Cowichan Stewardship Round Table.

## Southern Boundary Restoration and Enhancement Fund

### Detailed Proposal Form 2014

**Project Title:** Breaching the Westcan Causeway in Cowichan Bay to re-connect the two parts of the estuary artificially divided by the Westcan Causeway

**Proponents name:** Goetz Schuerholz (Chair CERCA) on behalf of CERCA

**Affiliation:** Cowichan Estuary Restoration and Conservation Association (CERCA)

**E-mail address:** taesco@shaw.ca

**Phone:** 250-748-4878

Identify the one Goal and its applicable Objective that best describes the main intent of the proposal.

Dollar amount requested (specify currency)

Goal:

Objective:

Can \$ 102,644

1. Improve management of stocks & fisheries
2. Address priority stocks of interest
3. Improved collaboration
4. Ecosystem based management

6 B,F +D

**Project Location:**

Cowichan Bay Estuary, Vancouver Island

Is this proposal a continuation of a project previously funded by the Southern Fund ? No

**Start Date:** 15/05/2014

**End Date:** 30/11/2016

**1. Overview:** The overall goal of the projects aims at breaching the man-made causeway currently acting as a barrier between the two parts of the Cowichan Estuary via a 33' x 16' bridge. The project rationale is to re-enable water circulation and ecosystem functioning between the two parts of the Cowichan/Koksilah estuary which are currently artificially divided by the Westcan causeway (i.e. created by in-filling in the 1970s) which provides road access to the Westcan Terminal. The causeway effectively blocks Cowichan River smolt from accessing a large section of a highly productive part of the Cowichan Estuary, and blocking freshwater flow from the Cowichan South Fork to the southern section of the estuary, thus preventing proper ecosystem functioning of the Cowichan Estuary which constitutes one ecological entity.

There is increasing understanding that marine survival of Chinook in the Georgia Strait is linked to the health of the Chinook leaving the river and estuary. This reflects the importance of estuary salt marshes and inter-tidal pools of brackish water critical for the survival of smolt. This has

been highlighted by Rugerone (2010) who stressed the importance of the lower river and estuary in ensuring sufficient growth and refuge to maximize potential for survival in the marine waters. Consequently, this degradation of habitat likely contributed to the poor marine survival and the decline of Cowichan chinook from 10,000 spawners in the early 1990s to a low of only a few hundred natural spawners in 2009. In fact, the lack of connectivity in the lower river and estuary was identified as a key factor at the March 2013 workshop on the Cowichan estuarine and freshwater risk factors. The man-made Westcan causeway was specifically identified as a major issue in the lack of connectivity and poor estuarine utilization. This habitat enhancement proposal addresses this key limiting factor to Chinook smolt growth and survival in the Cowichan estuary.

**2. Stock:** Chinook is the target species of this proposal. The proposed intervention focuses on rebuilding Chinook stock from the low escapement of 2009, also benefiting Chum and Coho stocks which all use the Cowichan Estuary at critical periods of their life cycle. Cowichan chinook are considered one of the most important indicators of biological health of the Cowichan watershed and are identified as a stock of concern in the Southern BC Salmon Integrated Fisheries Management Plan. The Cowichan chinook stock is a PSC chinook CWT indicator for exploitation and marine survival.

**3. Conservation:** The Cowichan River and Estuary have and continue to undergo considerable change, bringing into question the health of the ecosystem. The Cowichan River Chinook, Coho and Chum depend on the lower river and estuary during the most critical time of their life cycle. Quality habitat in the estuary and marshlands is Key for smolt survival. In 2009, Cowichan River chinook natural spawning was only 10% of the bilaterally agreed MSY goal of 6500. The expert review identified the lack of connectivity in the estuary as a major contributing factor to reduced productivity of this important chinook stock. Recent average survival rate for chinook is less than 1%. This stock is identified as a stock of concern in the southern BC Integrated Fisheries Management Plan. The level of concern is 'high'.

**4. Bilateral Fishery Relevance:** Cowichan River Chinook have a mainly southern BC / Washington State marine distribution. Recent average fishery exploitation is estimated at 63% of the total stock abundance including 15% in various southern US fisheries, as well as First Nations, recreational, and commercial fisheries in southern BC. Because of their southern distribution, Cowichan River chinook are likely important food for ESA listed Southern Resident Killer Whales. The Cowichan River is an Indicator River for Chinook abundance, marine survival, and exploitation and so is important to the CTC development of abundance indices.

**5. Fishery Benefits:** Continuing stock re-building will benefit fisheries in southern BC and Washington State. The economic value of Chinook is considered a key component of the southern BC recreational fishery and the WCVI commercial troll fishery. Gislason (2004) estimated the revenues and jobs associated with the recreational fishery in the lower half of Vancouver Island in the order of \$250M along with 1800 jobs. The Cowichan Tribes created a way of life around the Cowichan chinook. Consequently, the opportunity cost of conserving Cowichan chinook in the fishery is "high". Similarly, the estimated potential benefit of the proposed work is "High". This project could double the amount of high value estuarine habitat available to Cowichan chinook. This work has a potential to significantly increase marine survival and so total abundance.

**6. Context:** There is significant local support for chinook rebuilding. The people of the Cowichan Valley have agreed in numerous forums and plans, such as the Water Management Plan, the Cowichan Estuary Management Plan and the Regional State of the Environment Report that ensuring the health of Cowichan River and watershed ecosystem is an important goal for the community, a key priority for the Cowichan Tribes, and a top priority for the Cowichan Stewardship Round Table and the Cowichan Watershed Board. Over the past years the Cowichan Valley has forged major partnerships related to watershed management, river quality enhancement and Chinook stock improvement in an effort to bring Cowichan Chinook back into sustainable fishery in Georgia Strait. Breaching the causeway has been discussed with and is supported by the Cowichan Tribes, the Cowichan Stewardship Round Table, the DFO, Cowichan Watershed Board, Living Rivers, the BC Wildlife Federation, and the Cowichan Valley Regional District (see attached Letters of support).

The lack of connectivity in the lower river and estuary was identified as a key factor at the March 2013 workshop on the Cowichan estuarine and freshwater risk factors by a group of scientific, biological, and local knowledge experts, with over 300 years combined experience on the Cowichan. The man-made Westcan causeway was specifically identified as a major issue in the lack of connectivity and poor estuarine utilization. This key limiting factor to Chinook smolt growth and survival in the Cowichan estuary is expected to be remedied through the proposed breaching of the causeway.

## **Part 2. TECHNICAL IMPLEMENTATION DETAILS**

**7. Approach:** It is proposed to use Surespan Construction Ltd. as Key contractor. Surespan has supplied a budget price (see attached Project Budget Form) to supply and install a bridge to suit the needs of the causeway and the requirements of CERCA to re-connect the two estuary sections currently divided by the causeway by opening a channel through the causeway as shown on the attached map. This location was selected as one of the ecologically most appropriate, easiest and most effective for the breach during the site visit by Surespan and CERCA biologists on October 16, 2013. Also attached to this proposal is a sketch of the bridge design by Surespan (not to scale).

Surespan is proposing to install a 33' x 16' Concrete Slab bridge for the structure. This bridge is a simple, effective and mostly corrosion resistant structure considered optimum for this project. Galvanizing the shear keys on the bridge to reduce corrosion may be necessary but there shouldn't be an issue with getting this done by Surespan.

The contractor plans to excavate the causeway using conventional excavators. This will be achieved by using a 350 (35 ton) class excavator for the bulk excavation as well as the bridge installation. Surespan has allowed for 5 days in order to complete the project from start to finish.

The intent is to excavate a channel through the causeway to the desired depth as directed by CERCA and their hydrological engineers and marine biologists up to a maximum opening for a 33' bridge to be installed. This should allow for a 8-10' channel to be active underneath the bridge and a stable slope reinforced with large Rip/Rap to retain the end fill and protect the bridge substructure from scour due to weather and tidal issues. The quote by Surespan includes the use of concrete lock blocks and precast pier caps to support the bridge; decent ground is

required to use these footings. It is recommended to have a geotech drill a core for a sample at each abutment location to assess ground conditions and to plan for the proper substructure prior to start-up of the project.

At the same time if the schedule permits, Surespan hopes to excavate a simple breach in the railway right-of-way to the north of the bridge project. Surespan can also provide a price if CERCA would like for a simple pedestrian bridge to place over the breach in the railway. All of the unused excavation surplus material is assumed to be stockpiled or spread out within reach or near reach of the excavators; all required trucking and disposal fees if required would have to be discussed if the need arises.

CERCA would have professional personnel on site (biologists, project supervisor and other staff as needed) for the proposed five days duration of the project.

## 8. Schedule:

Start Date	Activity	Responsibility	Completion Date
On approval of proposal	Permits and Regulatory requirements	Goetz Schuerholz, Chair CERCA	01/05/14
10/01/14	Site selection and EIA	CERCA, Liv. Rivers, DFO, CVRD, MoE, FLNR	30/03/14
10/04/14	Design of biophysical monitoring program	CERCA, Living Rivers, DFO, MoE	30/05/14
15/05/14	Site preparation	Surespan Construction Ltd.	18/05/14
19/05/14	Bridge instalment	Surespan Construction Ltd.	25/05/14
25/05/14	Inception report	CERCA	30/05/14
01/06/14	Site clean up	Surespan Construction Ltd. and CERCA	05/06/14
12/06/14	Final Report	CERCA	25/06/14
30/06/14	Implementation of monitoring	CERCA, Living Rivers, DFO	30/08/16
30/10/14	Final Evaluation report	CERCA, Living Rivers, DFO	30/11/16

**9. Assumptions and Risks:** Following assumptions are critical to successfully breaching the causeway and for the proposed bridge construction.

- Regulatory requirements to be in place prior to project start-up date (i.e., Cowichan Valley Regional District, Ministry of Environment, Ministry of Forests Lands and Natural Resources, Department of Fisheries and Oceans and the current Lessee of the Westcan Terminal). Associated risk: “low”. The proposed intervention has been discussed with representatives of all agencies with positive response; it therefore is assumed that all regulatory requirements and permits will be available in time.
- Stakeholder Cooperation is essential for successful completion of the project within the proposed time frame. Associated risk: “low”. It may safely be assumed that the project can proceed as planned due to the unanimous support by all major stakeholders on the importance of the project for the enhancement of Key Chinook habitat.
- The proposed Timeline: The proven track record of Surespan as the selected contractor responsible for the preparation of the trench, removal of the overburden, bridge

construction and instalment of the bridge is a sound basis for expecting the Company to meet its deadlines. One full month has been set aside for ground work and bridge instalment to take place in May/June 2014, although Surespan intends to complete its part of the project within five days. This leaves 6 months for CERCA prior to kick-starting the ground work to assemble required official approvals. Associated risk: “low”, providing timely availability of required agency permits which at this point appears not to be a problem due to the consensus approval of the project and very cooperative major stakeholders.

- Budget: Surespan has provided CERCA with a firm costing proposal. No changes to the proposed budget are expected or will be accepted. All budget items except for the Surespan quote are confirmed in-kind contributions by agencies and the stakeholders identified in this proposal. Associated risk: “low”.
- Leadership: The project will proceed under the leadership of CERCA ensuring timely, efficient, and cost-effective completion of the proposed intervention and additional deliverables. Associated risk: “low”.
- Contingency Plan: In the unforeseen case of regulatory requirements not being in place by the proposed start-up date, and/or the unlikely event of a natural disaster interfering with the work schedule, the start-up date will be postponed until favourable framework conditions are in place. In the unlikely event of Surespan defaulting on its contractual agreement, a substitute local contractor will be hired to take over. Associated risk: “low”.
- Ultimate Success: The ultimate success of the project will be assessed over a two consecutive year period on completion of breaching the causeway based on biophysical monitoring of the trench to be implemented by CERCA in close cooperation with Living River experts and the DFO. There is general stakeholder agreement that the predicted outcome will be positive. Associated risk: “low”.

### Part 3. CAPACITY TO DELIVER

**10. Key Personnel:** CERCA will assume overall responsibility for the project to be supported by selected specialists from the identified stakeholder group. CERCA will also be responsible for the quality control of the project, a brief inception report, the final report required by the PSC Southern Fund, and the follow-up monitoring. Goetz Schuerholz will be the team leader and key contact for the project. Dr. Goetz Schuerholz is a seasoned internationally recognized conservation ecologist with more than 45 years experience in the design, supervision and implementation of development projects mostly related to the environment (“green sector”) in more than 50 countries. He is the founder and owner of Transamerica Environmental Science Consultants Ltd., a company which in the past has implemented numerous projects in BC ranging from biophysical inventories, to land use planning, wildlife research, and environmental impact assessments on behalf of Government agencies and private industry. The team leader will be supported by Raymond Demarchi, a CERCA member, retired wildlife biologist and former key employee of BC’s MoE. Numerous other CERCA members are eager to be of assistance if needed. The project will be implemented in close cooperation with Living Rivers which will provide scientific support, especially for the design and implementation of the biophysical monitoring of the trench. Close cooperation has also been secured from the DFO with Wilf Luedke as key contact from the DFO Nanaimo Office and the Planning and Engineering Departments of the CVRD.

**11. Consultation and Partnerships.** Steps taken during project planning to collaborate and consult with others and arrange cooperation for implementation of the project:

- The concept paper of this full proposal was first introduced to the Cowichan Stewardship Round Table composed of representatives from Cowichan Tribes; Government agencies (FLNRO, MoE, DFO); community representatives (CVRD, City of Duncan, North Cowichan); local environmental NGOs; Living Rivers; Fisherman Association; BC Wildlife Federation; Industry (i.e., Catalyst Paper, Western Forest Products Ltd. et al.), political parties; and interested area residents. The proposed intervention of breaching the causeway found unanimous support of the Cowichan Stewardship Round Table, indicative of the perceived benefits expected from the proposed intervention, in particular with respect to habitat enhancement for Chinook and other salmon species. The overwhelming stakeholder response may also reflect the priority given to the proposed breaching of the causeway locally and regionally.
- Individual discussions on the proposed breaching of the causeway via a bridge were held with (a) Cowichan Tribes, (b) Living Rivers, (c) DFO, and (d) the CVRD resulting in unanimous support.
- Following the discussion with the CVRD, the CVRD Director from Area D with her Chief planner Tom Anderson discussed the proposal with the current operators of the Westcan (Western Stevedoring and Marine Industrial and Supply Ltd.) which both acknowledged support and cooperation.
- Two site visits were organized by Living Rivers and CERCA with representatives from the BCCF, P.Geo, NJC Ltd, the CVRD, the Cowichan Watershed Management Board, and PSC Southern Fund to discuss details of the proposal and the optimum sites for breaching the causeway.
- Representatives from Surespan Ltd. Vancouver met with CERCA for a site visit to discuss engineering and hydrological details of trenching and bridge construction. Surespan was requested to submit a detailed cost proposal as key contractor for the project (see attachment).
- Letters of support for this proposal have been received from (a) Cowichan Tribes, (b) DFO, (c) CVRD, (d) BCWF (see attachments).
- A letter of confirmed cooperation especially with regards to the biophysical monitoring component of the project has been received by Living Rivers (see attachment).

**12. Approvals:**

- The first main regulatory requirement will be a DFO approval of the site development plan, technical drawing, and the actual breaching of the causeway. The DFO Habitat Branch has been informed about the proposed intervention and has provided a letter of support for our proposal (see attachment) which may be indicative that the approval of the actual project may not be a problem. The engineered drawings and technical specs will be submitted to the DFO for processing as soon as funding under the PSC Southern Fund would be approved. There will be ample of time to get the written approval from the DFO prior to the proposed start-up date in May 2014.
- The second requirement will be approval of the project by the Cowichan Estuary Environmental Management Committee (CEEMC) responsible for the implementation of the Cowichan Estuary Environmental management Plan (CEEMP). Ron Diederichs from FLNRO is currently the acting Chair of the inter-agency CEEMC. Other Committee

members include Cowichan Tribes, FLNRO's Lands Branch, the CVRD and DFO. Since this proposal has been endorsed through corresponding Letters of Support (see attachments) by the CEEMC members DFO, Cowichan Tribes, and the CVRD, it is unlikely that approval of the project permit would not be granted by the CEEMC. An official application for approval of the project will be submitted to the CEEMC as soon as funding by the PSC Southern Fund has been confirmed. Again there will be sufficient time to receive the approval prior to May 2014.

- Although official approval of the project by the CVRD may not be a regulatory requirement, discussions with the CVRD Chief Planner regarding the involvement of the CVRD and cooperation during the construction phase have been promising.
- Although approval of the Project by Cowichan Tribes is not a mandatory requirement, official approval will be requested. Cowichan Tribes is very supportive of the proposal as reflected by their attached Letter of Support.
- Approval (not a legal regulatory requirement) by the current Lessee of the Westcan Terminal which is accessed via the causeway has been given in principle based on the discussions of the proposed intervention by the CVRD Director of Area D, Lori Iannidinardo, and the CVRD Chief Planner Tom Anderson with the current operators of the Westcan Terminal. Mutually convenient arrangements regulating access during the construction phase will be made in writing prior to start-up by CERCA and Westcan operators.

#### Part 4. COST EFFECTIVENESS

**13. Costs:** The budget items to be covered by the Southern Fund include all items of the cost proposal by Surespan Ltd., the contractor enlisted to construct, deliver and install the bridge (see attached PSC Project Budget Form). This includes all of Surespan's (a) labour cost involving four persons on site for five days at \$12,892, (b) site and project costs such as machines and equipment, transport and travel at \$14,985, (c) administrative costs at \$7,610, and (d) Capital Costs of 67,156.

The capital costs include all materials needed for site preparation, stabilizing the Bridge Sub Structure, the Bridge and the End fill. Also covered by the Surespan quote is the work applied to site preparation and clean-up in accordance with safe and environmentally sound standards on project completion.

**14. Cost sharing:** The following in-kind contributions at an estimated \$ 45,530 are provided by:  
(a) CERCA members:

- Phase 1, Project Preparation: Volunteer professional time in form of extensive stakeholder consultation (meetings, correspondence, telephone conversations, presentations to several fora), media interaction and public relations, and on-site meetings with representatives from affiliated agencies, local stakeholders, specialists and contractor, and Cowichan Tribes.
- Phase 2, Site Preparation, Construction and Clean-up: Volunteer specialist services throughout construction phase by in-house biologist(s), one hydrological engineer, CERCA coordinator and voluntary helpers for manual labour if needed.

- Phase 3, Biophysical monitoring and report writing: scientific design and implementation of a two-year biophysical monitoring program related to the trench in cooperation with fishery biologists of Living Rivers and the DFO.
- (b) Living Rivers: pro bono professional services provided by fishery biologists prior, during and after construction; in particular work related to the proposed biophysical monitoring).
- (c) Cowichan Valley Regional District: pro bono services during all three phase by the CVRD Planning and Engineering Departments.

#### **15. Cost effectiveness:**

Although project benefits are difficult to quantify and qualify at this stage, expert consensus suggests that breaching the artificial barrier and re-connecting the two parts of the Cowichan-Koksilah Estuary is expected to result in a dramatic improvement of Cowichan River chinook smolt survival. The breach of the causeway will provide smolt on entering the estuary access to the southern section of the estuary which offers habitat conditions superior to habitat of the northern. The breach is also expected to equally benefit chum and coho smolt. Another Key benefit of the breach will be re-enabling freshwater flow from the Cowichan River into the southern estuary section, re-enabling estuarine water circulation and free movement of all biota of the estuary. An expected increase in Chinook stocks and other salmon species is expected to soon offset the cost of this project.

#### **Attachments:**

Site Location Map

Project Budget Form

Technical drawings for Bridge construction by Surespan Ltd. (draft)

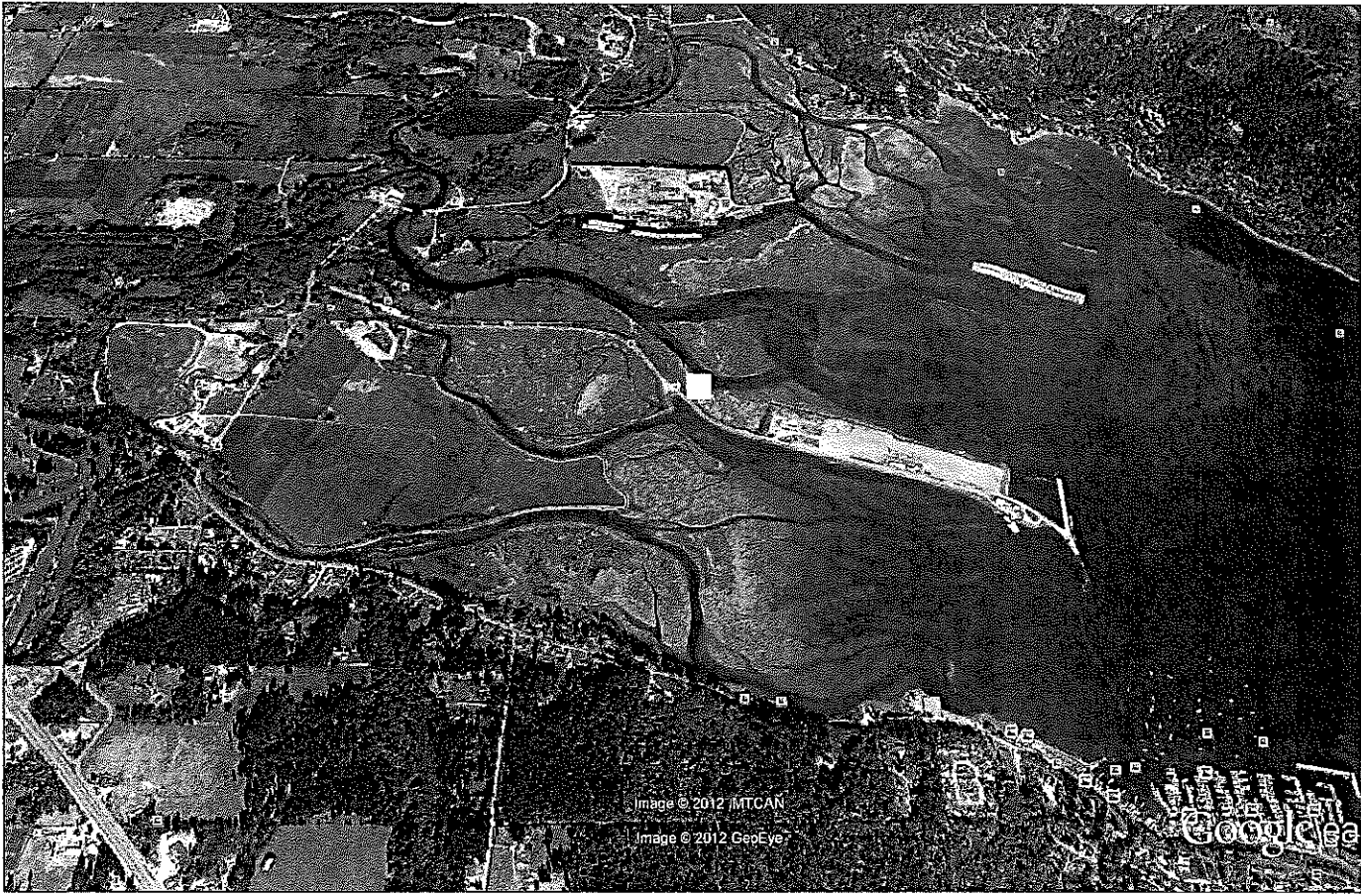
Letter of Support by Cowichan Tribes

Letter of Support by DFO

Letter of Support by Cowichan Valley Regional District

Letter of Support by BC Wildlife Federation

Letter of Cooperation Agreement with Living Rivers



Site location map for breaching the Westcan Causeway in Cowichan Bay



## Cowichan Tribes

5760 Allenby Road Duncan, BC V9L 5J1  
Telephone (250) 748-3196 Fax: (250) 748-1233

*Our file: e191-240511*

Thursday, March 6, 2014

Ann Kjerulf, Senior Planner  
Community & Regional Planning Division  
Planning & Development Department  
Cowichan Valley Regional District  
175 Ingram Street, Duncan BC V9L 1N8

Via Email: [akjerulf@cprd.bc.ca](mailto:akjerulf@cprd.bc.ca)

Dear Ann Kjerulf,

Re: CVRD Electoral Area D - Cowichan Bay Zoning Bylaw Nos. 3705 and 3773

Thank-you for your letter dated January 13, 2014 inviting comments from Cowichan Tribes on the proposed bylaws implementing the new Area D – Cowichan Bay Official Community Plan (OCP). Over the past few months Cowichan Tribes' Referral Coordinator, Tracy Fleming, has been working with the OCP Implementation Committee. At this time, most of Cowichan Tribes' comments will focus on the Zoning Bylaw 3773 which permits float homes and live-aboards in the Cowichan Bay Village, subject to proper liquid waste management requirements.

Cowichan Tribes has a long history of occupation in Cowichan Bay. The lands, waters and estuary associated with Cowichan Bay have literally been the bread-basket of our community for millennia. Existing plans and regulations have had little influence over protection of the natural environment of Cowichan Bay. Numerous impacts have led to the current state of degradation of Cowichan Bay, including grounding of vessels and log booms, loss of eelgrass, and most important to Cowichan members contamination and closure of shellfish and other marine harvesting in the bay.

The following is a list of specific comments and concerns related to the proposed Marine Zoning Bylaw 3773:

1. How does this new marine bylaw envision integration with the Cowichan Estuary Environmental Management Plan (CEEMP)? Perhaps a bylaw regulating the foreshore is pre-mature. There has been much discussion in recent years about how to make the CEEMP more pro-active and reverting it to local control. The CEEMP needs to be locally driven in a partnership between CVRD and Cowichan Tribes. Toward that end, we suggest that we work together to explore funding

options to realize a locally controlled and updated CEEMP, which includes baseline studies to support an holistic approach to managing the foreshore, estuary and the bay.

2. The foreshore Crown Land, including water lot tenures, is claimed by Cowichan Tribes for Treaty as well as through title and rights. Just because float homes and live-aboard vessels are situated over Crown-leased land does not mean they have a solid long-term right or interest to live there. These floating homes should not be granted long-term tenure. There needs to be solutions specified in this zoning bylaw that will reduce the numbers of float homes, including live-aboards, over the long-term. For instance, the bylaw could state that in the event a float home is sold, it is moved out of Cowichan Bay. Another solution may be to give marina owners a period of time, or end date, to bring the numbers of float homes into zoning compliance.
3. Bylaw 3773 proposes to permit a maximum of 32 float homes in the intertidal/nearshore zone of Cowichan Bay Village. Cowichan Tribes believes firstly that this number is too high, secondly that the maximum number needs to include BOTH float homes and live-aboards alike, and thirdly rather than a specified number of float homes/live-aboards there is maximum overall square footage (footprint). Whether it is, for illustration, 32-100 square foot vessels or 16-200 square foot vessels, the total footprint needs to be considered in order to limit the seafloor shading by these vessels.
4. The same limitations need to be spelled out in the zoning bylaw for live-aboard vessels. Both float homes and live-aboards have similar negative impacts. The footprint limitation needs to apply to the combined number of float homes as well as live aboards.
5. Any other structures or moorage facilities (including marinas) over the foreshore and into the marine area that are within the W-3 Water Marina zone (such as the Maritime Museum) that are currently NOT supporting float homes should be rezoned to another designation making it clear they are not to allow float homes OR live-aboards in the future.
6. We would also like to point out that we have been informed that the Crown tenure limits the number of float homes (or live-aboards) to 10 per hectare. Therefore the 32 maximum in this bylaw appears to contravene that limit. Cowichan Tribes looks forward to learning how the CVRD will reconcile this discrepancy.
7. Cowichan Tribes appreciates that Bylaw 3773 will require live-aboard vessels including float homes to be hooked up to sewer. We understand that despite the purchase of sewer hookups by many Marina owners, most have NOT actually physically hooked up to sewer. We encourage CVRD to explore ways to mandate marina owners and their vessels to hook up to the local sewer system.
8. A long-standing issue for Cowichan Tribes is the grounding out of moored vessels whether they are boats or float homes at low tide. Grounded vessels at low tides have significant and unacceptable impacts on marine ecosystems. Fisheries and Oceans Canada have best management practices that describe water clearances of 1.5 m between vessels and seafloor at lowest tide. We suggest CVRD employ existing mapping and studies [*Bathymetric Site Plan of Cowichan Bay Boat Basin* by Small Craft Harbours (2008), and *Towed Underwater Video Survey of the Physical and Biological Features of Cowichan Bay* by Archipelago (2005)] to investigate and implement solutions to vessel groundings in the Village of Cowichan Bay. For instance, it would be good to go through an exercise to map

out exactly where there are concerns with float homes and/or vessels grounding. If DFO already has a requirement of no grounding, CVRD needs to ensure that the marina owners limit the numbers of their moored vessels including float homes, within their existing leases, to make sure no grounding occurs.

9. There are a large number of small boats moored in the nearshore area of Cowichan Bay. These vessels' motors and anchors can damage eelgrass. Cowichan Tribes wants to continue to work with the CVRD to implement the Vessel Operating Restriction Requirements (VORR). A first step in eliminating moorage in this sensitive area would be to remove mooring bouys.
10. At the January 30, 2014 Cowichan Estuary Environmental Management Committee meeting, Cowichan Tribes shared a letter to the Province requesting unused Industrial leases associated with the WestCan Terminal to revert back to Conservation and Habitat Management status. A potential impediment to this reversion might be the proposed "Water Industrial" zoning in that area, as seen on the "Schedule A - Zoning Map". We would like to see language in Bylaw 3773 supporting reversion of unused industrial leases to marine conservation purposes. This is especially critical given that the Provincial Crown considers local area zoning in making decisions on marine and foreshore lease applications.
11. Cowichan Tribes further requests the entire marine area southwest of the WestCan terminal be zoned under the M-1 Marine Conservation designation. This part of the bay and estuary is in recovery from former industrial uses. It supports the beds of eelgrass, filamentous red and foliose green algae found nowhere else in Cowichan Bay. This area also supports the largest densities of nudibranchs, snails, sea cucumbers, muscles, clams and oysters. The report and mapping provided to Cowichan Tribes in 2005 by Archipelago Marine Research Ltd. identifies this area as having the highest biodiversity in Cowichan Bay. We know that eelgrass beds are the nurseries for juvenile fish (including Chinook salmon) and larval marine organisms. Without protection of the existing beds of eelgrass there will be no recovery of the delicate balance in the marine ecosystem of Cowichan Bay.

Cowichan Tribes looks forward to a dialogue on this important marine zoning bylaw and working with the CVRD into the future on co-management of this area under a new and updated Cowichan Estuary Environmental Management Plan. We invite you to make a presentation and field questions in an upcoming Committee of Council meeting, such as the Environment Committee or the Fishing Committee.

If you have any immediate questions or need clarification, please do not hesitate to contact myself or Tracy Fleming, Referrals Coordinator, at 250-748-3196 or by email at [Tracy.Fleming@cowichantribes.com](mailto:Tracy.Fleming@cowichantribes.com).

Sincerely,



Larry George  
Manager, Lands and Governance