

# **CAMPBELL RIVER ESTUARY MANAGEMENT PLAN UPDATE**



**Prepared For:**

**The District of Campbell River**

**Prepared By:**

**George E. Penfold, M.Sc., P.Eng., MCIP  
Qu'West Consulting Services  
Comox, B.C.**

**DATE: October 22, 2002**

# CAMPBELL RIVER ESTUARY MANAGEMENT PLAN UPDATE

## Table of Contents

<i>EXECUTIVE SUMMARY</i> .....	<i>ii</i>
1. Introduction.....	1
2. Purpose of this Project .....	2
3. Process Used to Update the Estuary Management Plan .....	3
4. The Estuary Management Plan Update .....	4
5. Campbell River Estuary Management Plan, 2002 - 2007 .....	4
A) <i>CAMPBELL RIVER ESTUARY MANAGEMENT PLAN (CREMP) AREA</i> .....	4
B) <i>VISION STATEMENT</i> .....	4
<i>Schedule A: CREMP Plan and Management Areas</i> .....	5
C) <i>PLAN GOALS</i> .....	6
D) <i>PLAN OBJECTIVES</i> .....	6
E) <i>ESTUARY MANAGEMENT PLAN POLICIES</i> .....	9
<i>Figure 1: Management Area Issues and Options</i> .....	13
6. Plan Implementation .....	18
6.1 <i>Estuary Management Commission</i> .....	18
6.2 <i>Short Term Actions</i> .....	18
<i>Appendix A: Development Permit Guideline Options</i> .....	1
<i>Appendix B: Review of Current Estuary Management Plan (EMP)</i> .....	1
a) <i>Current EMP Vision Statement for the Campbell River Estuary - 2010</i> .....	4
b) <i>Current EMP Planning Principles</i> .....	5
c) <i>Current EMP Goals and Objectives</i> .....	5
d) <i>Current EMP Projects and Activities</i> .....	9
e) <i>Current Mandate of the Estuary Management Committee</i> .....	10
<i>Appendix C: Campbell River Estuary Management Plan Review: EMC Survey</i> .....	12
<i>Appendix D: Campbell River Estuary Management Plan Review: Users and Businesses Survey</i> .....	19
<i>Appendix E: Campbell River Estuary Management Plan Review: Notes from the meeting with Businesses</i> .....	22
<i>Appendix F: Campbell River Estuary Management Plan Review: Open House Presentation Material</i> .....	25
<i>Appendix G: Campbell River Estuary Management Plan Review: Open House Responses</i> ....	33
<i>Appendix H: Campbell River Restoration and Rehabilitation Projects, 1981 – 2002</i> .....	47

**Photos courtesy of Mr. C. Cornfield, BC Ministry of Forests**

# **CAMPBELL RIVER ESTUARY MANAGEMENT PLAN UPDATE**

## *EXECUTIVE SUMMARY*

### **1. Introduction**

Since the Estuary Management Plan was Adopted by the District of Campbell River in 1996 many positive changes have occurred including, acquisition of portions of the Campbell River Estuary by the Nature Conservancy of Canada, the District of Campbell River, community partners and corporate sponsors, dedication and rezoning of river front areas to park and greenway space and development of a Park Plan for the Tyee Spit. Over \$3 million has been invested in rehabilitation and acquisition investment. Many of the major “structural” goals have been addressed.

### **2. Purpose of this Project**

The purpose of this Campbell River Estuary Management Plan (CREMP) Update is to “take stock” of accomplishments to date, identify key challenges and activities remaining, and develop a Plan for the next 5 years to continue the work of restoration of the Campbell River Estuary. The specific objectives are to:

- Identify the current status of the key management issues, policies, recommendations, programmes and accomplishments.
- Review new programmes and identify implementation options, future priorities and policies.
- Evaluate the role and function of the existing Estuary Management Commission and recommend whether alternative stakeholder involvement for implementation of future priorities is required.
- Prepare a comprehensive updated 5-year Plan and associated implementation strategy that will establish a blue print for the Estuary.

### **3. Process Used to Update the Estuary Management Plan**

This project was initiated in January of 2002. The process used to meet project objectives involved:

- Interviews with past and current Estuary Management Commission (EMC) members (see Appendix C), interviews with Estuary users (see Appendix D) and a meeting with area business owners (see Appendix E)
- Review of relevant studies, reports, and EMC meeting minutes.
- A Public Open House to review the results of a), b) and c) (see Appendix F - Background, and Appendix G - Responses)
- Meetings with the Estuary Management Commission and District Staff.

#### **4. The Estuary Management Plan Update**

Focus for the next 5 years should be on:

- Continuing the rehabilitation projects proposed in the current plan.
- Developing a long-term rehabilitation plan for the estuary that can both define the targets for additional rehabilitation, and address long-term management and use issues.
- Developing policies, performance standards and a management approach to minimize impacts on the estuary of foreshore and upland uses in the plan area.
- Developing an administrative structure and approach for the ongoing management and maintenance of estuary improvements.

#### **5. The Proposed Campbell River Estuary Management Plan**

Many of the goals and policies of the current CREMP are ongoing and still valid. These include:

- Establishing a mix of rehabilitated, re vegetated and natural upland, shoreline setbacks and foreshore that will support improved fish and wildlife habitat and park areas for active and passive forms of low impact recreation.
- Establishing an Estuary Management Commission to assist in Plan implementation and monitoring.
- Acquisition and redevelopment for public uses and environmental protection key industrial sites adjacent to the estuary.
- Development of a public park and commercial area for float plane activities on Tyee Spit.
- Working in partnership with the Campbell River Band, provincial and federal agencies and other partners to implement the goals of the Campbell River Estuary Management Plan.

Given the progress to date, including rehabilitation projects, acquisition of portions of the former Campbell River Mills site, and completion of a Park Plan for Tyee Spit, new ideas and initiatives were identified in this review process. These include:

- Recognize the ongoing and future role of light industrial and commercial development on the upland areas in the Vision Statement and policies.
- Establish a rehabilitation plan for the estuary portion of the CREMP Plan area.
- Establish restoration, land use and management objectives as part of the restoration plan
- Establish performance standards for storm water runoff quality, habitat protection, restoration or other factors related to implementation of the rehabilitation plan.
- Establish a monitoring framework for the ecological, social and economic objectives of the rehabilitation plan and the Estuary Management Plan.

- Establish a land use plan for the commercial leasehold area of Tyee Spit.
- Develop storm water management plans for watercourses flowing into the estuary.
- Encourage tourism commercial and additional First Nations representation as part of the Estuary Management Commission.
- Improve EMC communication with the public (e.g., page on District web site, or annual EMC meeting/public open house to review work completed).
- Review the role and mandate of the EMC, stewardship or other groups, and District departments and staff in ongoing monitoring and maintenance of improvements in 3 to 5 years.

# CAMPBELL RIVER ESTUARY MANAGEMENT PLAN UPDATE

## 1. Introduction

*Located in central Vancouver Island, the Campbell River drains an area of 1,460 square kilometres. The river originates from rugged mountains in the heart of the Island, including considerable areas with elevations greater than 2,220 metres. The river registers flows that are the third largest on Vancouver Island.*

*The area is the homeland of the Kwatiutl First Nation. The salmon produced by the Campbell River and estuary sustained the Kwatiutl people and their rich cultural traditions for many centuries. Permanent settlements were common in the area and many important traditional sites have been identified, especially on the estuary.*

*Three dams have influenced flow on the Campbell River since 1947 and have created major impoundments within the watershed. In addition, diversions from the Heber, Salmon and Quinsam Rivers have added to the flow within the lower Campbell River.*

*The Campbell River estuary is particularly significant to the biological and cultural history of the river. Tidal influences create a rich environment that supports an abundance of wild and hatchery-raised fish species, including many freshwater, marine and anadromous species. All five species of salmon (chinook, coho, pink, chum and sockeye) as well as sea-run trout (steelhead and cutthroat) use the estuary during their life cycle. While tidal action is strong, the gradient of the estuary is relatively steep, limiting the tidal influence to a distance of about 2.5 km and resulting in a prevalence of gravel in bottom sedimentation compared to the sand and mud sediments of lower gradient coastal rivers such as the Fraser.*

*The estuary was a prime site for industrial activities, especially logging. A much greater mix of land uses has emerged in recent times. Over the years, recreational activity has expanded both in the estuary and along the length of the river as fishing, canoeing, kayaking, bird watching, hiking and nature study have become major activities in the area.*

*Considerable community co-operation has been focused on management of the Campbell River and its estuary. Extensive planning supports a responsibly managed mix of land uses with the co-operation of many agencies and interests.<sup>1</sup>*

This description of the Campbell River and its Estuary is part of the provincial background for designation of the Campbell River as a BC Heritage River in 2000. It is a brief but accurate overview of the context and challenges facing the community of Campbell River in managing the River and Estuary for its ecological, social and economic values.

---

<sup>1</sup> <http://www.bcheritagerivers.ca/rivers/campbell.shtml>

In 1996, prior to provincial designation as a Heritage River, the District of Campbell River adopted an Estuary Management Plan, and subsequently appointed an estuary Management Commission to assist in implementation of the Plan. The purpose of this plan was to help restore the ecological values of the Campbell River estuary.

Since the Estuary Management Plan was Adopted by the District of Campbell River in 1996 many positive changes have occurred including:

- acquisition of portions of the Campbell River Estuary by the Nature Conservancy of Canada, the District of Campbell River, community partners and corporate sponsors;
- dedication and rezoning of river front areas to park and greenway space;
- development of a Park Plan for the Tyee Spit;
- over \$3 million in rehabilitation and acquisition investment. (see Appendix H)
- many of the major “structural” goals have been addressed. (e.g., relocation of Campbell River Mills, purchase of Tyee Spit, proposed termination of Ocean Cedar water lease, construction of major spawning, rearing channels)
- ongoing rehabilitation of riparian and aquatic habitat through various projects and activities.

## **2. Purpose of this Project**

The purpose of this Campbell River Estuary Management Plan Update project is to “take stock” of accomplishments to date, identify key challenges and activities remaining, and develop a Plan for the next 5 years to continue the work of restoration of the Campbell River Estuary. Based on the terms of Reference for this project, the specific objectives are to:

- Identify the current status of the key management issues, policies, recommendations and programmes of the existing Plan, including current accomplishments.
- Review new programmes currently underway within the flood plain of the Campbell River, and identify implementation options, future priorities and policies.
- Evaluate the role and function of the existing Estuary Management Commission and recommend whether alternative stakeholder involvement for implementation of future priorities is required.
- Prepare a comprehensive updated 5-year Plan and associated implementation strategy that will establish a blue print for the estuary.

### **3. Process Used to Update the Estuary Management Plan**

This project was initiated in January of 2002. The process used to meet the objectives outlined above involved:

- a) Interviews with past and current Estuary Management Commission (EMC) members (see Appendix C);
- b) Interviews with Estuary users (see Appendix D) and a meeting with area business owners (see Appendix E)
- c) Review of relevant studies, reports, and EMC meeting minutes.
- d) A Public Open House to review the results of a), b) and c) (see Appendix F - Background, and Appendix G - Responses)
- e) Meetings with the Estuary Management Commission and District Staff;

Based on the results of this review process, a review of the current plan (see Appendix B) and strategies for change were developed. The proposed changes resulting from the review are included in revised Plan for 2002 – 2007, a proposed approach to implementation of the Plan.



## 4. The Estuary Management Plan Update

Based on the outcome of review process, focus for the next 5 years should be on:

- Continuing the rehabilitation projects proposed in the current plan.
- Developing a long-term rehabilitation plan for the estuary portion of the Plan area that can both define the targets for additional rehabilitation, and address long-term management and use issues.
- Developing policies, performance standards and a management approach (as distinct from the relocation approach used in the current plan) to minimize the impacts on the estuary of foreshore and upland uses in the plan area.
- Developing an administrative structure and approach for the ongoing management and maintenance of estuary improvements.

## 5. Campbell River Estuary Management Plan, 2002 – 2007

### A) *CAMPBELL RIVER ESTUARY MANAGEMENT PLAN (CREMP) AREA*

- 1.0 The Goals and Policies of this plan apply to the area described as the Campbell River Estuary Management Plan and Management Areas as shown on Schedule A, attached.

### B) *VISION STATEMENT*

The Campbell River Estuary will exhibit:

- 1.0 a mix of rehabilitated, re vegetated and natural upland, shoreline setbacks and foreshore, which will primarily support:
- improved fish and wildlife habitat;
  - park areas for active and passive forms of low impact recreation; and
- 2.0 upland areas of well planned residential, commercial and light industrial uses that are managed in a manner that is compatible with the restoration goals and ecological health of the estuary.

**Schedule A: CREMP Plan and Management Areas**

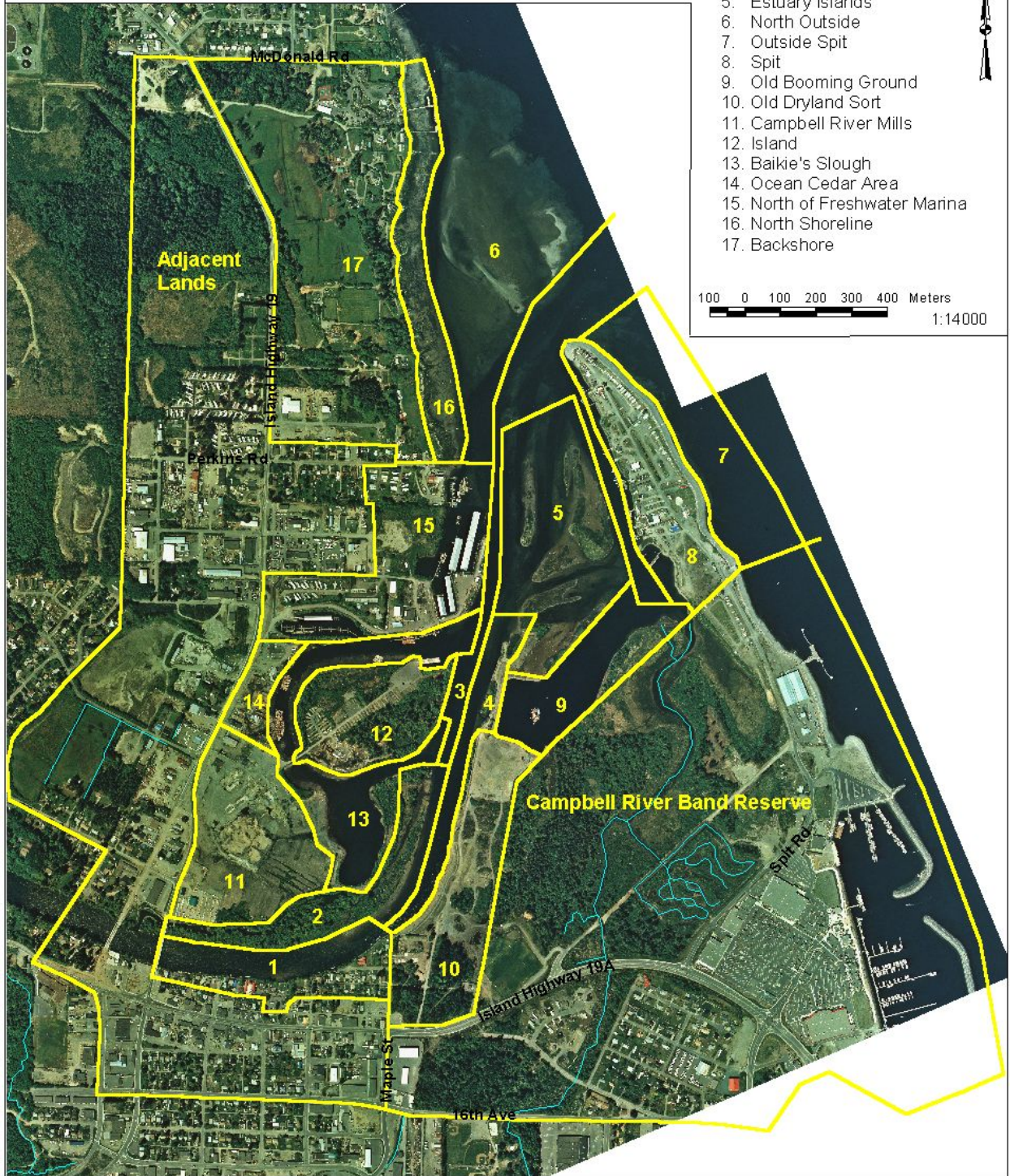
**Schedule A  
CREMP - Plan and Management Areas**

Map created October 2002 by Christine Kuta of the Greenways Land Trust. Photo taken in 1999.

1. Maple Street
2. North Riverbank
3. Dredging Channel
4. South Riverbank
5. Estuary Islands
6. North Outside
7. Outside Spit
8. Spit
9. Old Booming Ground
10. Old Dryland Sort
11. Campbell River Mills
12. Island
13. Baikie's Slough
14. Ocean Cedar Area
15. North of Freshwater Marina
16. North Shoreline
17. Backshore



100 0 100 200 300 400 Meters  
1:14000



### **C) PLAN GOALS**

1. Promote long term benefits to the natural environment over short term gains to any particular agency or user group;
2. Improve and increase the effectiveness and efficiency of long and short term decision making by regulatory agencies with regard to the management, development and allocation of land and water resources in the estuary;
3. Establish a plan and management process that:
  - is dynamic rather than defining an end state,
  - incorporates sustainability principles,
  - is founded on inherent biophysical capabilities of the estuary;
4. Recognize the long-term socio-economic needs of the community as it relates to land use decisions in the estuary;
5. Support a mix of public, residential, commercial and light industrial uses on the upland areas that is compatible with the restoration goals of the estuary;
6. Reduce conflicts between ecological preservation, recreation, public uses, and private residential, commercial and light industrial uses.

### **D) PLAN OBJECTIVES**

The following area specific objectives are intended to implement the above noted Vision Statement and Planning Goals.

#### **1. Estuary and habitat restoration**



- Develop a rehabilitation plan for the estuary, including wildlife, vegetation and fishery.
- Based on priorities in the rehabilitation plan, establish restoration priorities, projects and activities.
- Develop land use and management performance standards for storm water runoff quality, habitat protection, restoration or other factors related to implementation of the rehabilitation plan.
- Establish a monitoring framework for the ecological, social and economic objectives of the rehabilitation plan and the Estuary Management Plan.

## 2. Relocation or modification of existing industrial operations



- Continue to pursue industrial relocation strategy for specific industries (e.g., Ocean Cedar) based on available funding.
- In the interim, pursue modification of operation and management of existing logging and other foreshore operations to ensure that they are in compliance with DFO<sup>2</sup> and Environment regulations.
- Support preparation of a remedial operation plans by foreshore businesses to address compliance with DFO and Environment regulations and land use and management performance standards established as part of the estuary rehabilitation plan.

## 3. Park and interpretation development



- Publicly owned parklands will be primarily developed as corridors, connecting one portion of the estuary to another.
- Parkland corridors will follow much of the estuary shoreline, riverbank and Tye Spit shoreline.
- New park dedication shall be predominantly for environmental reasons and not necessarily for active recreational purposes (e.g. walking trails).

## 4. Tourism development



- New tourism development in the form of on-site facilities will be discouraged on the estuary and foreshore.
- The estuary and foreshore will provide opportunities for non-consumptive forms of tourism, including eco-tourism, guided non-motorized tours and estuary study.
- Tourism activities and benefits will be considered secondary to estuary ecological and restoration requirements.

---

<sup>2</sup> Department of Fisheries and Oceans Canada

## 6. Upland re-development



- Upland re-development will focus on open space dedication and moderate density mixed-use development. The latter will provide a defined urban edge to the upland and the former will protect estuary natural values and will promote habitat restoration and protection.
- Moderate density light industrial, commercial and residential (30 to 45 units per ha) will be considered for upland redevelopment areas.
- Comprehensive development plans should be completed for all redevelopment areas.

## 7. Tyee Spit



- Tyee Spit will be the primary public park site within the estuary area.
- Park development and use will be based on the Tyee Spit Park Plan, 2002.
- The Spit will continue to act as a base for floatplane operations. Over the long term, a central passenger, parking, storage area should be considered.
- Long term use and management of the commercial leasehold areas should be based on a land use plan for that area.

## **E) ESTUARY MANAGEMENT PLAN POLICIES**

### **1.0 Estuary Management Plan Policies**

Policies are divided into general policies and specific management area policies. These policies complement the recommendations and set out how the recommendations will be given action.

The following general policies will guide the Management Plan decision-making process and associated plan implementation. Additional policies that address land development issues area also noted.

#### **1.1 General Policies**

- 1.1.1 The Estuary Plan policies shall be compatible with broader community requirements as set out in the OCP.
- 1.1.2 Implementation of the Estuary Management Plan will be consistent with the Memorandum of Understanding between the District of Campbell River and federal and provincial governments.
- 1.1.3 Land use and future development on the land adjacent to the Estuary Plan area (see Schedule A) shall be undertaken so that the values and policies of the estuary are fully recognized. Policies and guidelines for streams, wetlands and natural areas on adjacent lands shall be similar to those used for the upland redevelopment area of this Plan.
- 1.1.4 The District of Campbell River will encourage the Province of BC to designate vacant crown land tenure areas as Wildlife Protection Areas under Section 17 of the Land Act.
- 1.1.5 The District of Campbell River will explore tenure and other options to ensure the long term use of crown lands that is consistent with the goals and objectives of the estuary management Plan.
- 1.1.6 Storm water management plans for watercourses flowing into the estuary will be developed. In addition to management of storm water to protect public health, safety and property, the objectives of these plans will also include managing storm water flows and quality to protect the ecological values and fish and wildlife habitat of the estuary.

#### **1.2 First Nations**

- 1.2.1 A dialogue between the Estuary Management Commission, the District and the Campbell River and other area Bands will be encouraged to identify the needs of each party and to achieve the broad principles

identified in the Management Plan and the requirements of the respective Bands.

- 1.2.2 Based on the above dialogue, the District will pursue a formal agreement with the Campbell River Band addressing development on both reserve lands and lands in the District of Campbell River, and restoration and conservation of the estuary.
- 1.2.3 A dialogue between the Campbell River Indian Band, the Province, the Federal Government and the District will be encouraged to reduce the impact of proposed residential development and to identify potential alternative Band residential areas that are located away from the estuary.

### **1.3 Estuary and Habitat Restoration**

- 1.3.1 DFO and BC Hydro will be encouraged to mimic the natural flow regimes as closely as possible their river flow guidelines for the John Hart Hydroelectric Plant,
- 1.3.2 All undeveloped lands within the estuary north of Spit Road, including Campbell River Band lands, are encouraged to remain in their natural state.
- 1.3.3 The restoration or rehabilitation of aquatic, riparian and upland areas that have been lost or degraded by previous land uses will be encouraged to maximize their value as fish and wildlife habitat.
- 1.3.4 Replacement of past habitat losses within the estuary will be promoted through the creation of new aquatic and terrestrial habitats. To this end, water lot lease renewals will be required to have a habitat improvement component.
- 1.3.6 Drainage works that improve the flushing of Baikie's slough, the adjacent log pond and the booming pocket next to the Dry land sort, will be encouraged. These drainage works shall incorporate measures to minimize the risk of property damage in the event of flood flows.
- 1.3.7 The District of Campbell River will not support dredging in the main channel of the Campbell River unless it is undertaken for public safety or habitat restoration purposes.
- 1.3.8 The District of Campbell River will support silt and debris removal in off-channel areas if it does not impact fish and wildlife habitat and it has approval from relevant provincial and federal authorities as may be required.

## **1.4 Industrial Relocation**

1.4.1 Implementation of the Industrial Relocation Strategy will continue to be pursued, along with funding to support its implementation.

1.4.2 Relocation, development and management programmes that minimize net employment loss and social dislocation over the short and long term will be promoted.

## **1.5 Tourism Development, Park and Interpretation Development**

1.5.1 The development of greenways throughout the Plan area shall be encouraged.

1.5.2 Public access will be chosen with respect for estuarine habitat functions.

## **1.6 Upland redevelopment areas**

1.6.1 A policy of net habitat gain within the study area shall be adopted for estuarine and adjacent uplands.

1.6.2 New development shall be flood-proofed as per existing requirements.

1.6.3 A minimum 30-metre setback from natural boundary or high water mark shall be required for new development. Reduced setbacks for new development or modifications to existing development may be considered based on habitat restoration or other site improvements related to the goals of the estuary rehabilitation plan and federal and/or provincial approval of modified setbacks as may be required.

1.6.4 Riparian setback area management and use will be consistent with the Greenways Management Plan

1.6.5 Clustering and medium density development of upland land uses shall be encouraged to provide open space while maximizing development opportunities from high value land.

1.6.6 Shoreline erosion protection, where private property is threatened and estuarine values are not compromised, shall be promoted.

1.6.7 The assessment of site contamination on former industrial lands and their associated remediation shall be required for all upland development sites.

1.6.8 Project proposals for new development will include an archaeological impact assessment.



- 1.6.9 Development permit guidelines, permits and approval processes, based including public access consideration, shall be prepared for the estuary intertidal, foreshore and upland areas.
- 1.6.10 Land development and management policies and guidelines that meet the objectives of current land development guidelines for the protection of shorelines and aquatic habitat, accepted by relevant provincial and federal authorities, shall be adopted.
- 1.6.11 Storm water management plans, incorporating detention and treatment systems to protect water quality in the estuary, shall be required for all development proposals.
- 1.6.12 Land development and management practices, which minimize water contamination from runoff/surface drainage as per the Provincial Urban Water Runoff Guidelines, shall be adopted.

## **1.7 Tyee Spit**

Policies for the upland redevelopment areas will also apply to the Tyee Spit as applicable. In addition, the following policies will apply:

- 1.7.1 A land use and management plan for the commercial area of Tyee Spit will be developed.
- 1.7.2 Floatplane and vehicle maintenance should not take place on the Spit.
- 1.7.3 Fuelling and other minor operational requirements should be carefully monitored and should be conducted in a manner that does not impact water, soil or air quality and supports the restoration goals for the estuary

## **2.0 Management area policies**

The primary study area is divided into 17 management areas. Those areas correspond to water lot leases, land ownership patterns and natural features. These areas provide a framework for the discussion of detailed activities that will facilitate estuary restoration.

### **2.1 Detailed management area policies and projects**

Policies and activities for each identified management area are included in Figure 1. Figure 1 summarizes: (1) the issues requiring resolution for each management area; (2) progress on policy or other requirements to address those issues for each management area; and (3) the action required to ensure policy implementation.

**Figure 1: Management Area Issues and Options**

<b><i>Issues/Concerns</i></b>	<b><i>Current Context</i></b>	<b><i>Policies and Actions</i></b>
<b><i>Area 1 (Maple Street)</i></b>		
<ul style="list-style-type: none"> <li>▪ Storm water</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on proposed waste monitoring, implementation of waste standards, public education.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a program for waste monitoring, implementation of waste standards, and public education.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Bank stabilization/rip rap</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress removing existing riprap, explore feasibility of deflector groins/fins. Pilot was undertaken on dry land sort.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Remove rip rap and restore bank to a stable natural condition.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flood proofing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Flood proofing Standard has been adjusted</li> </ul>	<ul style="list-style-type: none"> <li>• Require flood proofing to current standards.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Public access provision at road ends or as part of rezoning.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide public access on publicly owned land.</li> </ul>
<b><i>Area 2 (North Riverbank)</i></b>		
<ul style="list-style-type: none"> <li>▪ Channel flow improvement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Raven and NCC channels established.</li> <li>▪ Watershed rehabilitation plan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain existing side channel improvements as necessary.</li> <li>▪ See restoration plan, D)1above</li> </ul>
<ul style="list-style-type: none"> <li>▪ Habitat protection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Watershed rehabilitation plan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See restoration plan, D)1 above</li> </ul>
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Trails established.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain current trails as necessary. Connect to DCR Greenways and trail system.</li> </ul>
<b><i>Area 3 (Channel)</i></b>		
<ul style="list-style-type: none"> <li>▪ Industry/air transport/recreation conflict</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on public education.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a public education strategy for estuary use and activities.</li> <li>▪ Improve signage.</li> <li>▪ Define recreational use areas in the estuary/river/channels.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Bundle booms</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ocean cedar is bundling some logs and booms.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continue practice of bundling incoming booms.</li> </ul>

<b>Issues/Concerns</b>	<b>Current Context</b>	<b>Policies and Actions</b>
<b>Area 4 (South Riverbank)</b>		
<ul style="list-style-type: none"> <li>▪ Bank stabilization</li> </ul>	<ul style="list-style-type: none"> <li>▪ Partially done. Also old piling needs to be removed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stabilize bank and remove old pilings.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Habitat improvement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rehabilitation plan.</li> <li>▪ Projects completed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See restoration plan D)1 above</li> <li>▪ Maintain current improvements as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Increased water flow to old log boom area</li> </ul>	<ul style="list-style-type: none"> <li>▪ Completed, breach established.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain new channel as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress. Need restoration plan to address location relative to wildlife/sensitive area protection.</li> <li>▪ Crown land used as a park, wildlife management area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See restoration plan D)1 above</li> </ul>
<b>Area 5 (Estuary Islands)</b>		
<ul style="list-style-type: none"> <li>▪ Maintenance of habitat</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on involving Nature Trust BC and establishment of an environmental reserve in this area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In partnership with Nature Trust BC, establish an environmental reserve.</li> <li>▪ Define potential reserve areas in the restoration plan D)1 above.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Recreational use</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on establishment of a recreational plan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limit recreational activities to wildlife viewing.</li> </ul>
<b>Area 6 (North Outside)</b>		
<ul style="list-style-type: none"> <li>▪ Sewer outfall</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action needed</li> </ul>
<ul style="list-style-type: none"> <li>▪ Creation of Islands</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action needed</li> </ul>
<ul style="list-style-type: none"> <li>▪ Shoreline Channel</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action needed</li> </ul>
<b>Area 7 (Outside Spit)</b>		
<ul style="list-style-type: none"> <li>▪ Access (boat and foot)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Partially completed – boat launch, Tyee Spit plan and trails.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement Tyee Spit Plan and maintain established park.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Boat/moorage/line removal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Remove water lot leases and moorage – lease termination.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain “no moorage: policy on west side of the Spit.</li> </ul>

<b>Issues/Concerns</b>	<b>Current Context</b>	<b>Policies and Actions</b>
<b>Area 8 (Tyee Spit)</b>		
<ul style="list-style-type: none"> <li>Restoration of natural vegetation</li> </ul>	<ul style="list-style-type: none"> <li>Vegetation management plan and restoration of balsam root. Balsam root area (on-reserve land) has been fenced.</li> </ul>	<ul style="list-style-type: none"> <li>Restore vegetation as per restoration plan above D)1 and Tyee Spit Park Plan</li> </ul>
<ul style="list-style-type: none"> <li>Public access</li> </ul>	<ul style="list-style-type: none"> <li>Tyee Spit Plan completed for park, low impact recreation, open space. Some restoration completed.</li> </ul>	<ul style="list-style-type: none"> <li>Implement Tyee Spit Park Plan. Maintain park and open space.</li> </ul>
<ul style="list-style-type: none"> <li>Float plane base</li> </ul>	<ul style="list-style-type: none"> <li>Centralized facility not pursued. Consolidation of operations in current locations.</li> <li>Need land use plan based on revised lease approach</li> </ul>	<ul style="list-style-type: none"> <li>Retain long-term leases on current facilities, and consolidate activities to remove activities at north end of Spit.</li> <li>Develop a land use and management plan for the commercial area of Tyee Spit</li> </ul>
<b>Area 9 (Old log boom)</b>		
<ul style="list-style-type: none"> <li>Sub surface restoration</li> </ul>	<ul style="list-style-type: none"> <li>Breach established. Restoration not necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain channel as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Shoreline restoration</li> </ul>	<ul style="list-style-type: none"> <li>Restoration completed.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain restored areas as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Increased water flow</li> </ul>	<ul style="list-style-type: none"> <li>Breach established.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Public access</li> </ul>	<ul style="list-style-type: none"> <li>Access, walkway completed.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Barges and Float House</li> </ul>	<ul style="list-style-type: none"> <li>Have been relocated out of estuary.</li> </ul>	<ul style="list-style-type: none"> <li>No floating offices, accommodation, or marine vessel or equipment storage in this area.</li> </ul>
<b>Area 10 (Old dry land sort)</b>		
<ul style="list-style-type: none"> <li>Runoff water quality</li> </ul>	<ul style="list-style-type: none"> <li>Direct roof runoff to estuary.</li> <li>Storm water detention, oil separation.</li> </ul>	<ul style="list-style-type: none"> <li>Implement development permit/comprehensive plan policies.</li> </ul>
<ul style="list-style-type: none"> <li>Maintain public access</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive development plan.</li> </ul>	<ul style="list-style-type: none"> <li>Implement development permit/comprehensive plan policies.</li> </ul>
<b>Area 11 (Campbell River Mills)</b>		
<ul style="list-style-type: none"> <li>Industry relocation</li> </ul>	<ul style="list-style-type: none"> <li>Mill removed, NCC lands acquired.</li> </ul>	<ul style="list-style-type: none"> <li>No action needed.</li> </ul>
<ul style="list-style-type: none"> <li>Soil contamination</li> </ul>	<ul style="list-style-type: none"> <li>Study completed.</li> </ul>	<ul style="list-style-type: none"> <li>Implement development permit/comprehensive plan policies.</li> </ul>
<ul style="list-style-type: none"> <li>Highway access</li> </ul>	<ul style="list-style-type: none"> <li>Explore access options - highway improvements completed.</li> </ul>	<ul style="list-style-type: none"> <li>Implement development permit/comprehensive plan policies.</li> </ul>

<b>Issues/Concerns</b>	<b>Current Context</b>	<b>Policies and Actions</b>
<b>Area 11 (Campbell River Mills cont'd)</b>		
▪ Timing	▪ Completed, Comprehensive Development Plan polices in place.	▪ Implement development permit/comprehensive plan policies.
▪ Shoreline restoration	▪ Some completed.	▪ Implement development permit/comprehensive plan policies.
<b>Area 12 (Baikie Island)</b>		
▪ Public access	▪ NCC <sup>3</sup> developing use/management plan.	▪ Work with NCC to develop and implement a use/management plan for the foreshore and Island.
▪ Industry Relocation	▪ Mill removed, foreshore and Island acquired by DCR.	
▪ Soil Contamination	▪ Study completed, no issues.	
<b>Area 13 (Baikie Slough)</b>		
▪ increased water flow	▪ Raven channel extension being implemented.	▪ Maintain improvements as necessary.
▪ Industry relocation	▪ Campbell River Mills removed. Ocean Cedar water lot lease termination in 2005.	▪ Relocate log booming activities in the slough.
▪ Slough restoration	▪ Partially completed, boom relocation, improved water flow.	▪ With NCC, establish and implement Plan for Baikie Island and Slough. ▪ See restoration plan D)1 above.
▪ Shoreline restoration	▪ Partially completed, boom relocation, log bundling.	▪ With NCC, establish and implement Plan for Baikie Island and Slough. ▪ See restoration plan D)1 above.
<b>Area 14 (Ocean Cedar)</b>		
▪ Industry relocation	▪ Water lot lease termination in 2005	▪ Retain water lot lease termination strategy. ▪ Establish management plan based on regulatory and performance standards.
▪ Soil contamination	▪ No study	▪ Provincial regulations apply.
▪ Shoreline restoration	▪ No machinery in water, relocation of booms, boom bundles, bulkhead and marsh on Robinson Road.	▪ With NCC, establish and implement Plan for Baikie Island and Slough. ▪ See restoration plan D)1 above.
▪ Timing	▪ Water lot lease termination in 2005.	▪ Retain water lot lease termination strategy.

<sup>3</sup> Nature Conservancy of Canada

<b><i>Issues/Concerns</i></b>	<b><i>Current Context</i></b>	<b><i>Policies and Actions</i></b>
<b><i>Area 15 (Fresh Water Marina N.)</i></b>		
<ul style="list-style-type: none"> <li>▪ Storm water management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ditch has been established on Perkins road.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain ditch and monitor water quality.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Contaminated soils</li> </ul>	<ul style="list-style-type: none"> <li>▪ No study has been undertaken.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provincial regulations apply.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Water lots</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider termination of water lot leases.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider termination of water lot leases.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Bylaw compliance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider termination of water lot leases.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider termination of water lot leases.</li> </ul>
<b><i>Area 16 (North Shoreline)</i></b>		
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ No additional provision of public access.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish public access through development permit, comprehensive development plan policies.</li> </ul>
<b><i>Area 17 (Backshore)</i></b>		
<ul style="list-style-type: none"> <li>▪ Long-term growth.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No development of a comprehensive development plan for the area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a comprehensive development plan for the area.</li> </ul>

## 6. Plan Implementation

The current approach to implementation of the Estuary Management Plan through the Estuary Management Commission seems to be generally well received and productive. Next Steps should address “fine tuning” the Commission structure and mandate, and then focussing on completing the specific actions necessary to address restoration objectives.

### 6.1 Estuary Management Commission

Following are recommendations for changes to the representation structure and organizational development priorities for the Estuary Management Commission:

#### a) Representation on the EMC.

- Priority should be given to including 1 tourism commercial representative and 1 additional First Nations representative to the membership of the Commission.

#### b) Training and orientation for EMC members

- Establish policy/procedures manual and orientation program for new members.
- Use local resources (college, agencies) for training on specific issues as required.
- Look for support funding for organizational development and conference attendance.

#### c) Communication with the public

- Establish EMC page on District web site, post agendas and minutes. Have annual EMC meeting as a review meeting/public open house to review work completed.

#### d) Role and mandate of the EMC

- Review the role and mandate of the EMC in 3 to 5 years.

#### e) Ongoing management of improvements

- Identify roles for stewardship or other groups, and District departments and staff in ongoing monitoring and maintenance of improvements.

### 6.2 Short Term Actions

The main actions that require attention in the short term are:

- a) Develop a rehabilitation plan for the estuary, including restoration priorities, projects and activities.
- b) Establish a monitoring framework and approach for the ecological, social and economic objectives.
- c) Develop appropriate Development Permit Guidelines for the Estuary Management Plan area.
- d) Develop land use and management performance standards for storm water runoff quality, or other factors related to the rehabilitation plan.
- e) Work with NCC to finalize and implement a plan for Baikie Island and the adjacent foreshore.

## Appendix A: Development Permit Guideline Options

Estuarine areas are critical for provision of critical habitat for native wildlife, threatened and endangered species, resting and feeding habitat for migratory waterfowl, and food chain support to resident and non-resident species (aquatic and terrestrial). To conserve and protect estuarine areas, three key factors must be addressed in considering development and change: hydrology, water quality, and biological interactions.<sup>4, 5, 6</sup> These factors can be addressed by requiring appropriate pollution control, assimilation or water purification, flood control and base flow, erosion control, and vegetation and habitat protection or restoration where previous damaged has been incurred. These requirements can be addressed through appropriate OCP policies, zoning requirements and development permit guidelines. Following is a compilation of example guidelines currently in use in various jurisdictions in BC and the western US that can be used as a basis for discussion and development of guidelines for the Plan area by the EMC and District.

### Intertidal Area (Littoral Zone)<sup>7, 8, 9, 10</sup>

- All intertidal areas shall be preserved, except in accordance with the conditions of the permit. Works shall be constructed, where required, to preserve and enhance the shoreline by:
  - Providing safe, durable access such that people are afforded an unobstructed view of the waterfront wherever possible;
  - Retaining mature vegetation, including existing large trees, shrubs, and aquatic vegetation;
  - Replanting disturbed areas with native vegetation;
- Where development over the water is necessary, land fill shall be avoided. The preferred method of development over the water is on pilings or floating structures;
- No alterations should be made to the intertidal area without appropriate environmental studies and implementation of mitigation measures;
- Conformance with these guidelines does not exempt applicants from meeting requirements of other federal and provincial agencies.

### Foreshore

- No placing or removal of fill or discharge of deleterious material into the Campbell River estuary or adjacent watercourses and tributaries will be permitted.

---

<sup>4</sup> <http://www.wcel.org/wcelpub/2001/13300.pdf>

<sup>5</sup> <http://www.coastal.ca.gov/wetrev/wetch4.html>

<sup>6</sup> Coastal Shore Stewardship, Review Draft, Province of BC, 2002

<sup>7</sup> [http://www.city.nanaimo.bc.ca/c\\_strategic/pdf/ocp\\_10.pdf](http://www.city.nanaimo.bc.ca/c_strategic/pdf/ocp_10.pdf)

<sup>8</sup> <http://www.ci.encinitas.ca.us/municode/PDFall/30c80.pdf>

<sup>9</sup> <http://www.city.richmond.bc.ca/searchs/search.asp>

<sup>10</sup> [http://www.rdn.bc.ca/library/englishman\\_river/sections/engrvsec8.htm](http://www.rdn.bc.ca/library/englishman_river/sections/engrvsec8.htm)



- Foreshore developments should dedicate or preserve and maintain a natural, vegetated buffer strip within the first 30m (98.4 ft.) above the high-water mark, except where access is essential for water transportation or public use. The width of the buffer may be averaged to preserve significant stands of existing trees;
- In all cases, the width of the buffer may be averaged to preserve significant natural features;
- The width of the buffer may be reduced if site development and management can achieve the goals of the estuary rehabilitation plan, and if there is a significant net gain in aquatic and/or wildlife habitat. In all cases, reduction in the buffer width will require approval of appropriate federal and provincial agencies, in addition to the District of Campbell River, and minimum building setback will be 15 m (48.2 ft.)
- Potentially polluting activities shall maintain a minimum 30m (98.4 ft.) setback from the high water mark, except in accordance with the conditions of the permit;
- Developments adjacent to channels, canals or sloughs located in Environmentally Sensitive Areas shall dedicate or preserve and maintain a natural, vegetated buffer strip within the first 15.2m (50 ft.) above the high-water mark of the slough. The areas within that high-water mark buffer shall remain free of development, except in accordance with the conditions of the permit. Works shall be constructed, wherever required, to preserve and enhance the banks of the slough;
- Public access to the waterfront for the purpose of recreation or education should be designed into each foreshore development in a manner that is consistent with the natural values of the site;
- Water quality and natural systems should be protected by leaving stream banks intact and by not altering natural slopes and existing vegetation.

### **Upland Natural Areas**

- Development should preserve a natural vegetated strip 6m (19.7 ft.) wide immediately adjacent to all existing natural environmental features;
- Applicants for development should refer to the current federal, provincial and District guidelines for further details.

### **Upland Development Areas (In addition to use specific guidelines)**

- The use of herbicides, pesticides and fertilizers on vegetated areas can be applied only through an Integrated Pest Management Approach and is subject to any relevant provincial and/or federal regulations.
- Watercourses shall not be altered, except under approval of the District and relevant provincial and federal agencies.
- Where possible, there shall be limited removal of vegetation within 15.0 metres of the natural boundary of any watercourse.

- Surface drainage shall not be discharged directly into the Campbell River Estuary or watercourses leading to the estuary. Removal of sediment or other contaminants shall be required as part of surface water management.
- Surface drainage flows shall be mediated to replicate flow from an equivalent undisturbed site, and discharge water quality shall meet all relevant District, provincial and federal standards

### **Vegetation Survey Guidelines**

- All applicants for development permits involving Environmentally Sensitive Areas (ESA) should submit a vegetation survey with the application. The vegetation survey should include the following:
  - The location, diameter (dbh), crown elevation, base elevation, and species of all trees greater than 15.2cm (6 in.) in diameter at breast height above the ground (dbh) in and adjacent to the designated ESA. Adjacent trees include trees within 6m (19.7 ft.) of the designated ESA. Multitemmed or clumped trees should also be included where the dbh of the two largest stems, when added together, exceed 15cm (5.9 in.);
  - The extent of coverage and species of the dominant under storey shrubs within the areas described above;
  - The location and type of all known utilities entering or immediately adjacent to the ESA;
  - Existing and proposed property lines and building footprints for the entire site;
  - The location of the high water mark (if adjacent to the foreshore or a waterway system) and the extent of the ESA on the site;
- The application should also include:
  - One or more photographs showing as much of the ESA as possible. The photographs should be notated on the plan showing the viewpoint and direction of view;
  - A grading plan or cross section showing finished grade and appropriate drainage within 1.5 times the drip-line of the tree;
  - If necessary, a landscaping plan showing the location, size, and species of trees and shrubs to be planted as compensation for those anticipated for removal. At least 50% of the replacement species should be compatible with natural vegetation growing in the area. All planting is required to conform to BCSLA/BCNTA<sup>11</sup> planting standards.

---

<sup>11</sup> British Columbia Society of Landscape Architects/British Columbia Nursery Trade Association

## **Appendix B: Review of Current Estuary Management Plan (EMP)**

In this section, each of the components of the current Estuary Management Plan is reviewed. Plan content is summarized along with comments and suggestions from the review process. Based on these comments and suggestions, as well as comment from the Estuary management Commission and District staff, proposed changes for each section are presented. These proposed changes are the basis for the revised Estuary Management Plan.

### **a) *Current EMP Vision Statement for the Campbell River Estuary - 2010***

The Campbell River Estuary will exhibit:

- (1) a mix of rehabilitated and re vegetated natural upland, shoreline setbacks and foreshore, which will primarily support:
  - improved fish and wildlife habitat;
  - park areas that will support active and passive forms of low impact recreation;
  - and
- (2) selected upland areas of well-planned compatible residential/mixed use development.

### **Key Review Comments**

- *There is recognition of environmental sensitivity of area by general public.*
- *Emphasis to date has been on fish.*
- *Use of the Spit has been problematic.*
- *Possibly synthesize key elements into one clear vision.*
- *Vision to help recreate the natural environment.*
- *Relocation of industry is missing.*
- *Need more emphasis on “balance” between economic activity and ecological objectives.*
- *It’s on the edge of being a very good example of co-existence. It’s a question of bringing all parties into harmony, using performance-based criteria. There has to be on-going stakeholder involvement.*

### **Rationale for Change**

Policy and land use decisions over the last 5 years have recognized light industrial/commercial uses on foreshore and upland areas (e.g., Raven Industries, E&B Helicopters, lease extensions on current locations on Tyee Spit).

- Revise the Vision statement to reflect decisions to maintain light industrial/commercial uses in the area, conditional on limited impact on the Estuary.

## **b) Current EMP Planning Principles**

Planning Principles are:

- i. promote long term benefits to the natural environment over short term gains to any particular agency or user group;
- ii. improve and increase the effectiveness and efficiency of long and short term decision making by regulatory agencies with regard to the management, development and allocation of land and water resources in the estuary;
- iii. shall be dynamic rather than defining an end state;
- iv. incorporate sustainability principles;
- v. be founded on inherent biophysical capabilities of the estuary; and
- vi. recognize the long-term socio-economic needs of the community as it relates to land use decisions in the Estuary.

### **Key Review Comments**

- *Best achievement on principles v., and vi. Least achievement on ii.*
- *Need to build towards a measuring/monitoring system.*
- *Need more balance on economic needs relative to social and environmental*
- *Use conflicts are, and will be an important issue (e.g., public and commercial uses on the Spit, recreational and ecological uses in the estuary, recreational and float plane use on the Estuary)*

### **Rationale for Change**

Recent decisions noted in the Vision section above reflect a principle of maintaining business uses in the Plan area. This principle should be included in the Plan. As further residential, light industrial/commercial and recreational uses develop and evolve in the Plan area, there will be increased potential for conflict between the various land uses and users. Addressing these conflicts should be one of the recognized principles in the Plan.

- Revise principle v. to give more recognition to current business uses and recent approval of new/expanded business uses in the plan area.
- Add a new principle that focuses on addressing current and developing use and user conflicts.

## **c) Current EMP Goals and Objectives**

### **1. Modification of existing industrial operations**

- industrial relocation strategy.
- moderation to their existing logging operations to ensure that they are in compliance with DFO and Environment regulations.
- preparation of a remedial operation plan.

## **2. Park and interpretation development**

- parklands will be primarily developed as corridors, connecting one portion of the estuary to another.
- corridors will follow much of the estuary shoreline, riverbank and Tyee Spit shoreline.
- park dedication shall be predominantly for environmental reasons and not necessarily for active recreational purposes (e.g. walking trails).

## **3. Tourism development**

- active tourism development in the form of on-site facilities will be discouraged
- the estuary will provide opportunities for non-consumptive forms of tourism, including eco-tourism, guided non-motorized tours and estuary study.
- tourism benefits will be considered secondary to estuary ecological and restoration requirements.

## **4. Upland re-development**

- upland re-development will focus on open space dedication and moderate density mixed-use development. The latter will provide a defined urban edge to the upland and the former will protect estuary natural values and will promote habitat restoration and protection.
- moderate residential densities of 12 to 15 units to the acre on upland redevelopment areas should be considered. For the Campbell River Mills and Ocean Cedar sites, densities may have to be higher to ensure that industrial relocation costs can be largely offset by land redevelopment benefits.
- comprehensive development plans should be completed for all redevelopment areas.

## **5. Tyee spit**

- Tyee Spit will be the primary public park site within the estuary area. An interpretive facility should be built to provide an overview of the estuary, the management plan process and timing of plan implementation, and a floatplane history of Canadian aviation.
- the designated park area should include a large restored natural spit to the north of a floatplane base. Plant restoration, including Balsam Root, should be given priority.
- the Spit will house an on-going floatplane base that serves all operators. A central passenger, parking, storage area should be built. Maintenance should take place off-site. Fuelling and other minor operational requirements should be carefully monitored and should occur in an environmentally friendly way.

## **Key Review Comments**

### **General**

- *A lot has been accomplished including participation in EMC and significant relocation of industry away estuary; fish habitat restoration; property purchase, acquisition of the Raven/NCC land; CR Band rearing channel adjacent to Cdn. Tire, coupled with removal of Spit Road; channel construction along north shore of the river (Raven and NCC channels); habitat construction in Baikie Slough; Tyee Spit parkland.*

- *Still much to be done including further relocating industrial and commercial users of the Spit and estuary, maintaining good communication links between parties on EMC and link to politicians; park and restoration strategy for Baikie Island area, ensuring public access and ecological integrity; the future of seaplane industry and sensitive redevelopment of their properties; restoration of Spit Park, completing the spawning channels and the Raven Channel; having Ocean Blue Cedar discontinue operating in that location as per agreement with Job Protection Commission; construction of trails, continued habitat restoration, raising funds from all levels of govt., creating public awareness which will assist in raising funds.*
- *Largely DFO – heavily slanted towards fish; sensitive ecosystems and wildlife not addressed. Estuary rehabilitation needs to address other aspects than fish habitat.*
- *Need to set up effective monitoring system.*

### **Modification of existing industrial operations**

- *There has been de-emphasis of industrial representation and loss of jobs; focus on removal of any human imprint (not just industry) and not assisting with relocation.*
- *Lucky in one instance; no success in another.*
- *Ocean Cedar is trying to improve management practices.*
- *Achievement of not dredging is a great success. The failure to dredge has caused economic hardship – and that's been ignored.*
- *Nothing beneficial to industry or the town. The goal seems to be to remove industry and business at any cost in terms of jobs lost and the viability of the business, in spite of evidence industry and fish can co-exist.*
- *Continue efforts to relocate industry (particularly Ocean Cedar and the Gooldrup Boat Works, reclaim industrial lands and improve the salt-water habitat for outgoing smolts (particularly from Tyee Spit south.*
- *Businesses can operate in an environmentally friendly way and bring in income. We just need to say, - if you want to run a business here, you have to meet certain environmental objectives – follow the rules. If they can't clean up their operation, they have to move, but someone has to pay the bill.*
- *The estuary clean up in general has been good – the cedar mill has to use a crane now to pick logs out of the river and the booming ground is gone.*

### **Tourism development**

- *Monitor carrying capacity of estuary trails and parkland vis-à-vis influx of tourists.*
- *Occasional paddlers seen in the area now.*
- *Need policy re balancing public use and estuary sensitivity.*
- *Address aesthetics.*
- *Encouraging softer tourism – kayaking, canoeing, and bird watching.*
- *There should be better signage – maybe restrict canoeists and kayakers.*

### **Park and interpretation development**

- *CR needs to implement recommendation of park on Tyee Spit*
- *Trails on private property are not the same as public paths.*
- *The utility of property around the estuary is severely restricted by the 30-metre setback on the riparian strip.*

- *The biggest mistake is that Campbell River is trying to make parks out of everything. Look at Courtenay – they have an airstrip, floatplanes, helicopters, a public walkway. We seem to have a very narrow idea of “park.”*

### **Upland re-development**

- *Loss of industry (dry land sort and cement plant) had more impact than the Plan.*
- *Have policy in place regarding sale or transfer of upland leases in the estuary.*
- *Owners and lessees should be encouraged to expand – all improvements have to be paid for somehow.*

### **Tyee spit**

- *Deal with remaining tenants in the estuary, particularly on the Spit – find a way for them to co-exist with the park on the Spit. The tenants must be encouraged to stay in order to raise the necessary funds to pay for the improvements needed on the Spit. Compromise is essential.*
- *What defines a seaplane operation? Will all helicopters disappear from the Spit? Some of the users include Weyerhaeuser, Western Forest Products, Omega, the Coast Guard, RCMP, Terminal Forest Products and some other companies. West Coast has, – but doesn't charge for – a common pad for everyone to use.*
- *You see needles along the road every morning after the kids have been down there during the night.*

### **Rationale for Change**

A recent review of Estuary management Plans in BC proposes the following as components for effective estuary management<sup>12</sup>:

- inventory of natural habitats and resources as well as human activities,
- classification and ranking of sensitive areas within the estuary
- regular updating of the classification based on current conditions to ensure that changes are reflected in the classifications and other adjustments as required.

With significant components of the industrial relocation/management objectives complete or underway, and with many enhancement projects also completed, new projects and activities should be based on an assessment of the ecology and habitat of the estuary, with decisions based on both ranking of sensitivities, and potential for enhancement benefits. This assessment and prioritization will constitute a “rehabilitation plan” for the estuary.

- Establish a Rehabilitation Plan for the estuary and foreshore,
- Establish restoration and use priorities based on a rehabilitation plan for the estuary,
- Establish a Plan monitoring process to see if the Plan goals and objectives are being met,
- Establish performance criteria for foreshore and upland uses to minimize impacts on the estuary,
- Develop a land use/management plan, including allowable uses, for the long-term lease area of Tyee Spit.

<sup>12</sup> G.L Williams, 2002 - Review of Estuary Management Plans in British Columbia, Fisheries and Oceans Canada

#### **d) Current EMP Projects and Activities**

An overview of projects proposed in the current Plan and progress to date is attached as Appendix D. The comments on each project area are contained in that section, and will not be repeated here. Following are suggestions from the review for additional projects and activities.

#### **Key Review Comments**

- *Significant progress on proposed projects*
- *Develop new projects based on restoration plan*
- *Need to improve community awareness*
- *A volunteer coordinator might be a good idea for controlling invasive plant species. If CR could dedicate significant staff resources (a scientist or biologist, for example) to the area - that would certainly help.*
- *Relocation of industrial users (Ocean Cedar)*
- *Continue to co-opt current owners and tenants to help improve estuary*
- *Public access*
- *Restoring Spit and ERT dry land sort*
- *Habitat rehabilitation in Baikie Slough*
- *DCD Pile-driving/Fresh Water Marina*
- *Water quality and storm water management*
- *Storm water runoff monitoring*
- *Develop land-use plan for NCC lands*
- *Rehabilitation of industrial areas*
- *Establish monitoring protocol*
- *Funding and construction of Tye Spite Park*
- *Get contamination studies done – imperative; determine impact of planes landing over bird habitat, oil from planes and runoff on eelgrass.*
- *There is a creek in the Perkins Road behind Cameron’s Mobile Homes running into the estuary – if this creek could be turned northwards to follow the base of the slope towards Painters Lodge and across Perkins Road into the other creek and both continue north.*

#### **Rationale for Change**

The above suggestions include “ongoing” work such as development of a land use plan for the NCC lands and implementation of the Tye Spite Parks Plan, as well as some new ideas to add to the “unfinished” project work outlined in the original plan. These suggestions constitute options for investment of project money, volunteer time and Commission and staff time and resources. With limited resources, it will be important to prioritize these options, and well as other new ideas that may emerge, based on potential for long term benefits to the estuary area.

- Establish project priorities and activities based on restoration and use for the estuary.



### **e) Current Mandate of the Estuary Management Committee**

In the Terms of Reference established by Bylaw, the mandate of the Estuary Management Commission is as follows:

- i. facilitating industrial relocation
- ii. planning estuary rehabilitation
- iii. monitoring users and uses, and addressing improper uses, trespass and lease violations
- iv. facilitating agreements or memorandums of understanding concerning the management of the Estuary
- v. reporting to council and to the Community on the state of the Estuary and the progress made in implementing the plan.

### **Key Review Comments**

- *Monitoring users doesn't work well because the Commission has no enforcement powers.*
- *EMC's priorities should be re-examined from time to time;*
- *Reps from wide range of interest groups (good cross-section) – individuals, environmentalists and recreational users – who have varying objectives and time to examine the issues.*
- *Not sure single-interest reps can give unbiased input; need more and better (and younger) representation on EMC.*
- *Environmental opportunism associated with being on EMC.*
- *There should be an elected member from council attached to EMC, attending the meetings and taking back the message.*
- *Senior agency participation may change because of govt. constraints.*
- *More and better (unbiased, younger) representations on EMC.*
- *Advisory function to CR council is critical.*
- *Meaningful consultation with the bands is absolutely necessary. There are some archaeological sites out on the Spit and around the estuary that have been ignored.*
- *Reassess how long it is considered necessary to keep the EMC in place. It's possible that other existing organizations or groups could do the work (if it's mainly restoration).*
- *Possibly bring in more partners to be part of this success story.*
- *There has to be an orientation process for new Commission members. Members need to be reminded why they're there and where they're going. The EMC should meet on site, do a field inspection, and become more familiar with the area it's dealing with.*
- *It's important to give EMC members open terms of reference – so that business concerns are taken into consideration. Let the EMC guide the City Council – don't limit it with terms of reference.*

### **Rationale for Change**

If the past progress toward rehabilitation of the estuary continues over the next 5 years, the administrative and management functions needed to support the estuary will shift toward monitoring and maintenance of improvements that have been put in place. It is not clear if this role is substantial enough to warrant an Estuary Management Commission as currently mandated by the District of Campbell River.

- Review current EMC representation with a view to strengthening the business “voice’  
On the Commission,
- When the major objectives of the EMP have been addressed (3 to 5 years), review  
the need for a Commission, or a revised mandate that best suits the needs of the  
estuary and the District of Campbell River.

## Appendix C: Campbell River Estuary Management Plan Review: EMC Survey

Includes comments from Russ Irish, Ron Burrell, Peter Law, Larry Langford, John Ebert, Harley Elias, Lee Luckhurst, Ken Collins, Dan Wickham and Jerry Fletcher. Ed Wilcox

General Questions		Ye s	No	Rate/Describe/Elaborate/Comment
<b>Vision</b>				
1	Does the Vision Statement reflect your understanding of Vision for estuary?	3		Uncertain – there is recognition of environmental sensitivity of area by general public. More or less; use of the Spit has been problematic.
	Other ideas that should be added?	2	1	<ul style="list-style-type: none"> <li>▪ Possibly synthesize key elements into one clear vision.</li> <li>▪ To help recreate the natural environment.</li> <li>▪ Relocation of industry is missing.</li> </ul>
<b>Goals</b> (performance rating 1 very poor, 5 excellent)				
2	a) facilitate industrial relocation			3, 3.5, 4, 3, 3 (average 3.3)
	b) plan estuary rehabilitation			5, 3.5, 4, 4, 4 (avg. 4.1) Largely through DFO's efforts (fish habitat only, wildlife needs to be addressed.)
	c) monitor users and uses			4.5, 2, 5, 2, 3 (avg. 3.3) No enforcement powers.
	d) Facilitate Agreements re estuary management			2, 4.5, 4, 4 (avg. 3.625)
	e) report to Council + community			Council: 5, community: 1; 3.5; 5; 4 (through minutes and reports to council); 4 (avg. 3.75)
3	Which goals are the most important			A (4), B (4),E
	. . . Least imp.			C (4) D
4	Major accomplishments to date			<ul style="list-style-type: none"> <li>▪ Participation in EMC and significant relocation of industry away estuary; fish habitat restoration; property purchase.</li> <li>▪ Acquisition of the Raven/NCC land; CR Band rearing channel adjacent to Cdn. Tire, coupled with removal of Spit Road; channel construction along north shore of the river (Raven and NCC channels); habitat construction in Baikie Slough; Tye Spite parkland.</li> <li>▪ The Plan package as a whole.</li> <li>▪ Establishment of park at Tye Spite; removal of industry from the estuary.</li> </ul>
5	Strengths of EMC			<ul style="list-style-type: none"> <li>▪ Communication amongst all parties.</li> <li>▪ Reps from wide range of interest groups (good cross-section) – individuals, environmentalists and recreational users – who have varying objectives and time to examine the issues.</li> <li>▪ Diversity and experience of participants, as well as their personal knowledge of the estuary.</li> </ul>

General Questions		Yes	No	Rate/Describe/Elaborate/Comment
6	Weaknesses of EMC			<ul style="list-style-type: none"> <li>▪ Delays in reaching consensus.</li> <li>▪ Policing is not part of mandate of EMC (monitoring uses and users); nor is education of general public.</li> <li>▪ Representation: not sure single-interest reps can give unbiased input; need more and better (and younger) representation on EMC.</li> <li>▪ Environmental opportunism associated with being on EMC.</li> <li>▪ De-emphasis of industrial representation and loss of jobs; focus on removal of any human imprint (not just industry) and not assisting with relocation.</li> </ul>
7	Major tasks over next 5 yrs			<ul style="list-style-type: none"> <li>▪ Relocating industrial and commercial users of the Spit and estuary.</li> <li>▪ Maintain good communication links between parties on EMC and link to politicians; strategy for Baikie Island area, ensuring public access and ecological integrity; and future of seaplane industry and sensitive redevelopment of their properties; restoration of Spit Park.</li> <li>▪ Completing the spawning channels and the Raven Channel; having Ocean Blue Cedar discontinue operating in that location as per agreement with Job Protection Commission; construction of trails.</li> <li>▪ Continued habitat restoration.</li> <li>▪ Raising funds from all levels of govt.; creating public awareness which will assist in raising funds.</li> </ul>
8	Most significant challenges			<ul style="list-style-type: none"> <li>▪ Trying to satisfy the needs of businesses to be relocated.</li> <li>▪ Ensuring good lines of communication, ability to ensure funding opportunities are understood and recognized; promoting recognition of industries' roles in environmentally sustainable operations and responsible management practices (ISO 14,000).</li> <li>▪ Further work in the estuary could be financed through compensation for harmful alteration, damage or destruction to fish habitat in other locations rather than in a less productive site.</li> <li>▪ Maintaining commitment from CR.</li> <li>▪ Focusing on the vision and policies, goals and objectives – i.e., facilitating relocation; sustainability is the objective, and environmental protection cannot exist with economic sustainability.</li> </ul>
9	New purposes EMC should have?	2	3	<ul style="list-style-type: none"> <li>▪ Needs to address other aspects (than fish) habitat; needs to set up effective monitoring system.</li> <li>▪ EMC's priorities should be re-examined from time to time;</li> <li>▪ Monitor carrying capacity of estuary trails and parkland vis-à-vis influx of tourists.</li> </ul>
10	Other changes needed to EMC structure?	1	4	<ul style="list-style-type: none"> <li>▪ There should be an elected member from council attached to EMC, attending the meetings and taking back the message.</li> <li>▪ Senior agency participation may change because of govt. constraints.</li> <li>▪ More and better (unbiased, younger) representations on EMC.</li> <li>▪ Advisory function to CR council is critical.</li> </ul>

General Questions		Yes	No	Rate/Describe/Elaborate/Comment
11	Options for CR other than EMC?	2	3	<ul style="list-style-type: none"> <li>▪ Expand role/mandate of EMC to advisory body to council on other environmental issues; Have DCR's habitat steward sit on EMC.</li> <li>▪ Task forces can be extremely effective. A task force could be struck to assist in the relocation of Ocean Cedar.</li> </ul>
12	Other suggestions to improve restoration and management	1	2	<ul style="list-style-type: none"> <li>▪ Local govt taking lead role, system well structured.</li> <li>▪ Enforcement!</li> <li>▪ Volunteers, fund-raising (create a vehicle).</li> <li>▪ Aid in relocating industrial users on the north side of the river, such as Ocean Cedar and the boat-builder on Perkins Road.</li> </ul>
13	Who should we contact? – from agencies			Cdn. Wildlife Service; Env. Canada; First Nations through Bob Duncan
	- from not-for-profit , Community Groups			NCC; Tye Club; Nature Trust BC; Nature Conservancy; BC Salmon Foundation
	- other (individuals, experts)			Landowners and lease holders in the area – Timber West, E&B Helicopters, Mike Ellis of Ocean Cedar, Alec Baikie of Fresh Water Marina, Keith Hudson of Hudson Farms, Anne Young of King Coho Resort, the person who runs Westmin's dock facility (ask Bob Duncan). Mike Gage (ex pres. Of Tye Club, instrumental in acquiring Raven Lumber lands) – will undoubtedly have other contacts to suggest.

EMP Evaluation Questions		Rating 1 (very poor) to 5 (excellent)	Comment?
<b>Principles</b>			
1	Long-term benefits to natural environment	3.5, 3.5, 4?, 4, 3 (avg. 3.6)	
	Improved decision-making by Agencies	1, 5, 3.5; 3.5 and 1; 3 (avg. 2.8)	Not possible under current bureaucratic system. CR: 3.5, prov. and fed. govt.: 1.
	Be dynamic	4.5, 4.5, 2, 4, 3 (avg. 3.6)	
	Incorporate sustainability principles	3, 4, 3.5, 4, 4 (avg. 3.7)	Successful in some areas, unsuccessful in others (Ocean Blue).
	Founded on biophysical capability	5, 4, 4, 3, 4 (avg. 4)	Self-evident; that's what the plan is.
	Recognize long-term socio-econ. needs	4.5, 5, 4.5, 4, 4 (avg. 4.4)	
2	Any Additional principles for next 5 yrs?		Monitoring effectiveness.
3	Any suggestions to CR and/or EMC address principles?		<ul style="list-style-type: none"> <li>▪ Stay committed to the vision.</li> <li>▪ Build towards a measuring/monitoring system.</li> <li>▪ Outline principles at beginning of meetings, keep people on track.</li> </ul>
<b>Policies, Projects and Activities</b>			
4	Dredging	1, 1, 1, ?, 1, 1 (avg. 1)	<ul style="list-style-type: none"> <li>▪ Achievement of not dredging is a great success.</li> <li>▪ Might be necessary for some users.</li> <li>▪ Wasn't required.</li> <li>▪ Not applicable.</li> </ul>
	Habitat restoration	5, 3, 3.5, 4, 4, 4 (avg. 3.9)	Except for Spit.
	Industrial relocation	3.5, 3, 4.5, 4, 4, 3 (avg. 3.7)	Lucky in one instance; no success in another
	Modify existing industrial operations	2.5, 3, ?, 4, ?, 2 (avg. 2.9)	Ocean Cedar is trying.
	Park and interpretive development	?, 1, 4, 3, 3, 4 (avg. 3)	Not aware
	Tourism development	2, 3, 2, 2, 1, 4 (avg. 2.333)	Occasional paddlers seen in the area now.
	Upland redevelopment	1, 2, 3, 2, 3, 3 (avg. 2.333)	
	Tyee Spit (parkland)	2.5, 2, 3.5, 1, 3, 1 (avg. 2.2)	
	Tyee Spit (floatplane base)	1, 1, 1, 2, 4, 3 (avg. 2)	
	EMC mgmt. structure	5, 5, 3, 5, 3 (avg. 4.2)	

	Question	Rating (1 to 5)	Comment?
5	Any additional policies for next 5 yrs?		<ul style="list-style-type: none"> <li>▪ Address aesthetics</li> <li>▪ Balance tourism and industry/business values.</li> <li>▪ Need policy re balancing public use and estuary sensitivity.</li> <li>▪ Changes to OCP and/or EMP should be done when the EMC is sitting, so EMC has opportunity to comment.</li> <li>▪ Have policy in place regarding sale or transfer of upland leases in the estuary.</li> </ul>
6	Any suggestions to help CR or EMC address policies?		<ul style="list-style-type: none"> <li>▪ Stay committed.</li> <li>▪ Possibly look at makeup of committee.</li> <li>▪ Review progress and audit successes and failures.</li> <li>▪ See above.</li> </ul>
<b>Management/Implementation Process</b>			
7	Plan adoption	5, 5, ?, 5, 3 (avg. 4.5)	Not sure how much of plan is in OCP
	Management structure	5, 5, 5, 5, 3 (avg. 4.6)	Impossible to overstate Ron's importance
	MOU	?, 4, 3, ?, 3 (avg. 3.3)	
	Monitoring	3, 3, 1, 4, 3 (avg. 2.8)	<ul style="list-style-type: none"> <li>▪ Include carrying capacity as it relates to tourism (cruise ships, for example).</li> <li>▪ No monitoring yet.</li> </ul>
	Industrial relocation program	5, ?, 2, 2, 3 (avg. 3)	No sub-committee.
	Zoning	3.5, 5, 1, 3, 4 (avg. 3.3)	
	Water lot leases	5?, 5, ?, 3, 3 (avg. 4)	
	CR Band	3, 1, 1.5, 1, 2 (avg. 1.7)	
	Plan monitoring	3, 5, 1, 4, 3 (avg. 3.2)	
	Restoration program	5, 4, 4, 4, 4 (avg. 4.2)	Largely DFO – heavily slanted towards fish; sensitive ecosystems and wildlife not addressed.
	Other studies	3, 1, 1, 1, ? (avg. 1.5)	
8	Any additional implementation recommendations for next 5 yrs?		<ul style="list-style-type: none"> <li>▪ Continue to strive to reach consensus, work with the people who are there unless you can afford to buy out the non co-operators.</li> <li>▪ Get contamination studies done – imperative; determine impact of planes landing over bird habitat, oil from planes and runoff on eelgrass.</li> </ul>
9	Any suggestions to help CR or EMC address implementation recommendations?		<ul style="list-style-type: none"> <li>▪ Stay committed.</li> <li>▪ More money/funding – strategy required.</li> <li>▪ Establish issue/project specific task forces.</li> <li>▪ CR should encourage the development of habitat enhancement within the estuary as compensation for damage on other sites.</li> </ul>

	Question	Rating (1 to 5)	Comment?
<b>OCP and Zoning Policies</b>			
10	OCP: Develop Local Area for North CR	?, 1, ?, ?, ?	Not aware of one.
	Establish an estuary rehabilitation trust	?, 1, 1, 1, ?	Not sure
	Flood proofing to provincial standards	1, 1, 1, 1, ?	Impossible
	Contingency plan for spills	?, 1, 1, 1, ?	
	Site remediation	4, 1, 1, 2, ? (avg. 2)	
<b>Tasks or Projects Still Required</b>			
11	Major tasks still to be achieved?		<ul style="list-style-type: none"> <li>▪ Relocation of industrial users (Ocean Cedar)</li> <li>▪ Continue to co-opt current owners and tenants to help improve estuary</li> <li>▪ Public access</li> <li>▪ Restoring Spit and ERT dry land sort</li> <li>▪ Habitat rehabilitation in Baikie Slough</li> <li>▪ DCD Pile-driving/Fresh Water Marina</li> <li>▪ Water quality and storm water management</li> <li>▪ Storm water runoff monitoring</li> <li>▪ Develop land-use plan for NCC lands</li> <li>▪ Rehabilitation of industrial areas</li> <li>▪ Monitoring protocol</li> <li>▪ Encouraging softer tourism – kayaking, canoeing, bird watching</li> <li>▪ Funding and construction of Tyee Spit Park</li> </ul>
12	Possible changes: new goals?		<ul style="list-style-type: none"> <li>▪ Review goals because of changing industrial base.</li> <li>▪ Refresh, prioritize goals and ensure these are clear to everyone.</li> <li>▪ Goals need to be redefined.</li> </ul>
	Changes in administration, management?		<ul style="list-style-type: none"> <li>▪ Enforcement.</li> <li>▪ More and better representation on EMC.</li> </ul>
	New, more effective methods?		Meet on site, explore site.
	New partnerships, Network expansion?		<ul style="list-style-type: none"> <li>▪ Additional participants.</li> <li>▪ Possibly BC Hydro.</li> <li>▪ Don't know.</li> </ul>
	Additional community awareness?		<ul style="list-style-type: none"> <li>▪ Big time!</li> <li>▪ This will come.</li> </ul>
	Additional information or knowledge?		<ul style="list-style-type: none"> <li>▪ Assume "to Commission members": YES! Commission could be more effective with more open info . . .</li> <li>▪ Rivers Day works well.</li> <li>▪ There's probably a lot of info out there, needs to be compiled and distributed to members.</li> </ul>



	Question	Rating (1 to 5)	Comment?
	Additional restoration, remediation?		<ul style="list-style-type: none"> <li>▪ Ongoing.</li> <li>▪ On Spit and ERT lands.</li> </ul>
	Additional support (funders)?		Nature Conservancy, land trusts, DFO, BC Hydro
	Improved cost effectiveness?		"We're free!"
	Additional community involvement?		<ul style="list-style-type: none"> <li>▪ But it would cost more . . .</li> <li>▪ Open houses once a year.</li> </ul>
	Other?		Links with other organizations maintained
13	Most significant challenges in accomplishing these tasks?		Cooperation between all parties; Funding mechanisms.
14	Any suggestions on addressing challenges?		Keep lines of communication open.
15	Other comments?		"I found some of the questions confusing – I stumbled on them, so others undoubtedly found it rather difficult. I think the questionnaire should be simplified before taken further."
16	Other contacts?		Jimmy Robinson (owns a lot of the land in the area); Pat Martin of Raven Lumber; Van. Island Air; Sealand Aviation; Craig Huston, West Coast Helicopters; trailer-court operator; MG Air?

## **Appendix D: Campbell River Estuary Management Plan Review: Users and Businesses Survey**

Includes comments from Ken Enns, Ralph Krentz, Gordon Littlejohn, Mike Ellis, Ian Lightfoot, Chris Hall, Tim Ennis, Dan Wickham and Dee Collins.

### **1. What have been the major accomplishments to date?**

- Leading the province by example by establishing a vision for the river and estuary and implementing the EMP
- Continuing the momentum of previous efforts by the community; purchase of the Raven lands.
- Not much – the loss of industry (dry land sort and cement plant) had more impact than the Plan.
- Nature Conservancy bought some land.
- Better environment for fish, but at what cost?
- Relocation of much of the industry and resolution of the water-lot leases.
- CR should be given a lot of credit for trying to move industry out of the estuary. The fact that NCC was able to acquire a key piece of property was very important, as it includes red-listed plants and will be critical in restoring plant habitat. DFO has been instrumental in restoring fish habitat. Parkland on the Spit is/will be a major accomplishment.
- Creation of the Spit Plan, removal of much of industry from the estuary, clean-up of the estuary and creation of new fish habitat.
- The Plan only came to me three weeks ago and I haven't read it. But concerns have been expressed to me.

### **2. What have been the failures or inadequacies – in either substance or procedure?**

- None, other than possibly the salt-water end of the plan area.
- Doesn't take businesses other than the airlines into account; lack of consultation - we weren't contacted or consulted when the plan or the aviation study (1995) were done. The aviation plan wasn't properly done. A major fault is the idea that dredging is needed for safe take-off and landing of floatplanes, yet dredging could be very detrimental to the habitat. Allowing canoes and kayaks into water landing strips is a huge conflict. There is hardly any policing of activities on the Spit. Areas where planes are being worked on should be fenced off. Not sure industry representatives on the EMC are fair and unbiased; they have a potential conflict of interest. Since the aviation study was done, there has been a build-up of retail business in the approach path – how is this being dealt with?
- Lack of communication with parties/businesses outside the Commission. Doubt there is a real balance between environmental interests and those of property owners and businesses.
- Nothing beneficial to industry or the town. The goal seems to be to remove industry and business at any cost in terms of jobs lost and the viability of the business, in spite of evidence industry and fish can co-exist. Input into the plan has been very one-sided. There are a lot of people in business who haven't even been contacted.
- The failure to dredge has caused economic hardship – and that's been ignored. The EMC has done very little to help industry relocate, but has assisted greatly in destroying it.

- Possibly over-emphasis on fish compared to the larger realm of bio-diversity. There could be a potential danger unless we pay more attention to non-native invasive plant species.
- There hasn't been adequate consultation with the First Nations bands.

### **3. What major tasks remain to be done?**

- Continue efforts to relocate industry (particularly Ocean Cedar and the boat-building business), reclaim industrial lands and improve the salt-water habitat for outgoing smolts (particularly from Tye Spit south).
- All the information available needs to be taken into consideration, not just the often-biased and erroneous information that is being fed to council. Businesses need the opportunity to have proper input.
- CR needs to implement recommendation of park on Tye Spit; there needs to be a management plan for the NCC lands.
- Deal with remaining tenants in the estuary, particularly on the Spit – find a way for them to co-exist with the park on the Spit. The tenants must be encouraged to stay in order to raise the necessary funds to pay for the improvements needed on the Spit. Compromise is essential.
- Meaningful consultation with the bands is absolutely necessary. There are some archaeological sites out on the Spit and around the estuary that have been ignored. There are records of houses built on stilts in the estuary. The area is culturally very rich – it's an old village site. The CR Band also has had a claim on the land for some time. These are all concerns for us and need to be addressed. The area is very close to the CR Band and also to the Comox and Cape Mudge bands. There has to be more and better consultation; I can't speak for the bands, they have to speak for themselves.

### **4. Have you any suggestions on how these tasks could best be done?**

- The marina could be heavily restricted; create some habitat both on the inside and the outside of the marina.
- Sit down with and talk to me and other employers – it has been very frustrating. We need an unbiased, objective person to collect all the information and have it all presented in the plan and to council.
- Redefine objectives; give landowners and users the opportunity for input in order to achieve the plan; respond to landowners' concerns.
- A volunteer coordinator might be a good idea for controlling invasive plant species. If CR could dedicate significant staff resources (a scientist or biologist, for example) to the area - that would certainly help.
- Revisit the decision that was made by council with respect to the Spit tenants.
- Contact the bands – Campbell River first, then Cape Mudge and Comox. Also contact Ian Whitbread at the Archaeological Branch in Victoria, and he can tell you about the records or direct you to someone who can.

### **5. Are the boundaries of the EMP right/appropriate?**

- Upstream boundary is good; the ocean is possibly overlooked somewhat.
- Yes.
- Don't know.

**6. Do you have any additional comments or suggestions?**

- There is a creek in the Perkins Road behind Cameron's Mobile Homes running into the estuary – if this creek could be turned northwards to follow the base of the slope towards Painters Lodge and across Perkins Road into the other creek and both continue north, create a holding pond or wetland in the flat area, meandering and entering the ocean just south of Hudson's Farm. We could possibly get some land donated free, if the owners could be given tax receipts.
- Reassess how long it is considered necessary to keep the EMC in place, it's possible that other existing organizations or groups could do the work (if it's mainly restoration).
- Possibly bring in more partners to be part of this success story.
- There has to be an orientation process for new Commission members. Members need to be reminded why they're there and where they're going. The EMC should meet on site, do a field inspection, and become more familiar with the area it's dealing with.

**7. Do you know of other individuals, organizations or businesses that should be contacted?**

Don Cameron or Clint Cameron 287-3244 cell 287-1388 (they also own Dolphin Resort)  
First Nations  
Pat Martin, Raven Lumber\*  
Spit users  
Floatplane companies  
BC Hydro  
Gooldrup Boat Works at the end of Perkins Road  
Chief Aubrey Roberts of Campbell River Band, 286-6949  
Chief Ralph Dick of Cape Mudge Band, 286-1687  
Comox Band manager Melinda Knox (chief is Ernie Hardy), 339-4545

## Appendix E: Campbell River Estuary Management Plan Review - Notes from the meeting with Businesses

Monday, 10 June 2002

**Present:** George Penfold, Qu'West Consulting Services  
Kelly Gesner, Landworks  
Ron Neufeld, District of Campbell River (DCR)  
Michael Roth, DCR  
Sean Roy, DCR

Steve Jnuszewski, SteveJan Consulting Inc.  
Gavin Dirom, Boliden Westmin  
David Mchaina, Boliden Westmin  
Dennis Rodbom, Boliden Westmin  
Ian Lightfoot, JW Timber/DCD Pile Driving/Fresh Water Marina  
Ralph Krentz, Silver King Lodge  
Craig Houston, West Coast Helicopters  
Bill Alder, Sealand Aviation  
Janet Cosh, R&N Logging  
Jim Robinson,  
Jim Spiers, Resident, Tyee Spit

The meeting started with participants outlining their concerns, which included:

- If we participate in this process, this might be perceived as “buying in” – i.e., supporting the plan. The District made lots of promises before about consulting us, but we were never consulted. I wrote a letter to them in 1998 and still haven't received a reply. I can't understand why I was never consulted.
- Lessees and landowners owners aren't on the same playing field. Private owners don't have the same benefits and clout as lessees. When the airline companies dug in their heels, the District did the right thing and allowed them to stay.
- The Estuary Management Commission membership is not property balanced. People who have bought land and made an investment in the community have been forgotten – not listened to. The Commission listened to my presentation, but said they couldn't take it into consideration – said I was caught in the middle. At least half the members of the Commission should be from the private sector.
- What defines a seaplane operation? Will all helicopters disappear from the Spit? Some of the users include Weyerhaeuser, Western Forest Products, Omega, the Coast Guard, RCMP, Terminal Forest Products and some other companies. West Coast has, – but doesn't charge for – a common pad for everyone to use.
- What is the impact on the community as a result of loss of business? Where's the compensation for businesses? Was there an impact study done to determine who can stay and who can't?
- The economic factor hasn't been taken into consideration. We're all environmentalists – we're just not radical – we're rational. If the environmental groups were true environmentalists, they'd say “shut the pulp mill down.” But they don't. It has to stay – we all know that.
- The biggest mistake is that Campbell River is trying to make parks out of everything. Look at Courtenay – they have an airstrip, float-planes, helicopters, a public walkway . . . We seem to have a very narrow idea of “park.”

- The businesses can operate in an environmentally friendly way and bring in income. We just need to say, if you want to run a business here, you have to meet certain environmental objectives – follow the rules. If they can't clean up their operation, they have to move, but someone has to pay the bill. If the businesses can follow the rules and operate cleanly, it is dumb to force them out.
- The estuary clean-up in general has been good – the cedar mill has to use a crane now to pick logs out of the river and the booming ground is gone. Maybe there could be some more improvements. The other committee (Spit Park?) is going in the wrong direction. Now you see needles along the road every morning after the kids have been done there during the night. Campbell River is driving business/income away.
- Someone has to pay the bills, so if you can create a park alongside business, fine. To understand the ecological issues, you need to have an expert do a study to determine the issues. A certain amount of dredging (of silt) would help clean up the estuary.
- Canoeists are a hazard in the Spit area – they canoe right across the landing strip. You can barely read the dilapidated sign – you can't even see it from inside the estuary. There should be better signage – maybe restrict canoeists and kayakers.
- It sounds good, but it requires common sense. We've put up signs, and they've been ripped down. If you don't allow people on the Spit, you'll have kids partying and vandalizing. You need security. If you do have people, you don't have these problems.
- The current CREMP is like a desk-top exercise; it contains a lot of motherhood issues. It talks about relocation of business and compensation . . . Was there any study done to determine what industries have to relocate and how it should be done? We have to move from the motherhood statements of the CREMP and get to the nuts and bolts.
- There was an aviation study done, but the politicians dictated the parameters and the format, and the consultant was not allowed to consider helicopter operations. If it was biased to begin with, the result will be biased. I've made a plan – as an alternative to the City's plan for the Spit. You could have a walk-around, pictures of the helicopters, to make it look nice and be part of the community. But I don't have a way to show my plan or a vehicle for bringing it forward.
- Look at Granville Island – we have to look at examples in drawing up plans for the Spit. We need a way of measuring or quantifying – of setting standards and monitoring them.
- The (environmental) rules already exist. The private landowners are there; you have to deal with them. The lessees need to be treated the same as the private landowners and follow the rules.

Summary: What you're saying is, let's set some environmental objectives (as a way of revising the plan). Then we could say to businesses, if you can meet these objectives, you can continue to operate. Other issues include the depth and bottom quality of the estuary, signage, conflicting uses, a better system of use management, better representation on the EMC (a vehicle for being heard) . . .

Other suggestions and ideas:

- The Greenway Association has some radical plans – out of the question. Trails on private property are not the same as public paths. The utility of property around the estuary is severely restricted by the 30-metre setback on the riparian strip.
- Water quality could be improved. They still store some booms in the estuary because the shingle mill is still there. If it were dredged, it would make a big difference for the fish and for the flow of water. Establishing water flow through the slough by dredging some mud out would make good sense. The logs being brought into the river seem to be the only remaining cause for concern. Maybe they could take them out of the water outside the estuary and truck them to the mill.

- The only fish that haven't come back are the trout.
- I suggest, under Planning Principles, you say "promote socio-economic needs" rather than "consider."
- It's on the edge of being a very good example of co-existence. It's a question of bringing all parties into harmony, using performance-based criteria. There has to be on-going stakeholder involvement.
- It's important to revisit the principles of the CREMP and to look at other models for implementation (like Courtenay). What are the impacts and what are the issues that determine who should leave – and will they be compensated? We have to have a common goal and a strong united voice as a group. The EMC has to look at the three aspects of the environment – social, economic and physical/natural.
- It's important to give EMC members open terms of reference – so that business concerns are taken into consideration. Let the EMC guide the City council – don't limit it with terms of reference. Don't let council direct the EMC, but let them direct council – this way the Commission can speak fairly for everyone. The Commission should be the vehicle that speaks for the business community as well as for other interests.
- The City has to have full consultation before proceeding with any plans.
- The local process doesn't work. I've tried for eight years to go through the process, and it doesn't work.
- We need longer-term leases (on the Spit) before we can plan anything.
- Spit lease-holders have been shafted. I've never seen what the original Spit looked like, and I've never seen the CREMP. A plan with walkways and signs is not the original state of the estuary. The politicians are not on site, and they're not listening to us. Every circumstance is different – no one size fits all.
- Owners and lessees should be encouraged to expand – all improvements have to be paid for somehow. We just want a level playing field.
- The leases that are there are somewhat flawed. If the current plan is implemented, the Spit (Parks) will be used 50 or 60 days of the year. All users have to be treated equally – whether they own or lease. The whole situation down there needs some guidance from people who pay the bills.
- We need to see a vision statement and some goals and objectives before we meet again.
- The business community clearly feels that it hasn't been heard. So, use this opportunity . . . and tell any of your colleagues who didn't make it to this meeting, to call George.

Next session: Open House on Tuesday, 25 June, from 4 to 9 p.m.

## Appendix F: Campbell River Estuary Management Plan Review: Open House Presentation Material

<b>CAMPBELL RIVER ESTUARY MANAGEMENT PLAN REVIEW – IDENTIFIED ISSUES/OPPORTUNITIES AND OPTIONS</b>		
<b>Issues/Opportunities/</b>	<b>Current Context</b>	<b>Change Options</b>
<b>1. Management</b>		
a) Lack of adequate representation and focus on EMC for the economy.	<ul style="list-style-type: none"> <li>▪ Current Bylaw requires 11 members:               <ul style="list-style-type: none"> <li>1 - First Nations</li> <li>2 - Industrial commercial</li> <li>2 - Recreational</li> <li>4 - at large</li> <li>1 - Fisheries and Oceans Canada</li> <li>1 - Ministry of Water, Land and Air Protection.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain current representation proportion.</li> <li>or</li> <li>▪ Add industrial commercial and tourism representatives.</li> <li>▪ Add industrial commercial and tourism representatives and reduce at large representatives.</li> </ul>
b) Better training and orientation for EMC members.	<ul style="list-style-type: none"> <li>▪ Currently no orientation program for new members, or training in either organizational development and management or ecosystem management or other technical aspects of management of the estuary.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a manual and orientation program for new members.</li> <li>▪ Provide budget for organizational development and training.</li> <li>▪ Provide budget for technical training, workshop and conference attendance.</li> </ul>
c) Better communication with the public.	<ul style="list-style-type: none"> <li>▪ Annual report is filed with council.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No further action.</li> <li>or</li> <li>▪ Annual EMC public open house to review work completed.</li> </ul>
<b>2. Vision/Goals</b>		
a) Need more emphasis on “balance” between economic activity and ecological objectives.	<ul style="list-style-type: none"> <li>▪ Current related principle is: <i>“recognize the long-term socio-economic needs of the community as it relates to land use decisions in the estuary.”</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain the current principle.</li> <li>and</li> <li>▪ Identify management objectives in regards to the economy.</li> </ul>
b) Need to be aware of conflict between recreational activities (trails, parks) and ecological and business objectives.	<ul style="list-style-type: none"> <li>▪ Plan currently combines public and private uses. Safety and security for the business is an increasing concern.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a clear policy of no public access on private lands, including setback areas.</li> <li>▪ Improve signage identifying public area boundaries.</li> <li>▪ Develop a security strategy with the RCMP.</li> </ul>



Issues/Opportunities/	Current Context	Change Options
c) Need to be aware of conflicts between park and business uses on the Spit.	<ul style="list-style-type: none"> <li>▪ Current focus is on public education.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop communication strategy re conflict and use of the estuary.</li> <li>▪ Develop a use plan (recreation, preservation, transportation) for the public areas of the estuary.</li> <li>▪ Improve signage.</li> </ul>
d) Need to establish clear restoration goals and objectives that businesses and restoration efforts can address.	<ul style="list-style-type: none"> <li>▪ There are “project” objectives, but not clear objectives for water quality, amount and quality of fish and wildlife habitat, or for recreation, tourism and business.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a watershed rehabilitation plan (See section 4 below.)</li> <li>▪ Establish water quality, restoration and other related objectives.</li> <li>▪ Address lease renewal or relocation goals based on a specific plan to address objectives.</li> </ul>
<b>3. Policies</b>		
a) Need to review 30 metre setback requirement.	<ul style="list-style-type: none"> <li>▪ Current Bylaw requires a 30 metre setback for all commercial industrial development.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain 30 metre setback.</li> <li>or</li> <li>▪ Use a 30 metre management zone with specific development permit policies to limit runoff contamination, restore habitat, use best management practices appropriate for the enterprise and retain buffers.</li> </ul>
b) Need to review appropriateness of policy to remove West Coast Helicopters, Silver King Lodge from the Spit.	<ul style="list-style-type: none"> <li>▪ Current policy permits only float plane uses on the Spit.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain current policy.</li> <li>or</li> <li>▪ Revise policy to permit long term leases for West Coast Helicopters, Silver King Lodge.</li> </ul>
c) Need to review ecological/fish and social emphasis in policies and activities relative to wildlife, and economy.	<ul style="list-style-type: none"> <li>▪ Current related principle is: <i>“promote the long term benefits to the natural environment over short term gains to any particular agency or user group.”</i> Most of the available funding for habitat improvement has been related to the fishery.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain current principle.</li> <li>and</li> <li>▪ Develop a watershed rehabilitation plan (See section 4 below.)</li> </ul>

Issues/Opportunities/	Current Context	Change Options
<b>4. Projects</b>		
<b><i>Watershed Rehabilitation Plan</i></b>	<ul style="list-style-type: none"> <li>▪ Referred to in several sections of current EMP. Parts of both planning and projects have been done. Rehabilitation Plan needs to be developed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specific project to develop a restoration plan for the estuary.</li> </ul>
<b><i>Monitoring</i></b>	<ul style="list-style-type: none"> <li>▪ Referred to in several sections of the current EMP. Several components are available (e.g., water quality, bird count) but no complete set of indicators, and related data collection are in place.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a monitoring framework for the ecological, social and economic objectives of the plan.</li> </ul>

	<b>Current Context</b>	<b>Change Options</b>
<b>Area 3 (Maple Street)</b>		
<ul style="list-style-type: none"> <li>▪ Storm water</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on proposed waste monitoring, implementation of waste standards public education.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain project.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Bank stabilization/rip rap</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on policy to remove existing rip rap, explore feasibility of deflector groins/fins. Pilot was undertaken on dry land sort.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain project.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Flood proofing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Flood proofing Standard has been adjusted.</li> <li>▪ Ongoing on a project basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Retain policy to flood proof to current standards.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Bridge abutment</li> </ul>	<ul style="list-style-type: none"> <li>▪ MoTH review of abutment design.</li> </ul>	<ul style="list-style-type: none"> <li>▪ New bridge in place. No longer an issue</li> </ul>
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Public access provision at road ends or as part of rezoning.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain, but limit to publicly owned land.</li> </ul>
<b>Area 4 (North Riverbank)</b>		
<ul style="list-style-type: none"> <li>▪ Bridge footing design</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bridge constructed.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Channel flow improvement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Raven and NTC channels established.</li> <li>▪ Watershed rehabilitation plan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain side channel improvements as necessary.</li> <li>▪ See restoration plan above.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Habitat protection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Watershed rehabilitation plan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See restoration plan above.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Trails established.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain current trails as necessary, connect to NCC trail system.</li> </ul>
<b>Area 5 (Channel)</b>		
<ul style="list-style-type: none"> <li>▪ Proposed one-time dredging</li> </ul>	<ul style="list-style-type: none"> <li>▪ No dredging has taken place. No longer needed.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Industry/air transport/recreation conflict</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on Public education.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain public education objective.</li> <li>▪ Add improved signage.</li> <li>▪ Define recreational use areas in the estuary/river/channels.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Bundle booms</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ocean cedar is bundling some logs and booms.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain policy.</li> </ul>

<b>Issues/Concerns</b>	<b>Current Context</b>	<b>Change Options</b>
<b>Area 6 (South Riverbank)</b>		
<ul style="list-style-type: none"> <li>▪ Bank stabilization</li> </ul>	<ul style="list-style-type: none"> <li>▪ Partially done. Also old piling needs to be removed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain stabilization objective.</li> <li>▪ Add removal of pilings.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Habitat improvement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rehabilitation plan.</li> <li>▪ Projects completed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See restoration plan above.</li> <li>▪ Maintain current improvements as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Increased water flow to old log boom area</li> </ul>	<ul style="list-style-type: none"> <li>▪ Completed, breach established.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain new channel as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress. Need restoration plan to address location relative to wildlife/sensitive area protection.</li> <li>▪ Crown land used as a park/wildlife management area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See restoration plan above.</li> </ul>
<b>Area 7 (Estuary Islands)</b>		
<ul style="list-style-type: none"> <li>▪ Maintenance of habitat</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on involving Nature Trust BC and establishment of an environmental reserve over this area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain these objectives/activities.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Recreational use</li> </ul>	<ul style="list-style-type: none"> <li>▪ Little progress on involving Nature Trust BC and establishment of an environmental reserve over this area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain, but limit to wildlife viewing.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Maintenance of habitat</li> </ul>	<ul style="list-style-type: none"> <li>▪ Work with Fisheries and Oceans/partners to enhance island habitat.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No longer an obvious need. Has naturally regenerated.</li> </ul>
<b>Area 8 (North Outside)</b>		
<ul style="list-style-type: none"> <li>▪ Sewer outfall</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action needed</li> </ul>
<ul style="list-style-type: none"> <li>▪ Creation of Islands</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action needed</li> </ul>
<ul style="list-style-type: none"> <li>▪ Shoreline Channel</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ No action needed</li> </ul>
<b>Area 9 (Outside Spit)</b>		
<ul style="list-style-type: none"> <li>▪ Access (boat and foot)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Partially completed – boat launch, Tyee Spit plan and trails.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement and maintain Tyee Spit Plan.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Boat/moorage/line removal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Remove water lot leases and moorage – lease termination.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain no moorage policy.</li> </ul>

<b>Issues/Concerns</b>	<b>Current Context</b>	<b>Change Options</b>
<b>Area 10 (Tye Spite)</b>		
<ul style="list-style-type: none"> <li>Restoration of natural vegetation</li> </ul>	<ul style="list-style-type: none"> <li>Vegetation management plan and restoration of balsam root. Balsam root area (on-reserve land) has been fenced.</li> </ul>	<ul style="list-style-type: none"> <li>See restoration plan above.</li> </ul>
<ul style="list-style-type: none"> <li>Public access</li> </ul>	<ul style="list-style-type: none"> <li>Tye Spite Plan completed for park, low impact recreation, open space, some restoration.</li> </ul>	<ul style="list-style-type: none"> <li>Implement and maintain Tye Spite Plan.</li> </ul>
<ul style="list-style-type: none"> <li>Float plane base</li> </ul>	<ul style="list-style-type: none"> <li>Centralized facility not pursued. Consolidation of operations in current locations.</li> </ul>	<ul style="list-style-type: none"> <li>Retain policy of long term leases on current facilities, and consolidation of activities to remove activities at north end of Spite.</li> </ul>
<b>Area 11 (Old log boom)</b>		
<ul style="list-style-type: none"> <li>Sub surface restoration</li> </ul>	<ul style="list-style-type: none"> <li>Breech established. Restoration not necessary.</li> </ul>	
<ul style="list-style-type: none"> <li>Shoreline restoration</li> </ul>	<ul style="list-style-type: none"> <li>Restoration completed.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain restored areas as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Increased water flows</li> </ul>	<ul style="list-style-type: none"> <li>Breech established.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Public access</li> </ul>	<ul style="list-style-type: none"> <li>Access, walkway completed.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>Barges and Float House</li> </ul>	<ul style="list-style-type: none"> <li>Have been relocated out of estuary.</li> </ul>	<ul style="list-style-type: none"> <li>Retain policy of no floating offices, accommodation, or marine vessel or equipment storage.</li> </ul>
<b>Area 12 (Reserve)</b>		
<ul style="list-style-type: none"> <li>Maintain working relationship with Campbell River Band</li> </ul>	<ul style="list-style-type: none"> <li>Band member on EMC.</li> <li>Spit Road removed.</li> <li>No action on Native Liaison Group.</li> <li>No formal agreement on Estuary. development/conservation</li> </ul>	<ul style="list-style-type: none"> <li>Retain EMC relationship.</li> <li>Retain District Council Band relationship.</li> <li>Retain formal agreement policy.</li> </ul>
<b>Area 13 (Old dry land sort)</b>		
<ul style="list-style-type: none"> <li>Runoff water quality</li> </ul>	<ul style="list-style-type: none"> <li>Direct roof runoff to estuary.</li> <li>Storm water detention, oil separation.</li> </ul>	<ul style="list-style-type: none"> <li>Retain development permit/comprehensive plan policies.</li> </ul>
<ul style="list-style-type: none"> <li>maintain public access</li> </ul>	<ul style="list-style-type: none"> <li>comprehensive development plan.</li> </ul>	<ul style="list-style-type: none"> <li>Retain development permit/comprehensive plan policies.</li> </ul>

<b>Issues/Concerns</b>	<b>Current Context</b>	<b>Change Options</b>
<b>Area 14 (Campbell River Mills)</b>		
<ul style="list-style-type: none"> <li>▪ Industry relocation</li> <li>▪ Soil contamination</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mill removed, NCC lands acquired.</li> <li>▪ Study completed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain development permit/comprehensive plan policies.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Highway access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explore access options - highway improvements completed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain development permit/comprehensive plan policies.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Timing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Completed, CDP polices in place.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain development permit/comprehensive plan policies.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Shoreline restoration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Some completed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain development permit/comprehensive plan policies.</li> </ul>
<b>Area 15 (Baikie Island)</b>		
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ NCC developing use/management plan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Work with NCC to develop a use/management plan for the Island.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Industry Relocation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mill removed, NCC lands acquired.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Soil Contamination</li> </ul>	<ul style="list-style-type: none"> <li>▪ Study completed, not an issue.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Timing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Completed.</li> </ul>	
<b>Area 16 (Baikie Slough)</b>		
<ul style="list-style-type: none"> <li>▪ increased water flow</li> </ul>	<ul style="list-style-type: none"> <li>▪ Raven channel extension being implemented.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain improvements as necessary.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Industry relocation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Campbell River Mills removed, Ocean Cedar lease termination in 2005.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain relocation objective for activities in the slough only.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Slough restoration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Partially completed, boom relocation, improved water flow.</li> </ul>	<ul style="list-style-type: none"> <li>▪ NCC Plan, See restoration plan above.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Shoreline restoration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Partially completed, boom relocation, log bundling.</li> </ul>	<ul style="list-style-type: none"> <li>▪ NCC Plan, See restoration plan above.</li> </ul>

<b>Issues/Concerns</b>	<b>Current Context</b>	<b>Change Options</b>
<b>Area 17 (Ocean Cedar)</b>		
<ul style="list-style-type: none"> <li>▪ Industry relocation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Water lot lease termination in 2005</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain water lot lease termination.</li> <li>▪ Establish performance standards for land based activities.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Soil contamination</li> </ul>	<ul style="list-style-type: none"> <li>▪ No study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provincial regulations will apply.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Shoreline restoration</li> </ul>	<ul style="list-style-type: none"> <li>▪ No machinery in water, relocation of booms, boom bundles, bulkhead and marsh on Robinson Road.</li> </ul>	<ul style="list-style-type: none"> <li>▪ NCC Plan, See restoration plan above.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Timing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Water lot lease termination in 2005.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Highway access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Highway access options – highway improvements completed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain development permit/comprehensive plan policies.</li> </ul>
<b>Area 18 (Fresh Water Marina N.)</b>		
<ul style="list-style-type: none"> <li>▪ Storm water management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ditch has been established on Perkins road.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Contaminated soils</li> </ul>	<ul style="list-style-type: none"> <li>▪ No study.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provincial regulations will apply.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Water lots</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider termination of water lot leases.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain current policy.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Bylaw compliance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider termination of water lot leases.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain current policy.</li> </ul>
<b>Area 19 (North Shoreline)</b>		
<ul style="list-style-type: none"> <li>▪ Public access</li> </ul>	<ul style="list-style-type: none"> <li>▪ No additional provision of public access.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain policy and development permit/comprehensive plan policies.</li> </ul>
<b>Area 20 (Backshore)</b>		
<ul style="list-style-type: none"> <li>▪ Long term growth.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No development of a comprehensive development plan for the area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain policy to develop a comprehensive development plan for the area.</li> </ul>

## Appendix G: Campbell River Estuary Management Plan Review: Open House Responses

<b>CAMPBELL RIVER ESTUARY MANAGEMENT PLAN REVIEW – Survey Results (19 responses)</b>		
<b>1. Management</b>		
<b>Issues/Opportunities:</b>	<b>Change Options:</b>	<b>Check ✓ Preference</b>
a) Lack of adequate representation & focus for the economy on EMC.	▪ Retain current representation portion, or	8
	▪ Add business representatives	3
	▪ Add industrial business representatives & reduce large reps.	7
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ Maybe exchange one of the recreational reps for a tourist rep.</li> <li>▪ Need 1<sup>st</sup> Nations rep from aboriginal tourism sector or Laiwitach First Nation</li> <li>▪ Community individuals who wish to participate need to put their names forward</li> <li>▪ EMC should be an overall representation of the community from all interest groups &amp; users</li> <li>▪ Economic opportunity is driven by business. As significant tax payers &amp; employers they represent &amp; fund a broad spectrum of the population</li> <li>▪ An equal # of “green” &amp; industrial parties are needed, ideally some neutral 3<sup>rd</sup> party representatives</li> <li>▪ 1 tourism rep.</li> <li>▪ Add commercial tourism rep as a priority to allow commission to have effective involvement in planning process</li> <li>▪ First Nations have 1 representative, but a very large cultural &amp; economic interest including representation</li> <li>▪ At large representation allows for a more visible process (i.e.: not left to the “experts”, this is important, so retain “at large” as well</li> <li>▪ Could have short “estuary update” news in local newspaper each month</li> </ul>		
b) Need training & orientation for EMC members	▪ Establish manual & orientation program for new members	12
	▪ Provide budget for organizational development & training	6
	▪ Provide budget for workshop & conference attendance	4
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ The best orientation would be to read annual report of the commission &amp; review OCP</li> <li>▪ Members should know what the issues in the estuary are. If funds are available then there should be \$ allocated to training etc.</li> <li>▪ EMC should draw members from people who are directly affected by or have vested interest in changes to the Estuary</li> <li>▪ Commission members should be bringing these qualities &amp; abilities to the table! However, if required, put into place</li> <li>▪ There should be a manual &amp; access to technical specialists to clarify members’ questions</li> <li>▪ Don’t stretch costs if not required</li> </ul>		



Issues/Opportunities:	Change Options:	Check <input checked="" type="checkbox"/> Preference
c) Need better communication with the public	▪ No further action	
	▪ Web page	11
	▪ Outreach by Habitat Steward	4
	▪ Annual EMC public open house to review work completed	15
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ Make line on the City web page</li> <li>▪ Quarterly newsletter in area papers</li> <li>▪ This was the 1<sup>st</sup> that I knew there was an EMC</li> <li>▪ Impact studies reflecting lost jobs &amp; tax base must be measured &amp; communicated. Are the desired results being accomplished?</li> <li>▪ Tell public all facts &amp; consequences (not opinions) to the business 7 employees using the Estuary</li> <li>▪ Annual meeting for review/beginning of new projects. Public should have all facts of industrial use</li> <li>▪ A program on local TV</li> <li>▪ A web site would provide static &amp; current information. How does the public have opportunity for input?</li> <li>▪ Public access to minutes via webpage</li> <li>▪ All of these are excellent suggestions, but web pages require maintenance, as does a habitat steward, unless already on staff</li> <li>▪ An update (small column) in local newspaper</li> </ul>		
d) Review the role & mandate of the EMC	▪ The District should review the role & mandate of the EMC over the next 3 to 5 years.	Yes – 18
		No
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ Should include public consultation</li> <li>▪ EMC should deal with facts instead of opinions of fisheries officers. Program should be reviewed to see if it is even needed after initial restoration</li> <li>▪ Every 5 years</li> <li>▪ Maintains the effectiveness of organization!</li> <li>▪ Roles &amp; responsibilities need to be reconsidered</li> <li>▪ To ensure the original direction of a park is maintained on Tyee Spit</li> </ul>		
e) Ongoing management of improvements	▪ The District should identify departmental & staff roles for ongoing maintenance of improvements over the next 3-5 yrs.	Yes – 15
		No
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ Any &amp; all maintenance should be contracted out to private business</li> <li>▪ There should be a plan, but not sure if district should lead!</li> <li>▪ Look at other organizations to partner in the maintenance functions</li> </ul>		

<b>2. Vision/Goals</b>		
<b>Issues/Opportunities:</b>	<b>Change Options:</b>	<b>Check ✓ Preference</b>
a) Vision Statement/Goals	▪ To provide public parks & access	8
	▪ To provide for non-consumptive tourism & recreation activities	8
	▪ To improve the quality of fish & wildlife habitat	15
	▪ To protect environmentally sensitive areas	12
	▪ To support economic activities that are not detrimental to restoration of the Estuary	10
	▪ To manage upland & water based activities & uses in a manner that supports restoration of the Estuary	10
<b>Comments</b>		
<ul style="list-style-type: none"> <li>▪ Most important is to improve fish &amp; wildlife habitat</li> <li>▪ All uses should support estuary &amp; not take away from wildlife natural values</li> <li>▪ A balance between environmental stewardship &amp; economic impact must be reached. Abstinance of use is not a rational or reasonable objective</li> <li>▪ Objective should be a “no harm” policy. Restoration should be done &amp; then allow nature to take its course. Existing businesses should be allowed to continue to operate as long as there are no blatant violations to fisheries act</li> <li>▪ Provide a reasonable methodology for identifying activities that have positive &amp; detrimental impacts in goals. Commercial recreation, if brought on board, will be a source of funding to achieve long term goals</li> <li>▪ The focus of the restoration should be to create diverse fish &amp; wildlife habitat</li> <li>▪ There is more than enough opportunity provided in the area, the entire foreshore south of Campbell River and harbour are tourist/recreation areas</li> <li>▪ Need vision statement to define goal</li> <li>▪ Sea planes only on the Spit. Emergency helipad, no fishing lodge</li> </ul>		
b) Need more emphasis on “balance” between economic activity & ecological objectives	▪ Retain the current principle	8
	▪ Identify new management objective in regard to the economy	11
<b>Comments</b>		
<ul style="list-style-type: none"> <li>▪ The Campbell is a heritage river &amp; should be managed to promote its environmental health</li> <li>▪ There does need to be a balance between social, ecological &amp; economic</li> <li>▪ A balance between environmental stewardship &amp; economic impact must be reached.</li> <li>▪ A thorough study should be done on economic impact of closing all businesses in the Estuary including employment, taxes, trickle down to satellite businesses, tourism etc.</li> <li>▪ Need to move forward on the public &amp; commercial recreation use aspect of the plan. As recognition of Estuary is increasing – need to establish ASAP</li> <li>▪ Recognize the limited estuary type habitat available &amp; manage as rare habitat</li> <li>▪ Economic activity &amp; ecological objectives should be balanced if compatible</li> <li>▪ Parks need financial support, thus some income needed, some parks need vandalism protection</li> <li>▪ Keep the Spit “Green” for future generations</li> </ul>		

Issues/Opportunities:	Change Options:	Check ✓ Preference
c) Conflicts between recreational activities & ecological & business objectives	▪ The Greenways Plan policy of no public access on private lands applies to the Estuary	9
	▪ Improve public area signage	10
	▪ Develop a security strategy with Parks & Rec. & RCMP	7
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ The fragile estuary needs all the protection it can get</li> <li>▪ Security is up to lease holders</li> <li>▪ A goal of complete abstinence of use is unreasonable</li> <li>▪ Trespass common in habitats being restored (motor vehicles on Baikie)</li> <li>▪ Possibly need security fencing and 11:00 p.m. closure</li> </ul>		
d) Conflicts between park & business uses on the Spit.	▪ Develop communication strategy re conflict & use of Estuary	15
	▪ Develop public area use plan (recreation, preservation, transportation)	9
	▪ Improve signage	8
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ The Spit should have only a terminal &amp; the airplanes should be parked somewhere less environmentally sensitive</li> <li>▪ The magnitude of impact must be based on science, not propaganda. The interests being served are far too narrow</li> <li>▪ The first two items are priorities!</li> <li>▪ Airplane base and helicopter base serve our town and need to be included in protection of their investment</li> <li>▪ Research other areas to see what they have done e.g., Sidney</li> </ul>		
e) Need to establish clear restoration	▪ Develop a rehabilitation plan	12
	▪ Establish water quality, wildlife & fishery restoration, economic objectives	12
	▪ Address lease renewal or relocation based on specific plans to address objectives.	12
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ By rehabilitating the Spit, tourist economy would increase (bird watching, canoeing)</li> <li>▪ Lease renewal must be based on ecological needs of estuary. Businesses should be committed to long range vision of area</li> <li>▪ Also rehab. Plan for invasive species to native species.</li> <li>▪ Stewardship should reflect responsible goals with consideration of all interests on the Estuary.</li> <li>▪ Lease renewal should continue until such time as funding and adequate sites become available</li> <li>▪ If you want businesses to be involved, you'll need to clearly articulate a restoration plan. Incorporate some flexibility on restoration for businesses to plan around</li> <li>▪ There should be plans, funding options &amp; annual filed projects completed</li> <li>▪ Prioritize and remain flexible/realistic achievable objectives</li> <li>▪ Establish goal for restoration, but have exceptions for planes &amp; helicopters established there.</li> </ul>		

<b>3. Policies</b>		
Issues/Opportunities:	Change Options:	Check ✓ Preference
a) Need to review 30 metre setback requirement	▪ Retain a rigid 30 m. setback	7
	▪ Use a 30 m. management zone with specific development permit policies	9
<b>Comments</b>		
<ul style="list-style-type: none"> <li>▪ Senior agencies should set standard. DCTC should enforce based on science.</li> <li>▪ 30 m from creek, river &amp; wetland</li> <li>▪ The 30 m. setback is not supported by science. This made in BC policy must e revisited &amp; brought in to balance with the rest of Canada</li> <li>▪ Management should include “grandfather” clauses for existing businesses. New development should have specific permit policies.</li> <li>▪ Special policies should apply to areas outside of setbacks</li> <li>▪ Locked setback isn’t an effective method to manage foreshore edge</li> <li>▪ Precautionary principle should prevail</li> <li>▪ Exception could be to already establish airplane &amp; helicopter bases</li> <li>▪ Retain 30 m. except for seaplane bases</li> </ul>		
b) Review appropriateness of policy to limit long-term lease are of Tye Spit to float plane uses.	▪ Retain current policy	3
	▪ Develop a land use/management plan, including allowable uses, for the long term lease area of Tye Spit	17
<b>Comments</b>		
<ul style="list-style-type: none"> <li>▪ Work towards a single seaplane terminal, possible private/public partnership</li> <li>▪ Long term leases should be uses that will enhance area, peacefulness, recreation habitat, etc. NOT take away from</li> <li>▪ If your looking at long-term balance of ecological &amp; economic benefits requires a management plan</li> <li>▪ Reduce the business uses of the area</li> <li>▪ All please</li> <li>▪ No businesses except planes &amp; helicopter, phase out leases to the Spit can gradually get back to Natural Park.</li> </ul>		
c) Review ecological/fish & social emphasis	▪ Retain current principle, and	6
	▪ Develop a rehabilitation plan (See section 4 below.)	13
<ul style="list-style-type: none"> <li>▪ Keeping fish &amp; wildlife habitat in good shape is good for all C.R. citizens</li> <li>▪ Evidence of impact must support statements of MOF &amp; other interested parties. There is significant misinformation.</li> <li>▪ Indisputable evidence of fish health problems/die off directly related to industry should be presented to the public before any businesses are forced to relocate</li> <li>▪ Ad hoc restoration is not an effective use of resources. “Establish the restoration plan”</li> <li>▪ Assure that rare habitat is preserved &amp; that economic activities are low impact</li> </ul>		

<b>4. New Projects</b>		
Issues/Opportunities:	Change Options:	Check ✓ Preference
Rehabilitation Plan	<ul style="list-style-type: none"> <li>▪ Develop a restoration plan for the Estuary, including wildlife, vegetation &amp; fishery</li> </ul>	Yes – 18 No – 1
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ #1 priority</li> <li>▪ a comprehensive plan is needed with follow through &amp; decisiveness</li> <li>▪ 95% of the estuary has been reclaimed already. I can't see the justification for pursuing business out of the remaining small area</li> <li>▪ Invasive plants</li> <li>▪ Emphasis has been on fisheries, broad scope needed to appreciate other values</li> </ul>		
Monitoring	<ul style="list-style-type: none"> <li>▪ Establish a monitoring framework for the ecological, social and economic objectives of the plan.</li> </ul>	Yes – 19 No – 1
<b>Comments</b> <p>Monitoring is valuable to see how successful your objectives are.</p> <ul style="list-style-type: none"> <li>▪ No new projects other than re-establishing riparian zones should be undertaken. Any toxins/deleterious substances should be removed and then let nature take its course.</li> <li>▪ What are there (in regard to economic objectives)?</li> <li>▪ Integrate the framework to evaluate recreational use relative to meeting objectives</li> <li>▪ Volunteer groups could monitor the ecological benefits in comparison over the years.</li> <li>▪ Use college classes to reduce costs</li> </ul>		
Performance Standards	<ul style="list-style-type: none"> <li>▪ Develop performance standards for storm water runoff quality, habitat protection and restoration or other factors related to the rehabilitation plan.</li> </ul>	Yes – 17 No – 2
<b>Comments</b> <ul style="list-style-type: none"> <li>▪ As required by development &amp; land use issues</li> <li>▪ This is very important, so as to not pollute sensitive estuarine habitat</li> <li>▪ Yes, but not less than provincial standards, preferably better than</li> <li>▪ Why, what are there (in regard to habitat protection &amp; restoration &amp; other factors)?</li> <li>▪ Identify the cheque of impacts on achieving objectives will define the priorities for resources to/or need to be applied</li> <li>▪ Do what you can with what you have, too many 'standards' may slow action</li> </ul>		

<b>5. Current Estuary Management Plan Projects</b>		
Issues/Opportunities		
<b>Area 3 (Maple Street)</b>	<b>Change Options</b>	<b>Comments</b>
Storm water	<ul style="list-style-type: none"> <li>▪ Retain policy/project</li> <li>▪ Review proposed storm water management plans</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ Avoid use of rip rap. Use bio-engineering standards</li> <li>▪ Flood proofing will be enhanced with appropriate dredging to permit flow levels at peak periods.</li> <li>▪ Rivers are dynamic entities, allow them to take their own course</li> <li>▪ Yes</li> <li>▪ Flood proofing policy require improvement</li> <li>▪ Should have information about “Greenway Plan” available for review. Understand the principle for ecological conservancy. However access is required for recreational “balance” with areas of sensitivity needs to be identified &amp; restricted. Leaving a plan trail network for public access</li> <li>▪ Be aware of storm water and erosion in run off.</li> </ul>
Bank stabilization/rip rap	<ul style="list-style-type: none"> <li>▪ Retain project</li> <li>▪ Pursue property acquisition &amp; greenway development</li> </ul>	
Flood proofing	<ul style="list-style-type: none"> <li>▪ Retain policy to flood proof to current standards</li> </ul>	
Public access	<ul style="list-style-type: none"> <li>▪ Retain, as per Greenways Plan</li> </ul>	
<b>Area 4 (North Riverbank)</b>		
Channel flow improvement	<ul style="list-style-type: none"> <li>▪ Maintain side channel improvements as necessary</li> <li>▪ See restoration plan above.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary. All bundle boom should be removed from the estuary/river/channels</li> <li>▪ No maintenance should be needed. River should be allowed to return to a natural state – not a “Disney-fied” contrived narrow vision of so-called experts</li> <li>▪ Yes</li> <li>▪ Agree with the connection of existing trails, as long as maintenance requirements &amp; resources are also incorporated</li> <li>▪ Current is stronger in inside channels so need to be kept clean for flow.</li> </ul>
Habitat protection	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	
Public access	<ul style="list-style-type: none"> <li>▪ Maintain current trails as necessary</li> <li>▪ Connect to NCC trail system</li> </ul>	

Issues/Opportunities	Change Options	Comments
<b>Area 5 (Channel)</b>		
Industry/air transport & recreation conflict	<ul style="list-style-type: none"> <li>▪ Retain public education objective</li> <li>▪ Add improved signage</li> <li>▪ Define recreational use areas in the estuary/river/channels</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long range plan needed</li> <li>▪ Bundle booms provide needed shelter for smolts</li> <li>▪ By public education objective, I assume you mean green propaganda program of half truths &amp; misinformation. Until direct evidence of fish deaths can be directly linked to industry in the estuary Vantine/Vanegan should step down their terror campaign against industry. An even handed &amp; two sided story should be brought forward by a “balanced EMC”</li> <li>▪ Yes, but need adequate safeguards</li> <li>▪ Bundle boom – remove this use</li> <li>▪ Recreational use for C.R. &amp; estuary has potential to increase at a compound annual rate. This aspect of recreational use needs to be given high priority</li> <li>▪ Signage re: recreational area and awareness of airplane safety for planes and recreational users; bark clean up where booms park by cedar mill</li> </ul>
Bundle booms	<ul style="list-style-type: none"> <li>▪ Retain policy</li> </ul>	
<b>Area 6 (South Riverbank)</b>		
Bank stabilization	<ul style="list-style-type: none"> <li>▪ Retain stabilization objective</li> <li>▪ Add removal of pilings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long range plan needed. DFO to be lead agency</li> <li>▪ Smolts will not rear in old booming ground area – water is too deep and cold</li> <li>▪ Yes</li> <li>▪ Don’t remove pilings</li> <li>▪ Within private lands is not a priority – leave as is. However, the city portion below Maple Street needs to recognize the current access &amp; parking issues with the increased recreation activities that is occurring.</li> <li>▪ Remove pilings except those that stabilize bank, especially in case of river water flooding. New small bridge in channel gives some flow at certain tides. Public access is used a lot, so needs maintenance</li> <li>▪ This trail shows what can be done. Marshall’s seating great. Respect this area</li> </ul>
Habitat improvement	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> <li>▪ Maintain current improvements as necessary</li> </ul>	
Increased water flow to old log boom area	<ul style="list-style-type: none"> <li>▪ Maintain new channel as necessary</li> </ul>	
Public access	<ul style="list-style-type: none"> <li>▪ Maintain current improvements as necessary</li> <li>▪ See restoration plan above</li> </ul>	

Issues/Opportunities	Change Options	Comments
<b>Area 7 (Estuary Islands)</b>		
Maintenance of habitat	<ul style="list-style-type: none"> <li>▪ Retain these objectives/activities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limit access to the island for scientific research only</li> <li>▪ Any interaction by man should be based on science. Economic trade offs must be measured &amp; weighed.</li> <li>▪ Yes</li> <li>▪ No human access</li> <li>▪ The size of the islands lend themselves well for viewing from the water</li> <li>▪ Well used by water fowl</li> </ul>
Recreational use	<ul style="list-style-type: none"> <li>▪ Retain, but limit to wildlife viewing</li> </ul>	
Maintenance of habitat	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	
<b>Area 8 (North Outside)</b>		
Sewer outfall	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ We are not god, if islands are needed in the river, let the river make them</li> <li>▪ Yes</li> <li>▪ Concern of defining the priority of restoration “need for plan”</li> <li>▪ The sandbar is natural and creating its own high points over time. Do not need islands created.</li> </ul>
Creation of Islands	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	
Shoreline channel	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	
<b>Area 9 (Outside Spit)</b>		
Access (boot & foot)	<ul style="list-style-type: none"> <li>▪ Implement&amp; maintain Tyee Spit Park Plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ Makes no sense, why should planes be allowed, but not boats. What about 1<sup>st</sup> Nations</li> <li>▪ Yes</li> <li>▪ Very poor ramp. Impossible to launch at med-low tide. An embarrassment to C.R.</li> </ul>
Boat/moorage/line removal	<ul style="list-style-type: none"> <li>▪ Retain no moorage policy</li> </ul>	



Issues/Opportunities	Change Options	Comments
<b>Area 10 (Tyee Spit)</b>		
Restoration of natural vegetation	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary. By reducing the airplane parking in &amp; on the estuary much of the environmental contaminants will be removed. The land use plan should focus on eco-tourism as the major economic engine for the estuary</li> <li>▪ Don't agree with implementing Spit Plan, but agree with long-term lease land use plan</li> <li>▪ Helicopters have been an important part of the Spit &amp; local community for over 40 years &amp; must be included for safety of flight</li> <li>▪ Existing businesses should be allowed to stay, if they choose (Silver King &amp; Helicopters)</li> <li>▪ Measure impact &amp; act prudently. If business is not wanted it will find another home &amp; unlikely this will be in the District. With business will go employment &amp; economic activity</li> <li>▪ Yes</li> <li>▪ Float plane change options need to be incorporated with this plan. Access corridors for looping along estuary, Spit etc.</li> <li>▪ The planes &amp; helicopters supply an economic base for many people. Retain them and north end of Spit get back to sandy beach on inside and as park use</li> <li>▪ Security for seaplanes essential</li> </ul>
Public access	<ul style="list-style-type: none"> <li>▪ Implement &amp; maintain Tyee Spit Park Plan</li> </ul>	
Float plane base	<ul style="list-style-type: none"> <li>▪ Retain policy of long-term leases on current facilities and consolidation of activities to remove activities at north end of Spit</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Develop a land use plan for the long-term lease area</li> </ul>	
<b>Area 11 (Old log boom)</b>		
Subsurface restoration	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ Yes on limits to accommodation, no on float houses or vessels</li> <li>▪ Yes</li> <li>▪ Maintenance of past investments is priority #1</li> <li>▪ Essential to keep out floating offices etc.</li> </ul>
Shoreline restoration	<ul style="list-style-type: none"> <li>▪ Maintain restored areas as necessary</li> </ul>	
Increased water flows	<ul style="list-style-type: none"> <li>▪ Maintain as necessary</li> </ul>	
Public access	<ul style="list-style-type: none"> <li>▪ Maintain as necessary</li> </ul>	
Barges & Float houses	<ul style="list-style-type: none"> <li>▪ Retain policy of no floating offices, accommodation or marine vessels or equipment</li> </ul>	

Issues/Opportunities	Change Options	Comments
<b>Area 12 (Reserve)</b>		
Maintain working relationship with Campbell River Band	<ul style="list-style-type: none"> <li>▪ Retain EMC relationship</li> <li>▪ Retain District Council Band relationship</li> <li>▪ Retain formal agreement policy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cultural &amp; eco-tourism should be proposed as use for the band lands bordering the estuary</li> <li>▪ Both Bands (Cape Mudge &amp; Campbell River)</li> <li>▪ It should be with all the Laiwitach Tribes, not just one. Campbell River Band membership doesn't know what's going on with the Spit.</li> <li>▪ Partnerships with common objectives should be maintained &amp; encouraged. This should apply to all citizens of C.R.</li> <li>▪ Yes</li> </ul>
<b>Area 13 (Old dry land sort)</b>		
Runoff water quality	<ul style="list-style-type: none"> <li>▪ Retain development permit, comprehensive plan policies</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> </ul>
Maintain public access	<ul style="list-style-type: none"> <li>▪ Retain development permit, comprehensive plan policies</li> </ul>	<ul style="list-style-type: none"> <li>▪ Yes</li> <li>▪ Is it possible to maintain a strip for a waterfront walkway to connect to the Spit?</li> </ul>
<b>Area 14 (Campbell River Mills)</b>		
Soil contamination	<ul style="list-style-type: none"> <li>▪ Development permit, comprehensive plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ How much contamination is on the Spit?</li> <li>▪ Yes</li> <li>▪ Maintain public access to the Riverfront</li> </ul>
Highway access	<ul style="list-style-type: none"> <li>▪ Development permit, comprehensive plan</li> </ul>	
Shoreline restoration	<ul style="list-style-type: none"> <li>▪ Development permit, comprehensive plan</li> </ul>	
<b>Area 15 (Baikie Island)</b>		
Public access	<ul style="list-style-type: none"> <li>▪ Work with NCC to develop a use/management plan for the Island</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limit access to the island for scientific research</li> <li>▪ Maintain involvement of/with planning framework. Limited use in short term</li> </ul>
Industry relocation		
<b>Area 16 (Baikie Slough)</b>		
Increase water flow	<ul style="list-style-type: none"> <li>▪ Maintain improvements as necessary</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ An impact study should be undertaken. Consideration should be given to the approach of other communities &amp; based on science</li> <li>▪ Yes</li> <li>▪ Expand relocation objective for slough</li> </ul>
Industry relocation	<ul style="list-style-type: none"> <li>▪ Retain relocation objective in slough only</li> </ul>	
Slough restoration	<ul style="list-style-type: none"> <li>▪ NCC Plan</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	
Shoreline restoration	<ul style="list-style-type: none"> <li>▪ NCC Plan</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ See restoration plan above</li> </ul>	

Issues/Opportunities	Change Options	Comments
<b>Area 17 (Ocean Cedar)</b>		
Industry relocation	<ul style="list-style-type: none"> <li>▪ Retain water lot lease termination</li> <li>▪ Retain assistance for relocation</li> <li>▪ Establish management plan for land-based activities to address restoration objectives</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ Where will these businesses relocate &amp; how will it be accomplished? What will be the impact if they do or can not relocate?</li> <li>▪ Work with Ocean Cedar to stay viable &amp; continue to employ 30 full time people, year round. Ocean has already invested \$200k to improve waste practices &amp; establish 7 monitor new fish habitat, extend water lot leases until such time as funding &amp; adequate sites become available</li> <li>▪ Ocean Cedar has improved dewatering practices, established new riparian zones, moved booms to deeper water &amp; generally changed all detrimental practices in &amp; around the estuary. 30 full time employees work here year round – water leases should be extended indefinitely until such time as funding &amp; adequate relocation sites become available.</li> <li>▪ Yes</li> <li>▪ Potential for recreational base business – if preference is for such business, then access &amp; use should be planned for the Slough area.</li> </ul>
Soil contamination	<ul style="list-style-type: none"> <li>▪ Provincial policies will apply</li> </ul>	
Shoreline restoration	<ul style="list-style-type: none"> <li>▪ NCC Plan</li> <li>▪ See restoration plan above</li> </ul>	
Timing	<ul style="list-style-type: none"> <li>▪</li> </ul>	
Highway access	<ul style="list-style-type: none"> <li>▪ Retain development permit, comprehensive plan policies</li> </ul>	
<b>Area 18 (Fresh Water Marina N.)</b>		
Storm water management	<ul style="list-style-type: none"> <li>▪ Review storm water management plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary. Area would be ideal for eco-tourism access to the estuary</li> <li>▪ Should not be going in to south west habitat sensitive areas. Without holding area to filter out impurities etc.</li> <li>▪ Yes</li> <li>▪ Improve or relocate industrial activities</li> <li>▪ Riparian plantings</li> <li>▪ Fresh water marina has scrap piles and logs/steel along the river bank that are unsightly. Serious contamination from boat works/copper paint</li> </ul>
Contaminated soils	<ul style="list-style-type: none"> <li>▪ Provincial regulations will apply</li> </ul>	
Water lots	<ul style="list-style-type: none"> <li>▪ Retain current policy</li> </ul>	
Bylaw compliance	<ul style="list-style-type: none"> <li>▪ Retain current policy</li> </ul>	

Issues/Opportunities	Change Options	Comments
<b>Area 19 (North Shoreline)</b>		
Public access	<ul style="list-style-type: none"> <li>▪ Retain current policy and development permit, comprehensive plan policies</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ Public access &amp; use should be welcomed. As when people care for land it is looked after better</li> <li>▪ Yes</li> </ul>
<b>Area 20 (Backshore)</b>		
Long-term growth	<ul style="list-style-type: none"> <li>▪ Retain policy to develop a comprehensive development plan for the area</li> </ul>	<ul style="list-style-type: none"> <li>▪ All areas should be managed to protect &amp; improve the ecological health of the estuary</li> <li>▪ Great idea. As long as habitat sensitive areas are not impacted</li> <li>▪ I don't see a growth outlook for a policy of extraction &amp; absence of use/access</li> <li>▪ Yes</li> </ul>

### Other Comments:

- Plan should focus on improving the environmental habitat to make the estuary a world class eco-tourism location, with safeguards to ensure it is not loved to death. All plane parking should be removed from the Spit & it should only be used as a seaplane terminal. All money raised from leases should be used for estuary rehabilitation
- Plans have been made based on false & inaccurate information. There has been no impact study as to loss of business. There has been no consultation with the major lease holders or the lease holders with the biggest investment. This must change.
- There should be an archaeological impact assessment done before the proposed park can proceed. People involved should be Kwakwaka'wakw Treaty Society and Affected First Nations. As far as I'm concerned, the Town Council put the cart before the horse by jumping in to turning Tyee Spit in to a park without proper consultation with existing businesses. As far as the consultation in "Tietelbaums Decision" in 1996, Cape Mudge versus Campbell River no state land set aside for the Laiwitat people not just one band.
- There is an economic & environmental impact that must be brought in to focus. The citizens of Campbell River deserve an unbiased reflection on the costs & opportunities on the Estuary. Infringement on property rights, if this direction continues, should not be without compensation to property holders.
- It has been said by our local fisheries people that Ocean Cedar is killing fish. There is nothing to support these kinds of statements. When being said by people of authority the public tends to believe them. The material from the Slough was tested and has been inspected by our government environmental rep for toxins. There is lots of wildlife activity in our slough when the water is there. Remember the slough is man made, so it is dry a lot of the time. The mill must have sheltered water access to stay viable.
- Private agendas of "special projects fisheries officers trying to justify their jobs should not be a mandate for tearing up families and hurting the economy of a town already reeling under the impact of the whims of other countries. We should all bear in mind that soft wood lumber employment pays the wages of these government workers. If they decide to take away our areas of employment, there will be no one here to walk on their nature trails or pay their wages.
- For open house have copies of relevant documents. (Greenway Plan & other plans – Tyee Spit) Public information plan to educate public use of restrictions through signs and code of ethics for recreational use. Interested in being involved in the planning and/or commission member representative.
- Upland development should limit impervious areas & direct storm water

## Appendix H: Campbell River Restoration and Rehabilitation Projects, 1981 – 2002

Project	Date	Habitat type	Habitat Created (m2)	Cost (\$)	Partners
Intertidal Islands Estuary	1981	Intertidal marsh	32200		DFO compensation for Log Sort dredging by BCFP
Elk Falls Channel	1992	spawning rearing	1200 2000	150,000	DFO, MELP, BC Hydro
Second Island	1985			0	DFO,
Second Island	1995	Spawing & rearing	8000	210,000	Tyee Club, DFO, community groups
Second Island	1996	Spawing & rearing	8000	230,000	BC Hydro, DFO
MarineLink Bench	1997?	intertidal	1000	15,000	Habitat Compensation DFO
River Breach	1996	marsh bench	600	Incl below	Habitat Conservation Fund, DFO, BC Hydro
Estuary Benching	1997	Marsh bench intertidal	1000 4300	55,000	Habitat Conservation Trust Fund, DFO, HRSEP, BC Hydro
Estuary Benching Bank Stabilization	1998	marsh bench intertidal	3400 3500	53,000	Habitat Conservation Fund, Timberwest, DFO, BC Hydro
Raven Channel	1998	spawning Rearing	1400 1600	235,000	Tyee Club, Habitat Conservation Fund, Tide Guide Assoc, HCTF, PSF, Steelhead Assoc, DFO, BC Hydro, Dist of CR
Nunns Creek	1997	low marsh	9000	60,000	Discovery Harbour Devel (compensation)
Gravel Placement Helicopter	1997	Spawning-	2000	154,000	Tyee Club, HCTF, Tide Guide Assoc, Steelhead Society, DFO, BC Hydro
Gravel Placement Bobcats	1998	Spawning	2000	42,500	BC Hydro, Tyee Club, DFO, Tide Guide Assoc, HCTF
Elk Falls Twin	1998	Spawning Rearing	1200 1400	135,000	Tyee Club, DFO, BChydro

<b>Project</b>	<b>Date</b>	<b>Habitat type</b>	<b>Habitat Created (m2)</b>	<b>Cost (\$)</b>	<b>Partners</b>
Elk Falls Twin	1999	Additional complexing		30,000	MELP, HCTF, BCHydro
Elk Falls #3	1999	Rearing chan Poned	17,000	200,000	FRBC-Interfor, DFO, FiRBC, MacBlo, CR Fish & Wildlife
Canyon Gravel	1999	Spawning	200	40,000	MELP-HCTF, BCHydro
Estuary Planting of benches (constructed 97/98)	1999	Marsh & riparian		30,000	DFO, NIFI, Fisheries Renewal
Interpretative signage/trails	1999 - 2000			7,500	DFO, CR Fish & Wildlife club, NIFI, Rotary Club,
Nunns Creek	1999	Low marsh	17,000	100,000	FiRBC, DFO
Raven	1999	Additional complexing		5,000	Steelhead society restoration Corp- FiRBC
NCC Purchase	1999 - 2000	Estuary – riparian, intertidal marsh	80,000 (8ha)	1,800,000	DFO-HRSEP, BCHydro, community groups,
Estuary trails and signage	1999	Public access and education	1,300 linear	28,000	Rotary Club, DFO, NIFI, Fish & Wildlife Club
Tyee Spit Bulkhead replacement Cox logging	1999	Intertidal marsh bench & riparian	500	28,000	District of CR, DFO, Fisheries Renewal, NIFI
Tyee Spit Bulkhead replacement- Tyee Club Silver King	2000	Intertidal marsh bench & riparian	500	0	District of CR
Gravel Placement HaigBrown, river sites	2001	Spawning	2085	102,000	BCHydro, DFO
NCC Channel	2002	Spawning Rearing	2100	150,000	BCHydro, DFO, HCTF, Dist of CR, Alpine Backhoe Merril & Ring, (compensation)

<b>Project</b>	<b>Date</b>	<b>Habitat type</b>	<b>Habitat Created (m2)</b>	<b>Cost (\$)</b>	<b>Partners</b>
Baikie Island bench/planting	2002	Intertidal bench rearing, transition	900	0	Rotary Club CR- compensation Willow Cr boat ramp
NCC marsh/riparian bench planting (marsh constructed with spoil from NCC channel)	2002	Intertidal benching rearing, transition	7475	50,000	Merril & Ring, (compensation), District of CR, NCC, DFO
Raven Channel	2002	Complexing		11,800	Steelhead Society Restoration Corp, Alpine Backhoe, DFO
<b>Total Habitat</b>	<b>1981-2002</b>			<b>\$3,316,800</b>	



