



**BRITISH  
COLUMBIA**  
The Best Place on Earth



# ***A Proposed Provincial Cumulative Effects Assessment and Monitoring Project for the Howe Sound Area***

Howe Sound Community Forum Meeting  
October 17, 2014

**Jeff Juthans**, Land & Resource Specialist, South Coast Region

**Scott Barrett**, Manager, Resource Management, South Coast Region,

**Steve Kachanoski**, Marine Resource Specialist, Resource Management Objectives Branch

Ministry of Forests, Lands, and Natural Resource Operations

The top of the slide features a decorative banner. On the left, the flag of British Columbia is shown waving, with its characteristic red, white, and blue stripes and a gold crown. To the right of the flag is a scenic view of a coastal landscape at sunset or sunrise, with mountains in the background and a body of water in the foreground.

## *Presentation Outline*

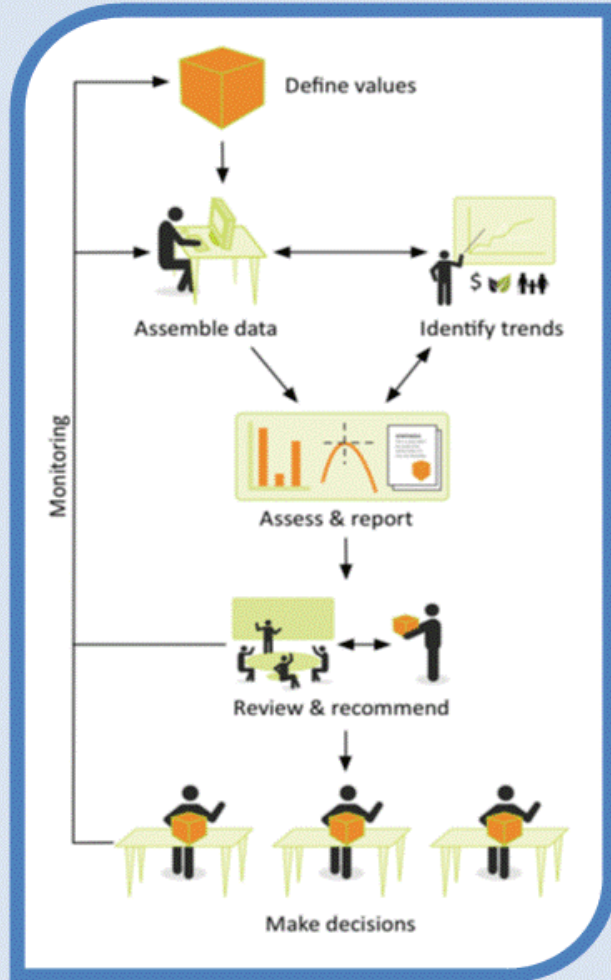
- 1) Backgrounder on Prov. Cumulative Effects (CE) Framework**
- 2) Overview of Proposed Howe Sound CE Project**
- 3) Proposed Next Steps**
- 4) Questions and Answers**

# CE Assessment & Monitoring

Values & Objectives

CE Assessment

Decision Support



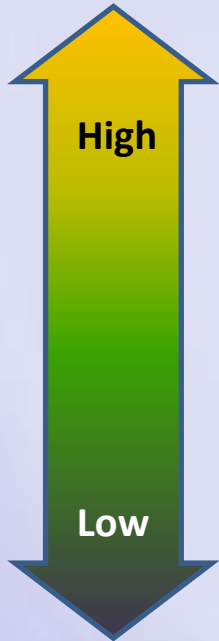
➤ *Informs future management and planning efforts*

➤ *Informs decision-makers and other interested parties*

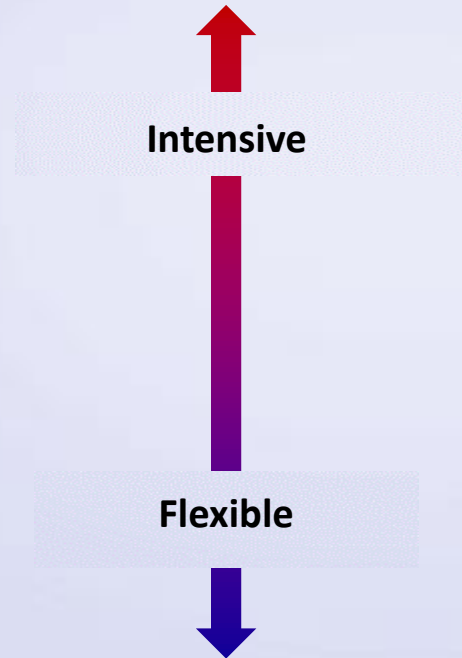
# Linkage to Future Management



*Risk to Value /  
Meeting Objectives*



*Level of  
Management*

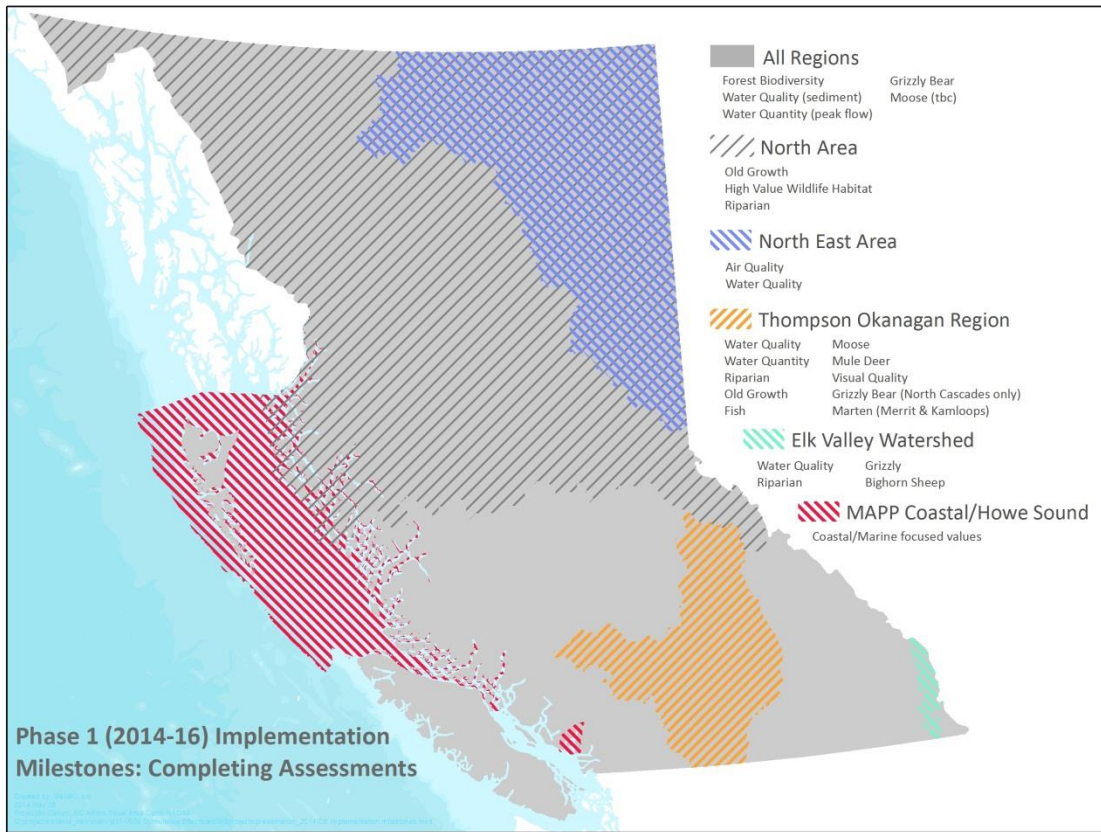


*Possible Management Actions*

- ***New strategic direction***
  - new or revised objectives
  - new strategic planning efforts
- ***Required permit conditions***
  - mitigation plan
- ***Best management practices***

# CE Backgrounder

## CE Implementation in BC



- **Phased implementation**
- **Building a “values foundation” (all regions)**
- **Completing in-progress assessments (broad scale)**
- **Incorporating into Provincial decision-making processes**

## Criteria for Selection

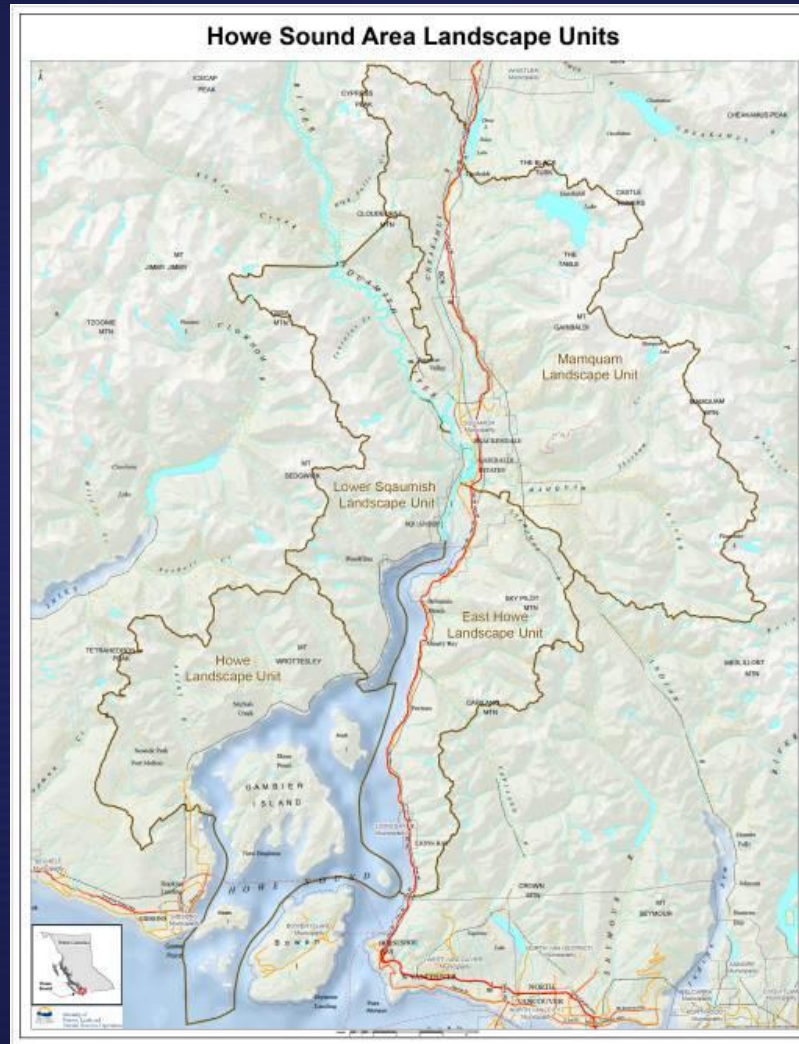
- Existing Objectives (Legal & Policy)
- Support for Aboriginal/Treaty Right
- Coarse filter/represents nested values
- Can be spatially mapped
- Available data

## Value Components for Monitoring

- Forest Biodiversity (seral stage condition and old growth objectives)
- Aquatic Ecosystems (watershed condition/risk and riparian objectives)
- Water (low flow/in-stream flow needs and water quality)
- Air Quality
- Priority Fish and Wildlife Species (Grizzly, Moose, Deer)
- Marine values
  
- Other sub-regionally specific values

# Howe Sound CE Project Proposal

## Proposed Project Area



# Howe Sound CE Project Proposal

## CE Value Components for Project

### Proposed Value Components for Project

- \* Aquatic Ecosystems-watershed condition (terrestrial fish habitat)
- \* Forest Ecosystems- old growth (OGMAs)
- \* Forest Ecosystems- biodiversity (seral stage)
- \* Priority Wildlife- Grizzly Bear (habitat)



2015

- Priority Wildlife- Marbled Murrelet (habitat)
- Priority Wildlife- Elk (habitat)
- Water Quality- watershed (water quality)
- Air Quality
- Visual Quality- Forest VQOs
- Estuaries (habitat quantity/quality)
- Herring (herring spawn distribution)
- Watershed Condition (freshwater run-off)
- Water Quality (marine water quality)



2016

### General Value Themes from HSCF

- Ecosystem health
- Biological diversity & abundance
- Environmental restoration
- Environmental sensitive areas
- Water Quality
- Air Quality
- Visual Quality (natural beauty)
- Recreation
- Quality of life for local communities
- Diverse and balanced sustainable economic development



# Howe Sound CE Project Proposal

## Initial Land Value Components

- *Aquatic Ecosystems-Watershed Condition*  
(freshwater fish habitat)

- *Road Density*
- *Riparian Integrity*
- *Stream Crossing Density*
- *Peak Flow Index*



- *Water Quality- Watershed*

- *Surface erosion*
- *Land cover metrics*
- *Direct connections to surface water*

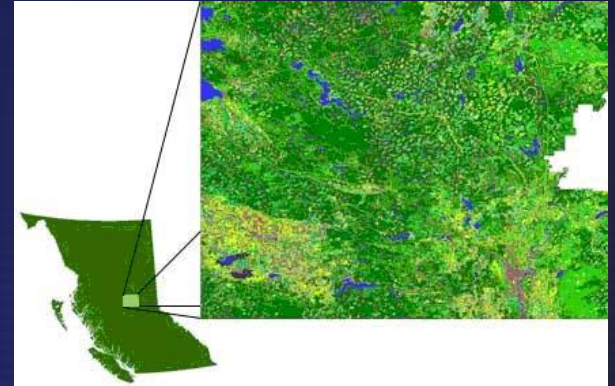


# Howe Sound CE Project Proposal

## Initial Land Value Components

- *Forest Biodiversity (old growth objectives)*

- *Proportion of forested land-base that is old growth*
- *Spatial distribution of old growth forest by watershed, landscape unit etc.*



- *Forest Biodiversity (seral stage distribution)*

- *Distribution of forest stands at different ages*
- *Measure against objectives in Biodiversity Guidebook*



# Howe Sound CE Project Proposal

## Initial Land Value Components

### • Grizzly Bear Habitat

- Road density
- Seral stage distribution
- Forage habitat



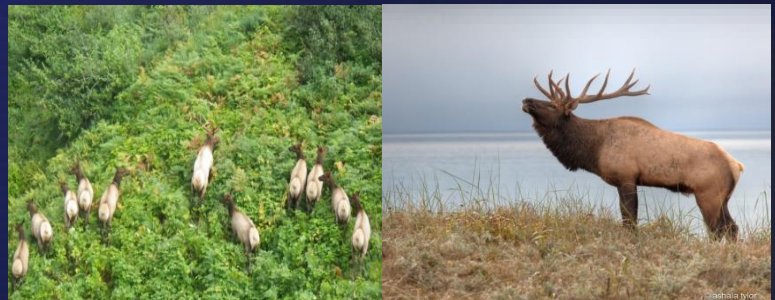
### • Marbled Murrelet Habitat

- Old growth forest patch of minimum size & elevation
- Access to marine forage fish



### • Elk Habitat

- Overwintering areas (snow interception)
- Forage habitat
- Habitat connectivity



# *Howe Sound CE Project Proposal*

## *Initial Land Value Components*

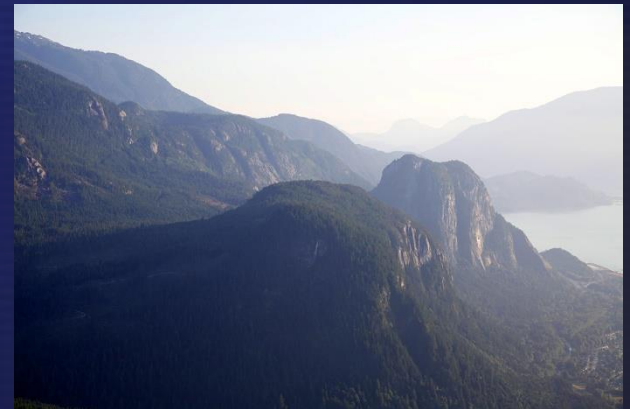
- *Air Quality (TBD)*

- *Likely proxies for key air quality objectives including:*
  - *Fine and coarse particulate matter*
  - *Ozone*
  - *Sulphur dioxide*
  - *Nitrogen dioxide*
  - *Carbon monoxide*



- *Visual Quality- (TBD)*

- *Based on Forest Visual Quality Objectives*
- *Specific classes are set as an objective ranging from preservation to maximum modification*



## *Howe Sound CE Project Proposal*

# *Initial Marine Value Components*

- *Estuaries (habitat quantity & quality)*

- *Area of functioning habitat*
- *Species abundance and biodiversity*
- *Key habitat for many ecological values*



- *Herring (herring spawn distribution)*

- *Area of spawning habitat*
- *Key species in the marine food chain.*



## *Howe Sound CE Project Proposal*

# *Initial Marine Value Components*

- *Watershed Condition (freshwater run-off)*

- *Quantity and quality of freshwater inputs*
- *Sensitive to upland activities.*
- *Good data availability*



- *Water Quality (marine water quality)*

- *Foreshore and upland development*
- *Fecal coliform is a common measure*



# Howe Sound CE Project Proposal

## Possible Collaboration/Partnerships

### Collaboration Opportunities

- *Value component selection*
- *Monitoring and data sharing*
- *Funding contributions for CE implementation*
- *Linkage to research activities*
- *Linkage to other possible initiatives*



# *Howe Sound CE Project Proposal*

## *Benefits of Proposed Project*

- *More focus on the Howe Sound area and associated key ecological value components*
- *CE assessment can begin in 2015/2016*
- *Includes some marine value components*
- *Provides opportunity for engagement with local governments on area of shared interest*





## *Howe Sound CE Project Proposal*

### *General Comments*

- *CE monitoring & assessment is foundational to responsible economic development and environmental sustainability*
- *Responsible economic development and environmental stewardship are shared responsibilities*
- *The Province is offering to modify its CE implementation approach to try and address interests expressed by HSCF*



## *Proposed Next Steps*

### *What's Next?*

- Is there general support from the Howe Sound Community Forum for the province to initiate a Cumulative Effects assessment specific to the Howe Sound area in 2015?*
- The province will follow-up with local First Nations on a government-to-government basis to discuss this proposed cumulative effects project*
- If there is general support, the province will continue with project scoping activities with First Nations and other governments to explore collaboration opportunities*



# Contact Information



## Cumulative Effects Framework

*Assessing and Managing Cumulative Effects in British Columbia*

**Jeff Juthans, Regional Contact,  
Land and Resource Specialist**

E-mail: [Jeff.Juthans@gov.bc.ca](mailto:Jeff.Juthans@gov.bc.ca)

Tel: (604) 586-4287

**Ministry of Forests, Lands and Natural Resource Operations**