



# *Welcome!*

## Keats (Lehk'tines) Island Marine Shoreline Protection Project

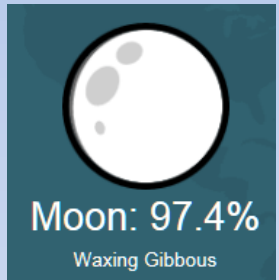
### **This Afternoon's Agenda:**

- Presentation on Keats Shorelines
- Introduction of Community Questionnaire
- Q+A Session
- Open House

**Thursday  
July 26, 2018**



Sunrise 5:37 am  
Sunset 9:02 pm



Moonset 4:35 am  
Moonrise 8:30 pm



High Tide 4:17 am  
Low Tide 11:35 am  
High Tide 7:12 pm



## Presentation Outline

- Background to the Project
- Identification & Protection of Shoreline Values
- Options for Voluntary Stewardship
- Options for Policy & Regulatory Changes
- Community Questionnaire
- Question & Answer Session

## Background

- LTC top-priority project
- Phase 1 (today, event 2 and community questionnaire):
  - share information
  - introduce potential policy, regulatory, or voluntary stewardship options
  - solicit input regarding community shoreline values
- Subsequent phase informed by events and questionnaire



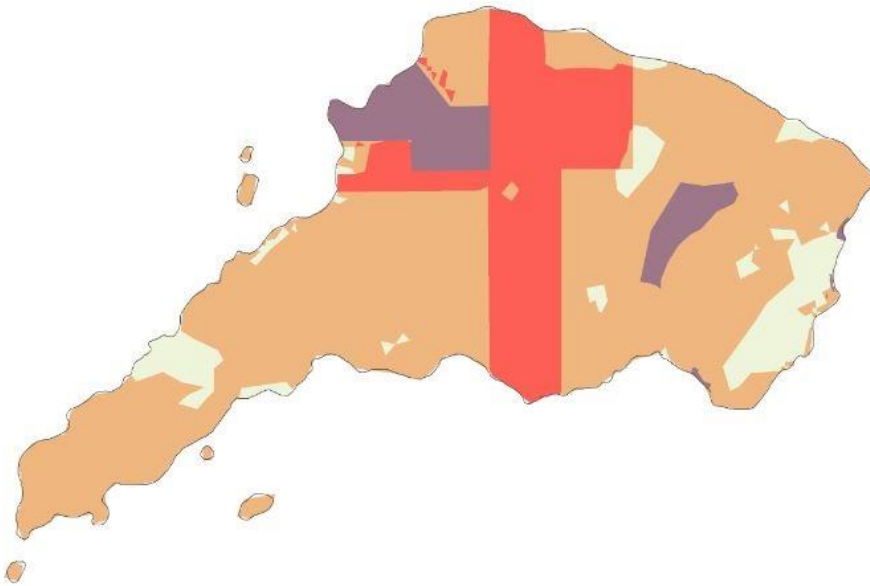
# Identification and Protection of Marine Shoreline Values

- What marine shoreline values do you wish to protect on Keats Island?
- What are the current/potential future threats to those values?





## Marine Shoreline Values



### Legend

 Protected Areas

### Relative Value

 Low

 Medium

 High

*“Due to high amounts of unprotected high relative biodiversity composition values, Lasqueti, Gambier and Salt Spring local trust areas have been identified for high conservation focus.”*

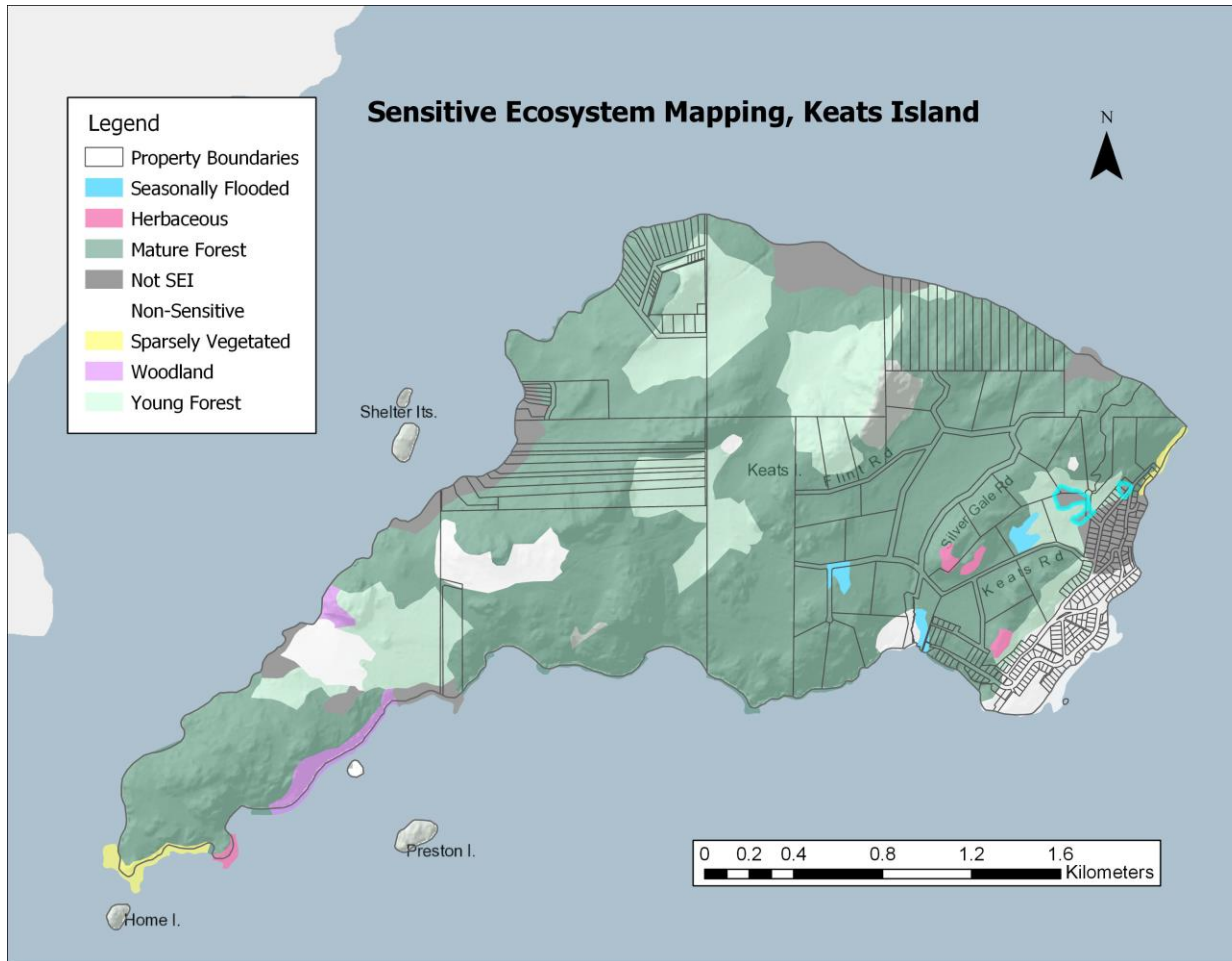


ISLANDS TRUST CONSERVANCY

Protecting Canada's Islands in the Salish Sea



# Sensitive Ecosystems



- Cliff
- Herbaceous
- Mature Forest (80-250 yrs)
- Old Forest (>250 yrs)
- Wetland
- Woodland



## Marine Shoreline Values



- Kelp beds
- Eelgrass beds
- Rockfish habitat
- Forage fish habitat





# Marine Shoreline Values

## Keats Island Docks Type

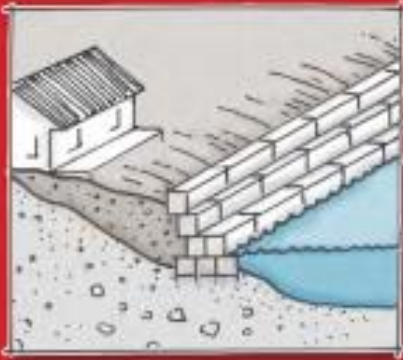
- Small Dock
- Small Marina








## structurally altered\*



\*Shorelines modified by facility development, principally boat ramps, seawalls, riprap, landfills, dykes, piers, groynes, or breakwaters.



### LEGEND:

-  Sections of shoreline with significant structural alterations (>30% altered)

### KEATS ISLAND:

**1.5 Km (9%)  
Structurally  
Altered Shoreline**



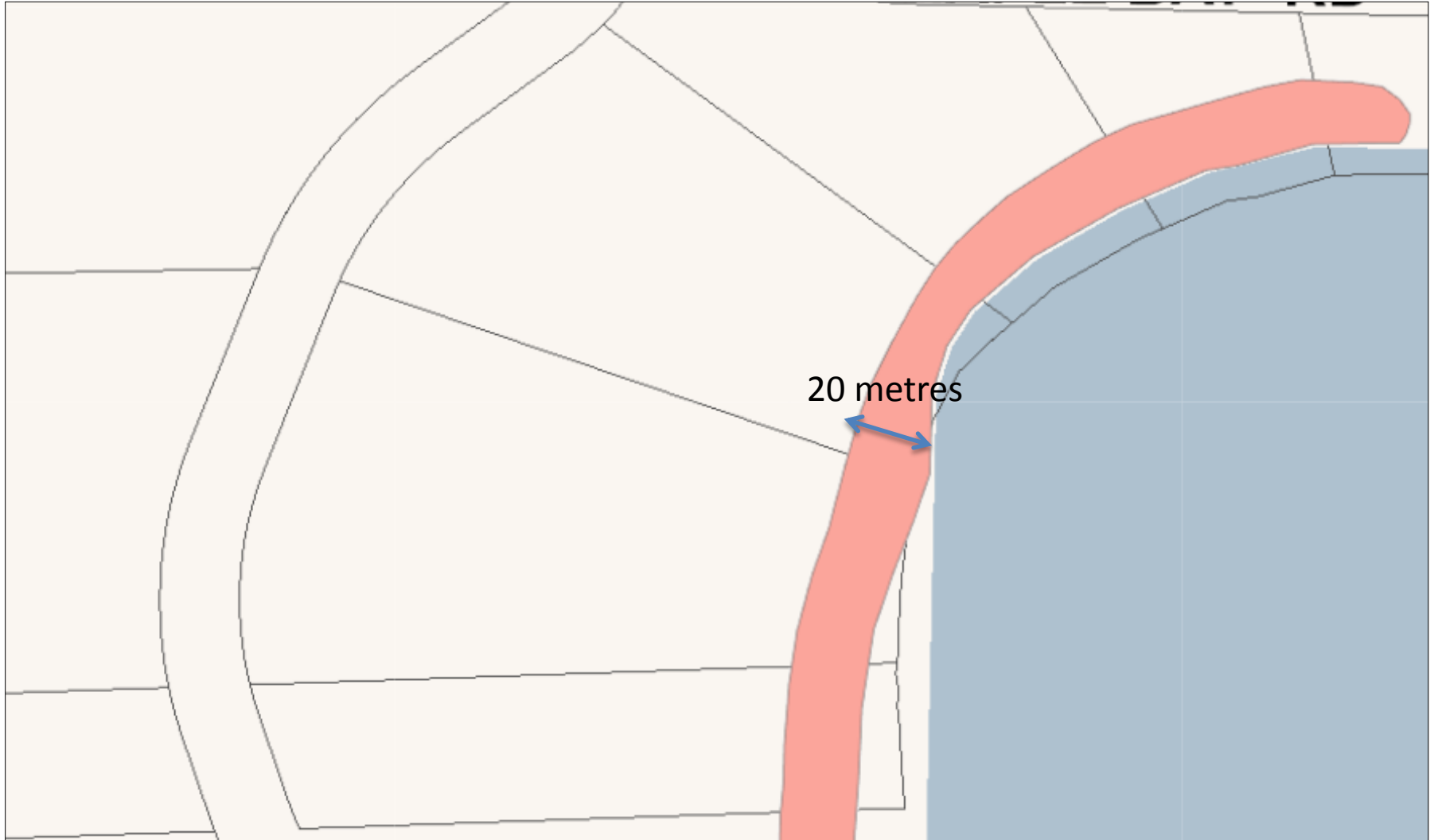
# Marine Shoreline Values

## First Nations of the Gambier Island Local Trust Area The Importance of Foreshore and Marine Resources

- The island region has the highest concentration of archaeological values in the province.
- Estimated that 80% of known archaeological sites are around shorelines.



Gambier Island  
Local Trust Committee



# Islands Trust First Nations Engagement Policy



- In committing to Principle E.1, Islands Trust should and island municipalities are encouraged to:
- a. commit to “listening and learning” about the history of First Nations’ connection to the land and waters;
  - b. commit to “listening and learning” about First Nations’ perspective on treaties, rights and title; and
  - c. commit to acknowledging that history, to ensure First Nations and ourselves that the history has been heard and understood correctly.



Poor Site Planning

# Threats to Shoreline Ecosystems



## Infilling and Removal of Riparian Vegetation

- wildlife habitat loss
- juvenile salmon feeding reduced
- filtering function lost



## Shoreline Hardening

- reduced sediment supply to shore
- lowering & hardening of beach
- loss of forage fish spawning areas
- reduction in habitat diversity

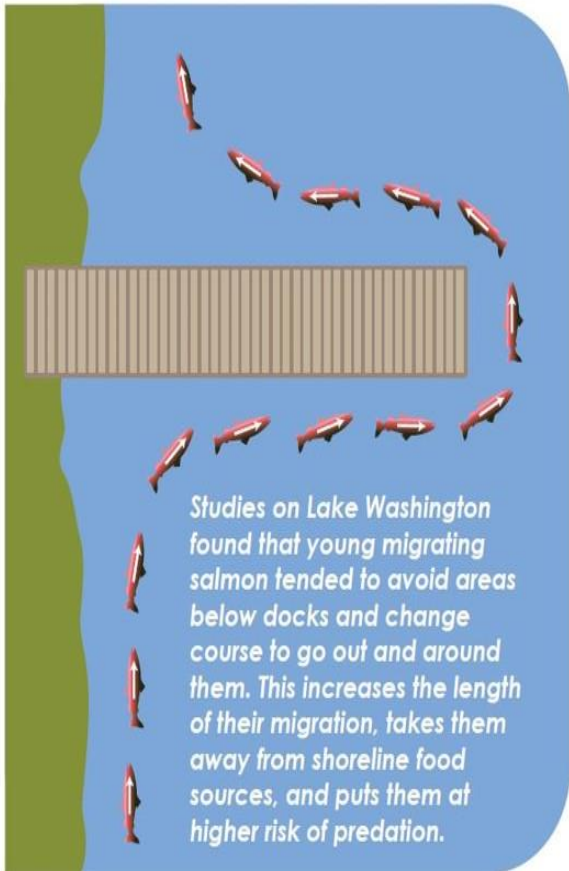


# Threats to Shoreline Values



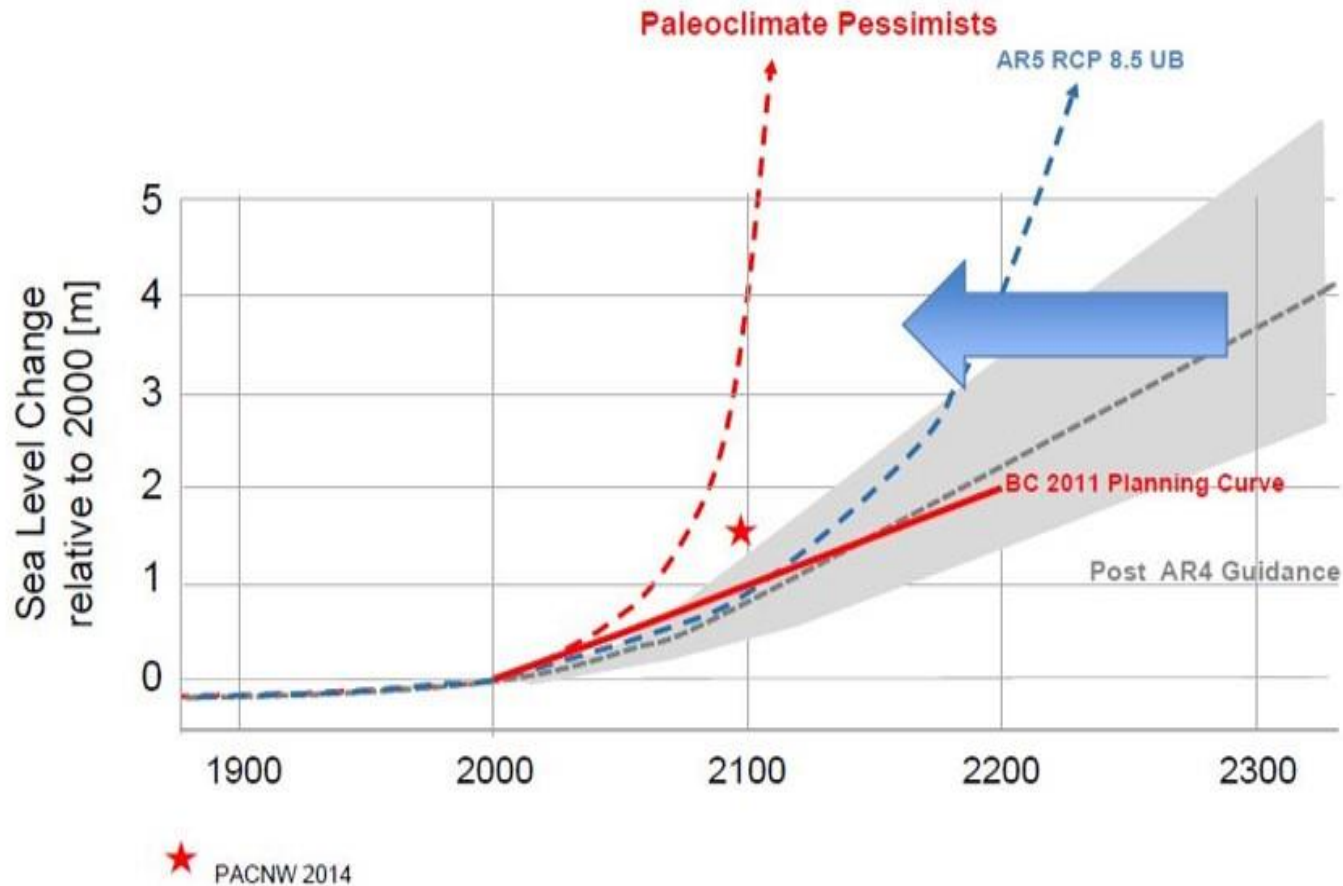


# Cumulative Impacts: Docks





# Sea Level Rise Planning

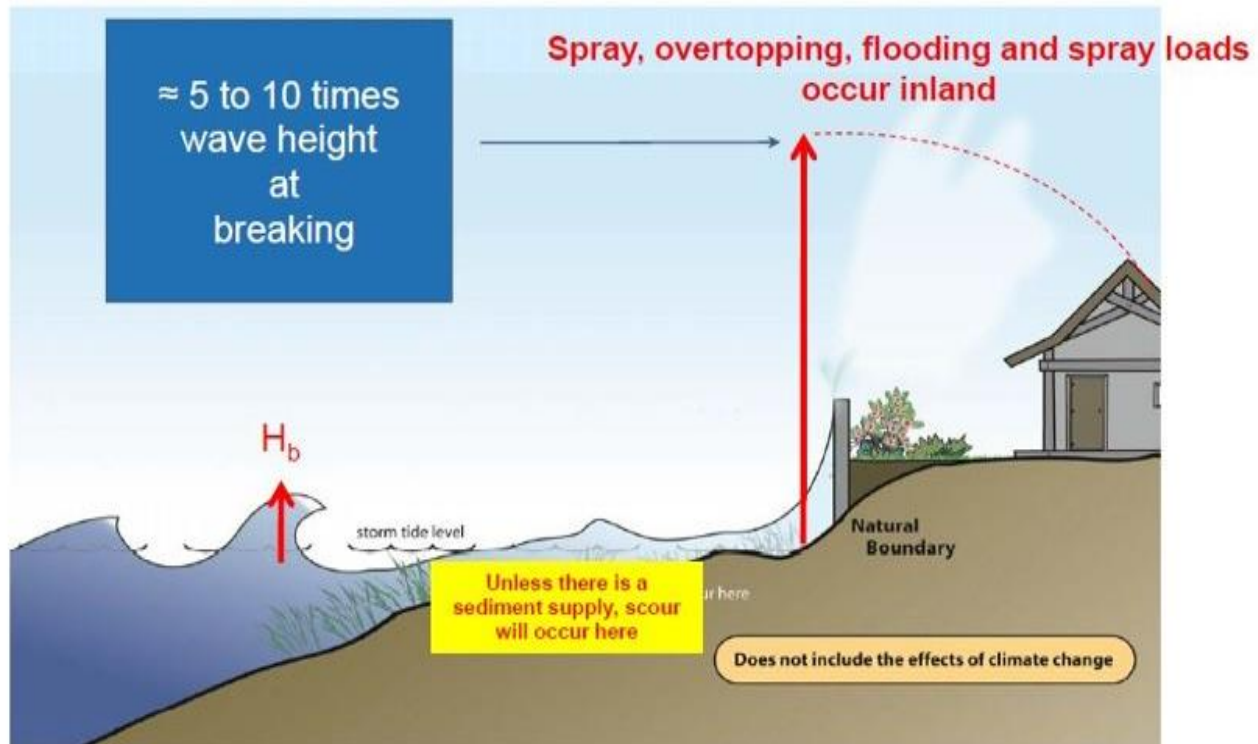






# Effects of Shoreline Hardening

## Sea Walls





## Erosion on Hardened Shores: Ross Bay



1915 Completed Seawall with beach



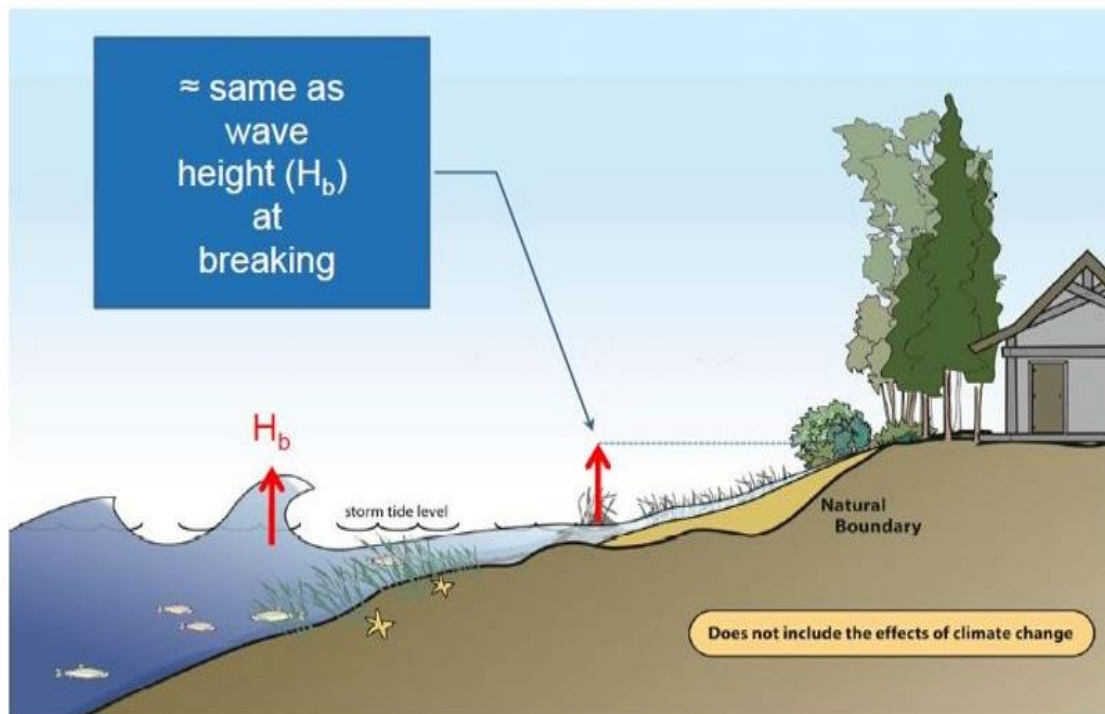
# Erosion on Hardened Shores





# Effects of Shoreline Hardening

## Gentle Slopes - Beaches





# Restoration of Hardened Shores



Ross Bay, 12 May 2009 (10 years after restoration)

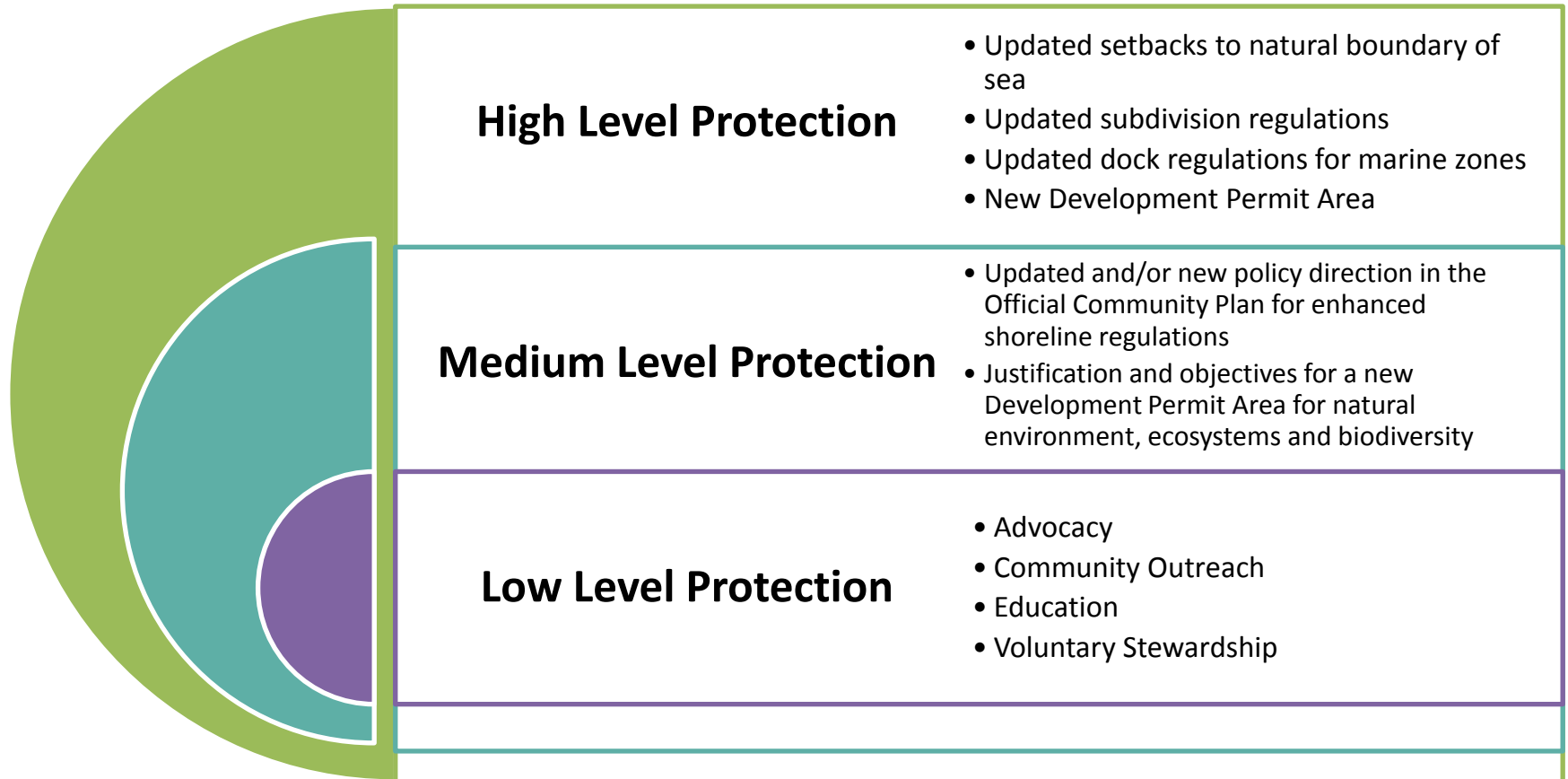


Gambier Island  
Local Trust Committee

**What marine shoreline values do you wish to protect and how do you wish for them to be protected?**



# Shoreline Protection measures available to the LTC





# **What are the opportunities for voluntary stewardship on Keats Island?**






Islands Trust




Gambier Island  
Local Trust Committee

# Voluntary Conservation Covenant

Protect your land

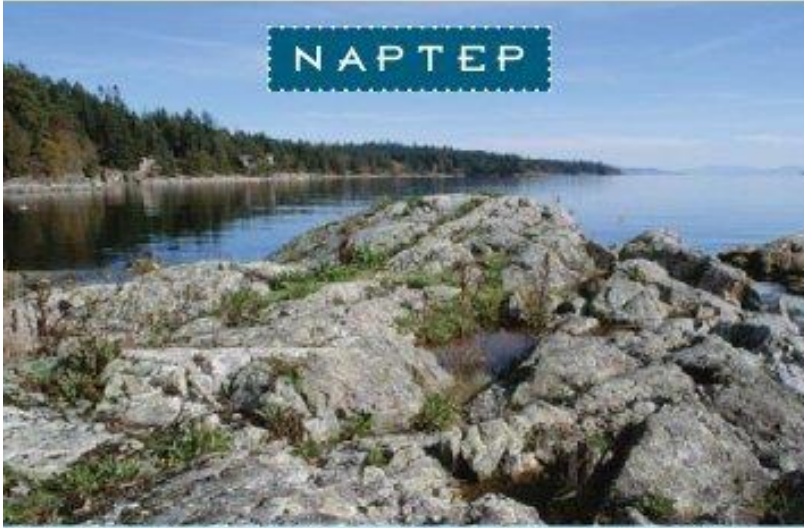


Conservation  
Covenants



Islands Trust Fund  
*creating a legacy of special places*

The Natural Area Protection Tax Exemption Program



NAPTEP

PROTECT YOUR LAND AND SAVE MONEY

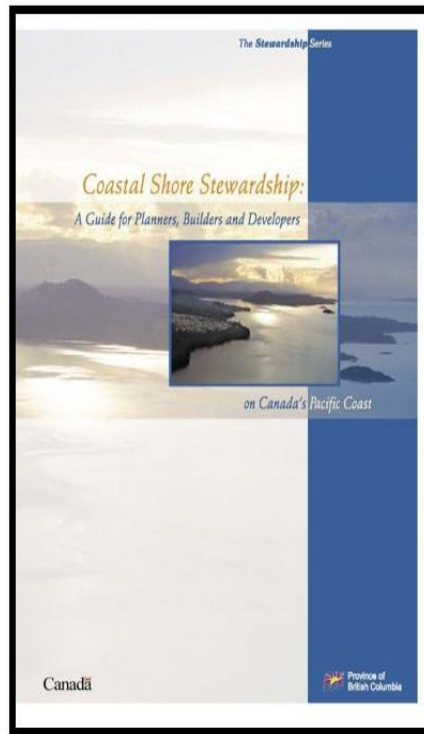
An incentive program to reduce taxes for Islands Trust Area landowners



# Green Shores



Green Shores for  
Coastal Development  
for  
large-scale projects



GREEN SHORES  
FOR  
HOMES

Green Shores for Homes  
for residential properties

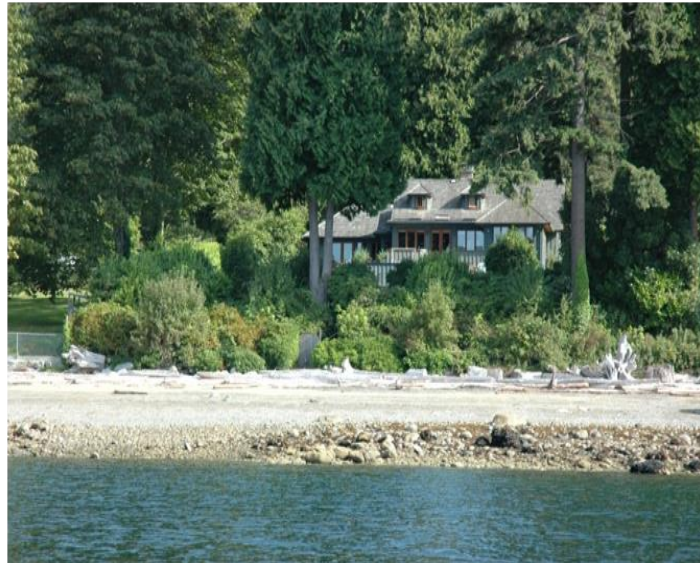


*So how can we help  
homeowners go from this:*





...to something  
more like this?





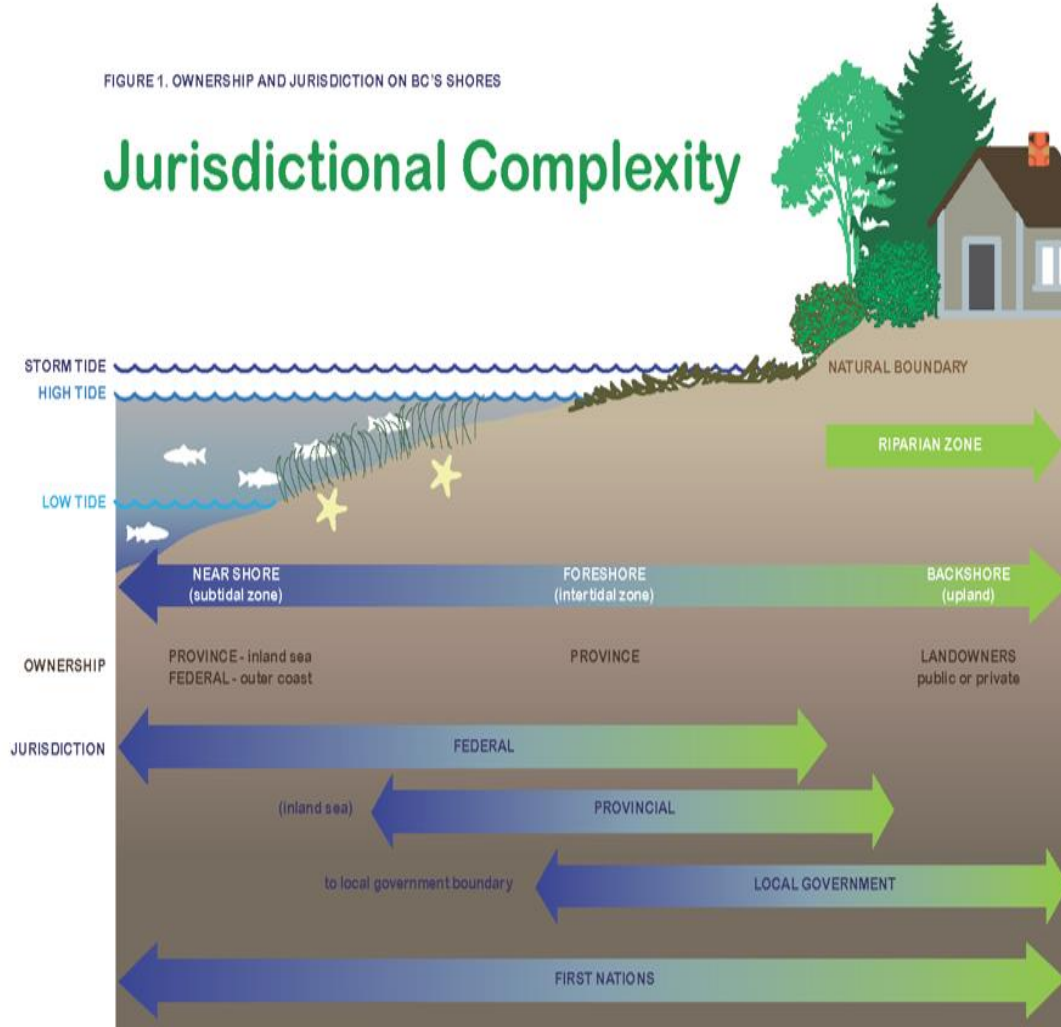
**What are the options for improving existing policy or regulations to formally protect shoreline values?**



# Role of Governments

FIGURE 1. OWNERSHIP AND JURISDICTION ON BC'S SHORES

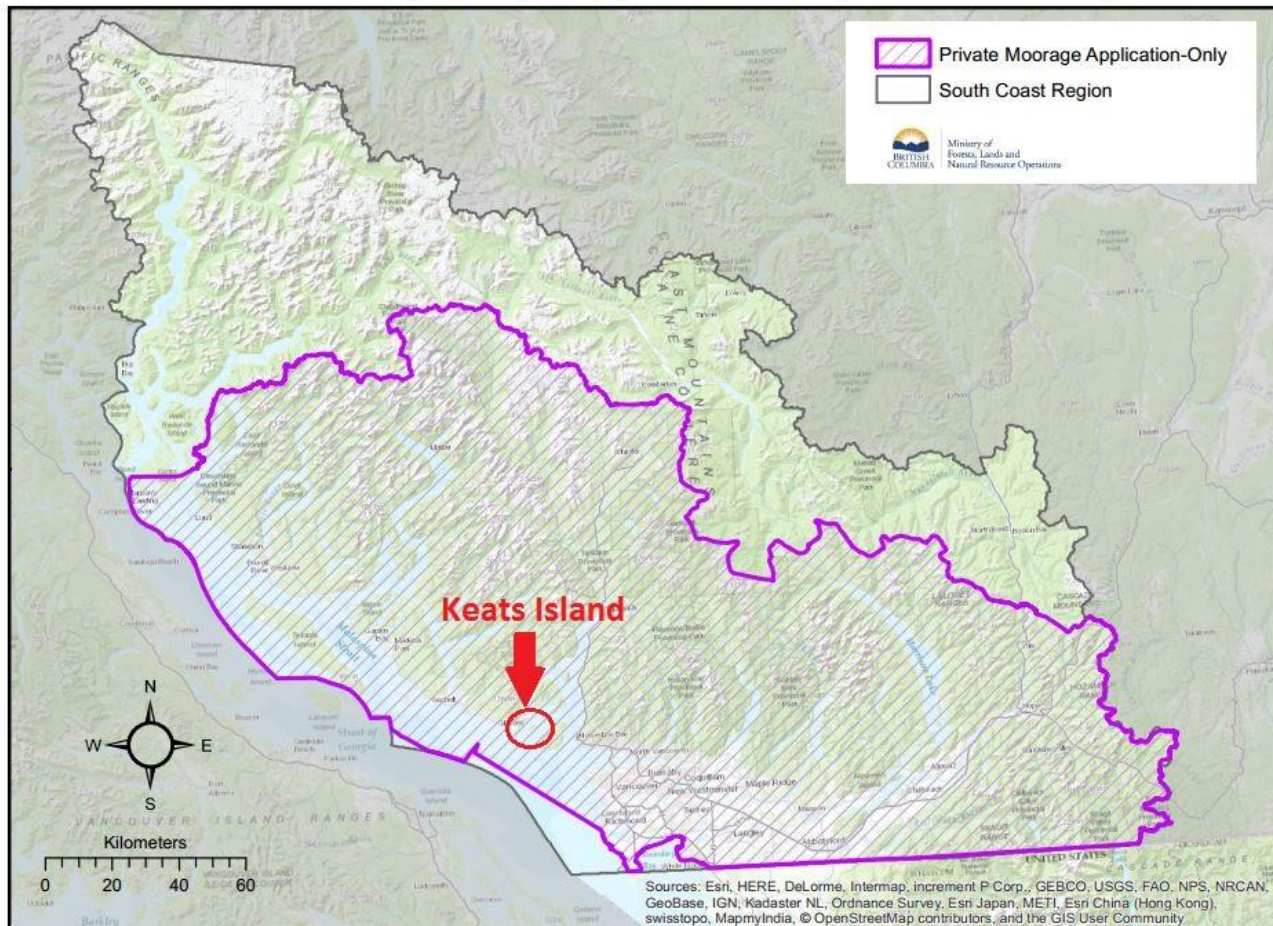
## Jurisdictional Complexity



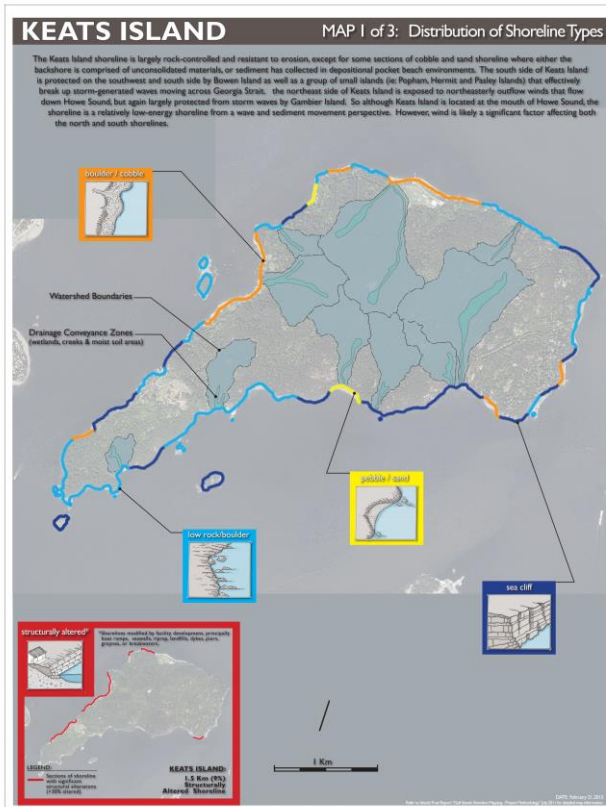


# Marine Zoning Regulations

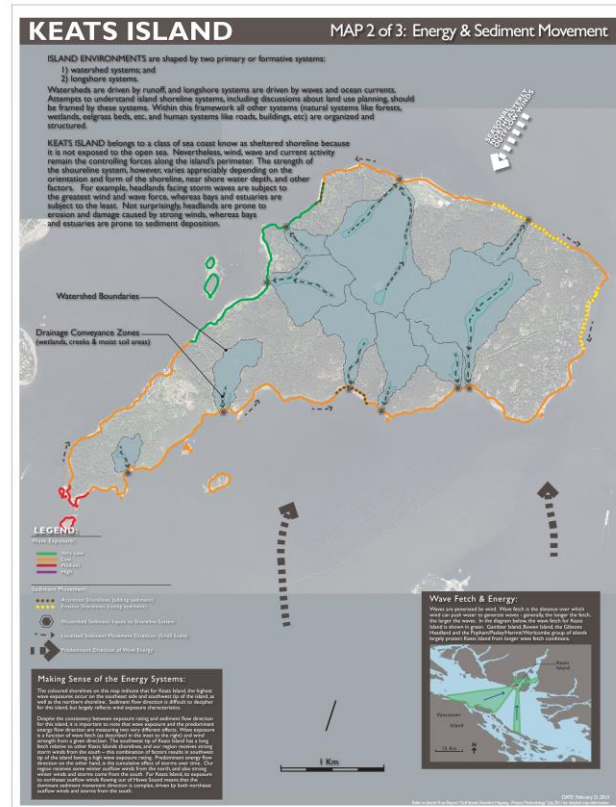
South Coast Private Moorage Application-Only Areas: January 2017



# Keats Shoreline Mapping



<b>SEA CLIFF</b> - rocky shore with steep slope - 1% of shoreline (1.6 Km)	<b>LOW ROCK/BOULDER</b> - low energy pocket beach - 15% of shoreline (1.8 Km)	<b>BULF</b> - moderate to high energy shoreline - 4% of shoreline (4.4 Km)	<b>BOULDER COBBLE</b> - coarse to large scale sediment - 2% of shoreline (2.9 Km)	<b>COBBLE/SAND</b> - moderate to high energy shoreline - 1% of shoreline (1.3 Km)	<b>MAPPING SEDIMENT</b> - low energy shoreline - 1% of shoreline (1.3 Km)
<b>Rock (Hard) Shorelines</b>			<b>Sediment (Soft) Shorelines</b>		



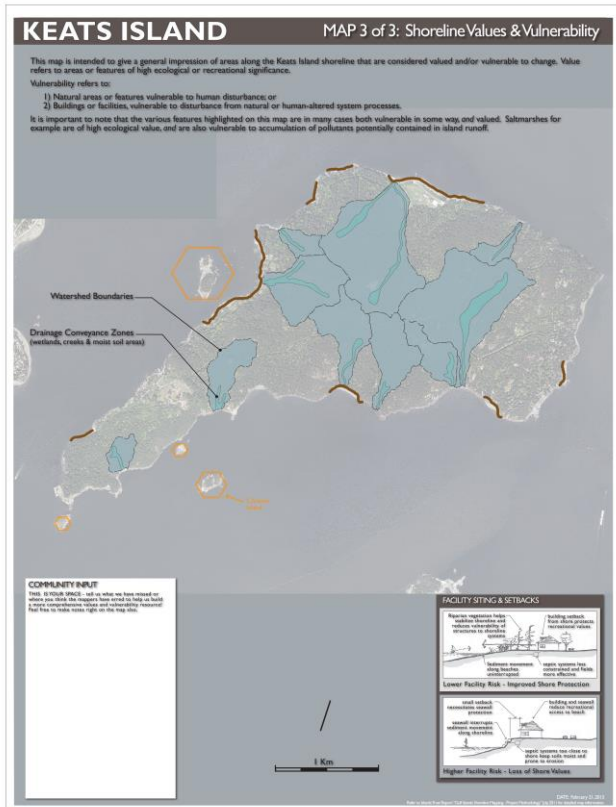
**Accretion Shorelines:**  
 Sediment accretion (deposition) is a natural process that occurs naturally along the shoreline. It is a process that occurs naturally along the shoreline. It is a process that occurs naturally along the shoreline.

**Erosion Shorelines:**  
 Erosion shorelines are typically associated with higher energy wave exposure along the shoreline. They are characterized by high energy wave exposure along the shoreline. They are characterized by high energy wave exposure along the shoreline.

**Wave Exposure & Sediment System**

**Wind Exposure & Buildings**

**Scale:** 1 Km



**LOW LIVING AREAS:**  
 Areas with low living areas are typically associated with high ecological or recreational significance. They are characterized by low living areas and high ecological or recreational significance.

**SOFT SHORLINES:**  
 Soft shorelines are typically associated with high ecological or recreational significance. They are characterized by soft shorelines and high ecological or recreational significance.

**VERY PROTECTED WETLANDS:**  
 Very protected wetlands are typically associated with high ecological or recreational significance. They are characterized by very protected wetlands and high ecological or recreational significance.

**SALT MARSHES:**  
 Salt marshes are typically associated with high ecological or recreational significance. They are characterized by salt marshes and high ecological or recreational significance.

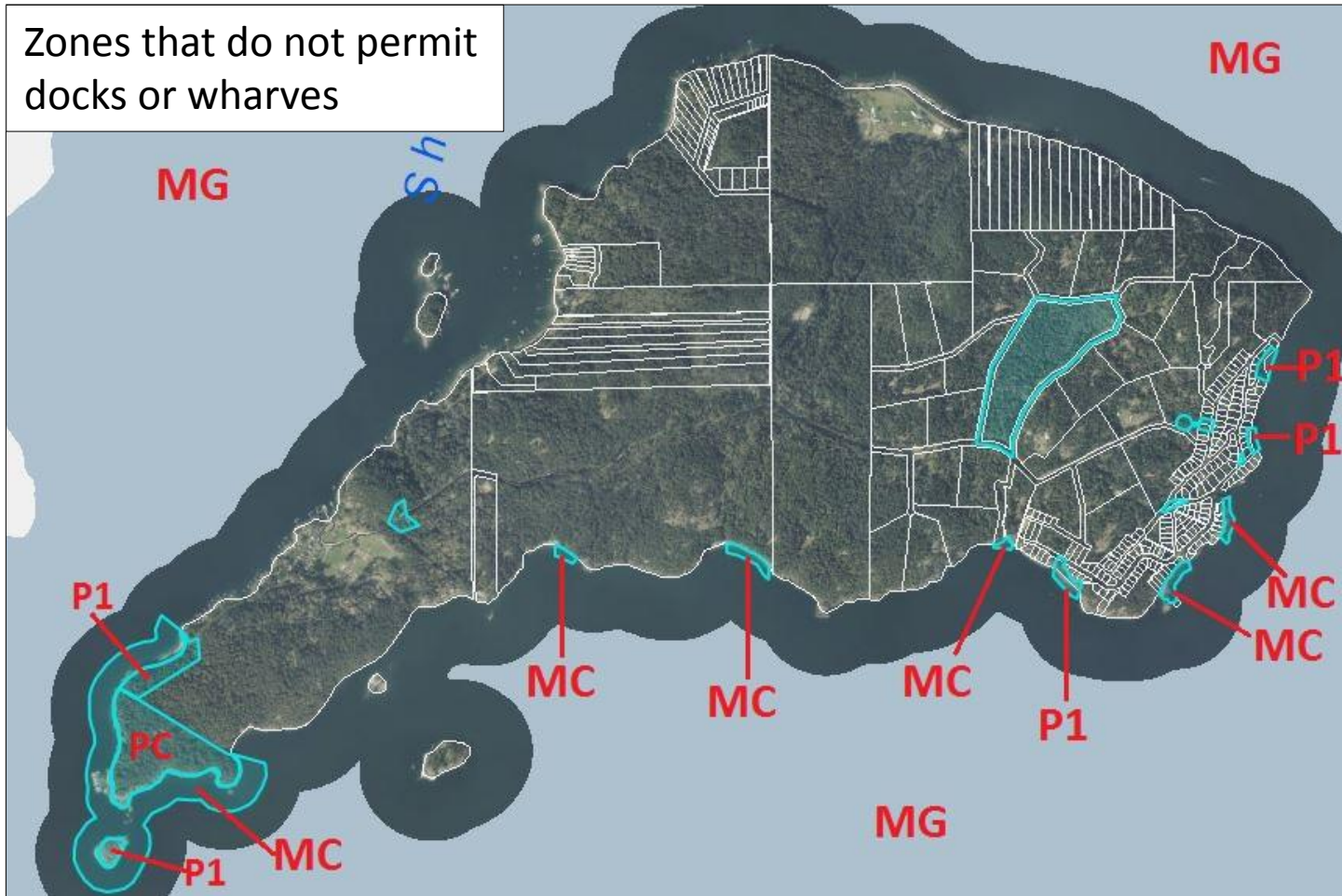
**KEATS:**  
 Keats Island is a unique and valuable area with high ecological or recreational significance. It is characterized by its unique and valuable area with high ecological or recreational significance.

**Scale:** 1 Km

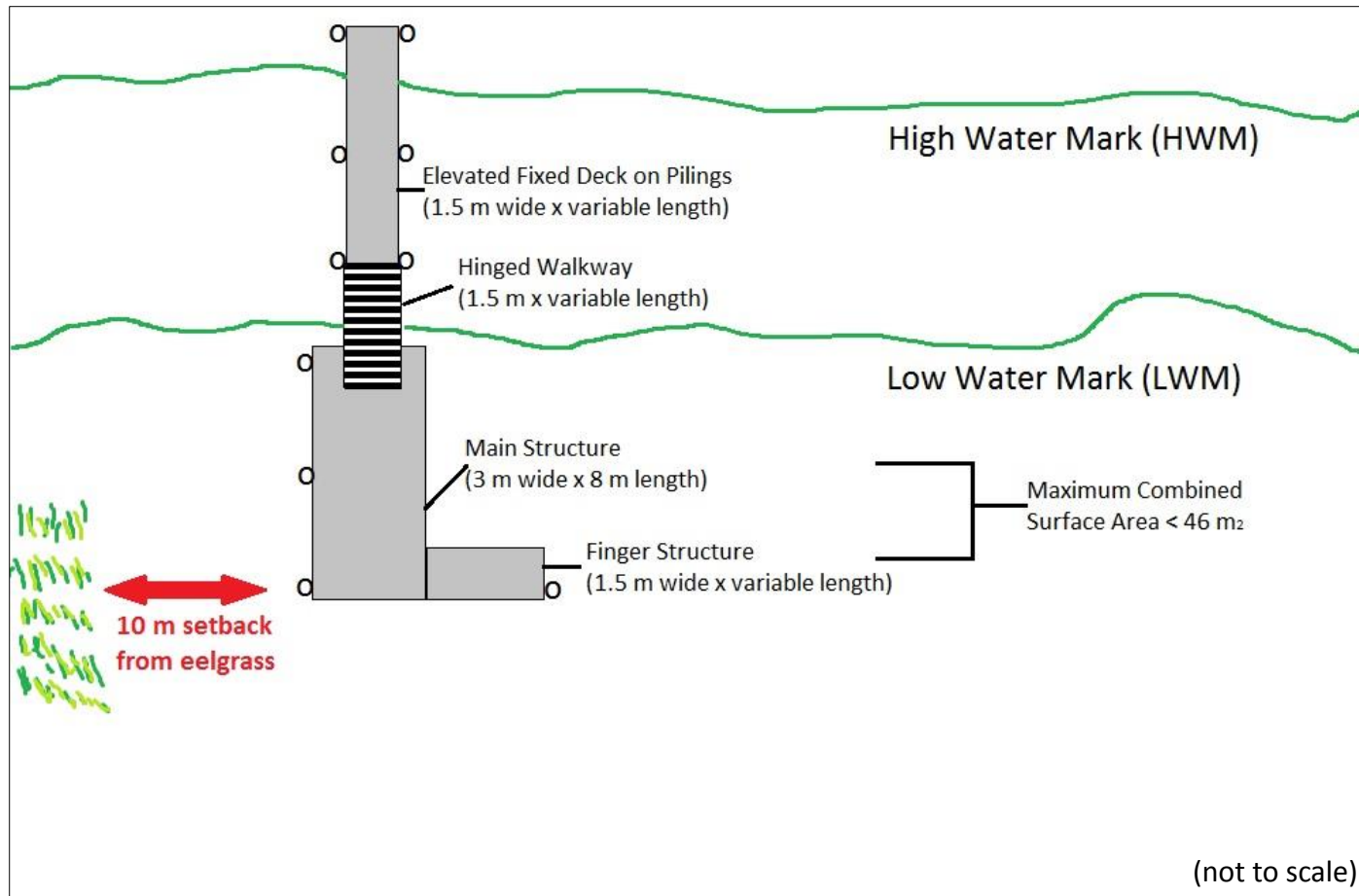




# Keats Island Land Use Bylaw

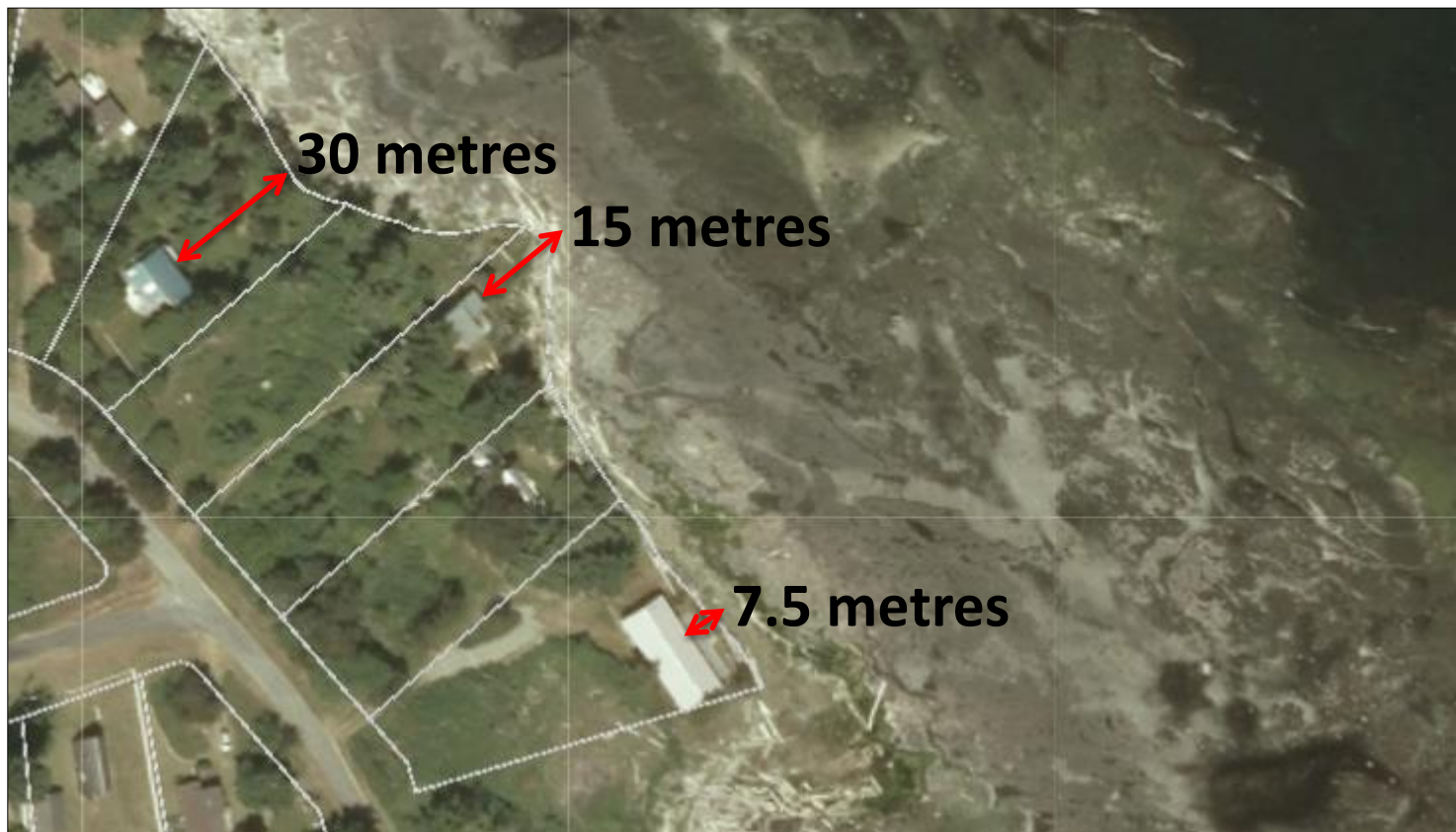


# Updated Dock Regulations for Marine Zones (example)





# Setback Regulations to the Natural Boundary of the Sea





Gambier Island  
Local Trust Committee

# Development Permit Area





**What are the options for improving existing policy/regulations to formally protect shoreline values?**

**What marine shoreline values do you wish to protect?**

**What are the opportunities for voluntary stewardship in general on Keats Island?**



## Gambier Island Local Trust Committee



### Gambier Island Local Trust Committee Keats Island Shoreline Protection Project (Phase 1)

#### Community Questionnaire Summer 2018

The Gambier Island Local Trust Committee (LTC) is seeking input from community members and stakeholders on community shoreline protection values, and policy and regulatory options for strengthening protection of marine and shoreline areas on Keats Island.

Your input during the first phase of the project is important to:

- Assist the Local Trust Committee in identifying priority community marine and shoreline values on Keats Island, and
- Inform Phase 2 of the project, which may include potential amendments to the Keats Island Official Community Plan (OCP) Bylaw No. 77 and/or the Keats Island Land Use Bylaw No. 78.

The questionnaire will take less than 10 minutes to complete and is available online. Paper copies will be distributed by mail, and at the community consultation event held at Keats Camp, Keats Island on Thursday, July 26, 2018. Paper copies can be mailed or scanned and emailed to:

Islands Trust, Northern Office  
700 North Road  
Gabriola Island, BC V0X 1X3  
[gambierplanner@islandtrust.bc.ca](mailto:gambierplanner@islandtrust.bc.ca)

For more information on the Keats Island Shoreline Protection Project, please visit the [project website](#) or contact planning staff at 250.247.2063.

Thank you for your participation!



# Questions and Comments



Thank you.