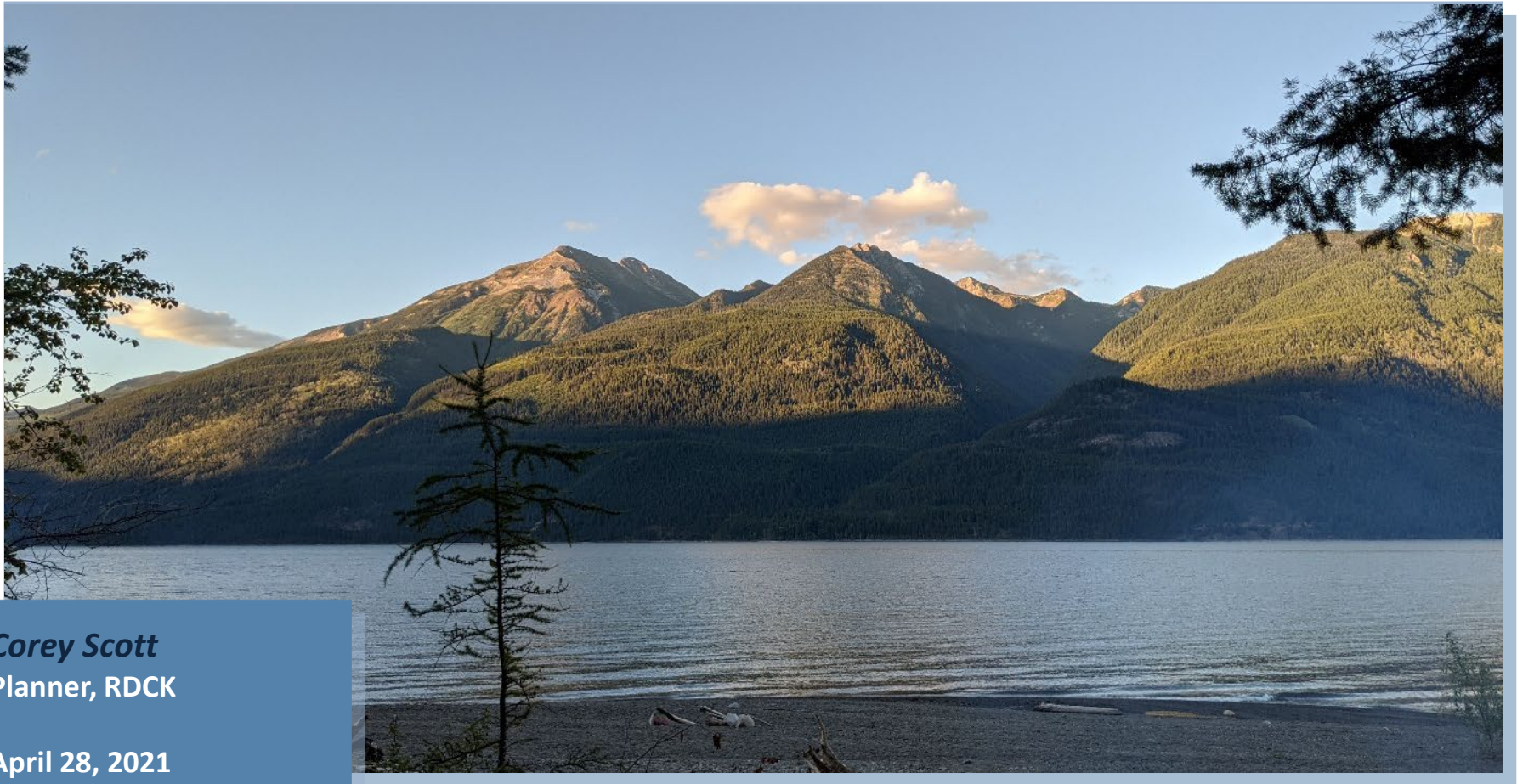




# Kootenay Lake Development Permit Area (KLDPA) Workshop



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# Overview

## BACKGROUND

- Riparian Areas
- Permitting requirements in and around water (local, provincial and federal levels)

## DISCUSSION

- Areas of Concern
- What do you value most about Kootenay Lake?
- Final Thoughts



# Goal and Outcome of Workshop

## RDCK Goal

To provide information on riparian areas, their importance, the purpose of Environmental Development Permit Areas and the current permitting requirements.

## Workshop Outcome

To understand why permitting requirements are in place and how feedback will be used to inform potential changes to these requirements.





# Riparian Areas – What are they?

*'THE AREAS BORDERING STREAMS, LAKES, AND WETLANDS THAT LINK WATER TO LAND. THE BLEND OF STREAMBED, WATER, TREES, SHRUBS AND GRASSES DIRECTLY INFLUENCES AND PROVIDES FISH HABITAT.'*

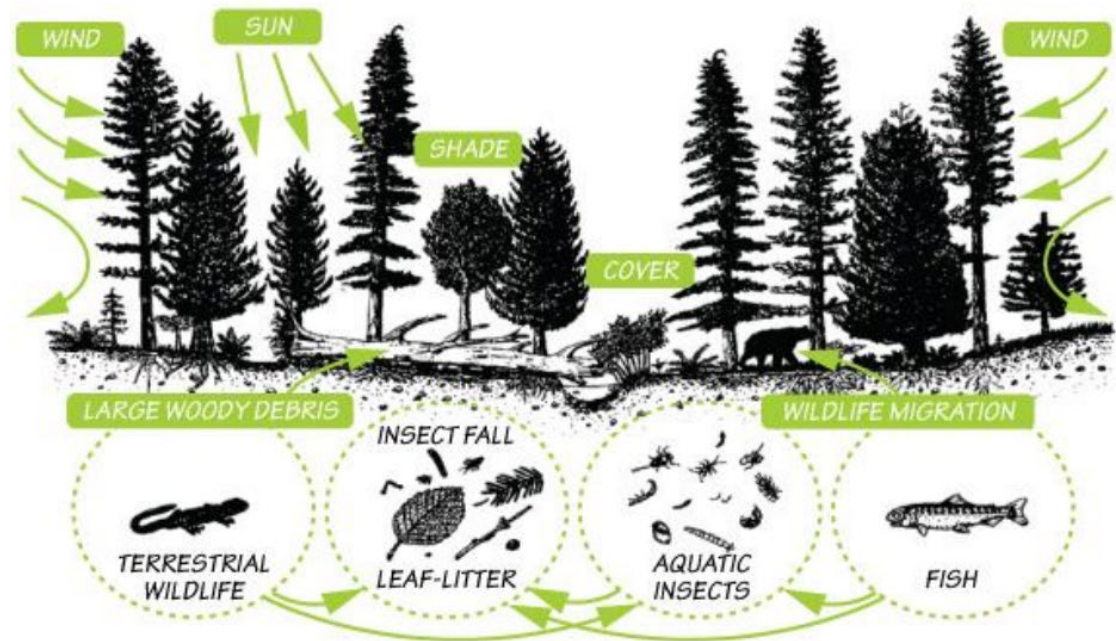
– BC MFLNRORD

*'THE AREA THAT LINKS AQUATIC ENVIRONMENTS TO UPLAND TERRESTRIAL ECOSYSTEMS.'*

– RAPR 2019

*'... A CORRIDOR BETWEEN LAND AND WATER, ALLOWING ANIMALS TO TRAVEL BETWEEN DIFFERENT BIOMES.'*

– Watersheds Canada



*Source: BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development.*



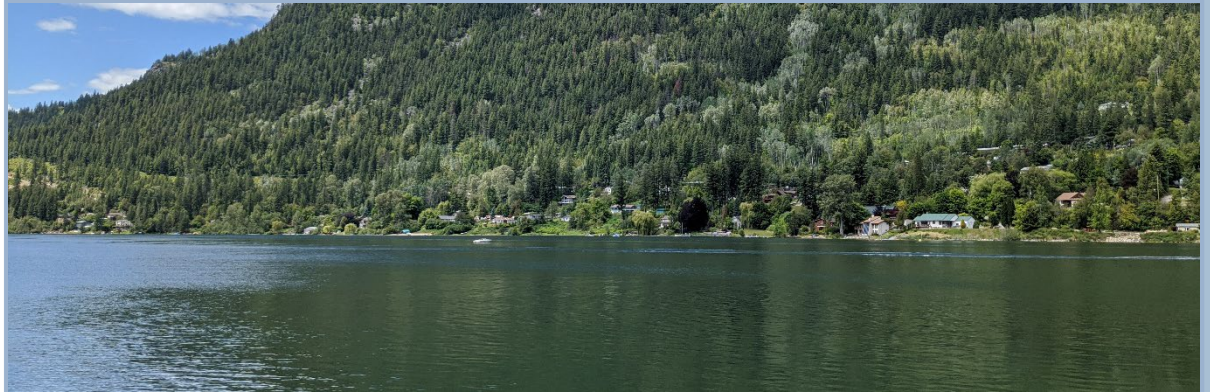
# What is a Stream or Watercourse?

Development in and around streams (watercourses) are regulated by government agencies:

- Local
- Provincial
- Federal

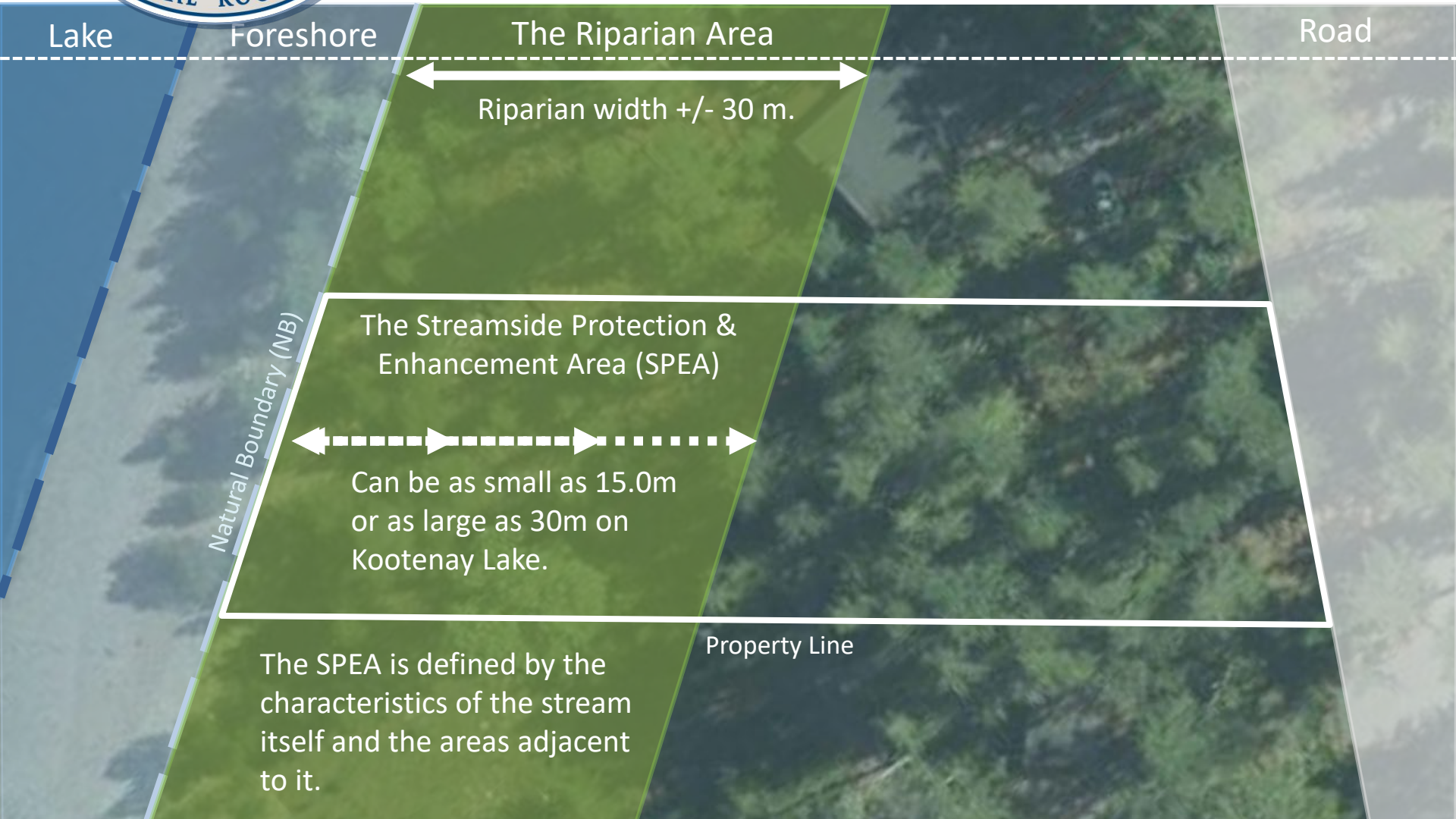
*“A natural watercourse, including a natural glacier course or natural body of water. Bodies of water described by the term “stream” can include a lake, pond, river, creek, spring, ravine, gulch, wetland, or glacier, whether or not usually containing water, including ice.”*

*- Province of BC, Water Sustainability Act*





# Riparian Areas – Where are they?





# Riparian Areas – Why protect them?

## Other benefits:

- Critical habitat for many species.
- Perch and nesting habitat for raptors and songbirds.
- Migratory corridor for wildlife.
- **Prevention of shoreline erosion by absorbing and dissipating wave energy.**

## Riparian areas maintain stream health and productivity by providing:

- Sources of large organic debris, such as fallen trees and tree roots;
- Areas for stream channel migration and flooding;
- Vegetative cover to help moderate water temperature;
- Provision of food, nutrients and organic matter to the stream;
- Stream bank stabilization; and
- Buffers for streams from excessive silt and surface run-off pollution

– BC MFLNRORD, 2016



# Riparian Areas

## THE LAKESHORE ZONES AND THEIR BENEFITS TO YOU

Land below the present natural boundary of the lake is Crown land and is usually represented by the High Water Mark. Unsure where your property line is? Contact a B.C. Land Surveyor.

### DID YOU KNOW?

Any land disturbance in or around Kootenay Lake is subject to permit(s) and approvals. This may include authorizations from multiple agencies prior to proceeding with any proposed development.



### DID YOU KNOW?

Osprey depend almost exclusively on fish for their diet and build nests that are used year after year on tall natural and human-made structures in riparian areas along shorelines. Osprey nest sites along Kootenay Lake are monitored annually by volunteers.

### UPLAND

• local government

### RIPARIAN

• local government

### LAKESHORE

• provincial government

### AQUATIC

• provincial and federal governments





# Riparian Areas – The Littoral Zone

## What is the littoral zone?

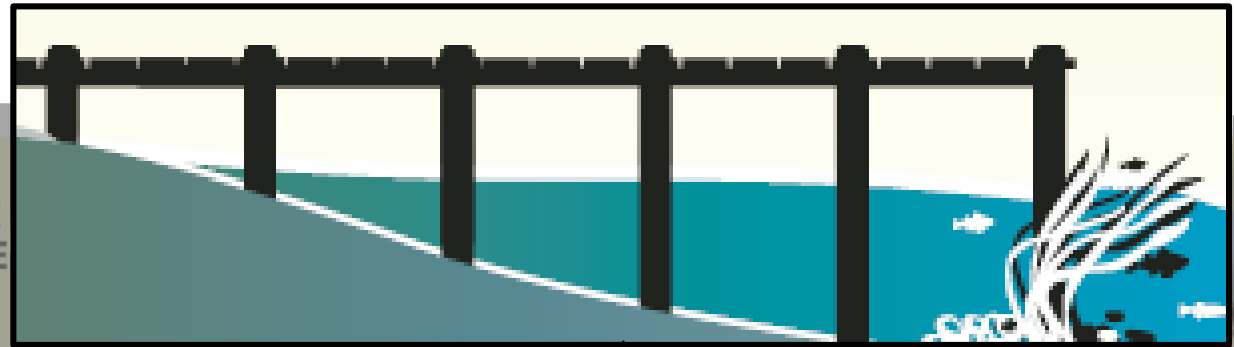
The near shore area where sunlight penetrates all the way to the sediment and allows **aquatic plants** (macrophytes) to grow.

## Removing soil/adding fill can:

- Suffocate existing vegetation
- Reduce vegetation regeneration
- Increase chance of erosion
- Allow for invasive weeds

**Cobbles and boulders** provide cover habitat for fish.

**Gravels** can provide potential spawning habitat for kokanee.



**Native soil** provides habitat for freshwater mussels and growing medium for aquatic plants.

**Maintains** variability along the shoreline for fish life stages and migration.

### DID YOU KNOW?

Osprey depend almost exclusively on fish for their diet and build nests that are used year after year on tall grasses and human-made structures in riparian areas along shorelines. Osprey nest sites along Kootenay Lake are monitored annually by volunteers.



**TERRESTRIAL**

**AQUATIC**

• provincial government

• provincial and federal governments



# Riparian Areas – Upland Soils

## What is the upland zone?

Comprised of native riparian vegetation and provides wildlife habitat, which can contribute to productive fish habitat.

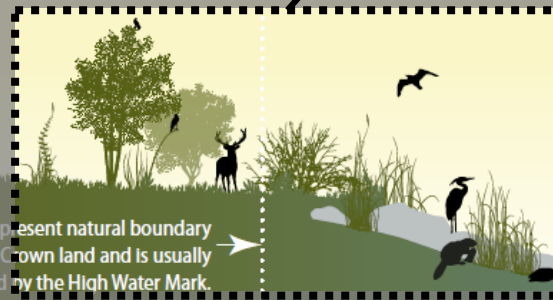
**Boulders and rocks** provide cover habitat for reptiles and small mammals.

**Exposed bedrock** provides niche habitat for specific plants and animals.



## SHORE ZONES AND THEIR BENEFITS TO YOU

...and approvals. This may include authorizations from multiple agencies prior to proceeding with any proposed development.



Land below the present natural boundary of the lake is Crown land and is usually represented by the High Water Mark. Unsure where your property line is? Contact a B.C. Land Surveyor.

**Native Soil** provides growing medium for native plant species, encourages natural plant regeneration, and reduces the potential spread of invasive weeds.

**Native vegetation** minimizes erosion potential on the landscape.

**UPLAND**

• local government

**RIPARIAN**

• local government

**LAKESHORE**

• provincial government

**AQUATIC**

• provincial and federal governments



# Landscape Connectivity

## Why is it important?

- Healthy ecological systems
- Increases species richness & diversity
- Increases foraging area
- Provides predator escape
- Mixed habitat for different life stages
- Shelter from large disturbances (ex. Fire)
- Provides greenbelts

Provides wildlife corridors from upland habitat to riparian habitat and lakeshore. These corridors allow wildlife populations to move freely between a network of suitable habitat patches.

## THE LAKESHORE ZONES AND THEIR BENEFITS TO YOU





# Archaeological Considerations

## Archaeological material can include:

- *Ancient stone carvings*
- *Remains of ancient houses and campsites*
- *Shell middens*
- *Culturally modified trees*
- *Others...*

- BC Archaeology Branch

- Archaeological sites are a non-renewable resource that are invaluable, particularly for local First Nations cultures, and have been found around Kootenay Lake.
- There are areas around Kootenay Lake that have 'high', 'moderate', or otherwise limited archaeological potential.
- Archaeological sites that pre-date 1846 are automatically protected under the *Heritage Conservation Act*
- Can be indicated by fire-stained/broken rock and artifacts



# Applicable Legislation

## Guidance Documents

- Kootenay Lake Shoreline Guidance Document (EEC 2016, KLP 2018)
- Standards and Best Practices for Instream Works (Province of BC, 2004)
- Develop with Care Environmental Guidelines for Urban and Rural Land Development (Province of BC, 2014)

## Local Government (RDCK):

- *Land Use Bylaws/Official Community Plans*
  - Development Permit Areas

## Provincial Government:

- *Water Sustainability Act*
  - Works in and about a stream
- *Lands Act*
  - Private Moorage (docks, boathouses, marine rails)
  - Accretions
- *Heritage Conservation Act*
  - Archaeological material & chance finds

## Federal Government

- *Fisheries Act*
  - Conservation, Pollution Prevention, Fisheries Mgmt.



# What are 'Environmental Development Permit Areas' (DPAs)?

**DEVELOPMENT PERMIT AREAS** are designated for the:

*"protection of the natural environment, its ecosystems and biological diversity."*



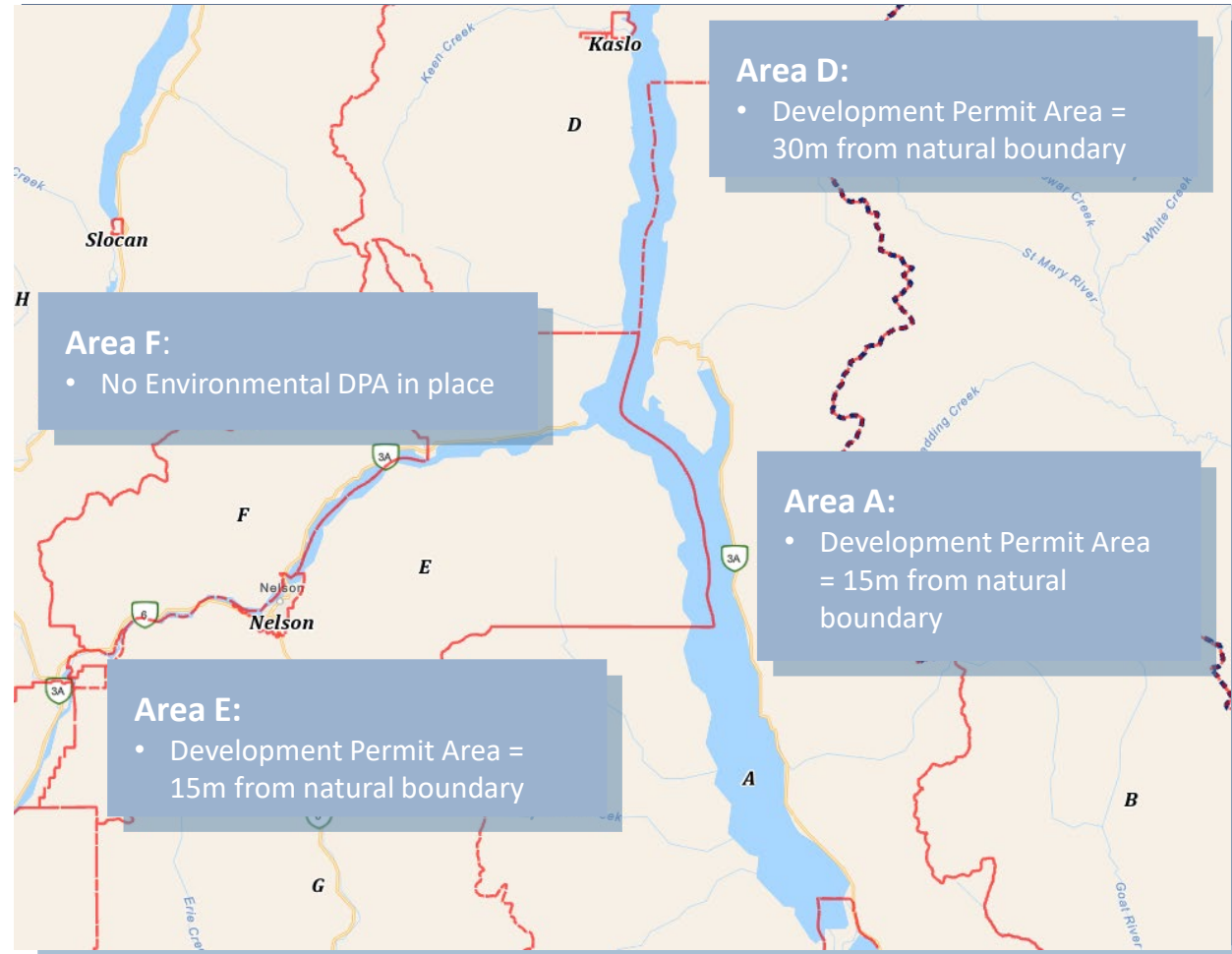
Photo Credit: Masse Environmental Consulting



# Where are they? (EDPAs along Kootenay Lake)

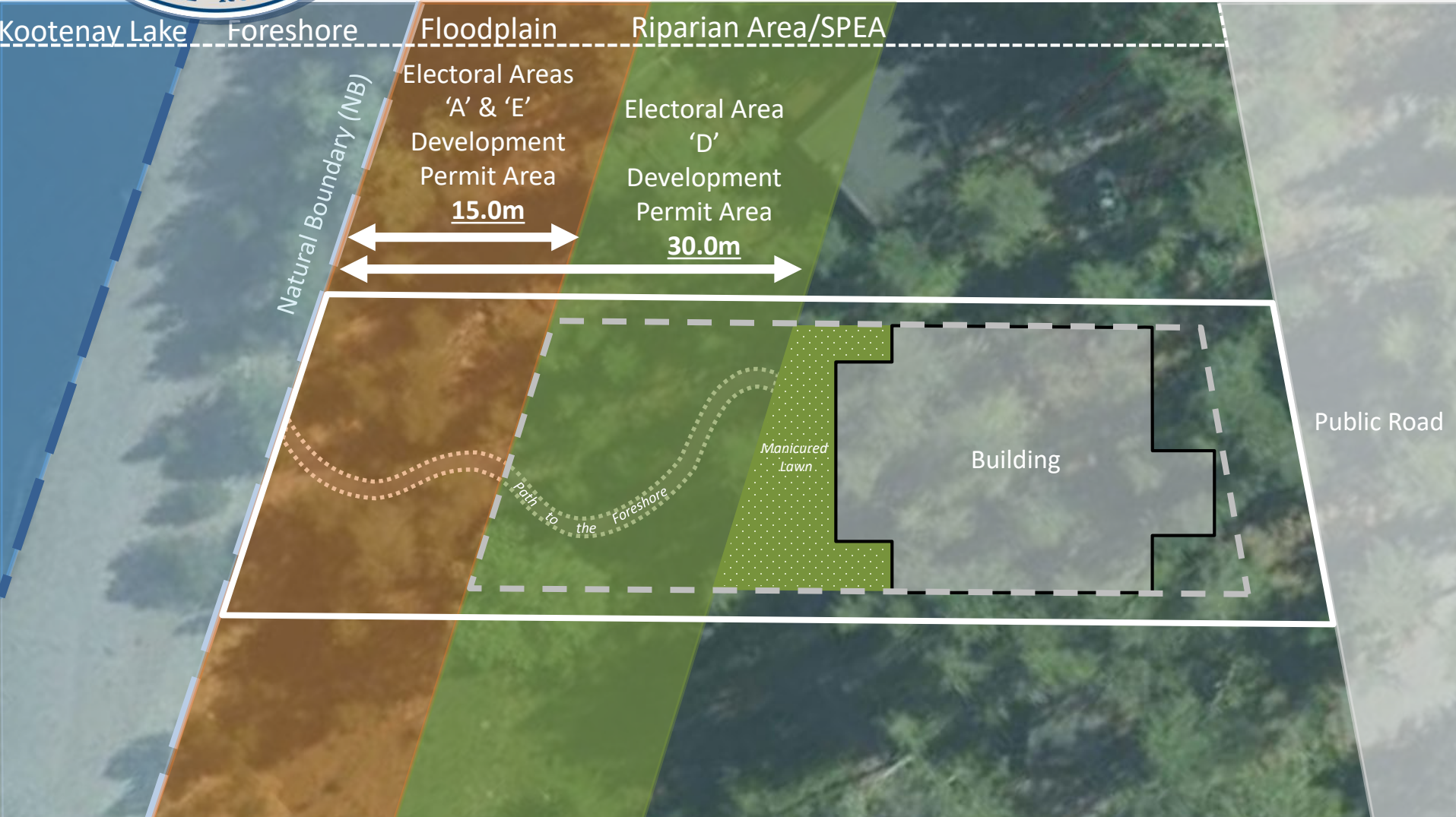
## A Development Permit is required before:

- removal, alteration, disruption or destruction of vegetation;
- disturbance of soils
- buildings and structures
- creation of non-structural impervious or semi-impervious surfaces
- flood protection works
- roads, trails, docks, wharves and bridges
- sewer and water services
- drainage systems
- utility corridors
- subdivision





# Development Permit Areas







# Objectives

What are we trying to achieve by having Environmental DPAs in place around Kootenay Lake?

- To protect Kootenay Lake's aquatic habitat from impacts of development
- To conserve and enhance Kootenay Lake's riparian areas
- To restore Kootenay Lake and its riparian areas where disturbance has already happened.



# Overarching Principles

## How do we achieve DPA Objectives?

DPA objectives can be achieved by applying the following priority sequence of mitigation options:

1. Avoidance of environmental impacts.
2. Minimization of unavoidable impacts.
3. On-site restoration.
4. Offset residual impacts that cannot be minimized through compensation

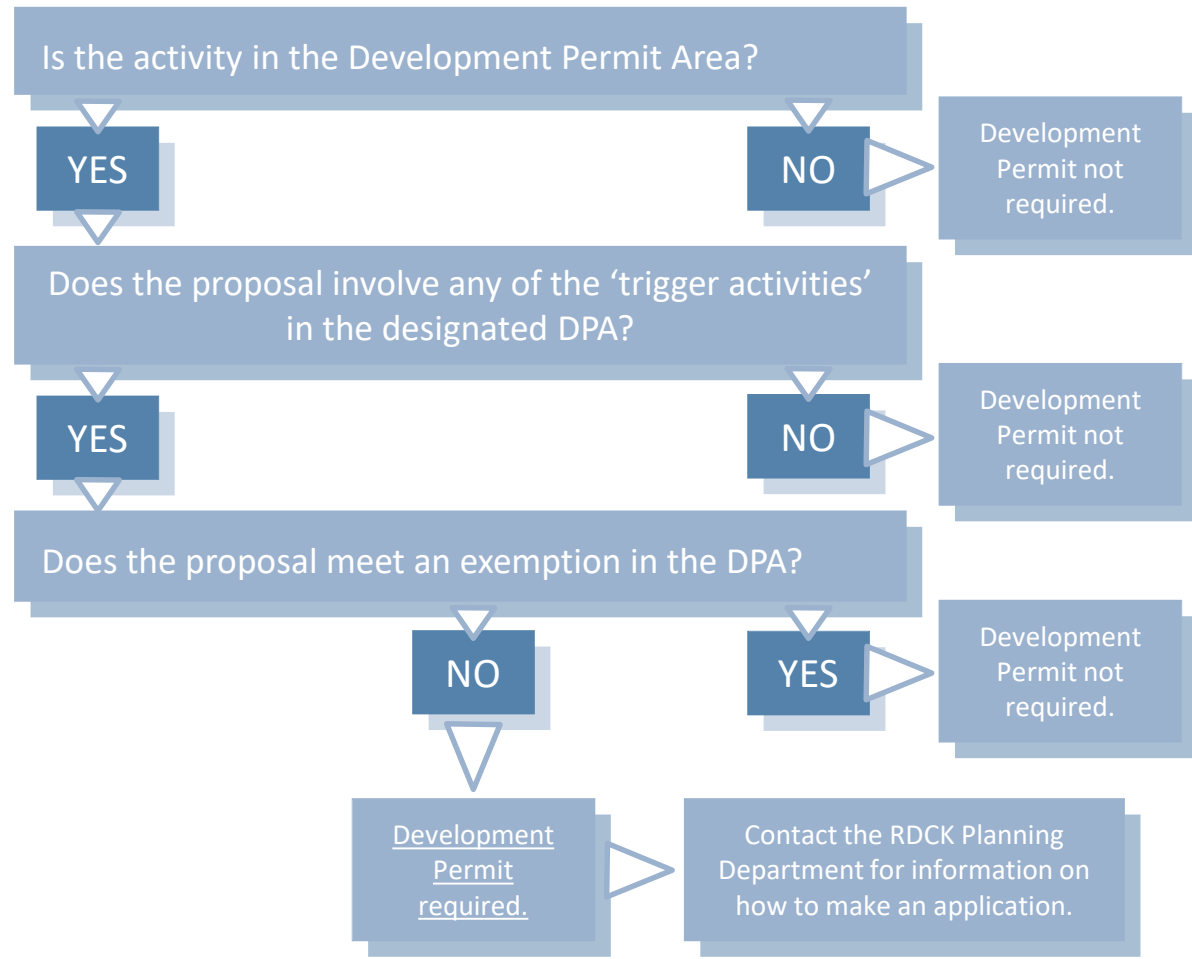
- KLP, 2018



# Environmental Development Permit Process

## Trigger activities include:

- Removal, alteration, disruption or destruction of vegetation
- Soil disturbance
- Construction or placement of building and structures
- Creating impervious surfaces
- Flood protection works (works during local state of emergency may be exempt)
- Roads, trails, docks, wharves and bridges
- Sewer & Water Services
- Drainage systems
- Utility Corridors
- Subdivisions





# Development Permit Requirements

## Riparian Assessment Report

### Riparian Assessment Reports must:

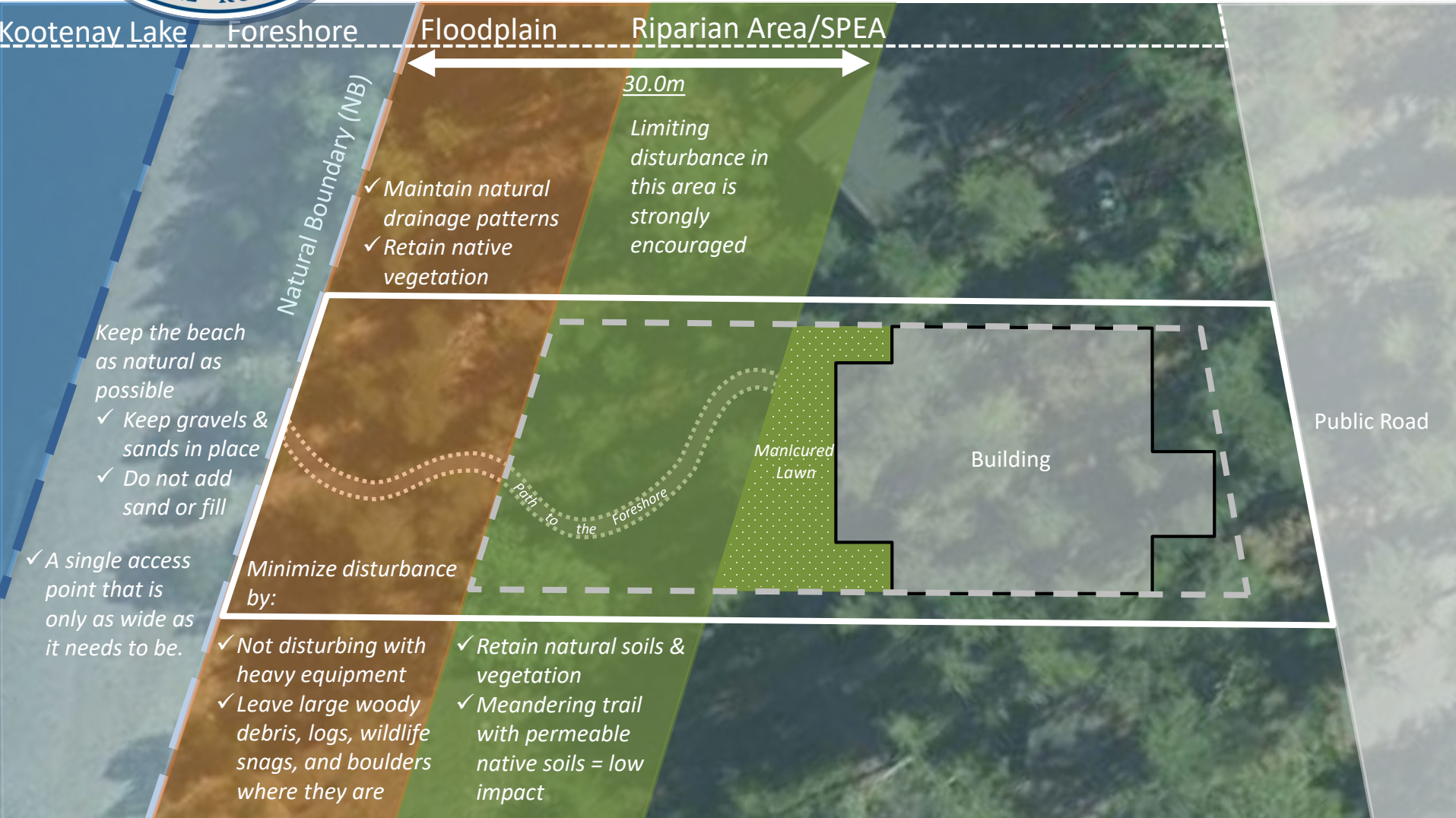
- a) Be prepared by a Qualified Environmental Practitioner (QEP) or Registered Professional Biologist (RP Bio)
- b) Follow the *Riparian Areas Protection Regulation* assessment methodology established by the Provincial government

### The QEP or RP Bio submits a report that:

- a) certifies they are qualified to do the assessment
- b) that the Riparian Areas Protection Regulation assessment methods have been followed
- c) confirms that the development will not negatively affect the functioning of the watercourse
- d) ensures the Riparian Areas Protection Regulations criteria have been fulfilled



# 'Sensitive' Shoreline Development





# 'Sensitive' Shoreline Development



Photo Credits: Masse Environmental Consulting



# Common Misconceptions

*CAN I BUILD WITHIN AN ENVIRONMENTAL DEVELOPMENT PERMIT AREA?*

Yes

- The Development Permit Area is the trigger to require a Development Permit
- It is a key way for us to understand important habitat features on private properties through the Environmental Report
- Without a Development Permit Area in place, our ability to know what features exist on a property, whether they have environmental importance, and whether disturbance would affect that/those feature(s) is very limited



# Common Misconceptions

*ARE FLOODPLAINS AND RIPARIAN AREAS THE SAME THING?*

No

- Floodplains are designated for the purpose of identifying flood hazard areas & reducing risks associated with building within/near them.
- Riparian Areas, which are covered by Environmental Development Permit Areas are designated for the purpose of protection of the natural environment, its ecosystems, and biological diversity





# Common Misconceptions

*ISN'T A DEVELOPMENT PERMIT ONLY REQUIRED IF I'M BUILDING SOMETHING?*

No

- Anything that has potential to impact the riparian area (soil disturbance, vegetation removal, decks, patios, retaining walls, removal of wildlife snags, landscaping, etc.)
  - Example: Installation of a water line from Kootenay Lake would require a Development Permit
  - Review the DPA or talk to RDCK Planning Staff to determine if a DPA applies to the project you're looking to complete



# Why we're here today

## TO UNDERSTAND:

What's important to you about Kootenay Lake

Whether you have specific concerns about Kootenay Lake

\*Please note: If you missed the workshops, a survey will be open until 12:00PM on May 2, 2021 on the RDCK website to provide your feedback. <https://www.surveymonkey.com/r/9FYKGQ5>



# Values for Kootenay Lake

## WHAT ARE THE THINGS THAT YOU VALUE MOST ABOUT KOOTENAY LAKE?

Some Examples:

Recreation & Personal Enjoyment

Wilderness

Natural Environment

Safety

Cultural Significance

Clean & Abundant Water

## OTHERS NOT SHOWN IN THE LIST?



# Areas of Concern

## WHAT ARE YOUR TOP 5 GREATEST CONCERNS WHEN IT COMES TO KOOTENAY LAKE?

Some Examples:

Development Pressures

Environmental Degradation

Water Quality

Healthy Fish Habitat

Invasive Species

Water Quantity

Loss of 'Wilderness'

Loss of Indigenous Cultural, Ecological and Archaeological Values

Natural Hazards (flooding, slope instability, etc.)

Pollution & Contamination

Lake Access degrading Natural Environment

Trespassing on Private Property

Not Enough Public Access Along the Lake

Un-authorized Foreshore Modifications

OTHERS NOT SHOWN IN THE LIST?



# Thank You!

## Next Steps:

- Compile feedback & review current Development Permit Areas
- Draft updated Development Permit Area for areas around Kootenay Lake
- Feedback on Draft DPA (Survey)