LP Malakwa – draft FSP 2018-2023

- **A FSP is a requirement of the Forest and Range Practices Act (FRPA) The purpose of the FSP is to link the government objectives for managing and protecting forest and range values with LPM's measures, results and strategies that meet these objectives. Legally established land use plans, legislation and regulations drive the objectives - for LP's FSP they are:**
  - **Forest Act**
  - **Forest and Range Practices Act (FPRA)**
  - **Forest Planning and Practices Regulation (FPPR)**
  - **Government Action Regulations (GAR)**
  - **Okanagan Shuswap Land and Resource Management Plan (OSLRMP)**
- **The Term of an FSP is five years upon Gov't approval and may be extended for up to another five years.**
- **A Forest Development Unit (FDU) indicates areas that will contain development activities that have a common set of objectives. In this FSP there is one FDU called Malakwa FDU that covers the LPM operating area located within the Okanagan Shuswap Forest District.**

FSP Objectives

- **FSP sets out LP's strategies for meeting gov't objectives for:**
- Old Growth
- Soils/Roads
- Wildlife(Deer, Moose, Grizzle Bear, Caribou)
- Riparian Areas and Streams
- Biodiversity at Landscape and Stand Level(Wildlife tree retention)

FSP Objectives Cont.

- Cultural Heritage Resources
- Visual Quality Objectives
- Recreation
- Crown Land-Community Interface
- Fisheries Sensitive Watersheds
- Reforestation Stocking Standards
- And various other items.

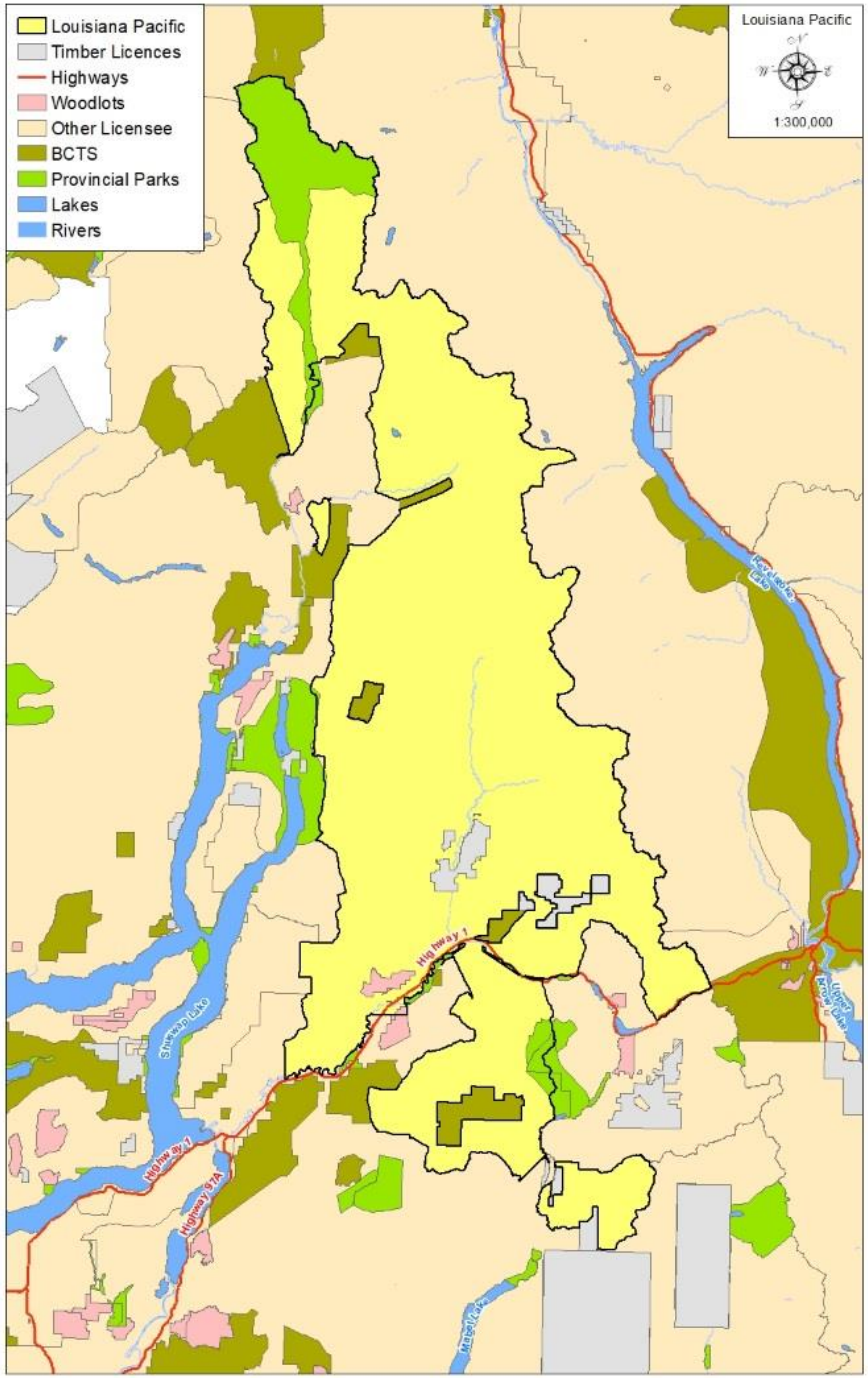
First Nations Information Sharing

Within the LP operating area:

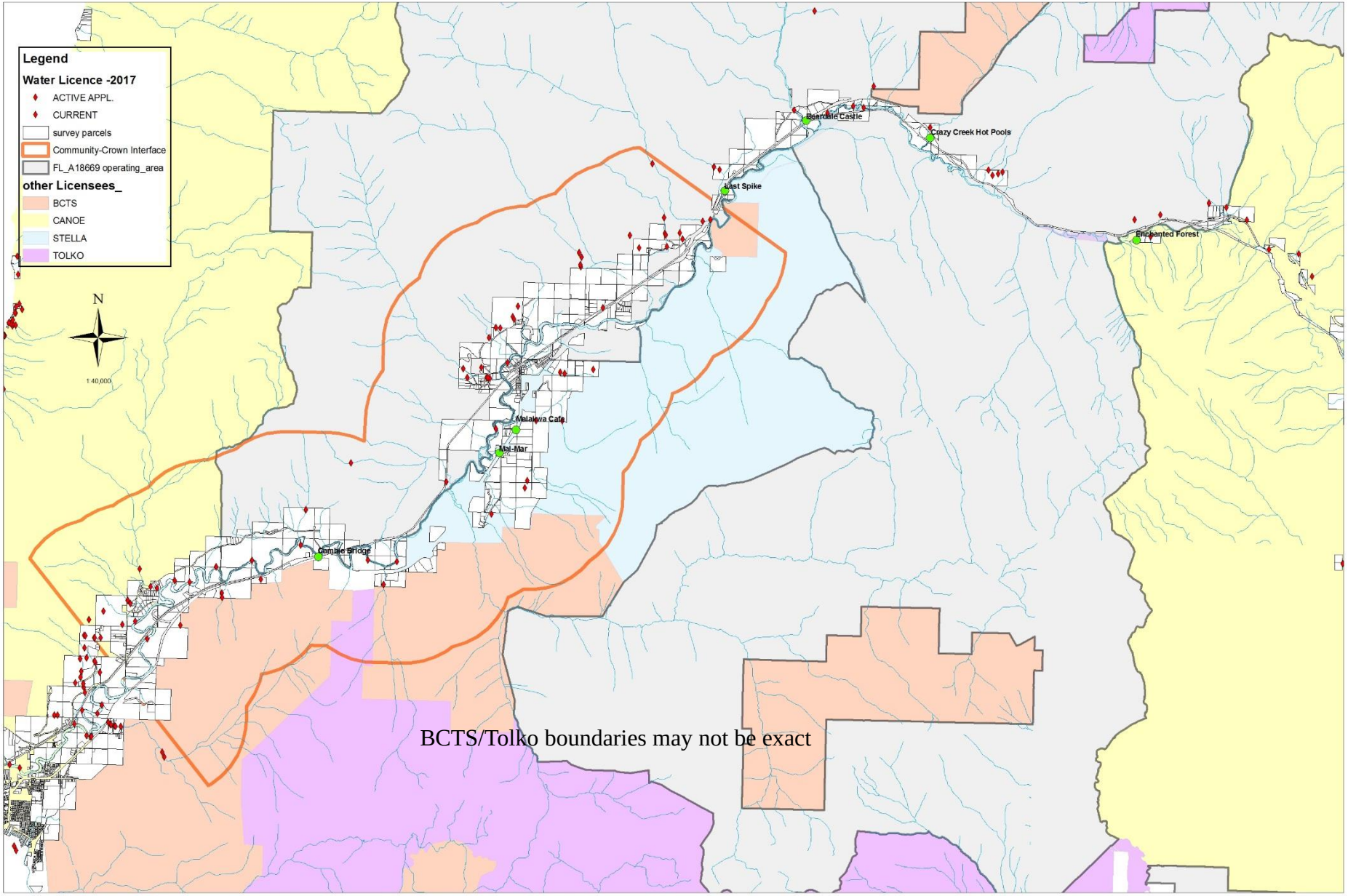
-north of Highway #1 Five First Nations
-south of Highway #1 Nine First Nations

Other Operating Areas and Licenses

-BCTS
-Canoe Forest Products
-Tolko
-Stella-Jones
-woodlots



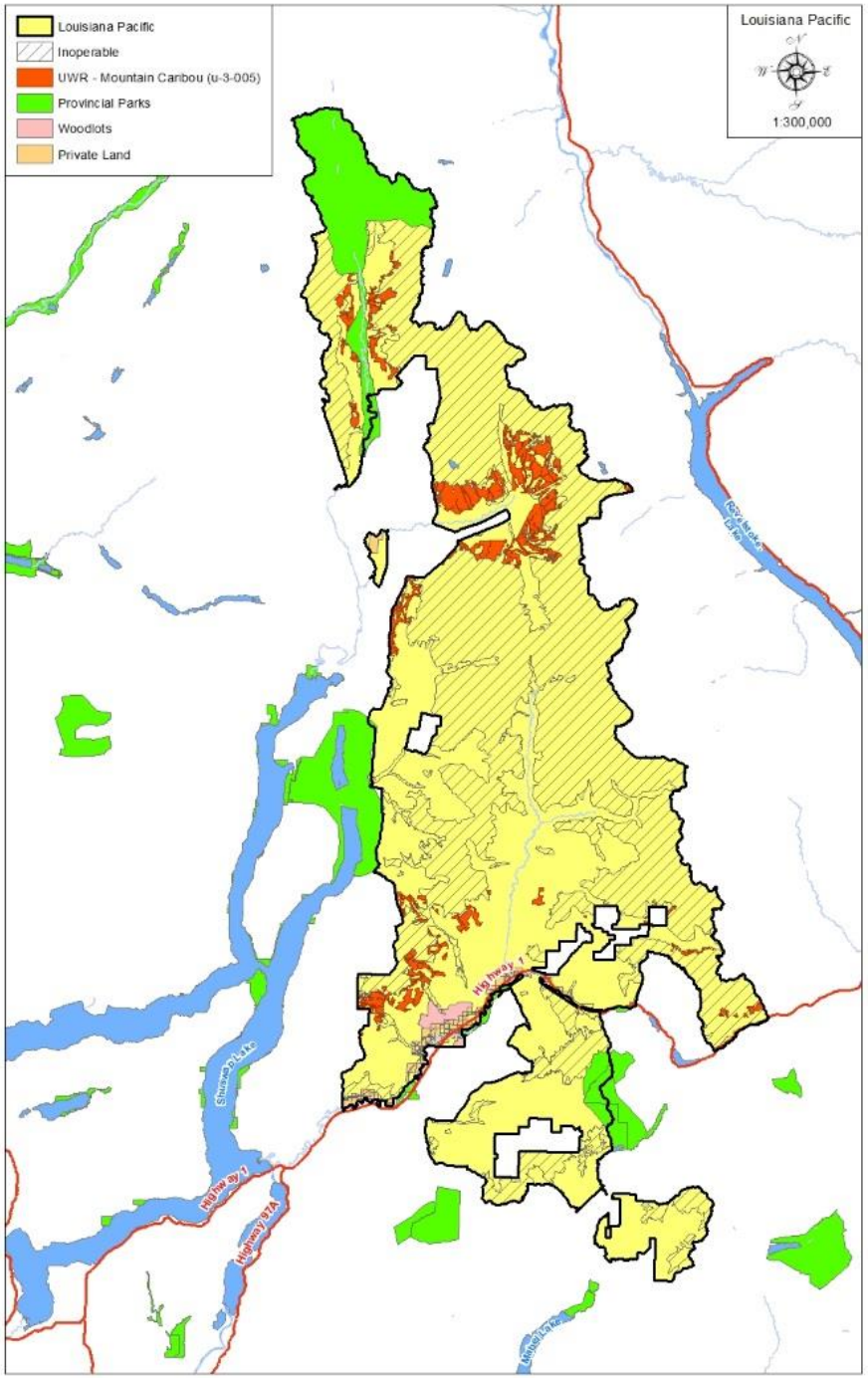
Operating Areas- close to Malakwa



Landbase constraints

-Caribou reserve areas

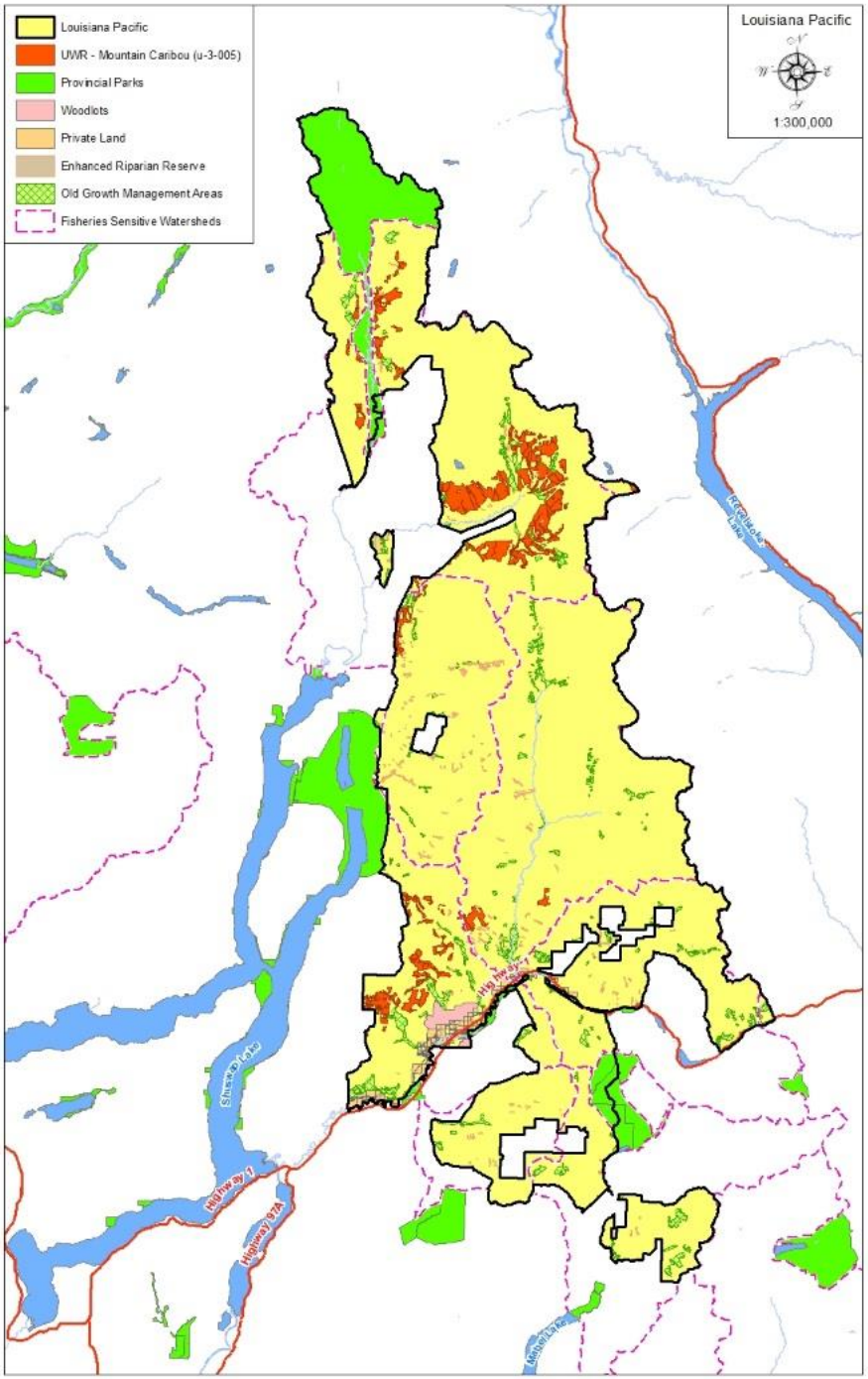
-Operability



Constraints to operable landbase

-Old Growth Management Areas
-Enhanced Riparian Reserves
- Wildlife Tree Patches

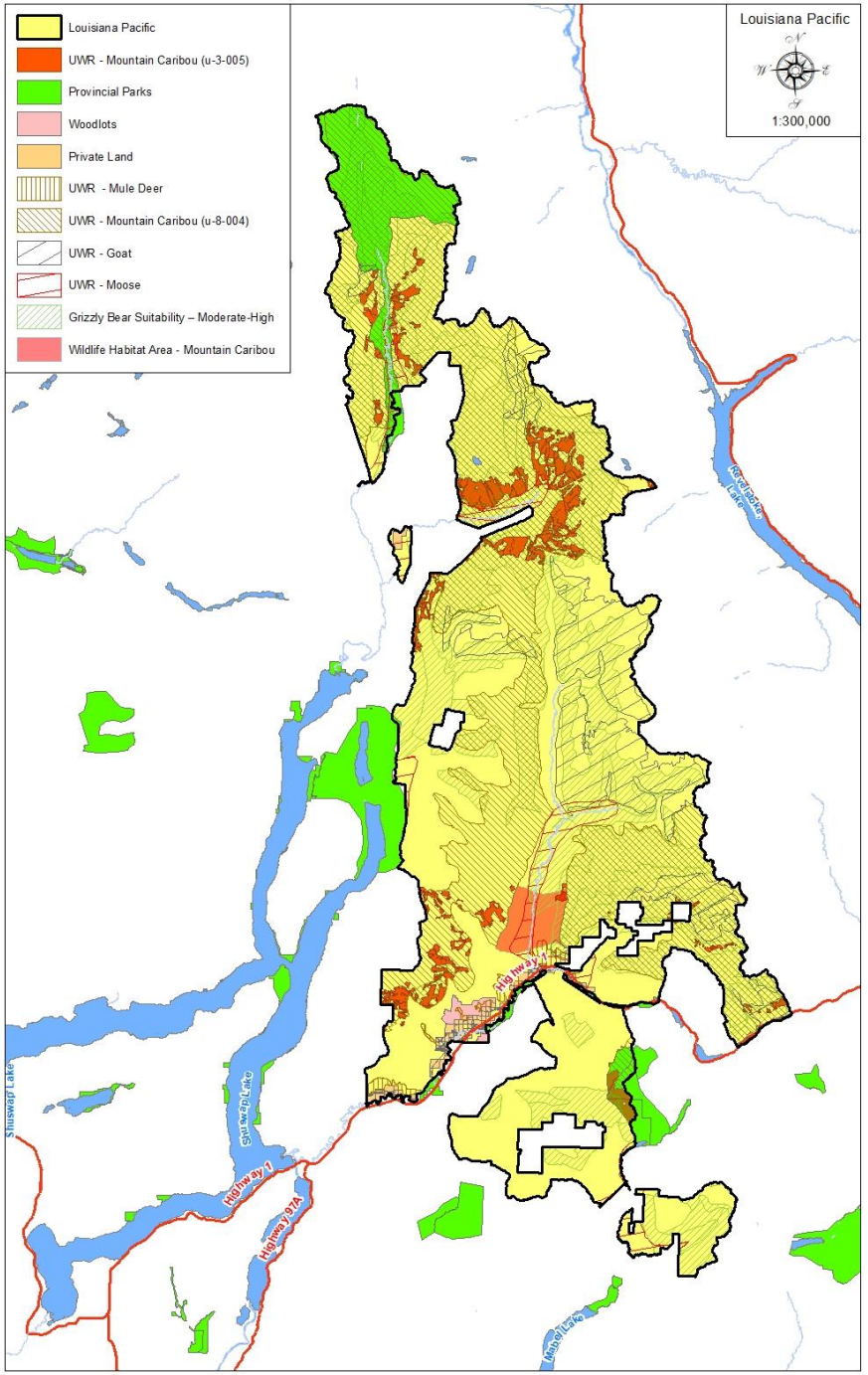
-Fish Sensitive Watersheds



Wildlife

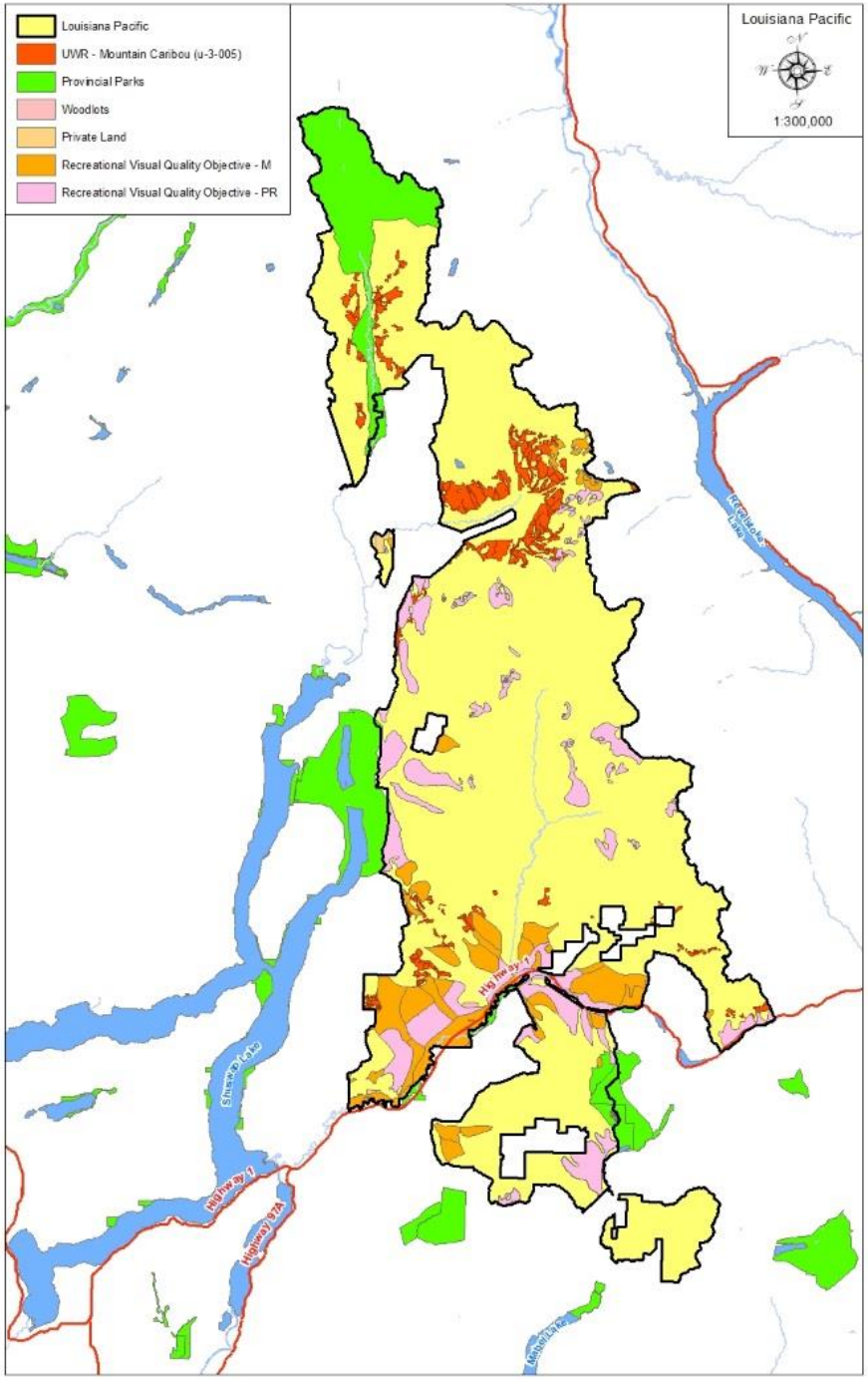
Ungulate Winter Range Areas(Deer, Moose, Goat, Caribou)

Wildlife Habitat Areas (Caribou, Grizzly)



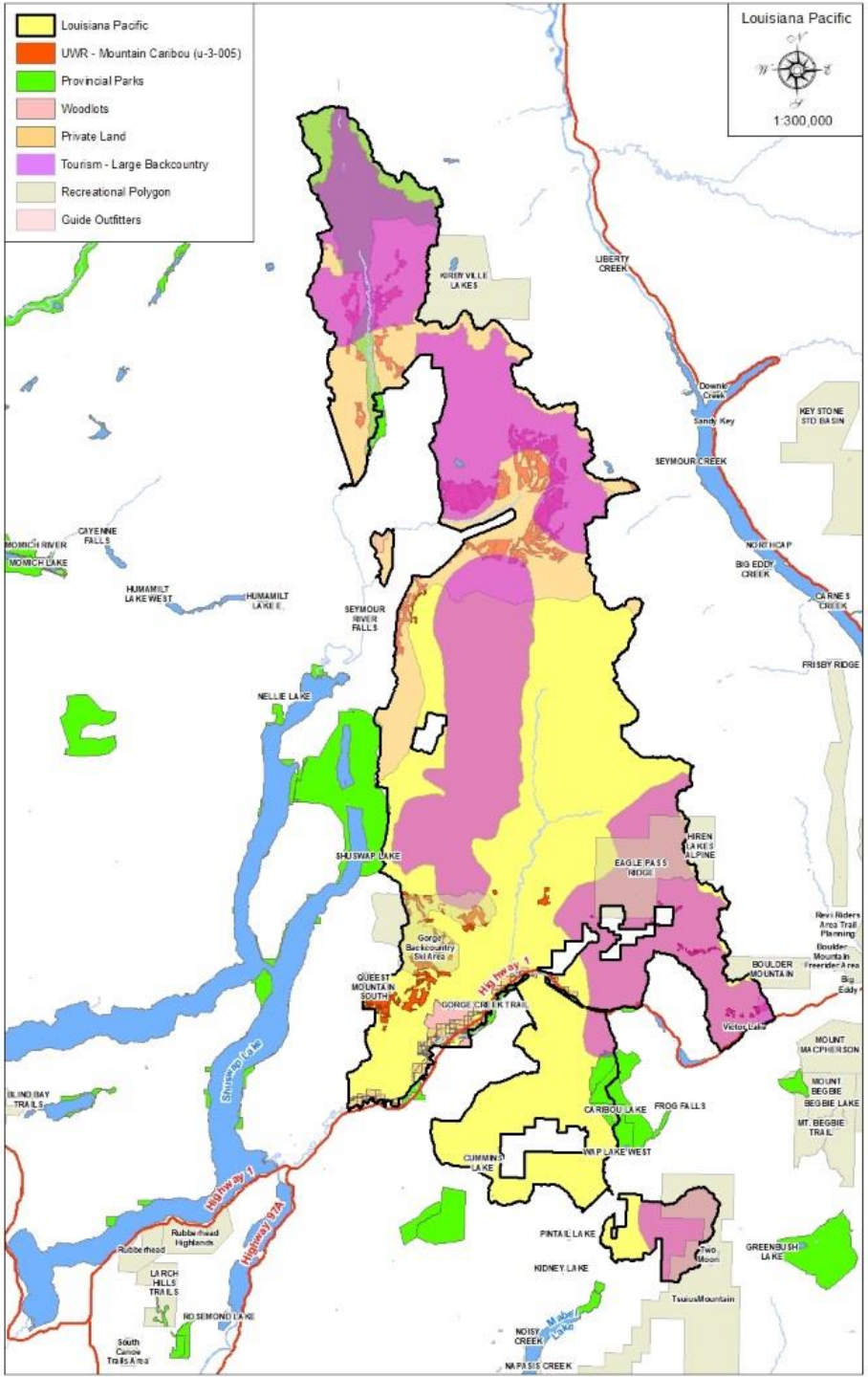
Visual Quality Objectives

-Partial Retention polygons: 1.6 - 7%
-Modification polygons: 7.1 - 18%



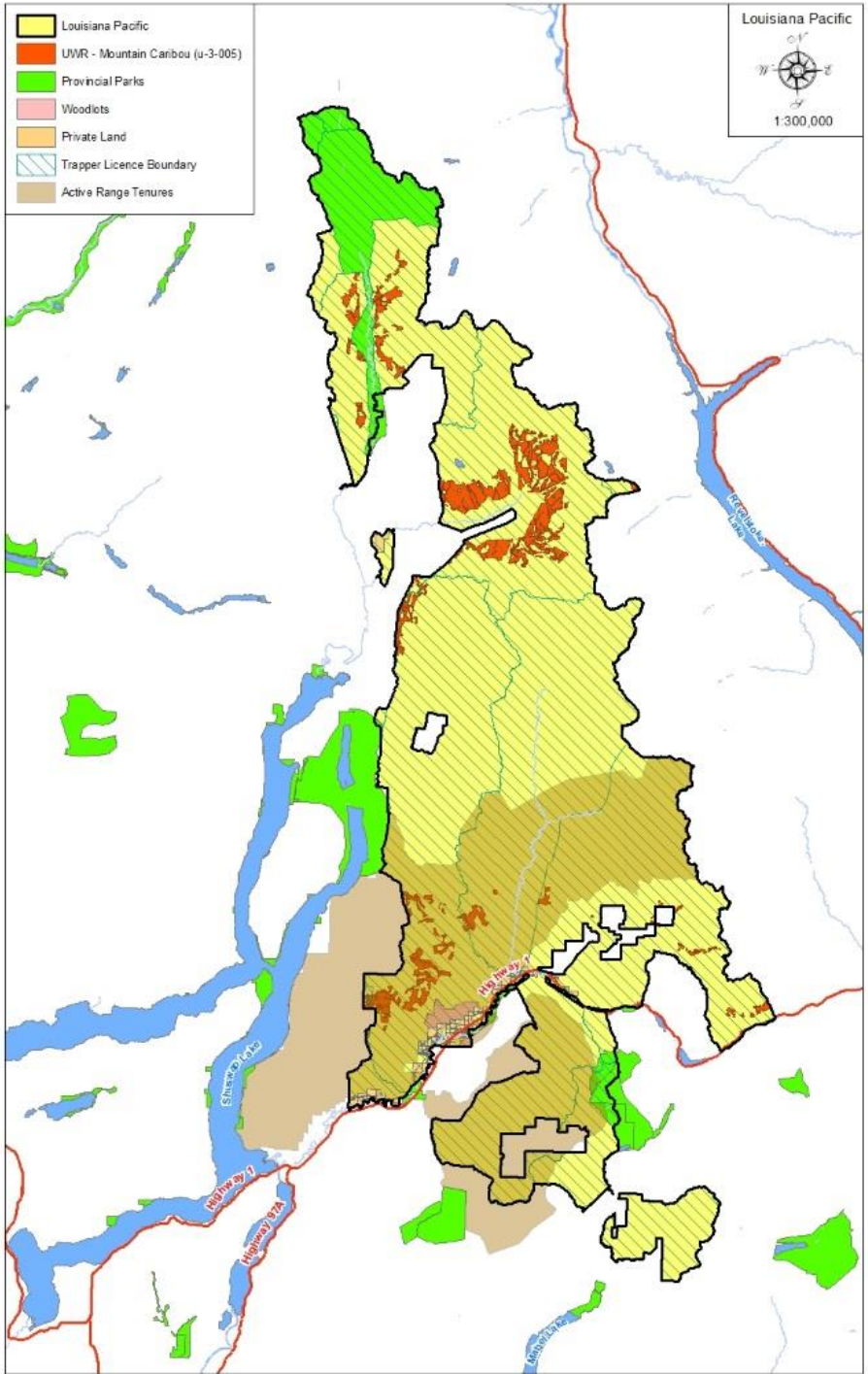
Tourism & Recreation Management Zones

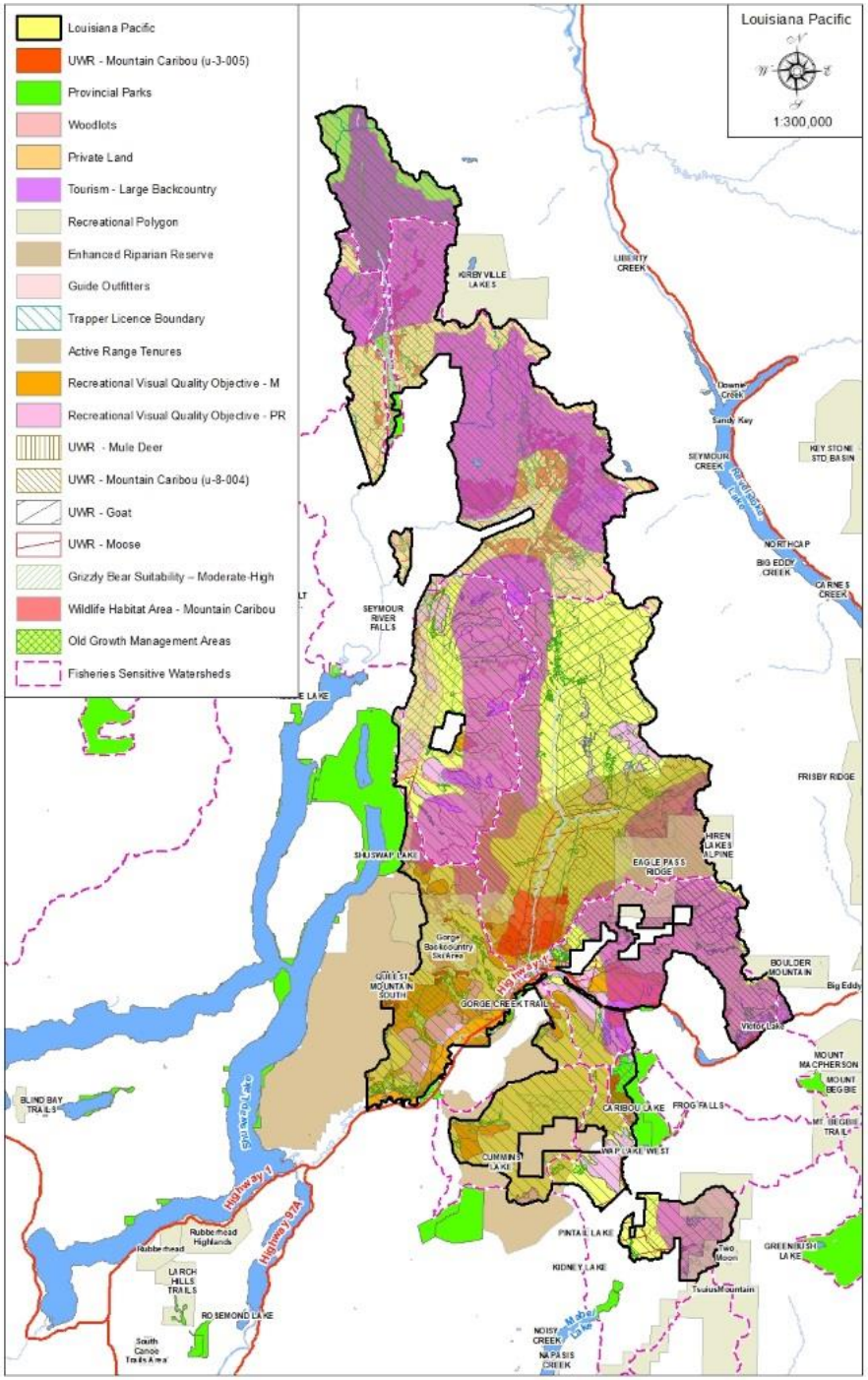
Guide Outfitter



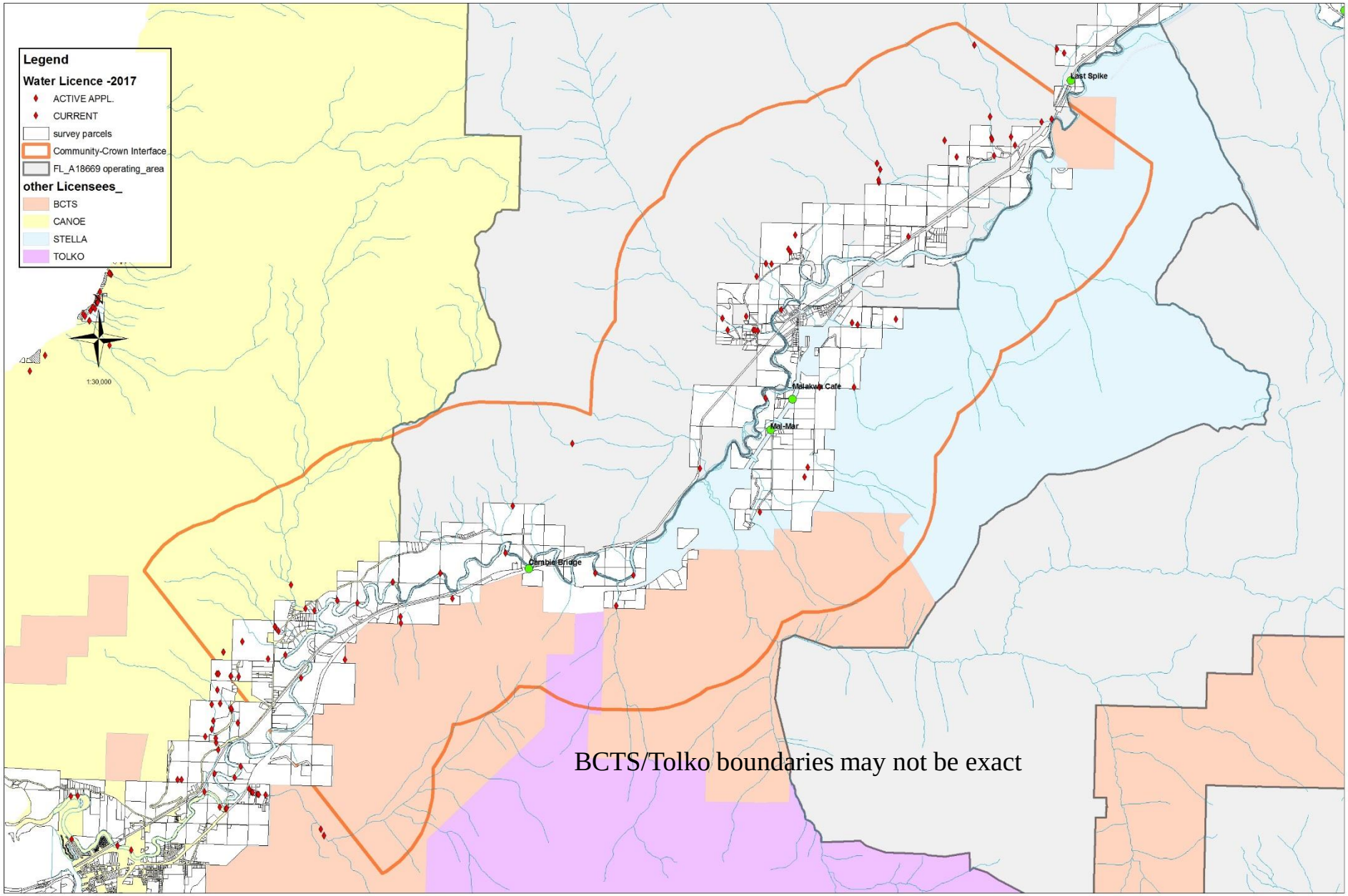
Range Areas

Trapping Licences (13)




Louisiana Pacific
Louisiana Pacific
UWR - Mountain Caribou (u-3-005)
Provincial Parks
Woodlots
Private Land
Tourism - Large Backcountry
Recreational Polygon
Enhanced Riparian Reserve
Guide Outfitters
Trapper Licence Boundary
Active Range Tenures
Recreational Visual Quality Objective - M
Recreational Visual Quality Objective - PR
UWR - Mule Deer
UWR - Mountain Caribou (u-8-004)
UWR - Goat
UWR - Moose
Grizzly Bear Suitability – Moderate-High
Wildlife Habitat Area - Mountain Caribou
Old Growth Management Areas
Fisheries Sensitive Watersheds
1:300,000
KIRBY VILLE LAKES
LIBERTY CREEK
Downie Creek
Sandy Key
SEYMOUR CREEK
KEY STONE STD BASIN
NORTH CAP
BIG EDDY CREEK
CARNES CREEK
SEYMOUR RIVER FALLS
FRISBY RIDGE
SHUSWAP LAKE
HIREN LAKES ALPINE
EAGLE PASS RIDGE
Gorge Backcountry Ski Area
GOLDEN MOUNTAIN SOUTH
GORGE CREEK TRAIL
BOULDER MOUNTAIN
Big Eddy
Victoria Lake
MOUNT MACPHERSON
MOUNT BEGBIE
MT. BEGBIE TRAILS
CARIBOU LAKE
FROG FALLS
CUMMINS LAKE
SHUSWAP LAKE WEST
BLIND BAY TRAILS
Shuswap Lake
Highway 1
Highway 97A
Rubbethead Highlands
Rubbethead
LARCH HILLS TRAILS
ROSEMOND LAKE
South Canoe Trails Area
PINTAIL LAKE
KIDNEY LAKE
Two Moon
GREENNIKISH LAKE
Tsuius Mountain
NOISY CREEK
NAPAISIS CREEK

Water Licences and Community Crown Interface Area



Other Stakeholders

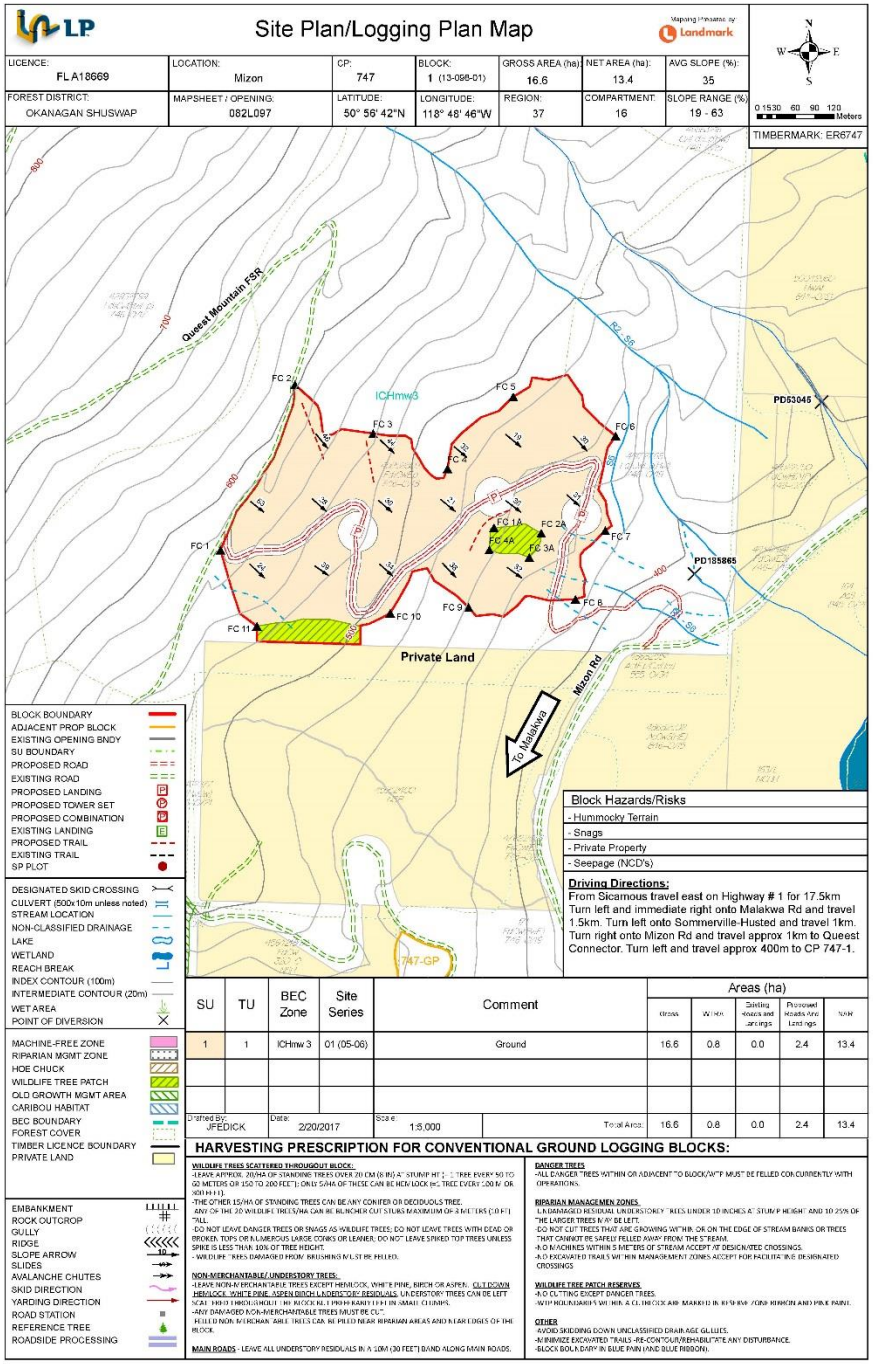
-Heli Skiing Tenures

-Cat skiing Tenures

-Snowmobile Club

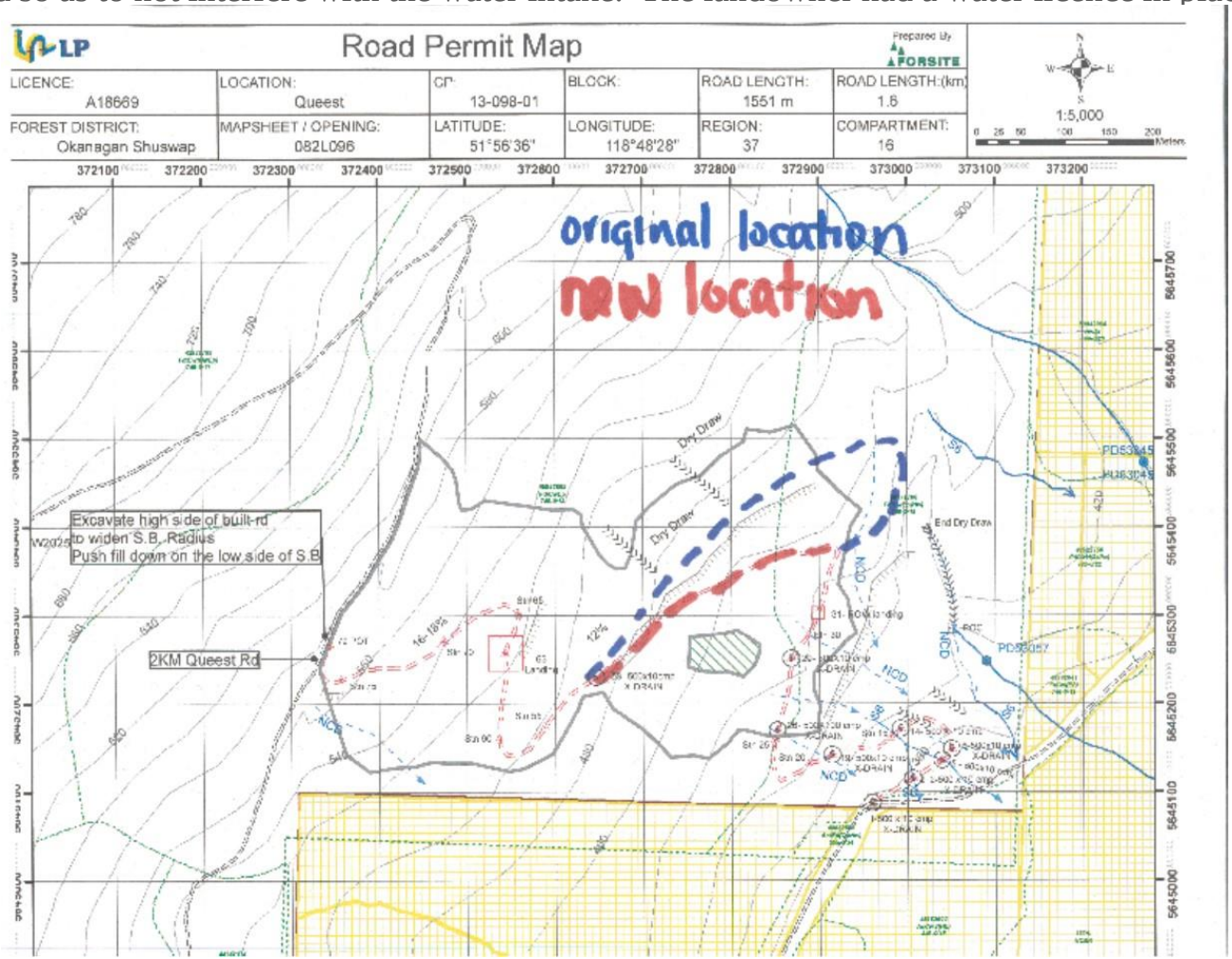
Example #1
-Private land
-Water Licence
-Visuals
-Community Crown Interface
-Wildlife Tree Patches

The following pages show a time line from initial development to post harvest for the Queest Connector Road and the block called CP 747-1. The road takes off from the Mizon Rd and meets the Queest FSR at the 2 km marker. The cutblock is situated between .5 km and 2 km.



Time line from initial development to harvest for CP 747-1 and Queest Connector

-Spring 2013 Road & cutblock development began –preliminary road and block boundary was located by Forsite Consultants Ltd. LP had conducted an initial online check for water POD's (points of diversion) on nearby streams and none were found. However during the layout phase an unlicensed water system was discovered and reported to LP and when the adjacent land owner (east side) contacted LP with concerns over the impact to their water system the road was re-aligned so as to not interfere with the water intake. The landowner had a water licence in place by October 2013.



Time line from initial development to harvest for CP 747-1 and Queest Connector

May 2013 Information Sharing packages sent to seven First Nations. No replies were received within a 60 day time period of info sharing in regard to this particular development

-**June 2013** a Terrain Stability Assessment was conducted by *Onsite Engineering Ltd.*

-**June 2013** a Visual Impact Assessment was began by *Forsite Consultants Ltd*

-**July 2013** Notice of proposed development was sent to the CSRD

-**October 2013** Field visit to revised road location by hydrologist *MJ Milne & Associates* and LP Rep

-**October 2013** Field visit by MOT rep & LP with MOT rep advising on the approach onto Mizon Rd from new Queest Connector

-**October 2013** Field visit by Water Stewardship Office from OSD-MLRO in response to adjacent landowner (east side) concerns a small creek running between the proposed road and Mizon Rd. MOF sent photos and LP confirmed that the creek flowed along the planned road and development and would continue to drain through the culvert crossing Mizon Rd.

-**December 2013** Permit received from Ministry of Transportation for approach onto Mizon Rd

-**February 2014** Road construction began on Queest Connector by *Windy River Contracting Ltd.*

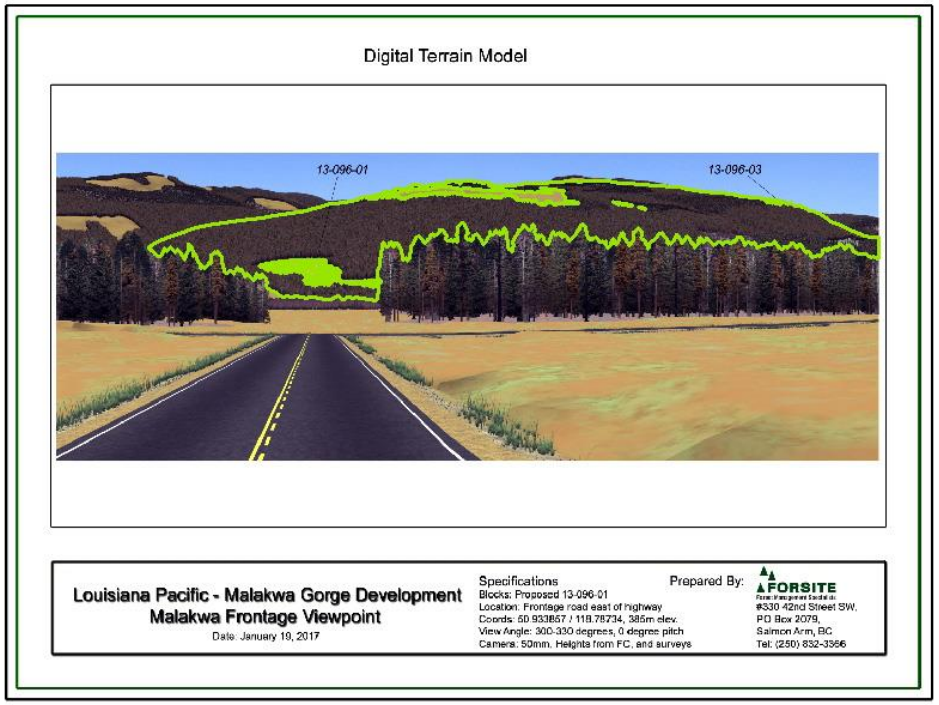
-**February 2015** Notice of proposed development for other Queest locations was sent to CSRD and also included an updated map showing the revised road location and unchanged cutblock. Letters were sent to known addresses of nearby property owners as well.

-**July 2015** An on site meeting was conducted between LP, the consulting hydrologist and adjacent landowner (west side) with a hydrological assessment carried out the same day. Recommendations from the report included some water management tweaks to the recently built road but no water related reason to not proceed with harvesting of the cutblock CP 747-1. Road maintenance as per the recommendations was completed in July 2015 as well.

-**September 2016** Douglas Fir Bark Beetle attack noted in cutblock area during field visit to gather site plan data.

Time line from initial development to harvest for CP 747-1 and Queest Connector

-**December 2016** Visual Analysis finalized –worst case scenario would add 2.4% alteration and resulting in a total of 5.9% non greened up areas in the Partial Retention viewscape.



PR '2744' Polygon - 401591.551492 units
Existing Alteration - 14124.339754 / 401591.551492 = 3.5%
Proposed Alteration - (13-096-01) 9484.875125 + (13-096-03) 44.437957 = 9529.313082 / 401591.551492 = 2.4%
Total Proposed Alteration - 23653.652836 / 401591.551492 = 5.9%

Time line from initial development to harvest for CP 747-1 and Queest Connector

-**February 2017** Received approved cutting permit from MFLNRO

-**May 2017** Bark beetle trap and baiting established. Traps monitered and emptied through the summer and removed in August

-**October 2017** Harvest began late October and was complete by November 12, 2017 by *Gorge Creek Logging Ltd.*

-**November 2017** Trail rehabilitation was complete by November 21-29, 2017 by *Hurricane Bay Contracting Ltd.*

-**November 2017** Stumping for root disease control is currently taking place by Jake Whitehead of *Jaws Excavating Ltd. (subcontracting for Whitehead Enterprises Ltd)*

-**Spring 2018** **Cutblock to be planted in April-May –(a 6 month regeneration delay from initial harvest.)**

Site disturbance – invasive plants - Regulations on the subject of preventing the introduction of invasive plants into forested site exists in FRPA (section17) '*a person who prepares a forest stewardship plan must specify measures in the plan to prevent the introduction or spread of species of plants*'. Best practices for preventing the spread of invasive plants, (ISC, 2013), provides detailed guidance. When controlling for root disease the preventative guidance should not boost invasive species. However, the main reason for stumping - to remove inoculum - must not be lost.

Plants that first colonize disturbed areas or lands are called ruderal plants. Ruderal plants, often invasive endemic or alien species, will dominate these disturbed areas until native species being to out-compete the invasive plants. However, there can be conditions where the disturbance is so great that the ruderal species can become permanently established and thereafter dominate the landscape. To avoid this condition seek advice from ecology specialists.

– Control with biological agents

Currently, the province of British Columbia does not support the use of biological agents for the control of root disease. The testing of the biological agents *Hypholoma fasciculare* to treat root disease is a relatively recent development in British Columbia (Chapman *et al.*, 2004). One published experiment (Chapman , 2001) assessed the biocontrol activity of *Hypholoma* on calcareous soils; soils in which stumping is not recommended.

Biological control relies on competition or parasitism or other natural mechanisms, but typically involves an active human management role. The limitations of biological control are difficult to forecast; they will however, become properly known only after greatly expanded research over a long period. A relatively simple limitation with biological control is that the host population (in this case *Armillaria* sp.) will continue to exist at a level predetermined by the properties of the host and its natural enemies and of the habitat, and most likely not completely removed by other organisms. Nevertheless, biological control in natural environments can be very complex.

CONCLUSIONS

Stump and large root removal from forest areas in almost all cases results in;

a) reduction of root rot in the next forest generation,

b) improved seedling establishment, and

c) increased tree growth and stand productivity.

AVAILABLE DATA STRONGLY SUGGESTS THAT ALL STUMPS AND LARGE ROOTS WITH ROT MUST BE REMOVED DURING STUMPING.

Example #2

-woodlot

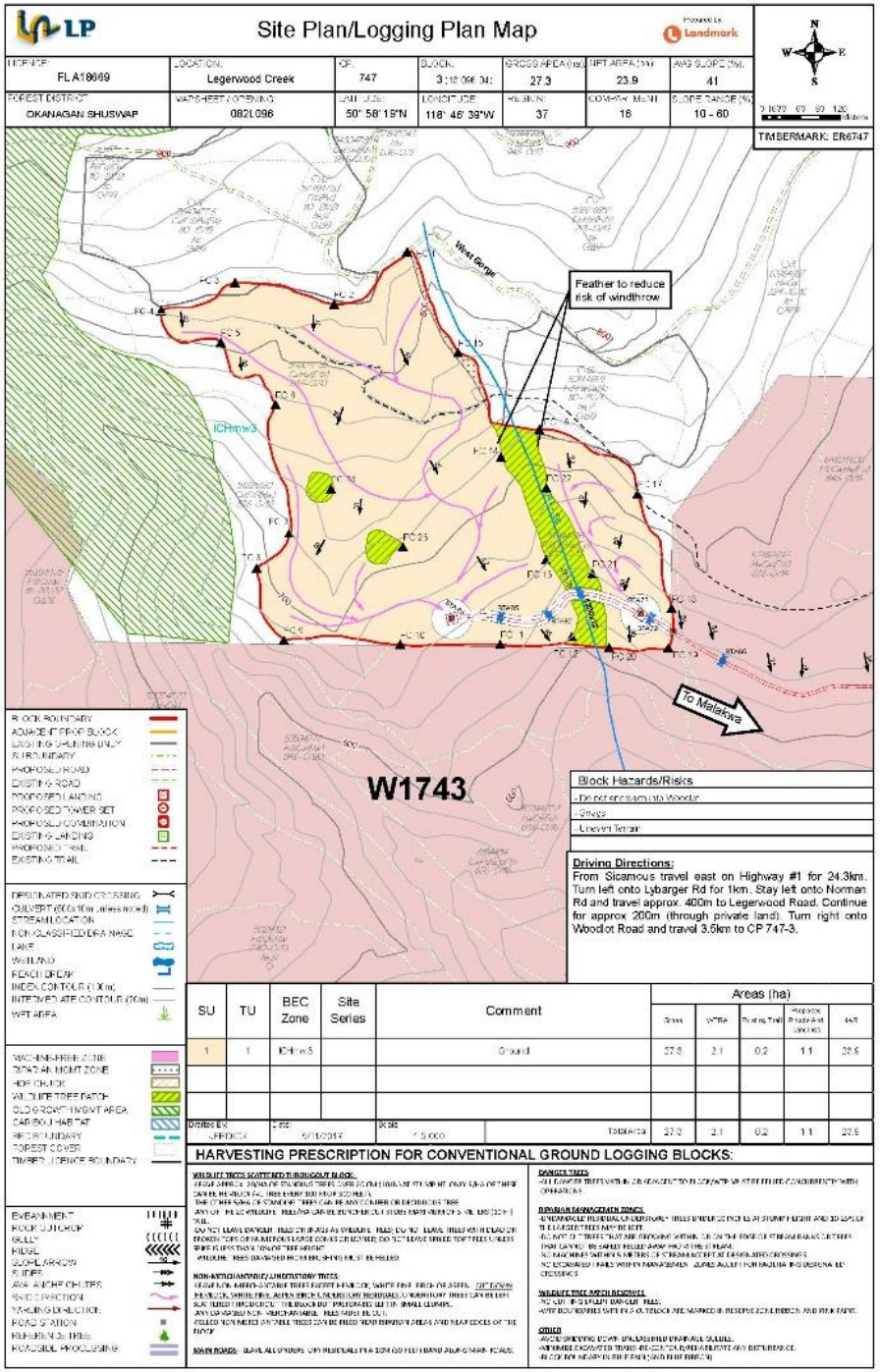
-tree retention around creek riparian areas

-visuals

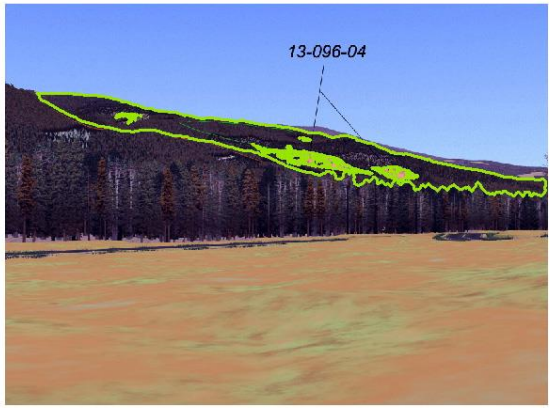
-Wildlife tree patches

-OGMAS

-Community Crown



Digital Terrain Model



Louisiana Pacific - Malakwa Gorge Development
Malakwa Frontage Viewpoint
Date: January 19, 2017

Specifications
Blocks: Proposed 13-096-04
Location: Frontage road east of highway
Coords: 50.933557 / -118.75734, 385m elev.
View Angle: 15 degrees, 0 degree pitch
Camera: 50mm, Heights from FC, Results and photo

Prepared By:
FORSITE
#330 42nd Street SW,
PO Box 2078,
Salmon Arm, BC
Tel: (250) 832-3366

PR '2722' Polygon - 145948.932306 units
Existing Alteration - 745.732557 / 145948.932306 = 0.5%
Proposed Alteration - 10092.334441 / 145948.932306 = 6.9%
Total Proposed Alteration - 10838.066998 / 145948.932306 = 7.4%

Copies of FSP available here:

https://lpcorp.com/sustainability/sustainable-forestry/
(Scroll down to the Literature Section)

or can be emailed to you.

Review and Comment period to Jan 15th 2018.

Send Comments to Brenda.Dyck@LPCorp.com

FORESTRY ECONOMIC STUDY: HIGHLIGHTS

- 60,000 direct jobs
- 140,000 total jobs
- 1 in 17 jobs in BC
- 1 in 4 manufacturing jobs
- $12.9 billion to provincial GDP
- $8.6 billion in total labour income
- $4 billion in government revenue
- $13.7 billion value of industry exports