



NSC 2016 Winter Conference:

Improving silviculture planning and practice from current standards to our future forests

February 16-17, 2016

Important Copyright Information

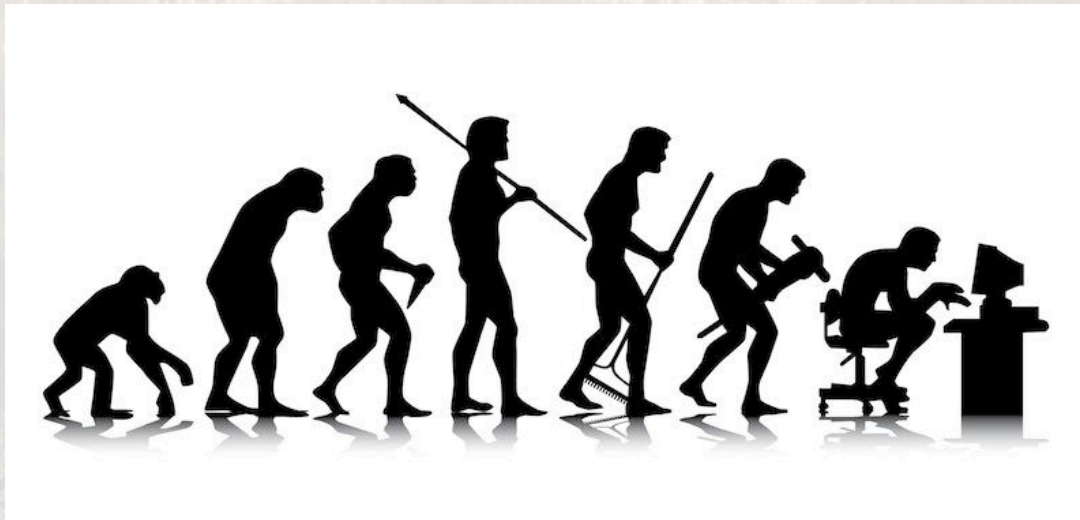
The following content is provided for educational purposes by the workshop presenter. This content may or may not have been peer reviewed.

Information, opinions, and recommendations put forward are those of the presenter, and do not necessarily reflect those of the Northern Silviculture Committee, its members, or sponsors.

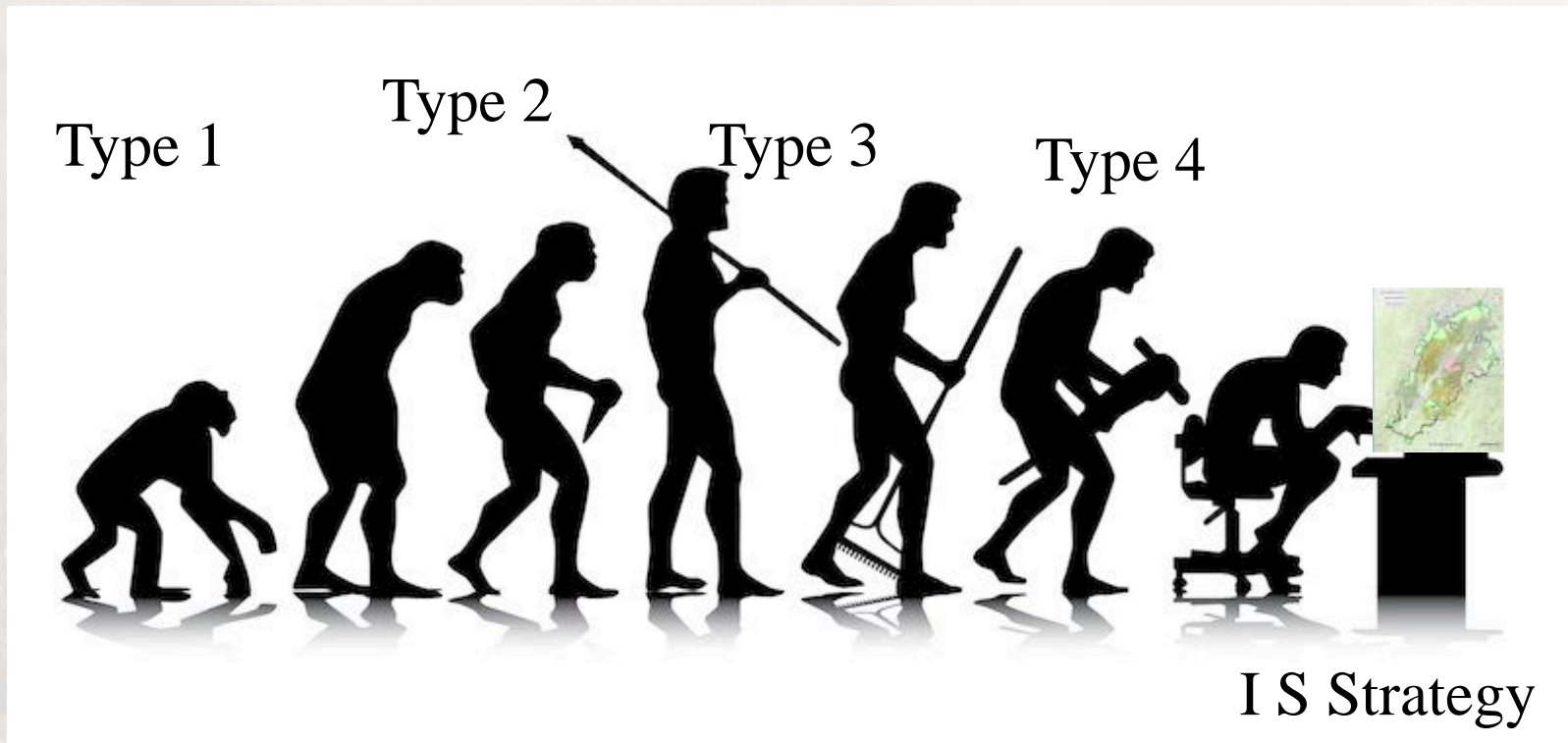
Copyright for the following material is primarily held by the presenter. This source should be fully acknowledged in any citation. For permission to reproduce or redistribute this material, in whole or in part, please contact the presenter.

Integrated Silviculture Strategy: An Evolution of Strategic Operational Planning

**Bryce Bancroft Symmetree Consulting Group Ltd
(on contract to Resource Practices Branch FLNR)**



To the Northern Silviculture Committee Meeting Feb 16th 2016



Where has this come from? – Type 1,2,3,4

So What are Integrated Silviculture Strategies?

Integrated, allows for incorporation of the varied objectives and inherent site and landscape attributes within the planning unit.

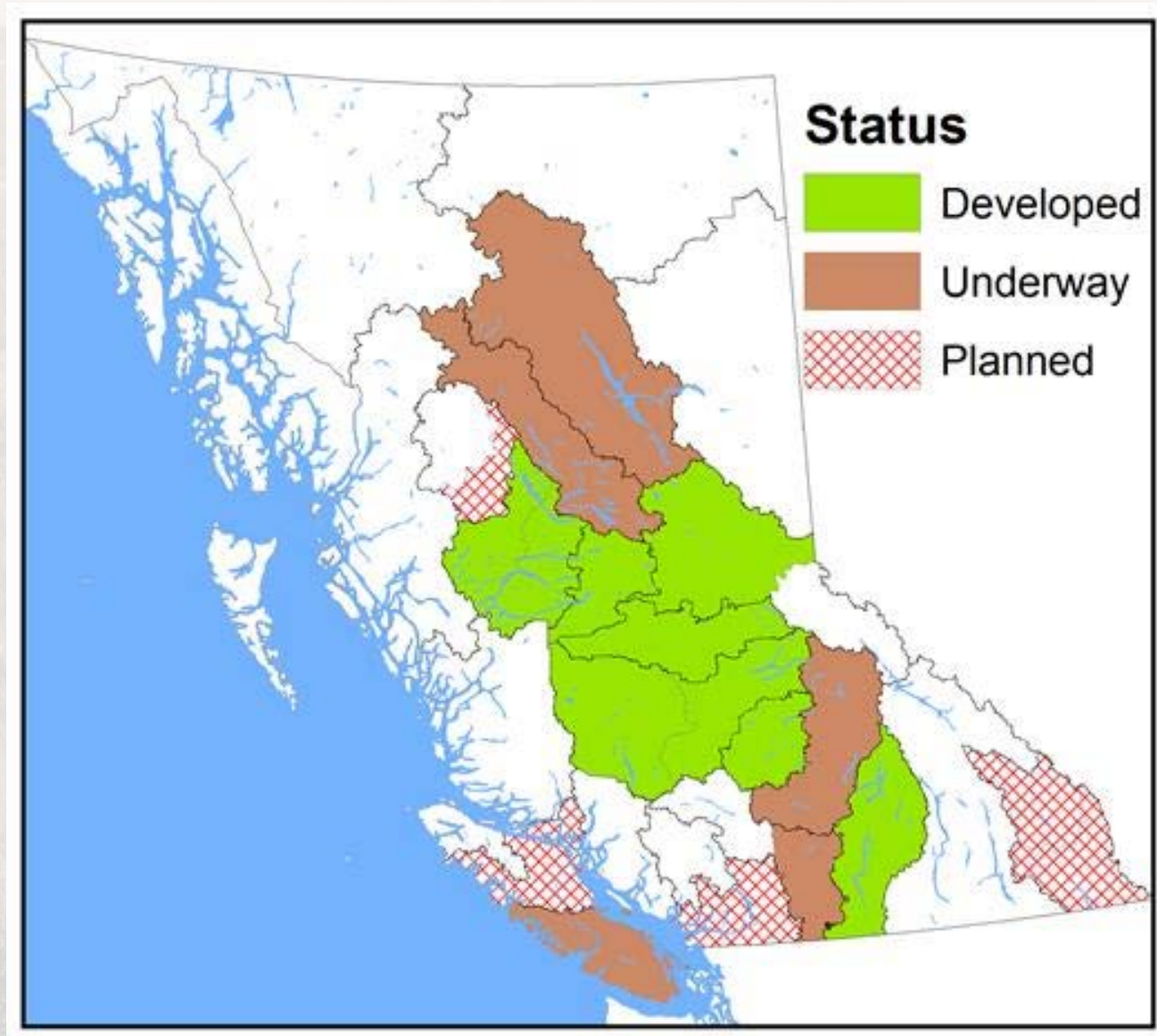
Silviculture is the **art and science** of controlling the **harvest, establishment, growth, composition, and the quality off forest vegetation for the full range off forest resource objectives.**

Successful silviculture depends on clearly defined management objectives. However, silviculture is often confused with managing stands and forests purely for timber. **Remember that silviculture is also used to manage forests for wildlife, water, recreation aesthetics, or any combination of these or other forest uses.**

Strategies provide the opportunity to look into the future with various scenarios to create options or strategies from which to guide management.

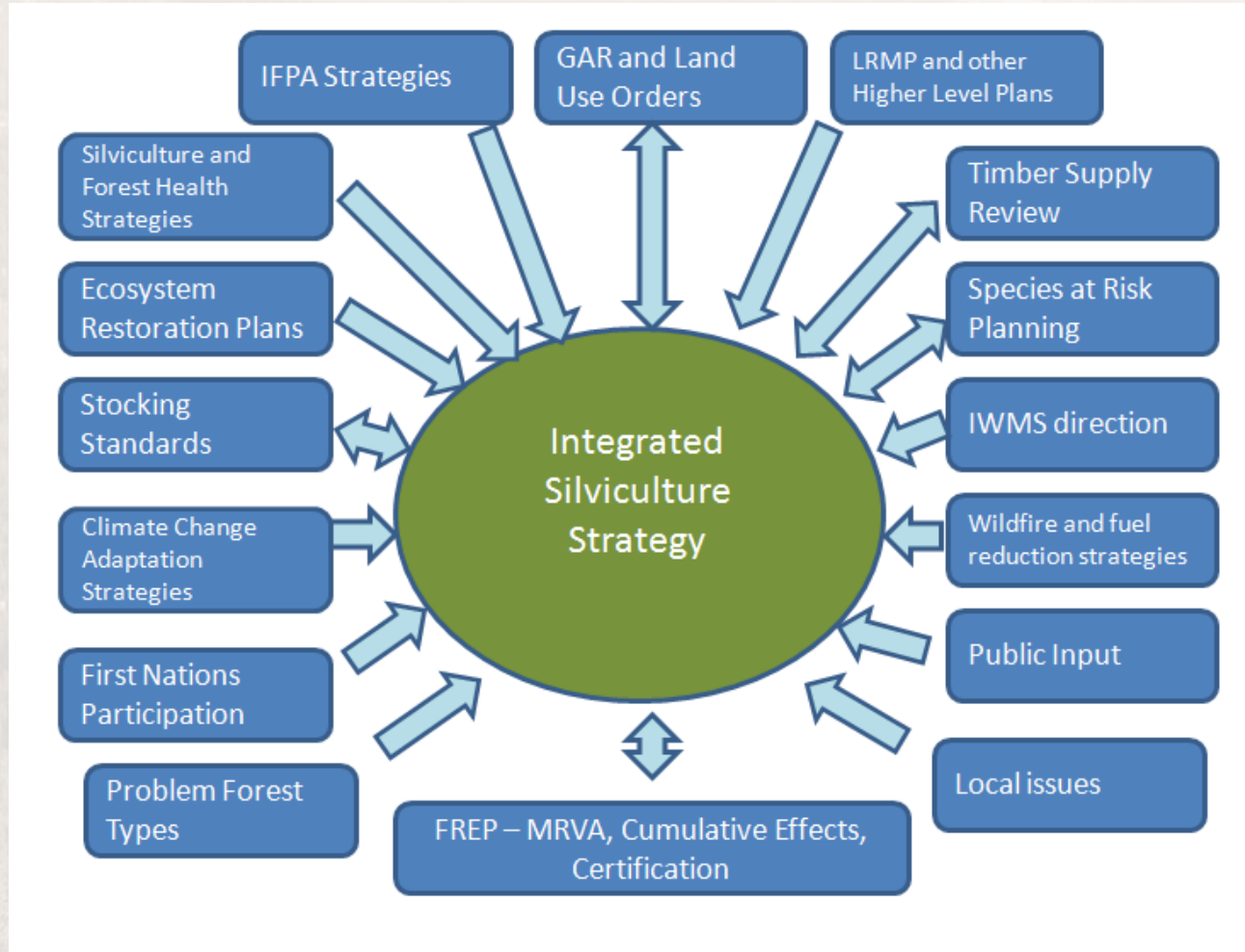


Similar Silviculture Strategies



MOVING FORWARD:

Integrated Silviculture Strategy - bringing it all together



Timber Supply Review / ISS

TSR

- Reflects past and current practices
- Legally defined process
- AAC determination



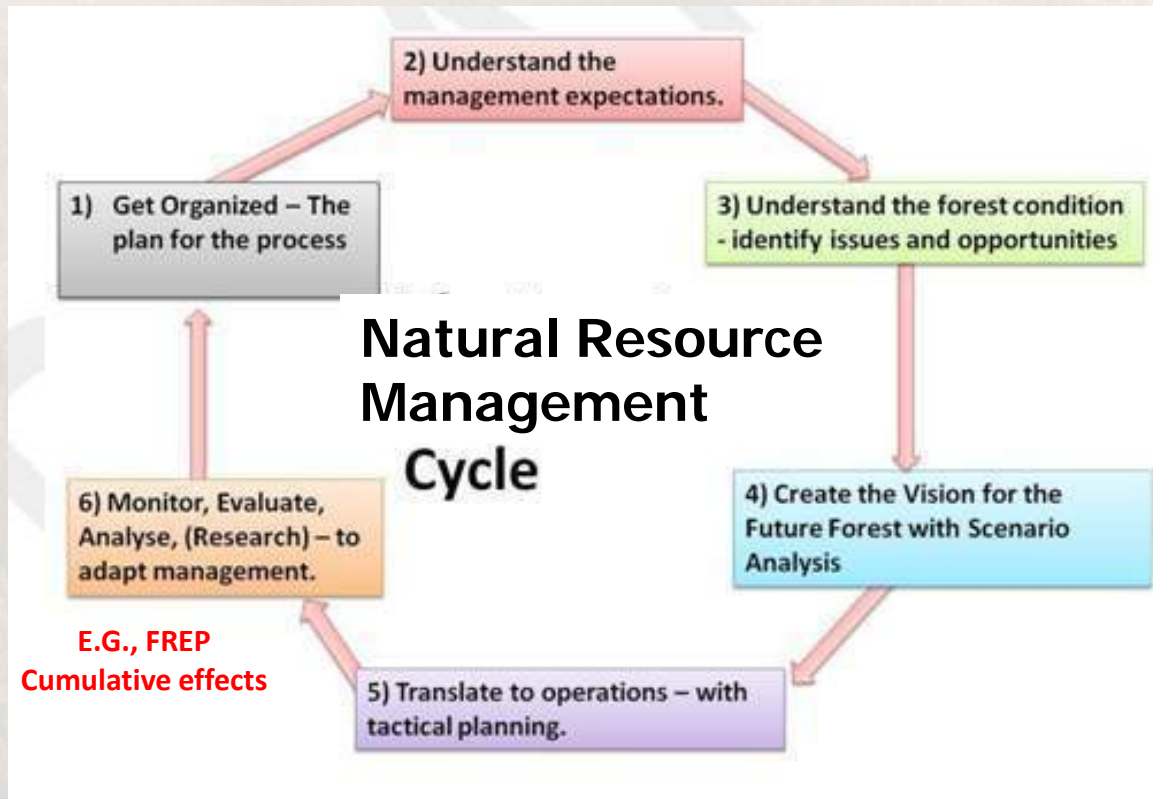
ISS

- Captures relevant plans and data for the unit (Situation Analysis)
- Promotes critical thinking on issues and options
- Creates harvest, retention and investment strategies



The Approach

FIRST ITERATION – note it is a continuous process/cycle.



- It integrates present goals and strategies.
- Works toward ideal SFM.
- But is realistic in expectations for first iteration of the cycle.
- As it builds on past accomplishments and direction.

Terms of Reference

Mackenzie Stewardship Initiative- Project Charter v 2.1 DRAFT

Last Updated: June 9, 2015

Purpose: This project will produce a spatial product with written supporting information summarizing identified environmental, economic and social values of significance to key contributors stakeholders and First Nations of the THLB within the Mackenzie TSA. This will provide support and informed guidance for forest planning decisions that will facilitate forest stewardship and maintain forest yield.

Background: The ADM for the North Area set an Omineca Region priority of "Advance engagement with First Nations to address forest stewardship issues arising from an increase in AAC in the Mackenzie Timber Supply Area". The 2014 AAC rationale specified a need for government, First Nations and industry to work collaboratively to ensure that designated habitat areas are collocated to minimize the impact on other forest resources values. These priorities along with recent collaborative agreements with First Nations and concurrent stewardship initiatives and local stakeholder input has led to the need for this project.

Objectives

- Objective 1-Develop a decision support product to facilitate comprehensive & durable decisions based on scientific and traditional knowledge.
- Objective 2-Collaborate with First Nations, industry and stakeholders to seek, understand and record information on location and extent of resource values
- Objective 3-Identify opportunities to build on monitoring and cumulative effects work.
- Objective 4- Provide desired options based on scenario analysis and outputs

Critical Success Factors

- CSF 1- Meaningful and productive engagement with First Nations and stakeholders
- CSF 2- Adequate resourcing from the Province.
- CSF 3-Product must be accepted by statutory decision makers as an accurate representation of values and utilized as a planning and development tool.

In Scope

- Information sharing between First Nations, FLNRO licencees and stakeholders within the Mackenzie TSA
- Compilation of known information on environmental, economic and social values in the Mackenzie TSA
- Creation of a robust report for the SDM's which includes spatial and temporal protection/ conservation/ mitigation
- Periodic communication & info sharing across government agencies

Links & Dependencies

- Link -Concurrent projects: ESI, Spatial Old Growth, Moose Management, Watershed Health, Caribou and Grizzly LNG Programs
- Dependency-CSTC Collaboration Agreements, Treaty 8 agreements and Kaska SEA
- Link-Muskwa-Kechika Advisory Board/ UNBC research
- Dependency: Completion of the RFP and execution of contract by LBI
- Dependency-First Nation involvement
- Dependency-Int. Silv. Strategies Com.

Out of Scope

- Representation by mining, oil and gas industry & other gov. agencies
- Decisions and legal orders resulting from land use report recommendations.
- Negotiations and agreements with First Nations and stakeholders.
- Influence on COSEWIC related decisions

Budget

Item	Cost
Workshops	\$25,000
FLRN Travel for First Nations engagement	\$25,000
Spatial Analysis and Reports	\$100,000
Total	\$150,000

Project Team

Name/Project Role	Duration	% FTE
Greg Rawling Project Sponsor		
Yvonne Parkinson/Mike McLachlan PM		
James Jacklin/Sect. Head LBS		
Heather Wiebe/ Resource Mng.		
FLNR staff District, Region		
Paul Rehsler/Res. Pract. Branch		

Stakeholders & First Nations

Nakazdli, Takla Lake, McLeod Lake, West Moberly, Tsay Keh Dene, Kwadacha, Gitksan, Halfway River, Saulteau, and Tahltan First Nations
Community members of Mackenzie, Germansen Land- ing, Manson Creek
FLNRO Licensees in Mackenzie TSA
Muskwa-Kechika Advisory Board
FLNRO staff & Other Gov. Ministries & Agencies

Workplan Overview

Deliverable/Milestone	Targeted Completion
Finalize Draft & obtain approval of Project charter	June 20, 2015
Hold meeting with district staff in Mackenzie. Complete detailed project work plan.	June 15, 2015
Collection & analysis of existing and proposed spatial and non spatial levels of conservation.	Sept 30, 2015
One on one meetings with First Nations & key stakeholders	Dec 31, 2015
Key contributor workshops	Jan 31, 2015
1st Draft of spatial and supporting product created	March 31, 2016
Internal review. Development and implementation of strategic plan.	March 31, 2017
Monitoring and evaluating progress towards meeting key goals and objectives	March 31, 2018

Risk Assessment

Risk	Probability	Impact	Response Strategy	Residual Risk
Poor level of First Nations engagement & acceptance to proj.	Med	High	Consult FLNR staff for recommendations. Go forward with best known information.	Med
Low level of acceptance of product by SDM's	Low /Med	High	Communicate and collaborate with stakeholders early and through out project	Low
LBI and contract proposal not successfully completed	Low	Mod	Maintain communications with Branch	Low
High level support for project may shift	Low	High	Report progress and maintain comm.	Low
Key stewardship initiatives not included in project	Low	Mod	Communication plan	Low
CSTC agreement	Mod	Mod	Communication plan	Low
Staff Resources. Understaffing & conflicting priorities (i.e. fires)	Mod	High	Role sharing and potentially timeline delays	Mod

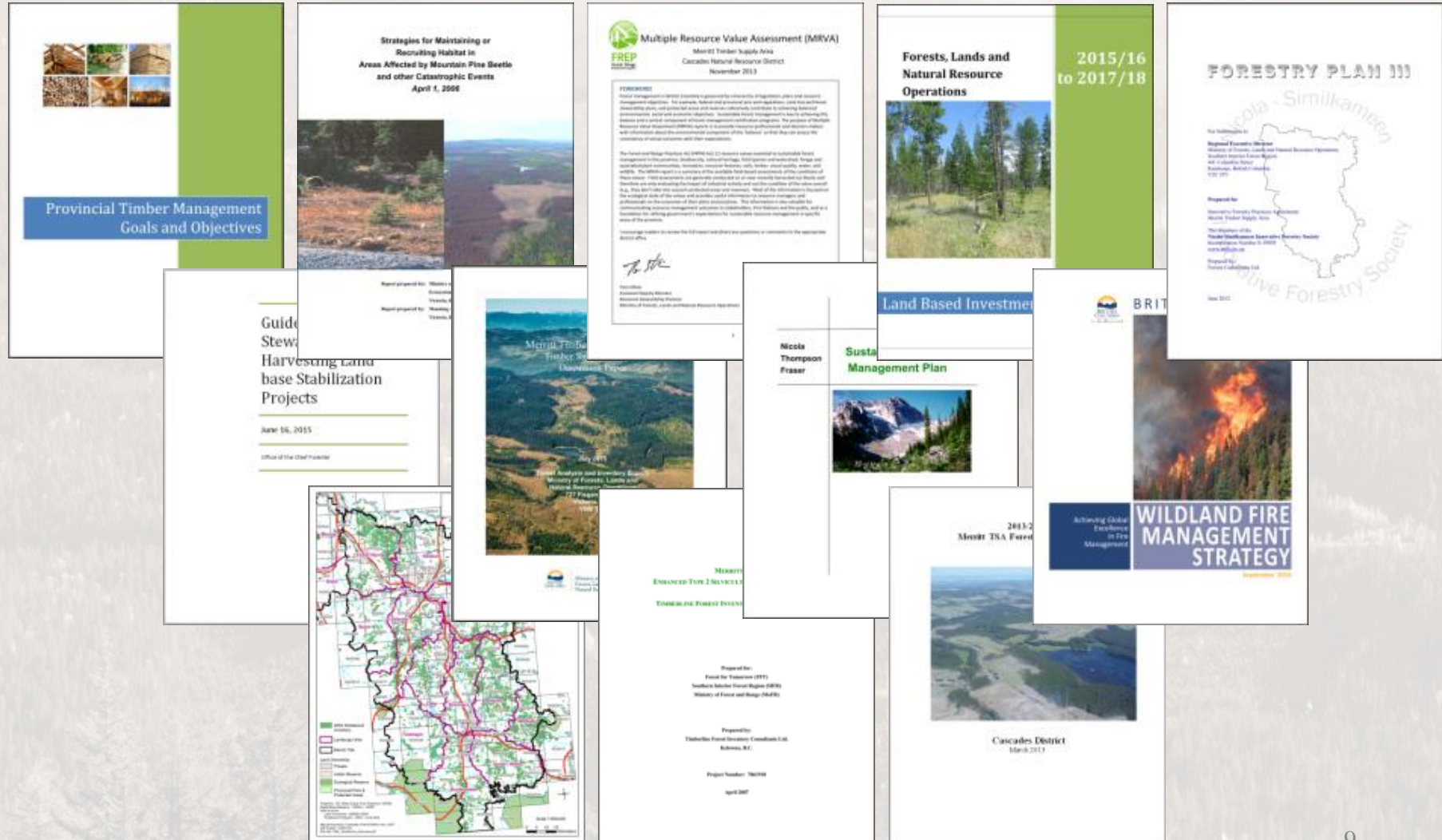
Project Manager Approval:

Date

Sponsor Approval:

Date

Gather and Consider Past and Existing Work



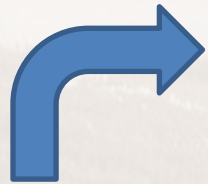
Value Category	Objective / with indicators or Performance measures for each
Economic	Maximize volume harvested Maintain even flow Maximize revenue of harvest
Environmental	Maintain Northern Goshawk nesting and foraging habitat Maintain Marbled Murrelet Habitat Maintain CDF representation Maintain elk and deer winter range habitat Maintain Riparian function
Social	Maintain visuals Maintain availability of Cw for First Nations cultural use Minimize risk of catastrophic fires in the interface

Scenarios are assessed
by Values

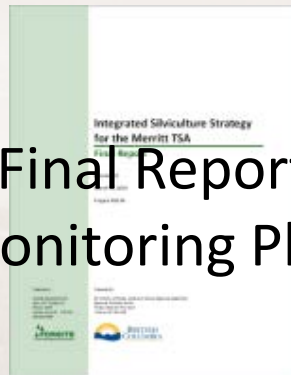
Example
Arrowsmith TSA
Values
Matrix

This is where the
I.S. Strategy is
More than the previous
versions

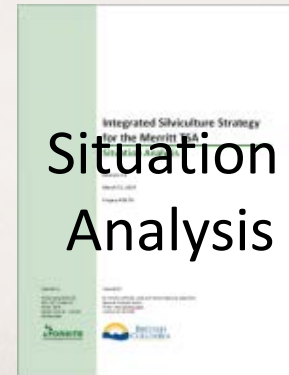
Products



Final Report Monitoring Plan



Situation Analysis

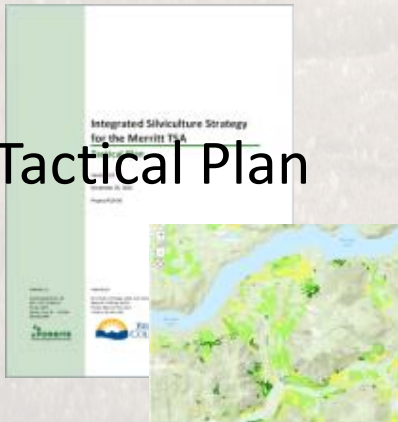


Integrated Strategies

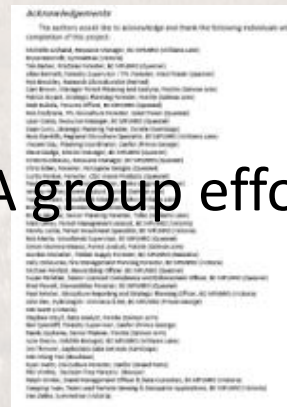
- Reserve
- Harvest
- Silviculture



Tactical Plan



A group effort

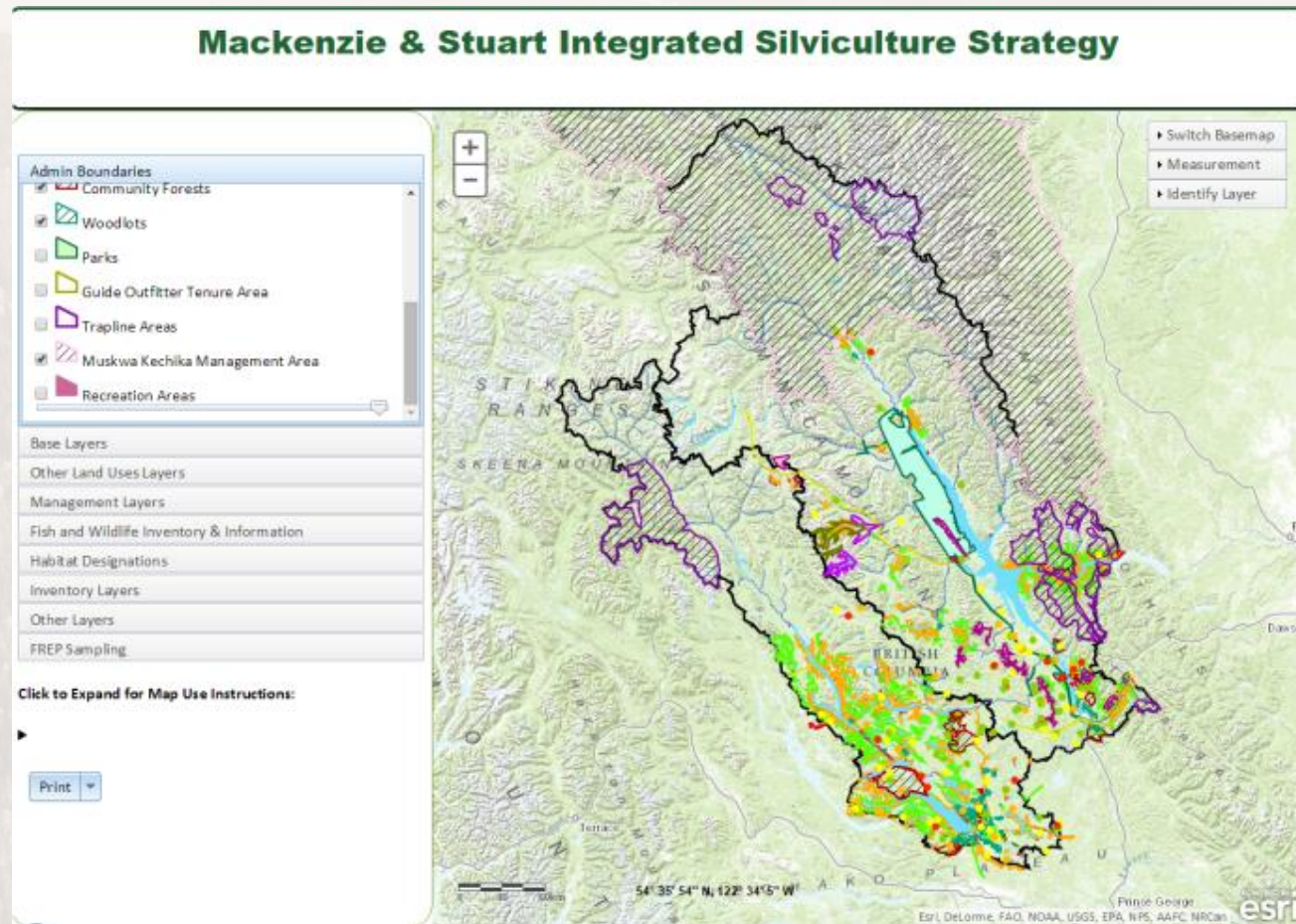


Data Package Analysis Report



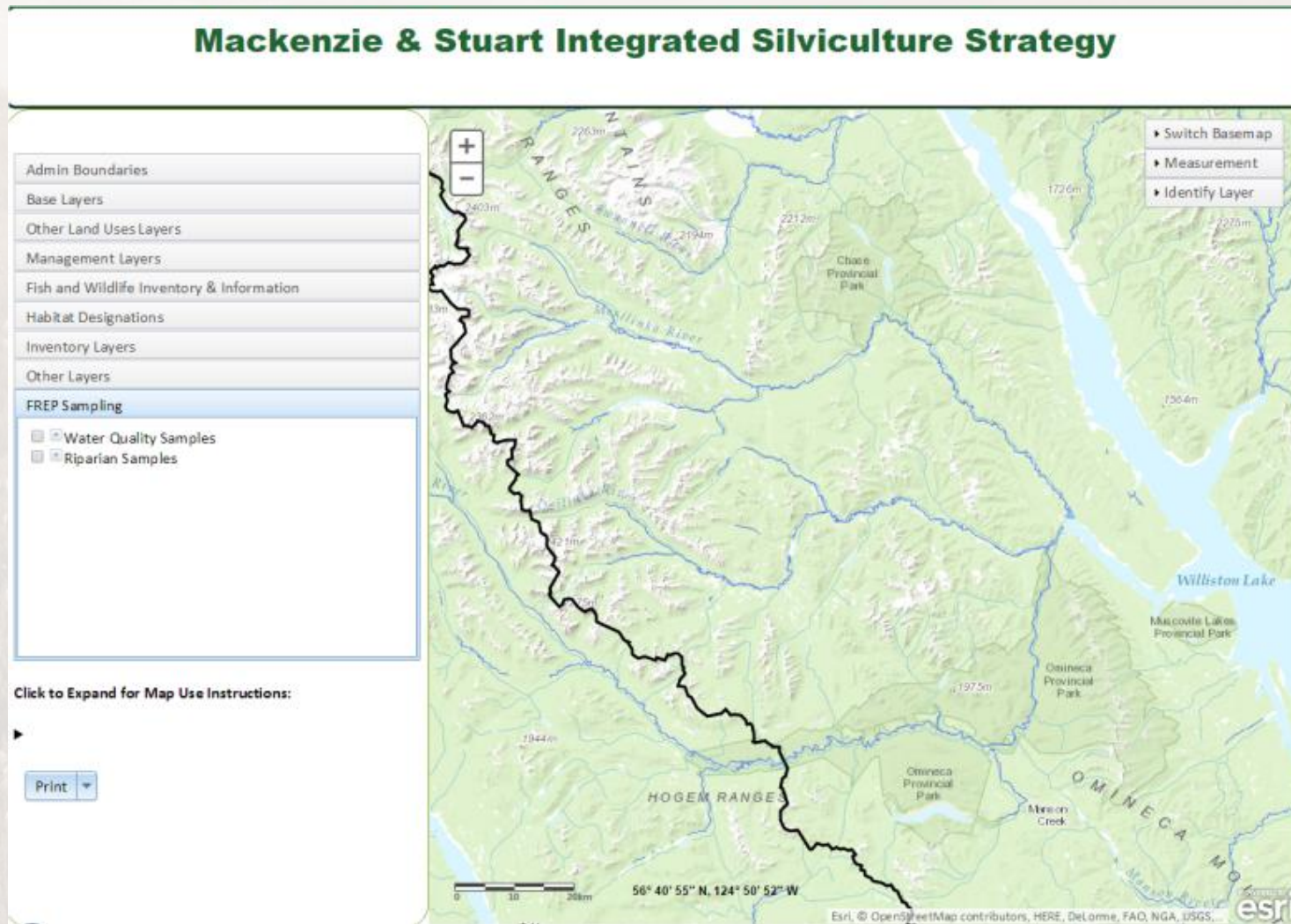
MOVING FORWARD:

Integrated Silviculture Strategy - bringing it all together



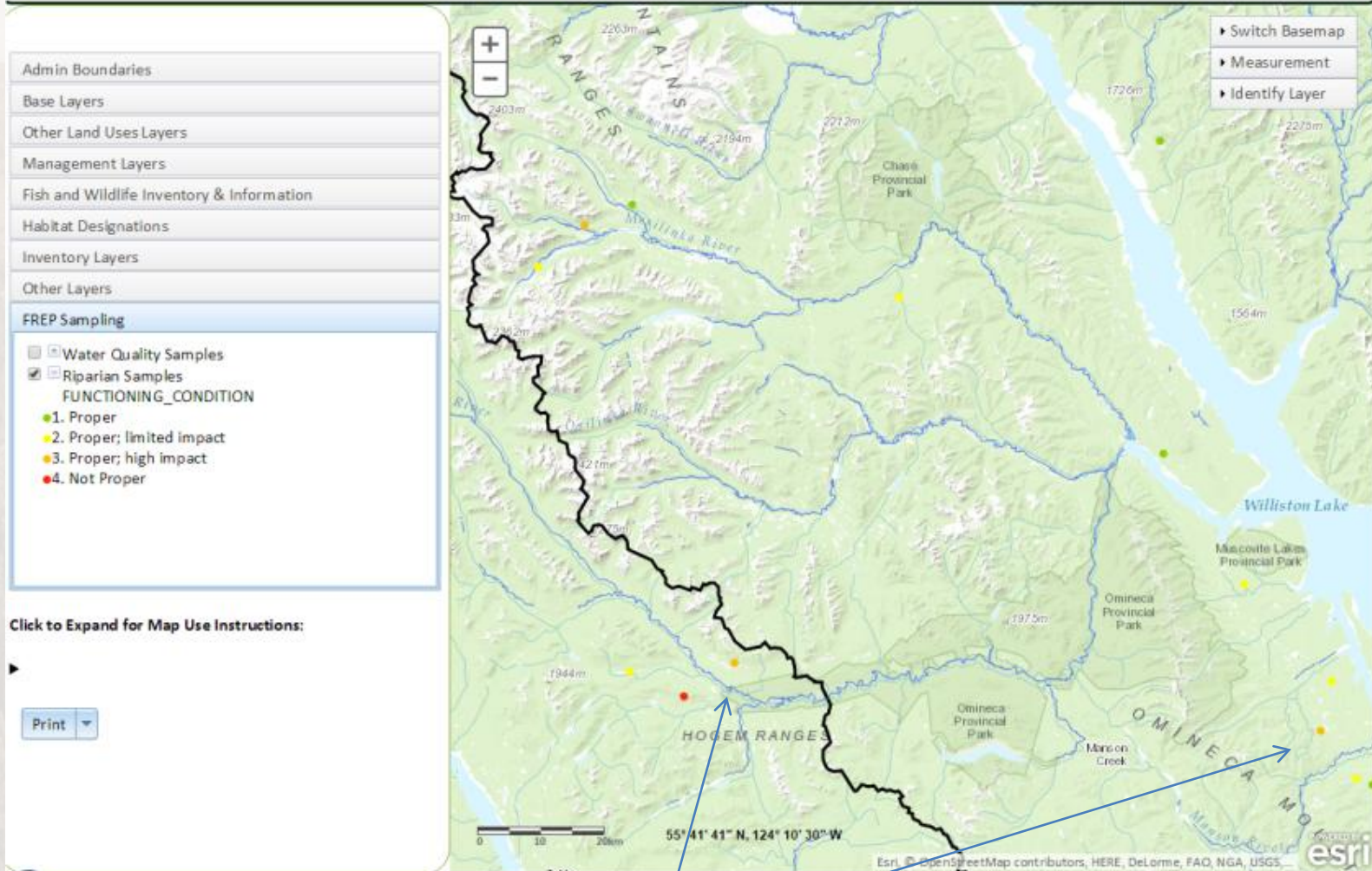
Those involved please stand

Understanding values on the landscape



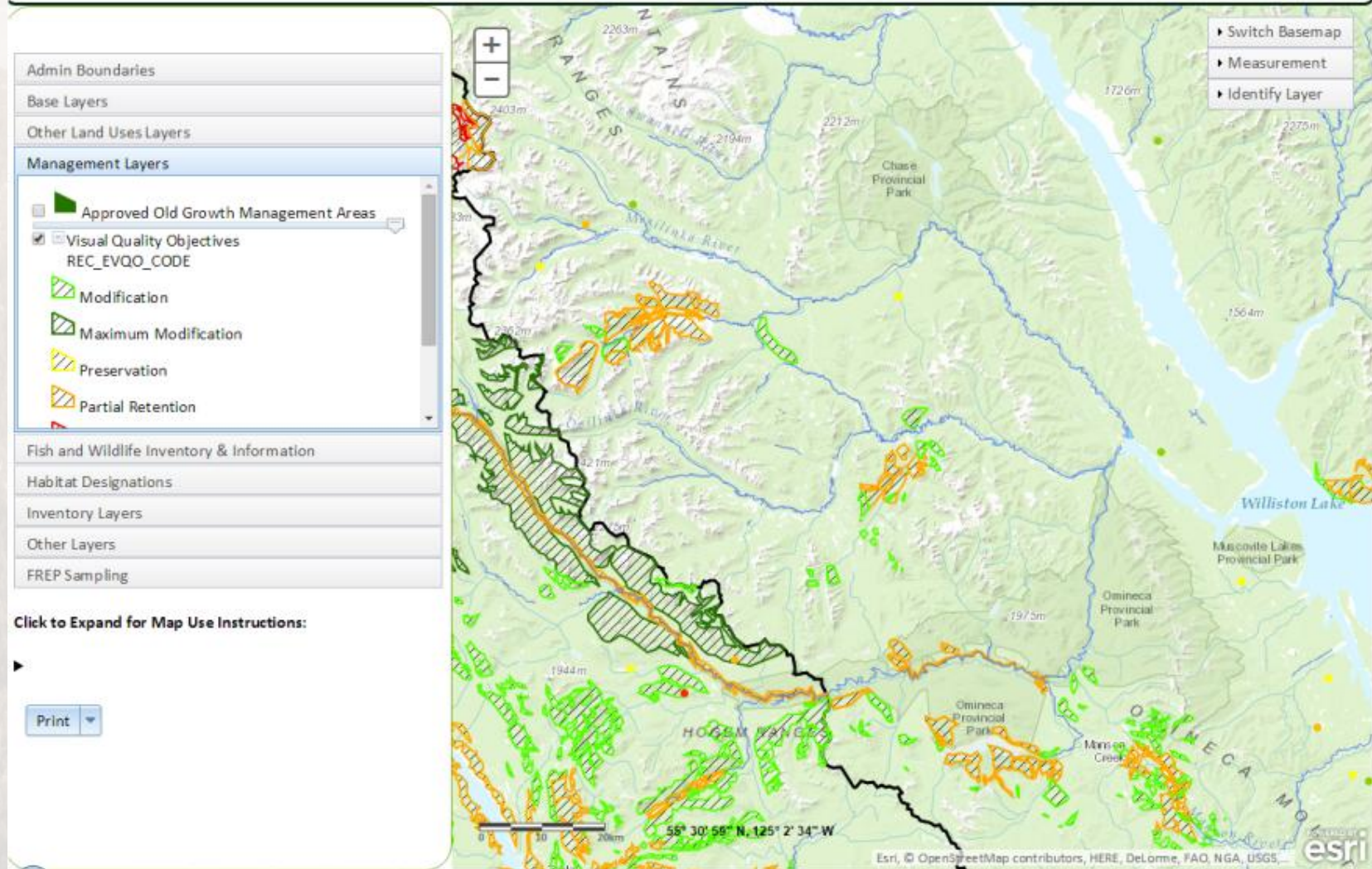
Base map

Mackenzie & Stuart Integrated Silviculture Strategy



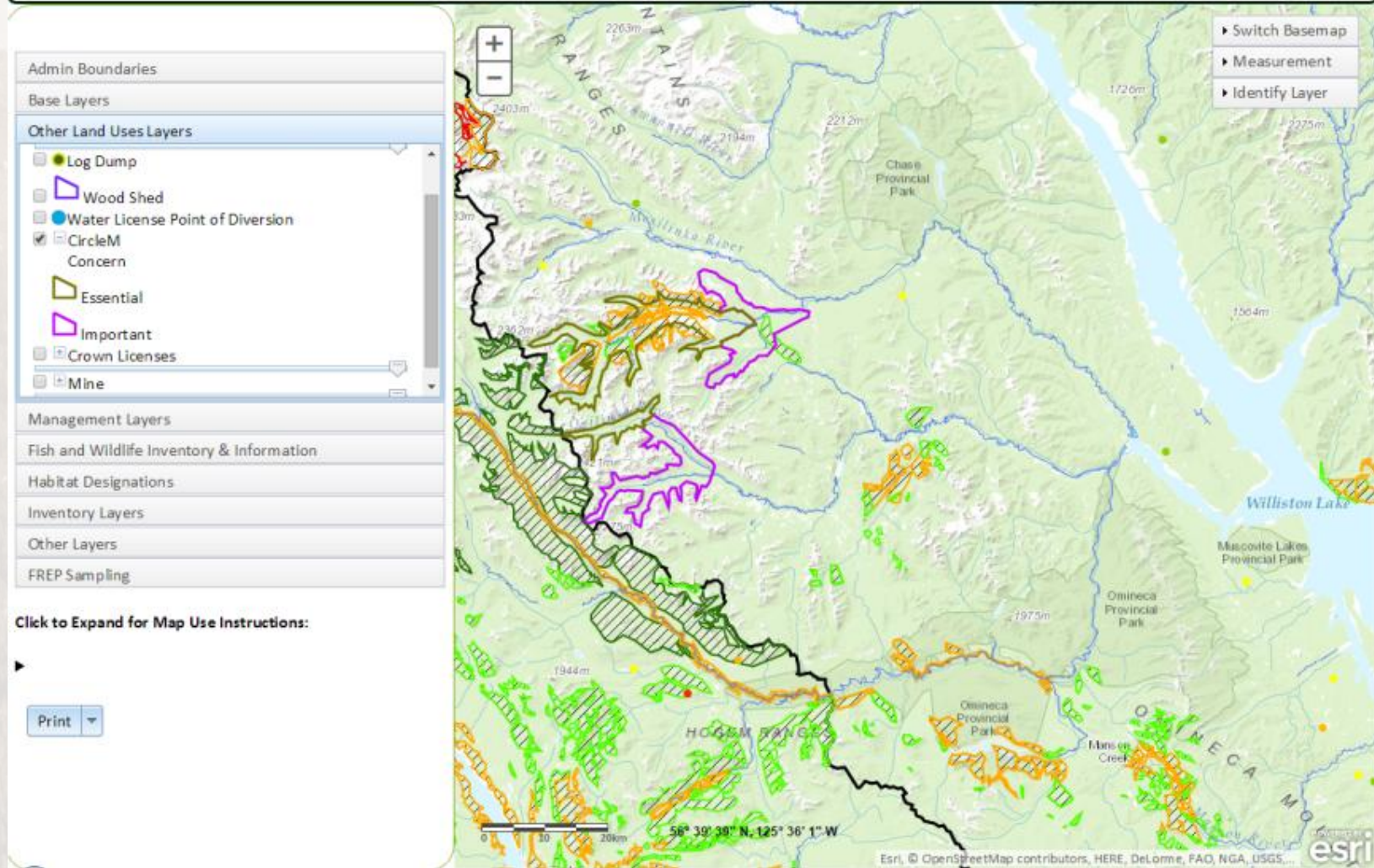
FREP Riparian Sampling

Mackenzie & Stuart Integrated Silviculture Strategy



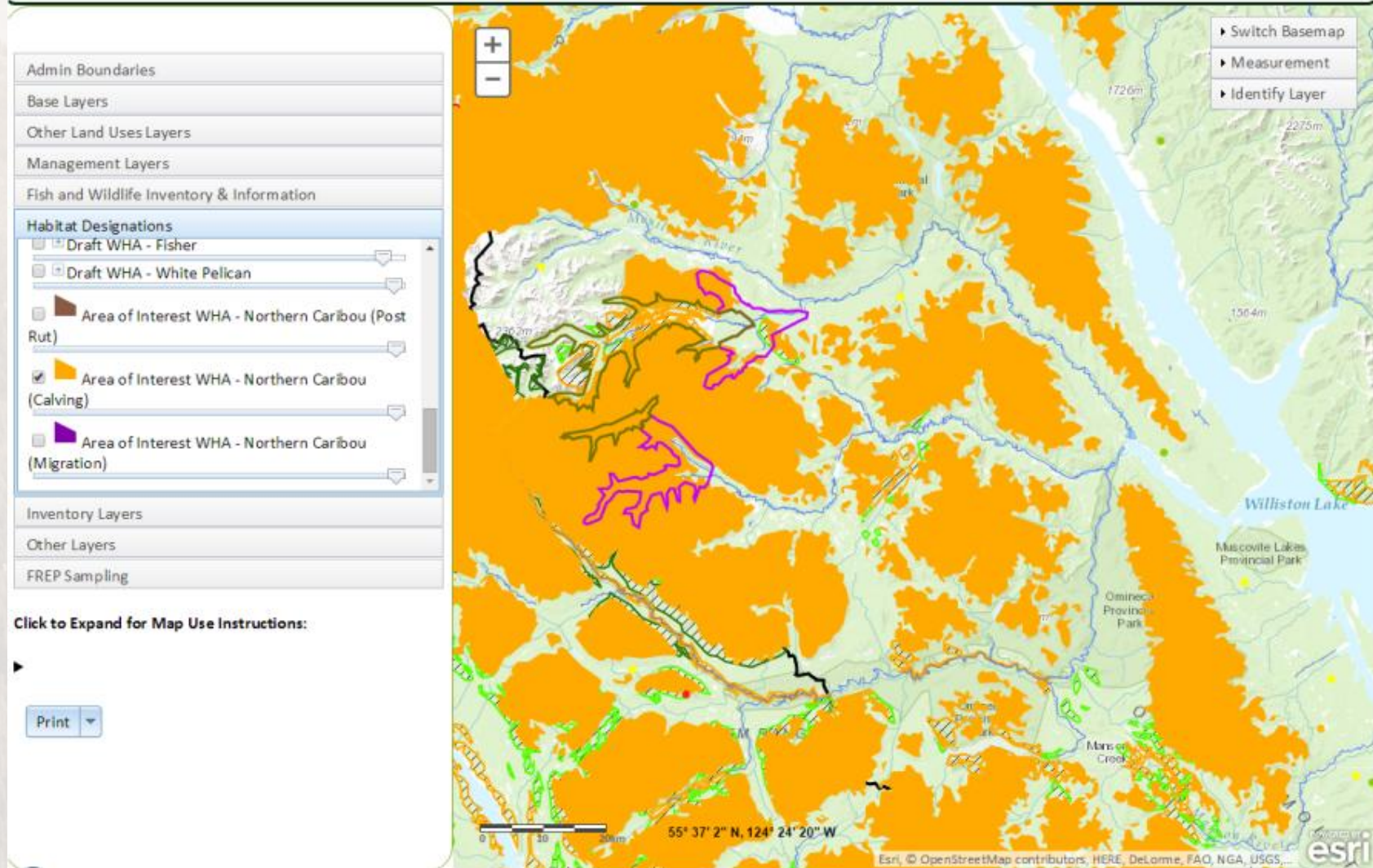
Visual Quality Objectives

Mackenzie & Stuart Integrated Silviculture Strategy



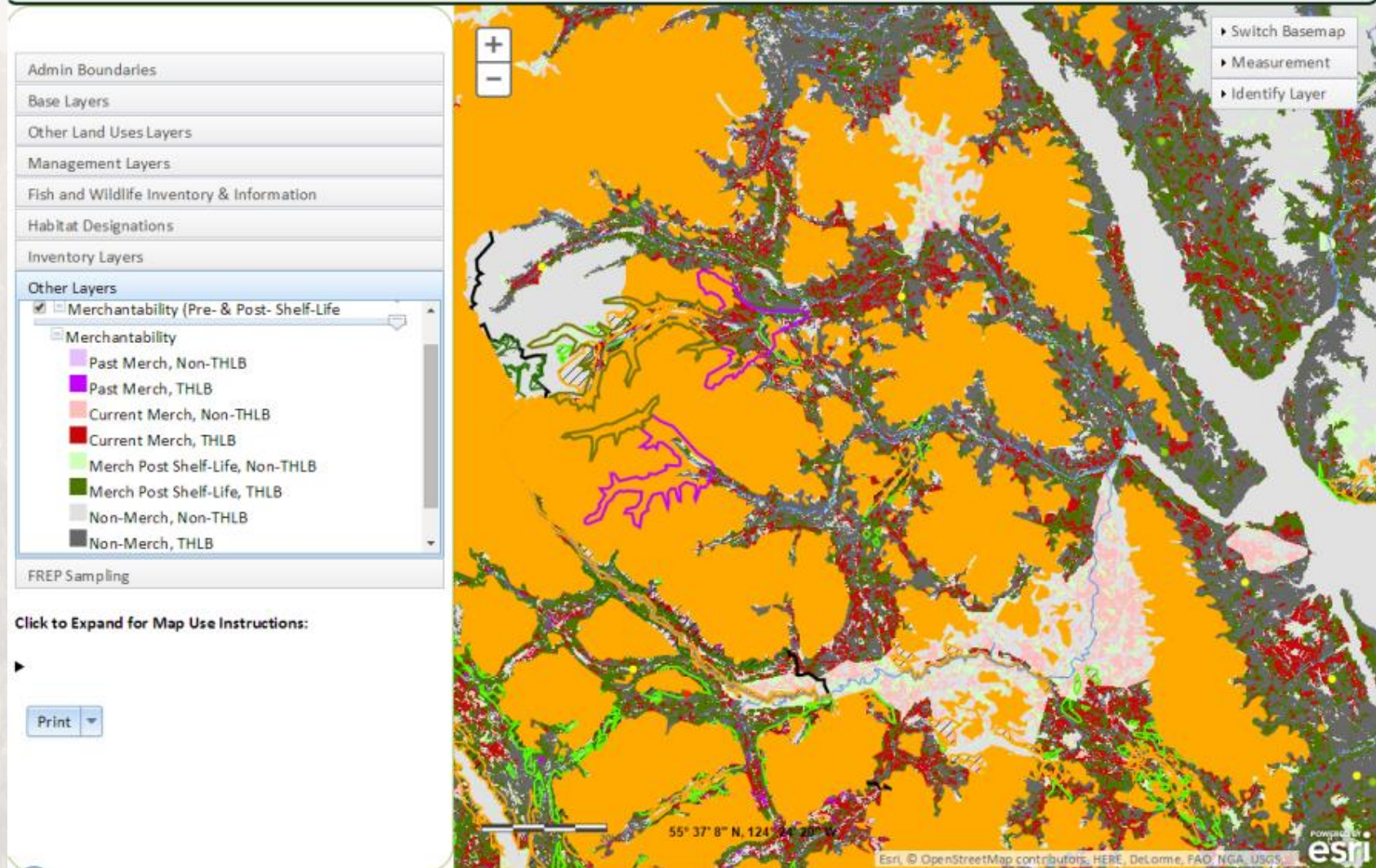
Example of a Guide Outfitter area of interest

Mackenzie & Stuart Integrated Silviculture Strategy



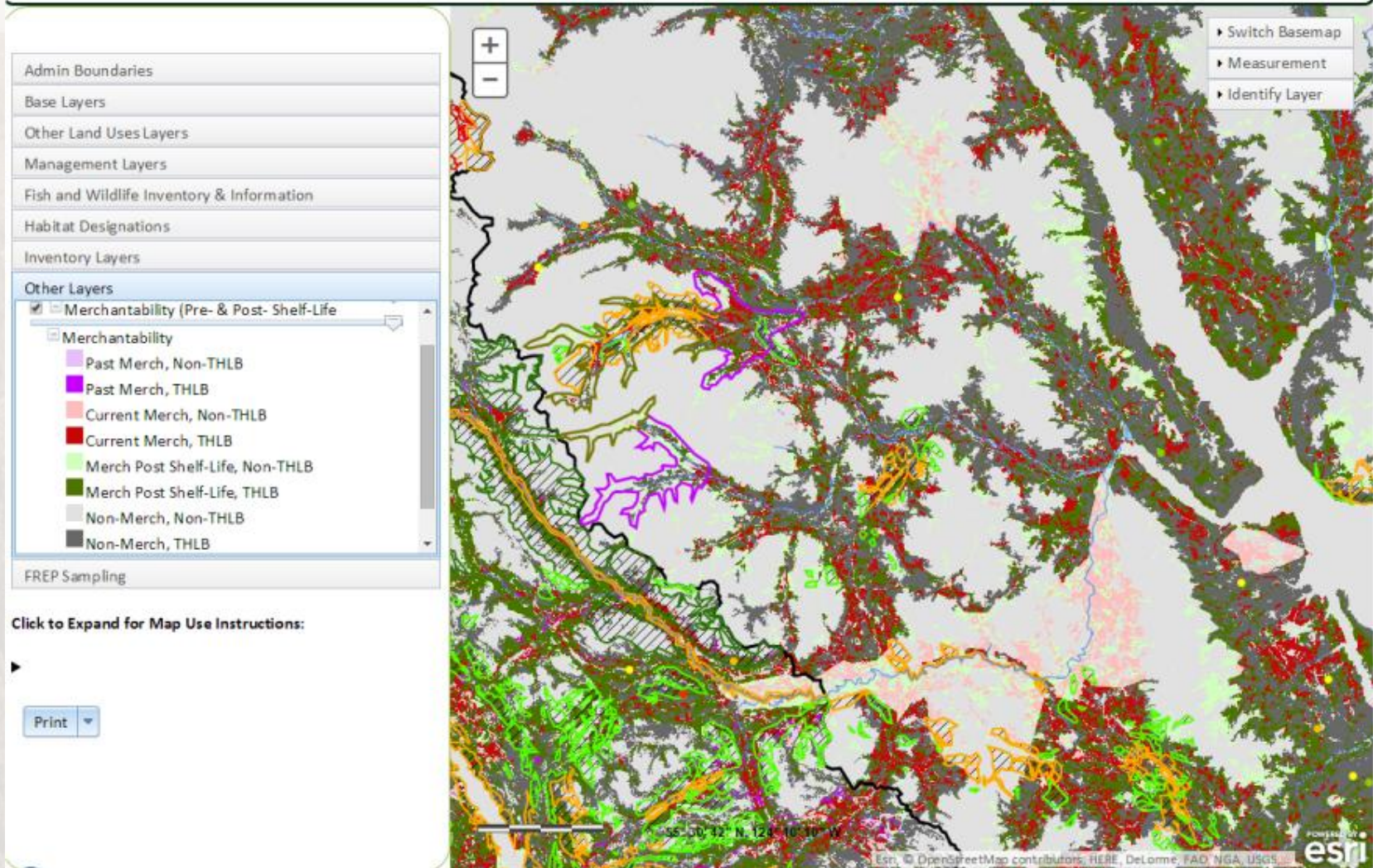
Area of Interest for a WHA – Northern Caribou - calving

Mackenzie & Stuart Integrated Silviculture Strategy



Merchantability with the other layers

Mackenzie & Stuart Integrated Silviculture Strategy



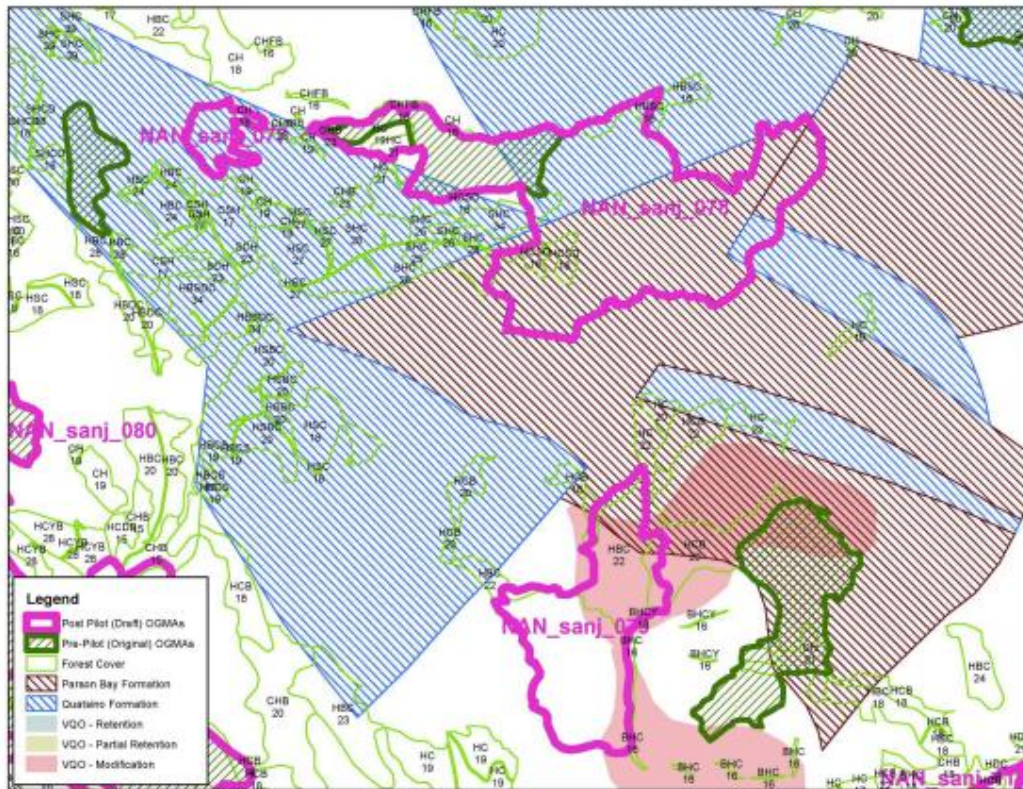
Merchantability without the AOI WHA

First Nations – a tool for engagement

An example from VI

Pre pilot OGMA's (green hatch) included subzones, typically with low quality cedar

Post pilot *Draft* OGMAs (purple outline) now overlap with subzones likely to contain large cultural cedar.



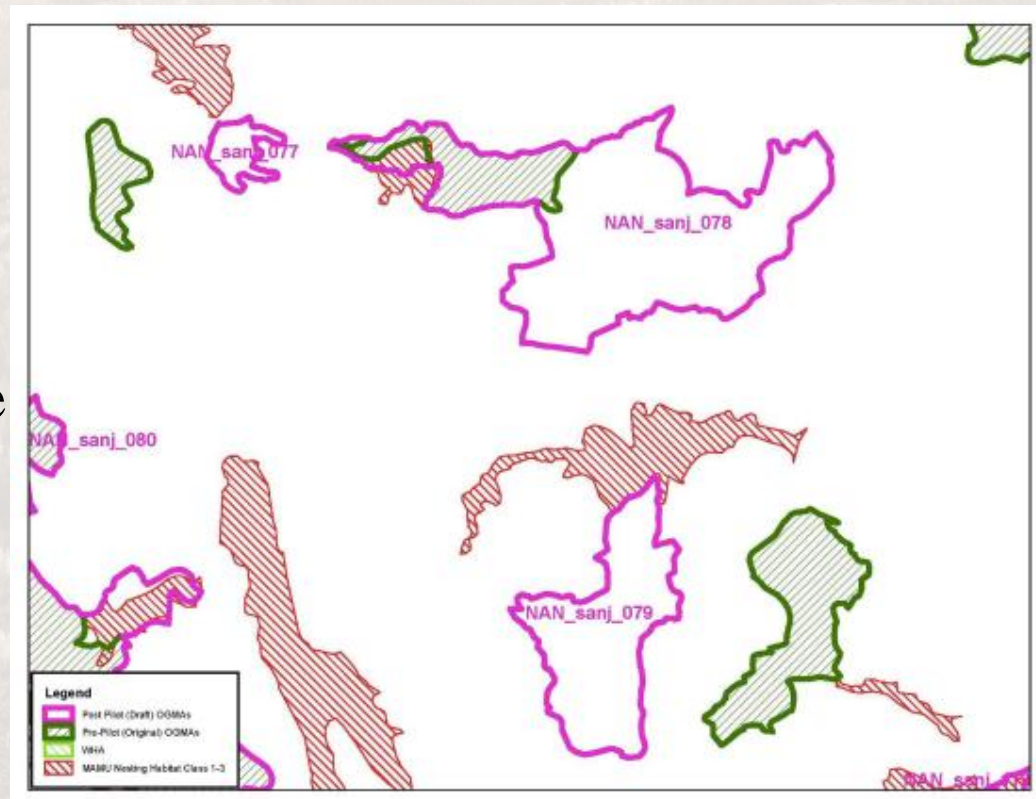
Stewardship and Stabilizing the Timber Harvesting Land Base

Wildlife / Biodiversity

Species at Risk - modelling existing and proposed recovery strategies

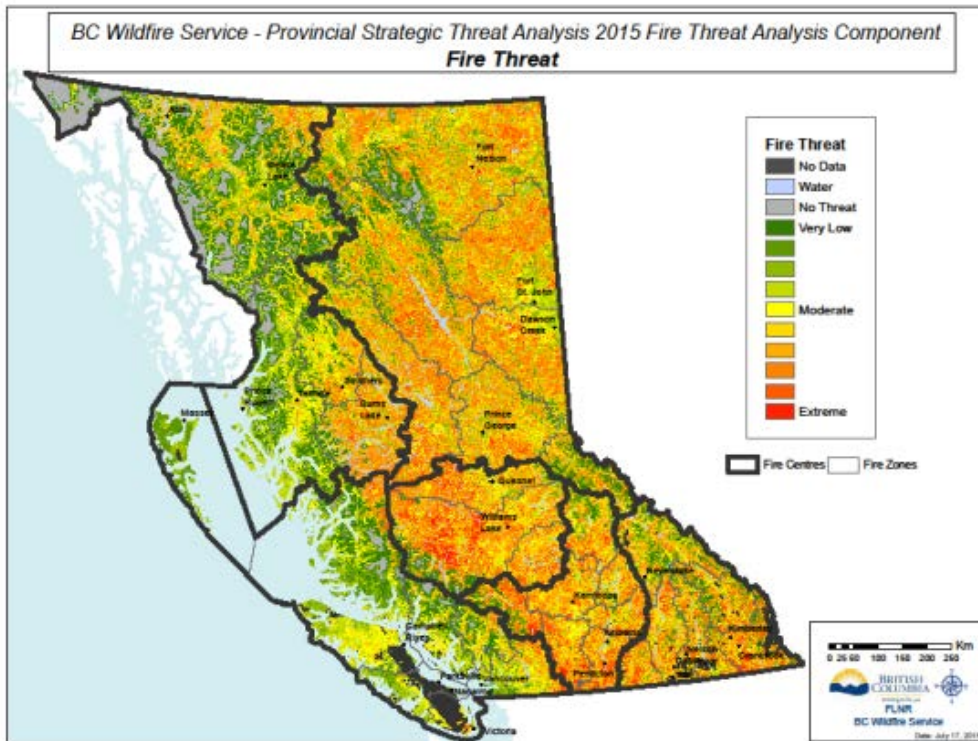
San Josef Pilot -

Over 800ha (2% of the THLB) of previously constrained harvestable area has been made available operational amendments and will decrease substantially.

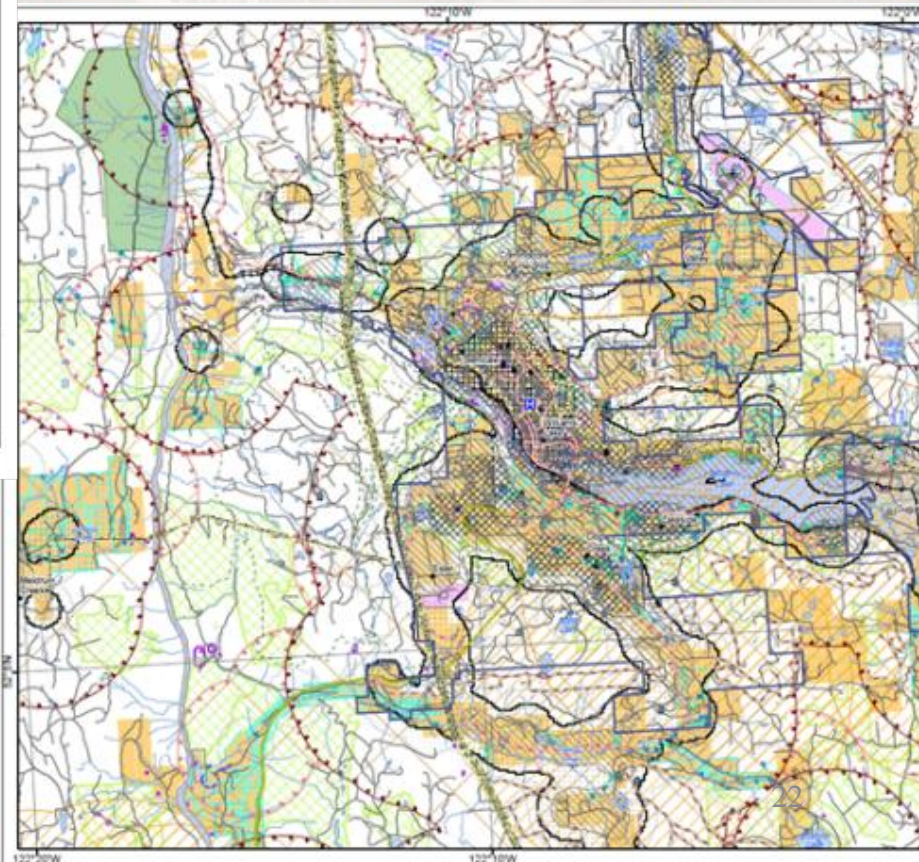


Landscape Fire Management

$$\begin{array}{c} \text{Provincial Strategic Threat Analysis} \\ \times \\ \text{Priority Value Themes} \\ = \\ \text{Risk} \end{array}$$



- Fuels treatments to address fire risk
 - CWPPs
- Prioritize silviculture investments based on risk



An ISS process

– Key Output

Lakes Type 4 Tactical Plan

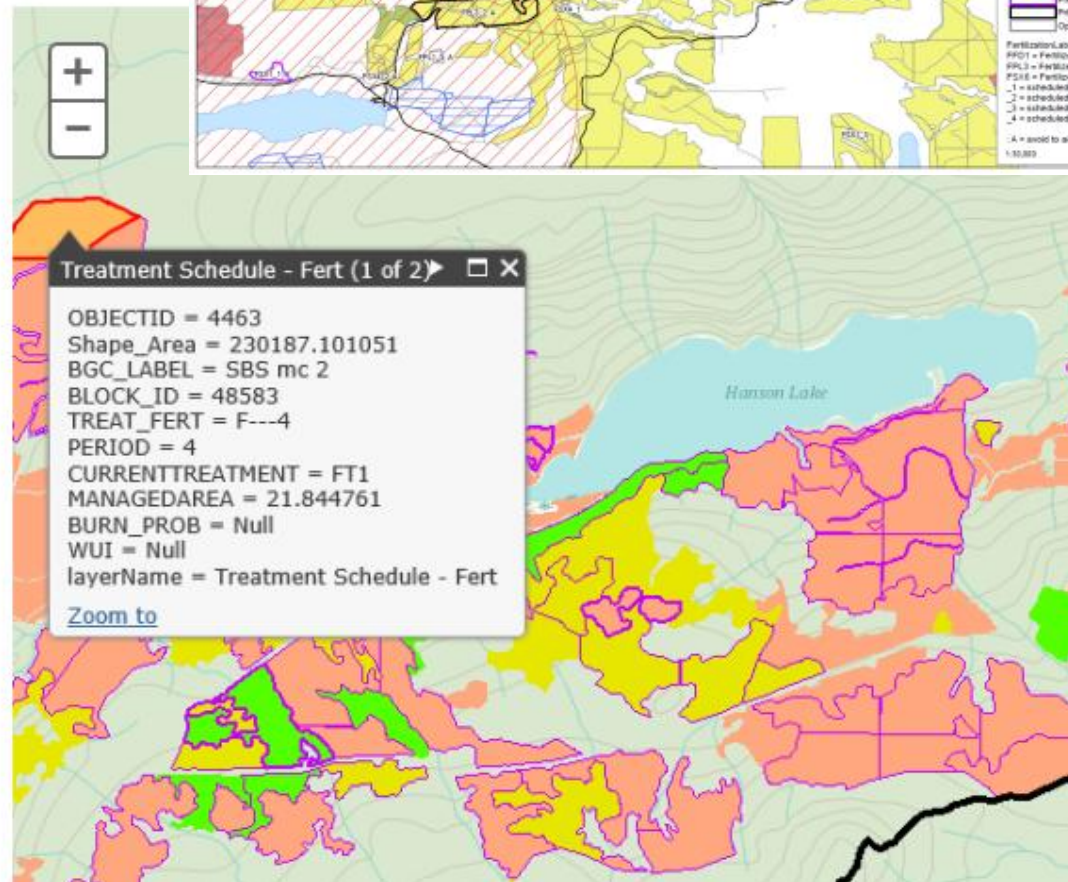
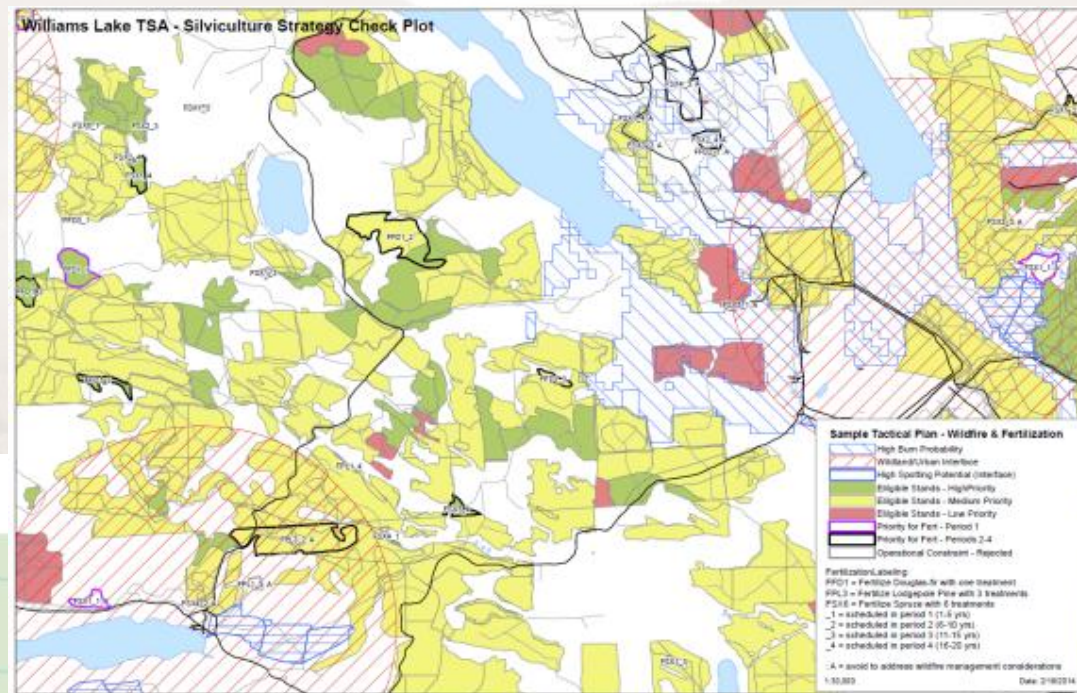
Location of Interest:

Latitude: 51 30 30N

Longitude: 121 30 30W

Zoom To Lat/Long

- ☒ WLT4
- ☒ TSA
- ☒ *WILDFIRE
- ☒ *REHAB
- ☒ *PCT
- ☒ *FERT
- ☐ Past Fert
- ☒ Treatment Schedule - Fert
 - ☐ Fert - Period 1
 - ☐ Fert - Periods 2 - 4
- ☒ Eligible - Fert
 - ☐ Priority 1
 - ☐ Priority 2
 - ☐ Priority 3
 - ☐ Priority 4

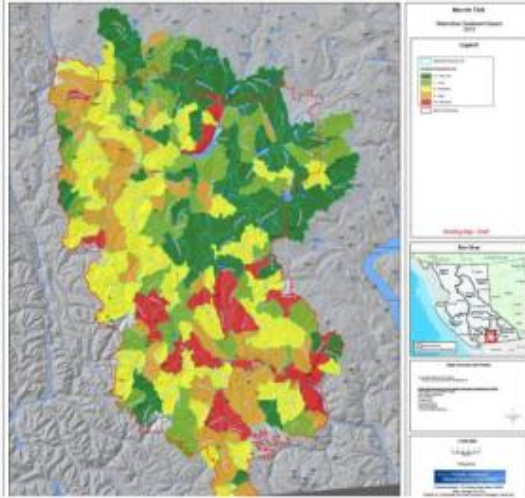


Resource Values & Objectives

Water Forest Biodiversity Riparian Wildlife Visual Quality Cultural Heritage

Landscape Level Assessment

- Inventory, Remote Sensing, GIS analysis, modelling

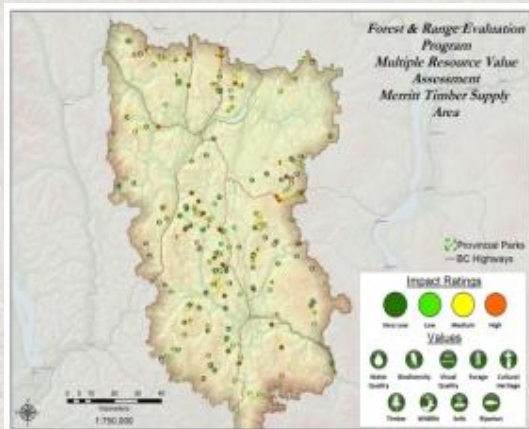


Cumulative Effects Assessment

- What is the **current condition** of selected values at a landscape level, relative to objectives?
 - What is the potential **future condition**, with foreseeable activities?
- What are the opportunities for mitigating risks?

Identify Priorities for monitoring

Calibrate GIS models, validate assessments



Site level Monitoring & Evaluation

-Field sampling, data collection

Forest & Range Evaluation Program

- What is the status & trend in condition of values, at a site level (& rolled up over larger areas)
- How effective are resource practices in maintaining values and achieving objectives (sustainable resource management)?
- What are the opportunities for improving practices, policies and legislation?

The ISS process

“Operational-izes” Strategic direction

- Builds on and integrates strategies, plans and frameworks.
- Provides for First Nations engagement.
- Addresses issues and provides direction for the implementation and coordination for a range of values – e.g. FN Spiritual and historical values, Common Objectives Project, Cumulative Effects, SAR 5 Year plan (Industry, Federal, Provincial Initiative on SAR), Water Sustainability Plans...
- Potentially provides a timber supply implementation plan – where, timing, stocking standards...
- Guides operations and investments across the landscape.
- Continuous improvement.
- An effective framework for Professional Reliance.



Big Picture Objectives

- Vision of where we want to go and how to get there using silviculture.
- More efficient use of the THLB
 - Optimized reserve strategy (range of values)
 - Clear priorities for harvesting (recommendations)
 - Clear recommendations for investment (gov't funding)
- Tactical direction on how to execute
- Feedback loop to guide improvements



The First Iteration (of cycle) vs the Ideal

The First Iteration may be:

- Perhaps not ideal.
- May yield more questions than answers.
- Like the oil filter analogy – need to address issues sooner rather than later, this provides a starting point to bring all the parts together.



Remember this is a journey!

Thanks to all who have contributed to date



Remember this is a journey – please get involved