

Young Stand Monitoring Forest Analysis & Inventory Branch

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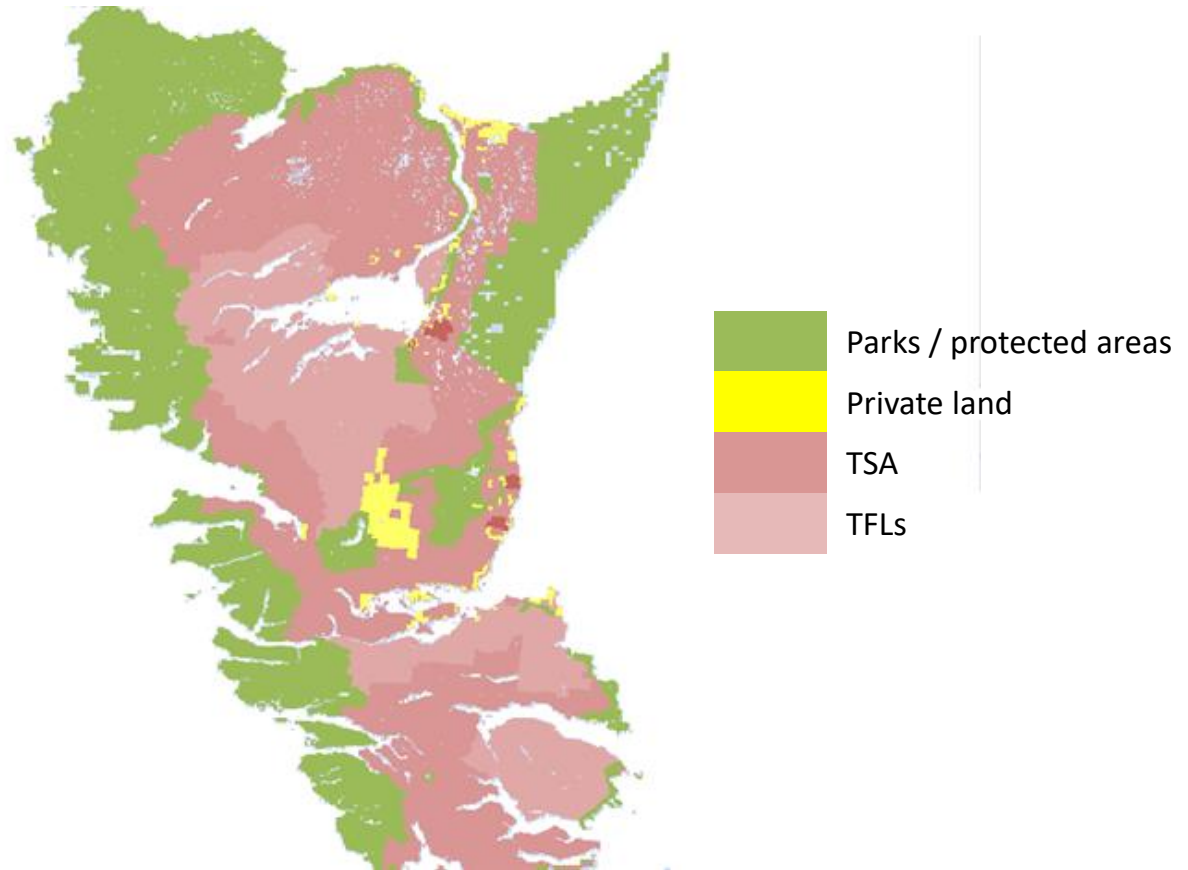
January 31, 2017

What is YSM

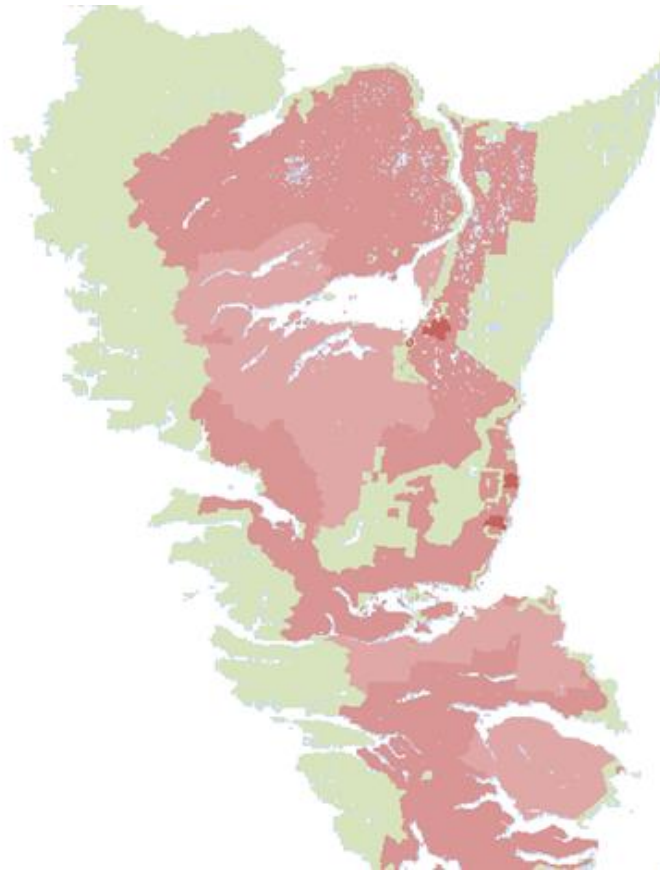
- A “Change Monitoring Inventory” program in young stands
- Describe stand characteristics and structure
- Quantify change (growth, ingress, mortality)
- Tests management plan assumptions
- Over 18 TSA-based programs established since 2011.

What is YSM

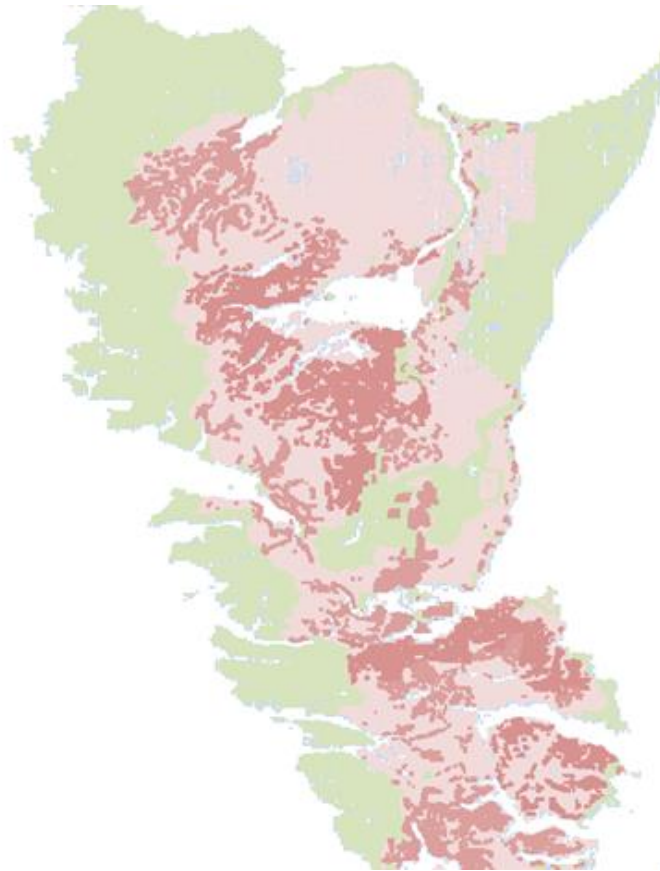
- Population defined from Phase-1 VRI polygons 15 - 50 years old in the Crown forested landbase
- Sample points located on a pre-defined grid (subset of NFI 20km grid)
- Fixed-radius permanent sample plots established and re-measured at each sample point location



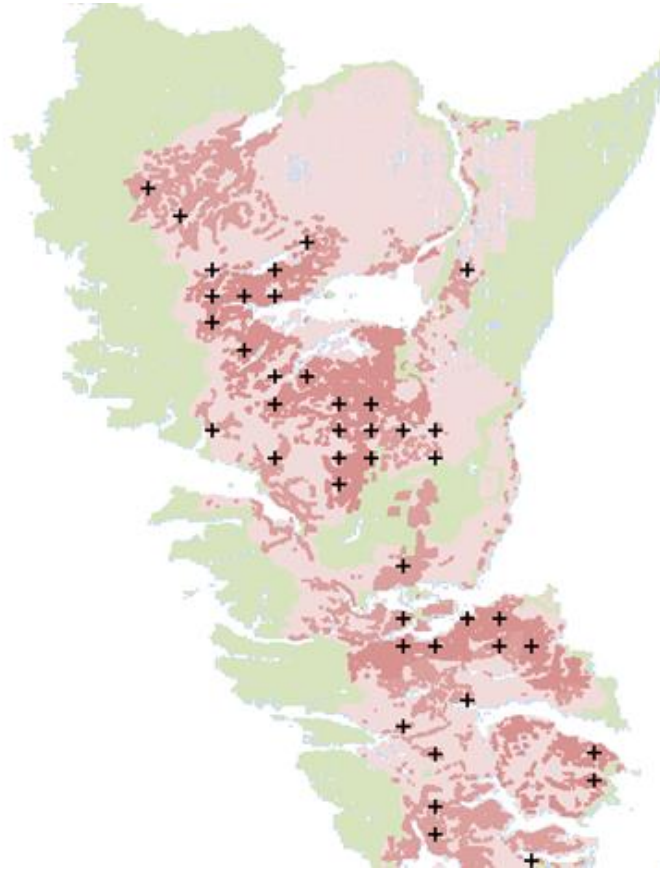
YSM Target Pop :
1) Classify entire landbase



YSM Target Pop:
2) Crown forest landbase

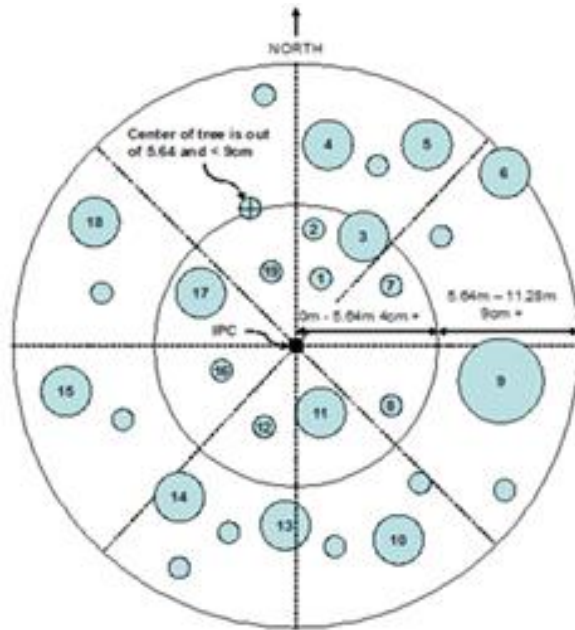


YSM Target Pop:
3) 15 – 50 yrs old in Phase 1 VRI



YSM Sample Pop:
Overlay grid (43 pts @ 5km*5km)

Ground Sample Measurements



- CMI Sampling Standards
- Fixed area : 0.04 ha
- Trees $\geq 4.0\text{cm}$ DBH permanently tagged
- DBH
- Height
- Forest health incidence and severity
- Loss indicators
- Site trees in 0.01ha quad
- Count-plots for trees $< 4\text{cm}$

Date & Time: Fri Jun 17 15:55:02 PDT 2016
Position: 8 N 699822 833351
Altitude: 48m
Datum: WGS84
Azimuth/Bearing: 270 (not a 360mils true)
Zoom: 1X
49.0



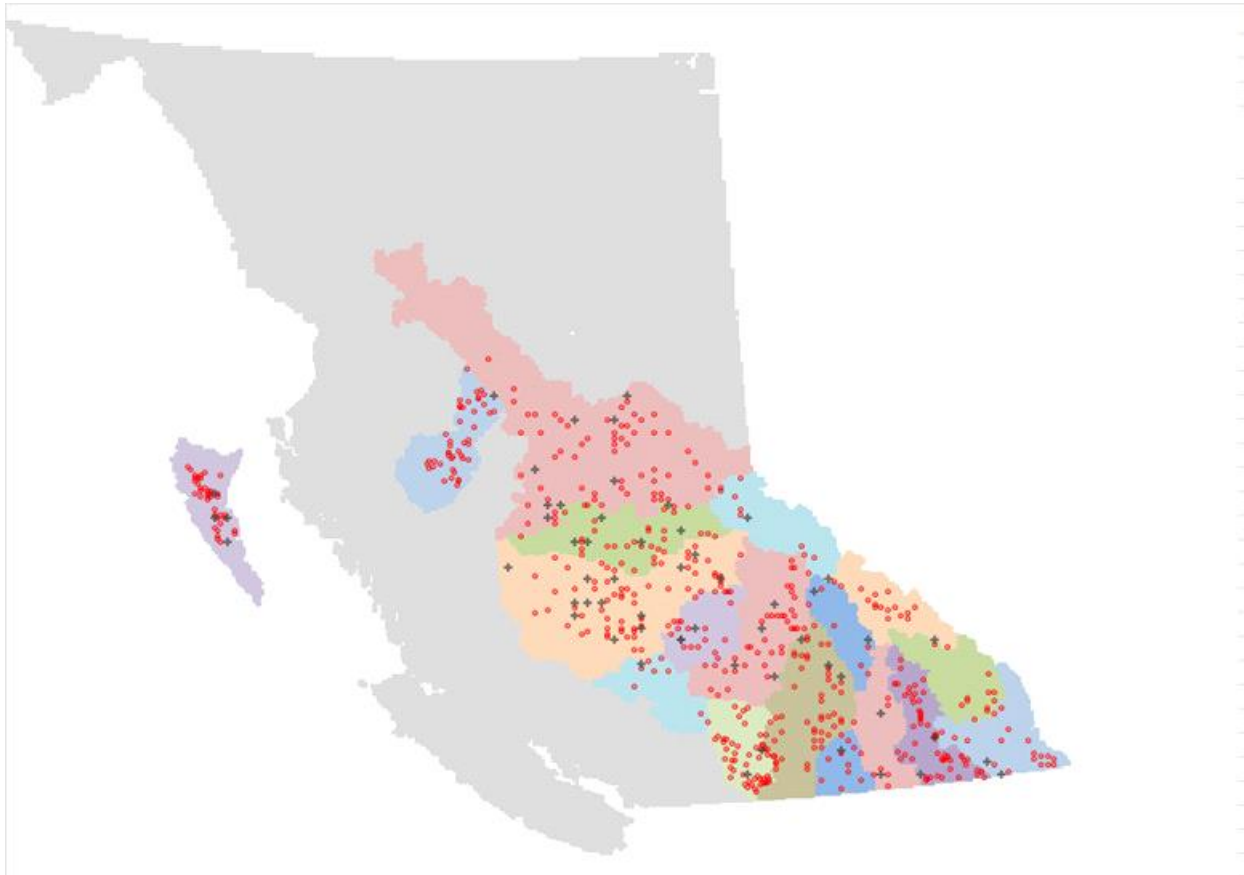
YSM Ground Samples Established 2011-2016

TSA	Grid Size	Total
TSA01_Arrow	5 * 10 km	10
TSA02_Boundary	5 * 10 km	12
TSA05_Cranbrook	5 * 10 km	20
TSA07_Golden	5 * 10 km	20
TSA09_Invermere	5 * 10 km	11
TSA11_Kamloops	5 * 10 km	46
TSA13_Kootenay_Lake	Other	59
TSA15_Lillooet	5 * 10 km	9
TSA17_Robson_Valley	5 * 10 km	8
TSA18_Merritt	Other	57
TSA20_Morice	Other	45
TSA22_Okanagan	5 * 10 km	45
TSA23_100_Mile_House	5 * 10 km	24
TSA24_Prince_George	10 * 10 km	77
TSA25_Haida_Gwaii	5 * 5 km	43
TSA26_Quesnel	5 * 10 km	34
TSA27_Revelstoke	5 * 10 km	7
TSA29_Williams_Lake	5 * 10 km	72
Total		599

YSM Programs Completed 2011-2016

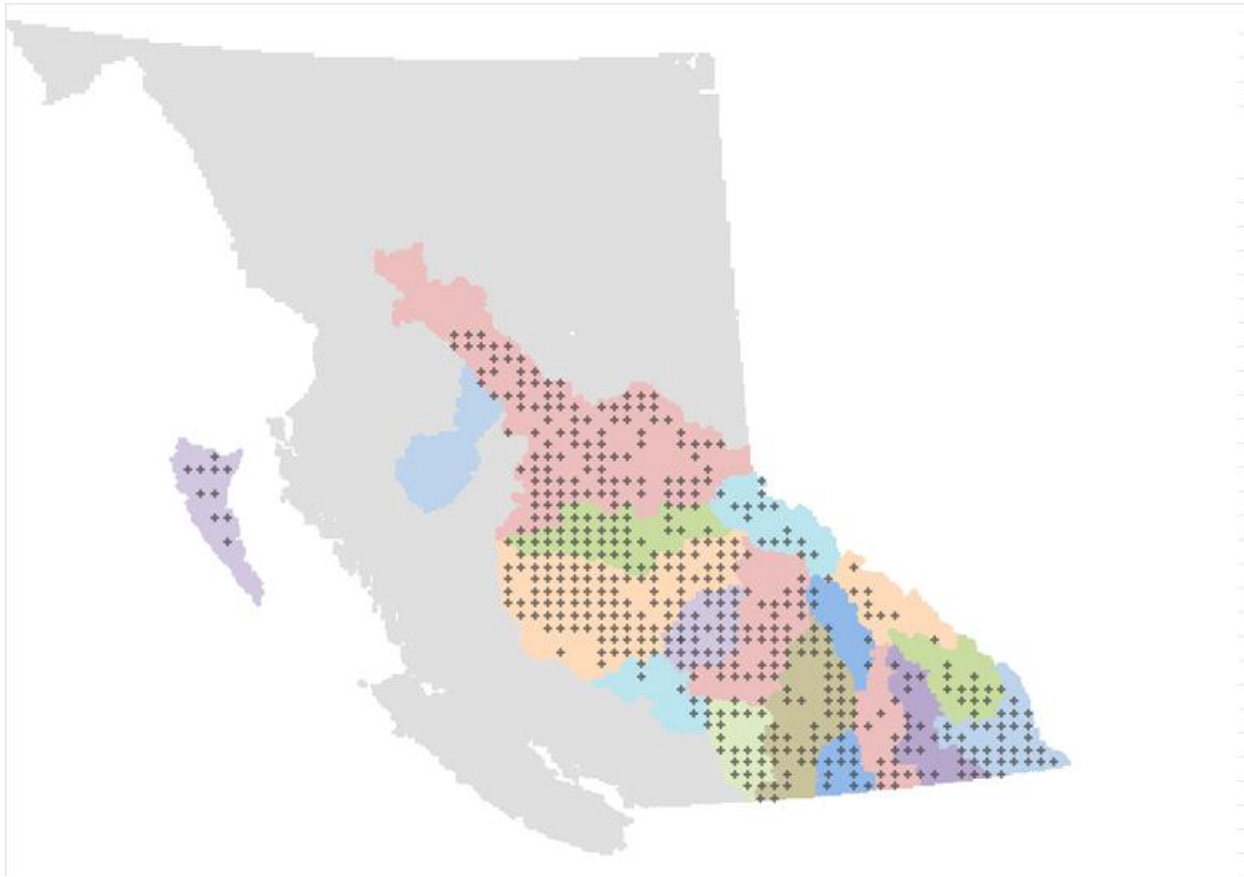
YSM ground samples on subset of NFI grid (**red**)

CMI ground samples on 20km NFI grid (black)



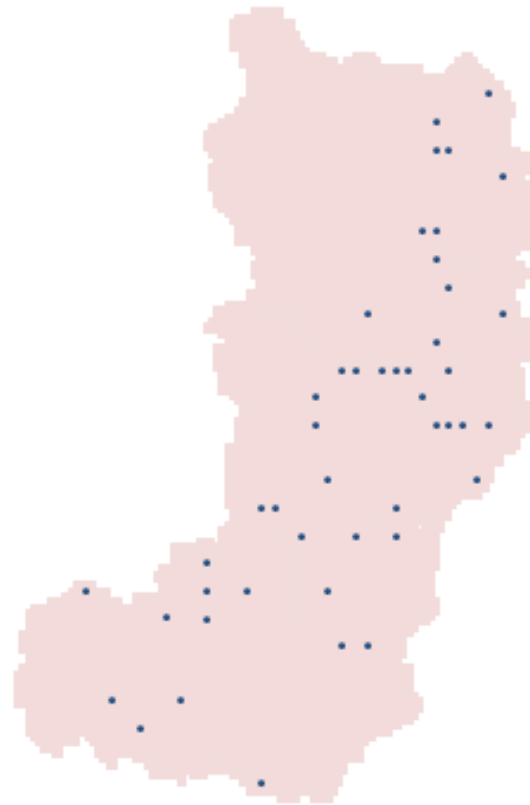
CMI Program Completed 2011-2016

ground samples on 20km NFI Grid



Kamloops YSM Establishment Results

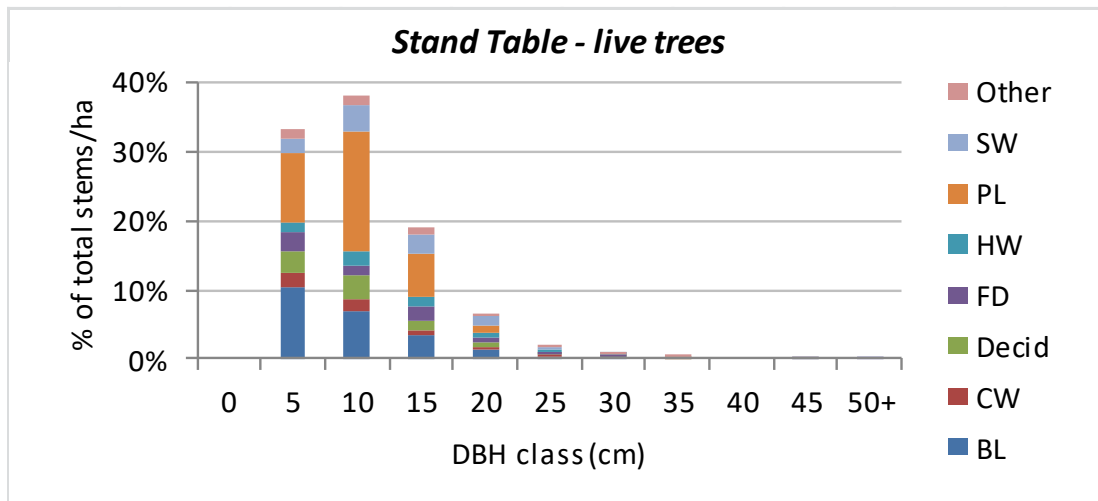
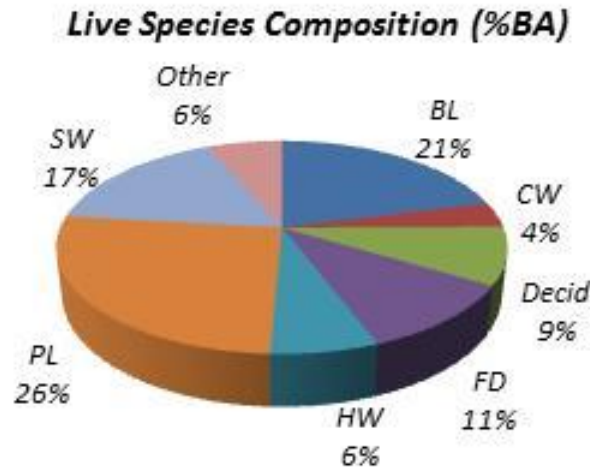
- Estab. 2015
- 5*10km grid
- 46 samples
- TSA



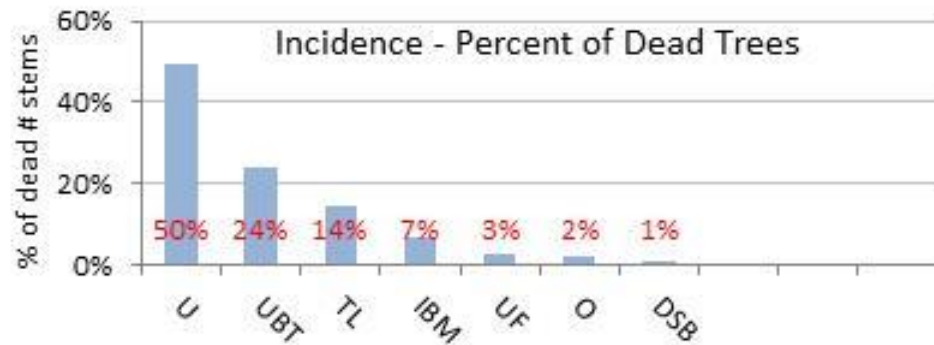
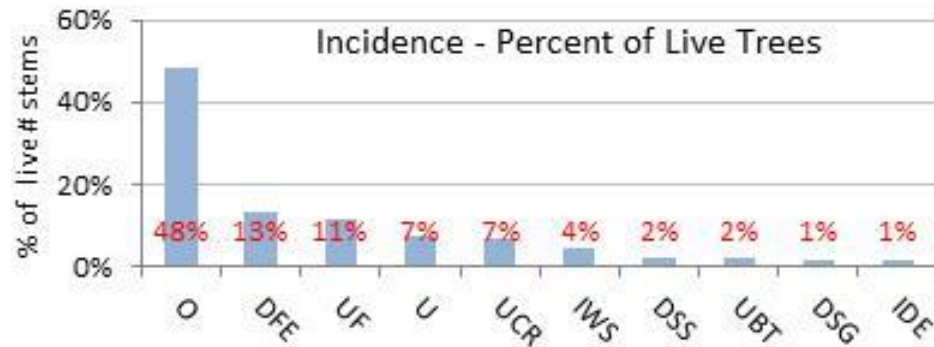
Summary Results

1. Stand description
2. Forest health Incidence
3. Species composition vs VRI
4. Site Index vs PSPL
5. Residual component
6. Current volume vs TIPSY
7. Testing MP Assumptions – *are young stands meeting TSR expectations @ rotation?*

Stand Description / Structure



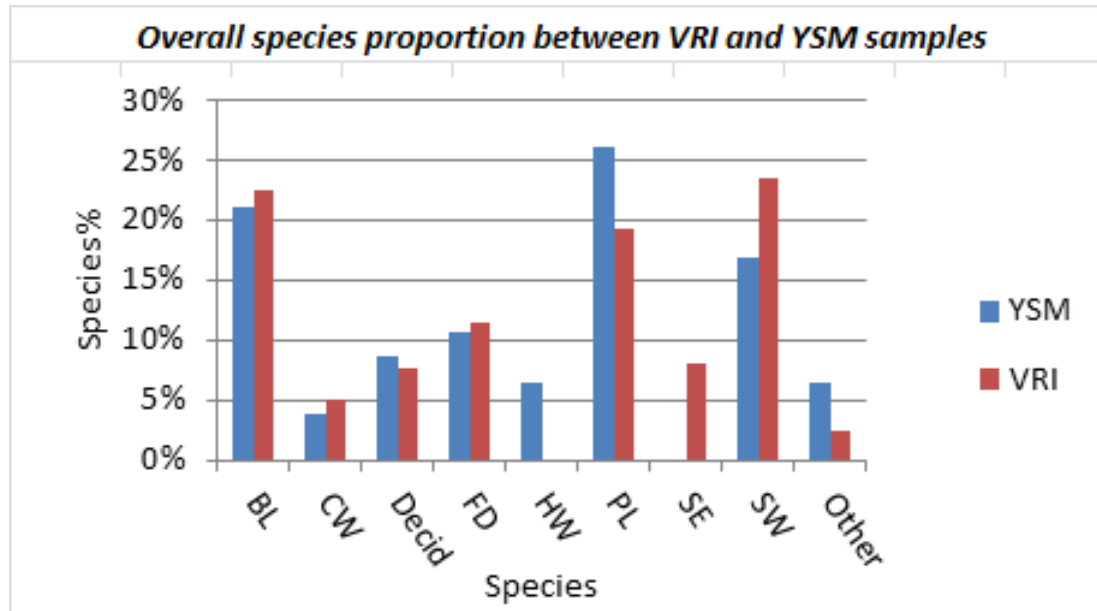
Forest Health Incidence



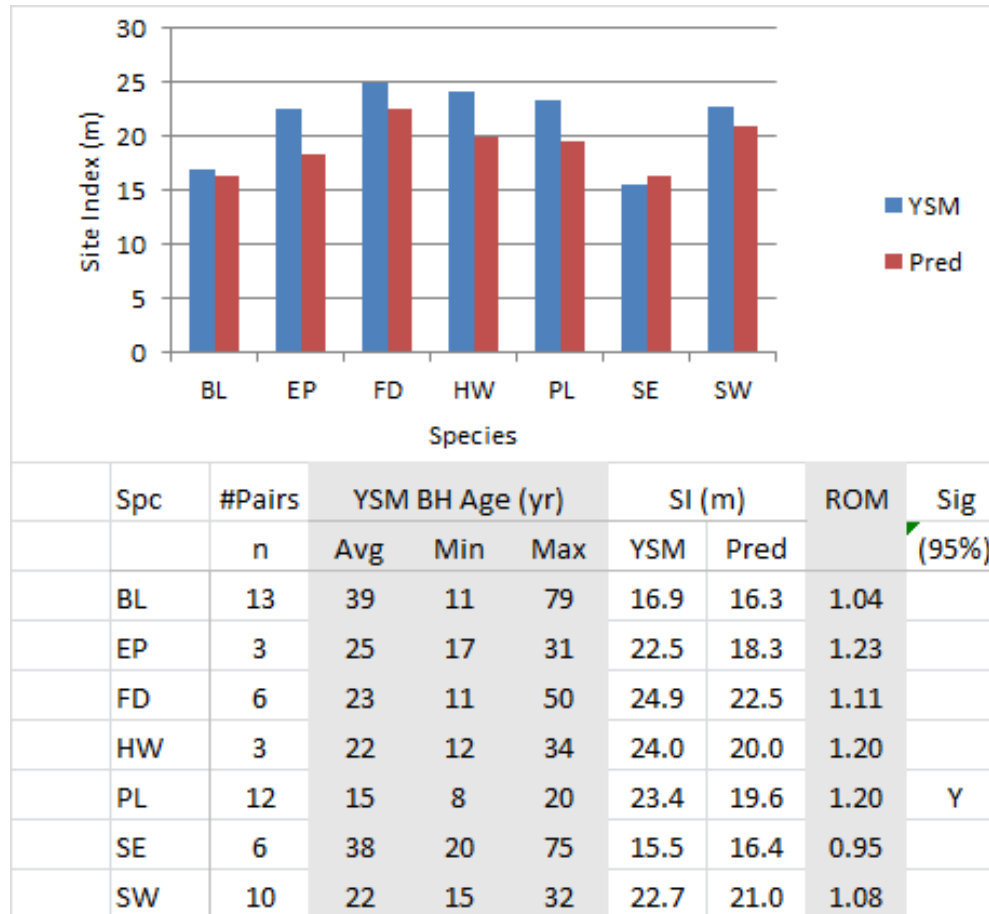
Leading Species vs VRI

<i>Leading species cross-table comparison (# of YSM samples)</i>									
YSM VRI									
	BL	Decid	FD	HW	PL	SW	Other	Null	Total
BL	9						2		11
Decid		1							1
FD		1	5		1			1	8
PL		1	1		10	1		1	14
SE	2					1	1		4
SW		1		2		5			8
Total	11	4	6	2	11	7	3	2	46
<i>Correct Leading Species Classification Rate =</i>									65%

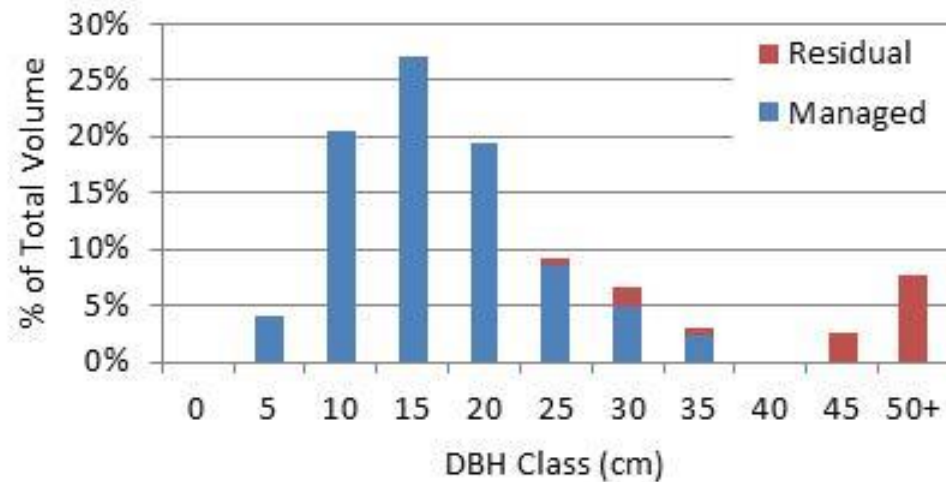
Species Composition vs. VRI



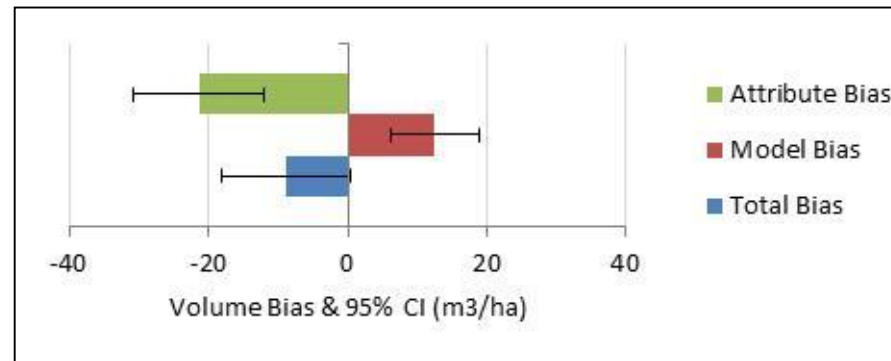
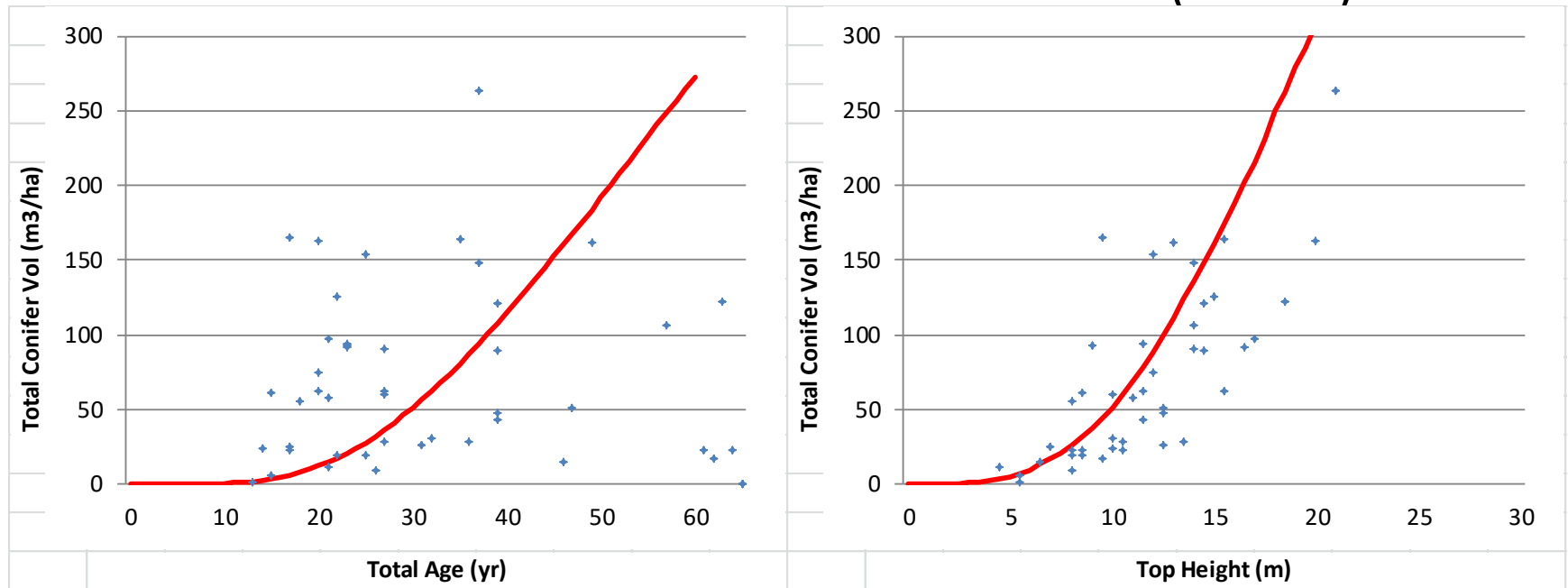
Site Index vs Provincial Site Productivity Tile



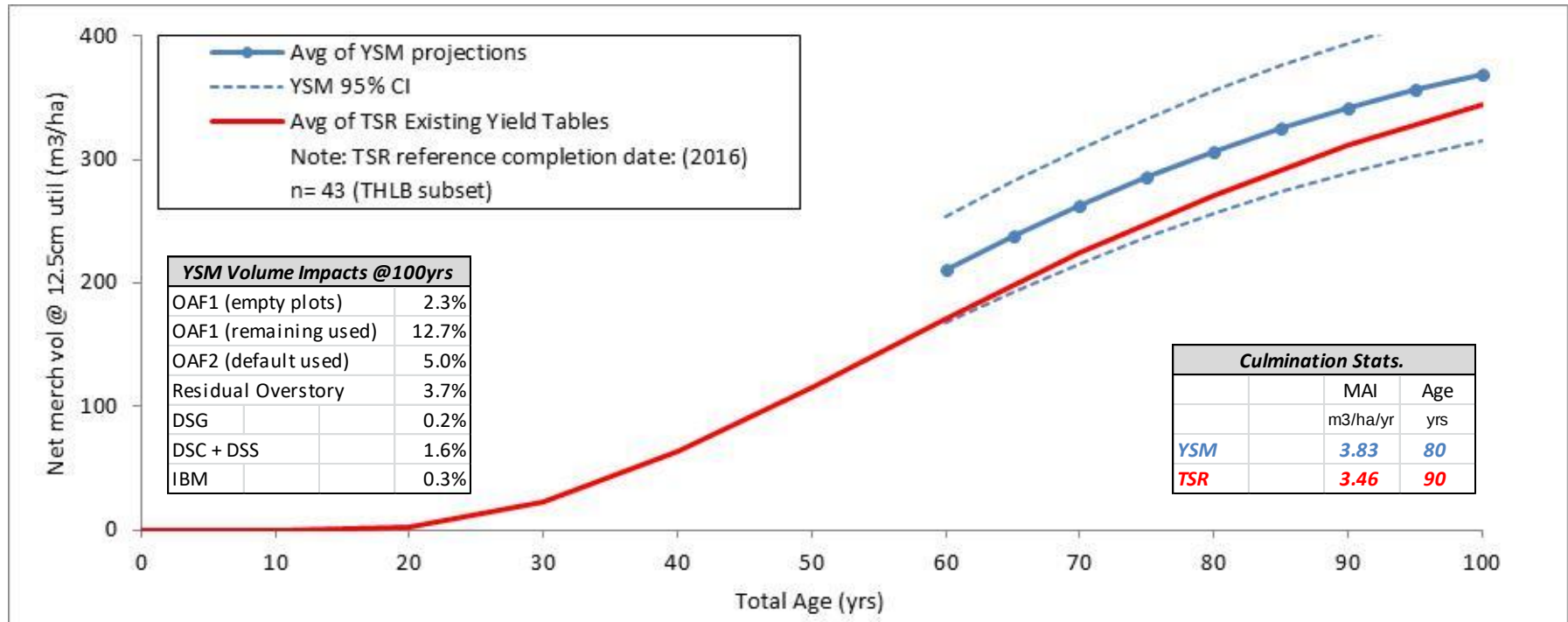
Residual overstory vs. Managed cohort



Current Volume vs TIPS_Y(v.4.3.2)



Meeting TSR expectations@ rotation?



Planned YSM Sampling for 2017

- Lakes TSA
- Morice TSA
- Bulkley TSA
- Fraser TSA
- Conditional on approved budgets