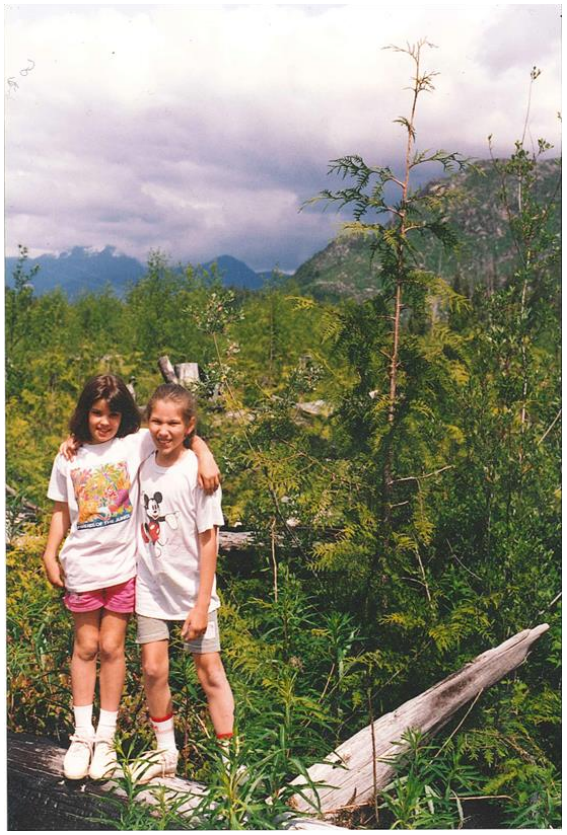
Timber Supply – why silviculture matters

CSC February 2017

Timber Supply – why silviculture matters

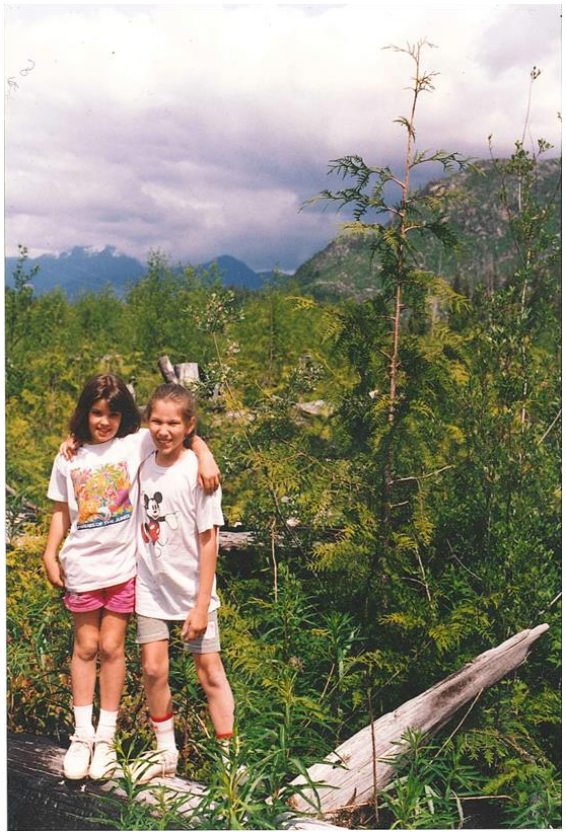
On the coast we do a great job of growing trees

We do a lousy job of getting recognition for this good work



Timber Supply – why silviculture matters

Why do we grow trees?



Timber Supply – why silviculture matters

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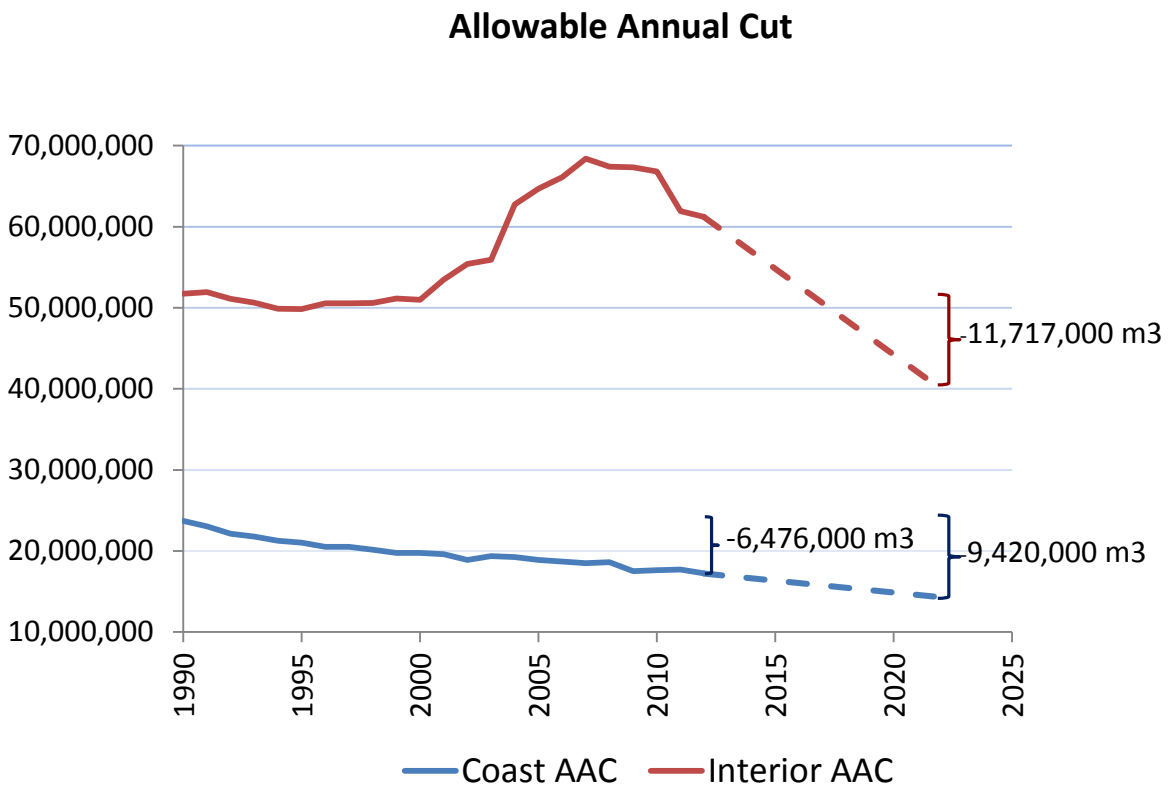
The really big picture



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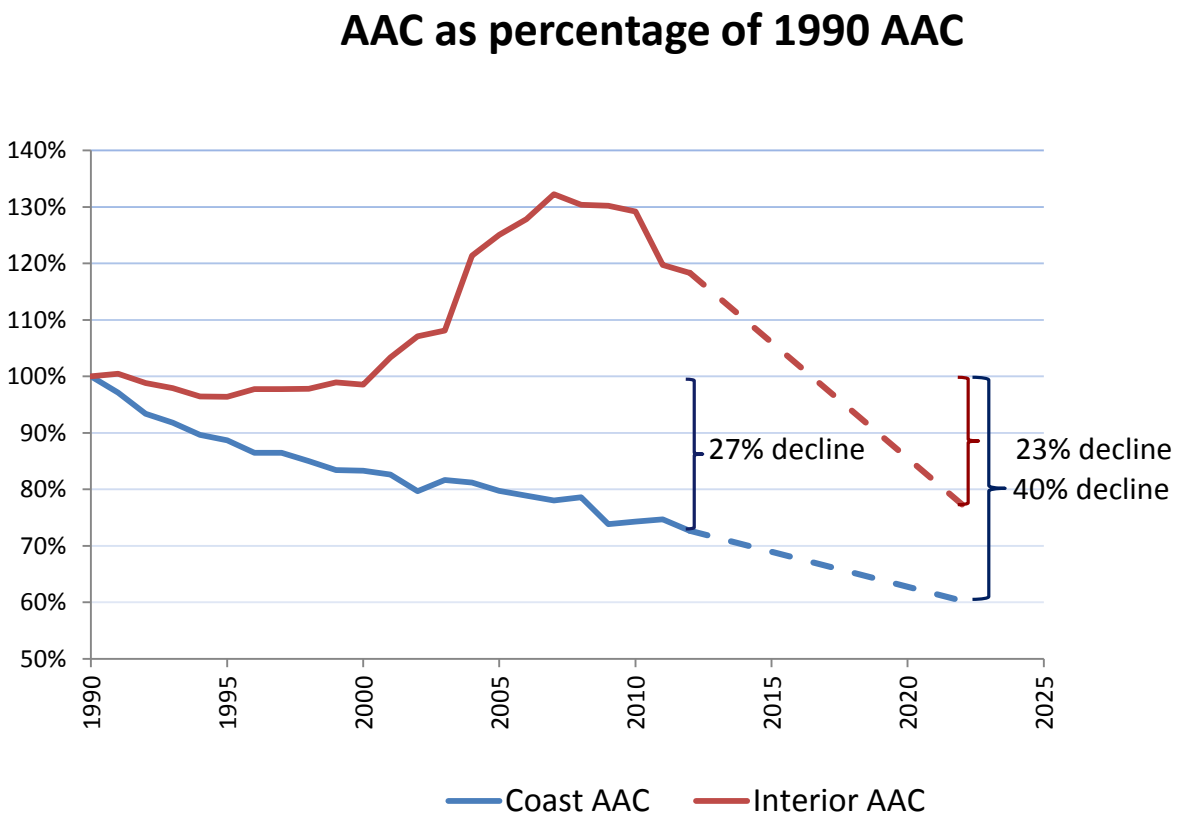


Timber Supply – why silviculture matters

CRIT Silviculture Working Group

"The Importance of Silviculture in Timber supply Analysis – a Coastal Perspective"

Timber Supply – why silviculture matters

- Silviculture linkages to Timber supply
- How big is the prize?
- How do we move forward?

Silviculture inputs into Timber supply

- Genetic gain
- Regeneration delay
- Species composition
- Years to breast height (Y2BH)
- Operational adjustment factors (OAF)

Genetic gain

- A reward for planting and for owning an orchard
- Compelled by legislation
    - Fd: 7-13%
    - Cw: 6-24%
    - Hw: 14-17%
- Different yield curves for different cohorts

Regeneration Delay

- Straightforward input: 0, 1, 2…….that directly impacts rotation
- Difference between commencement of harvesting and planting, not the declaration in RESULTS
- Remember you are planting a one year old tree

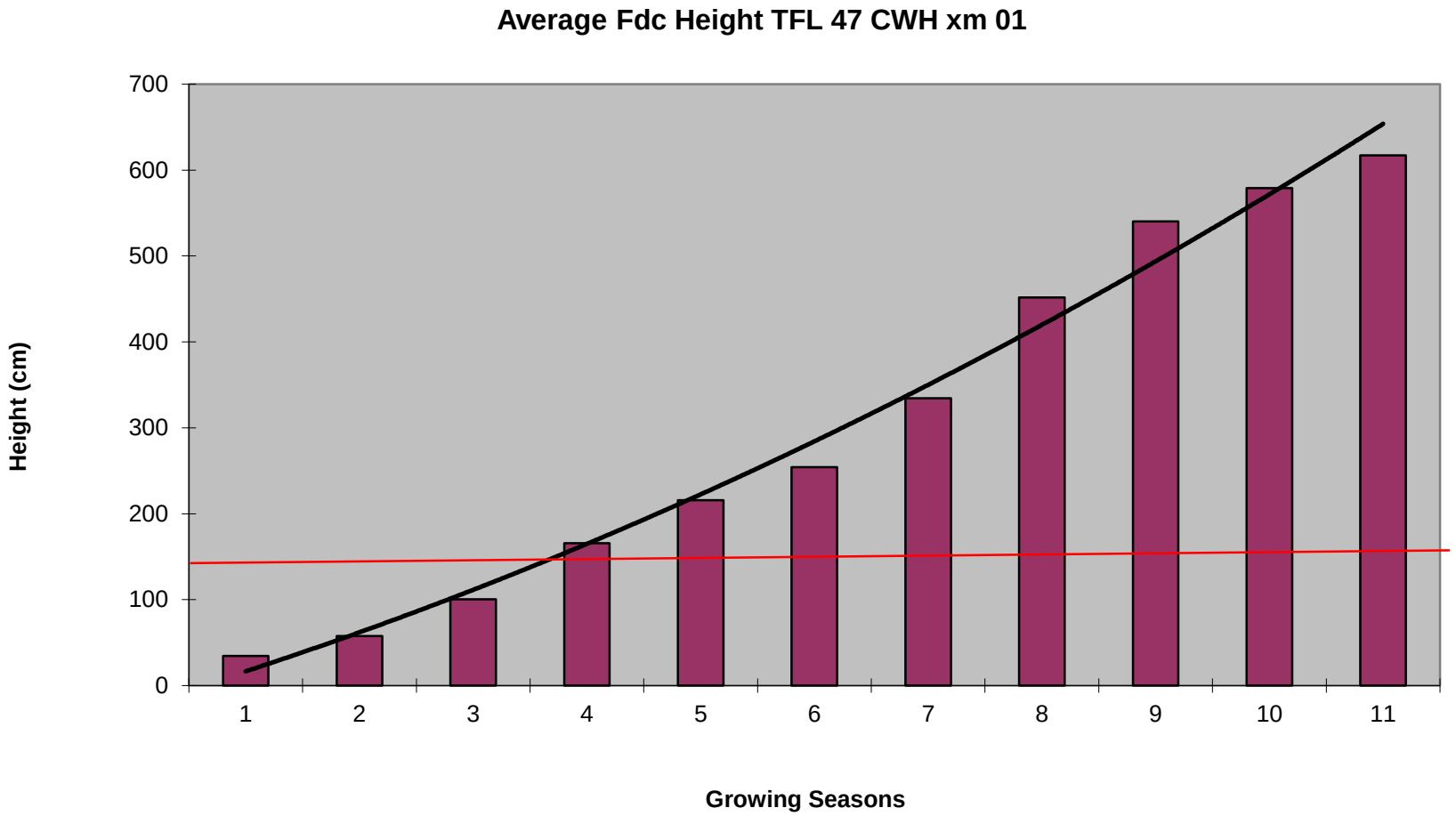
Species Composition

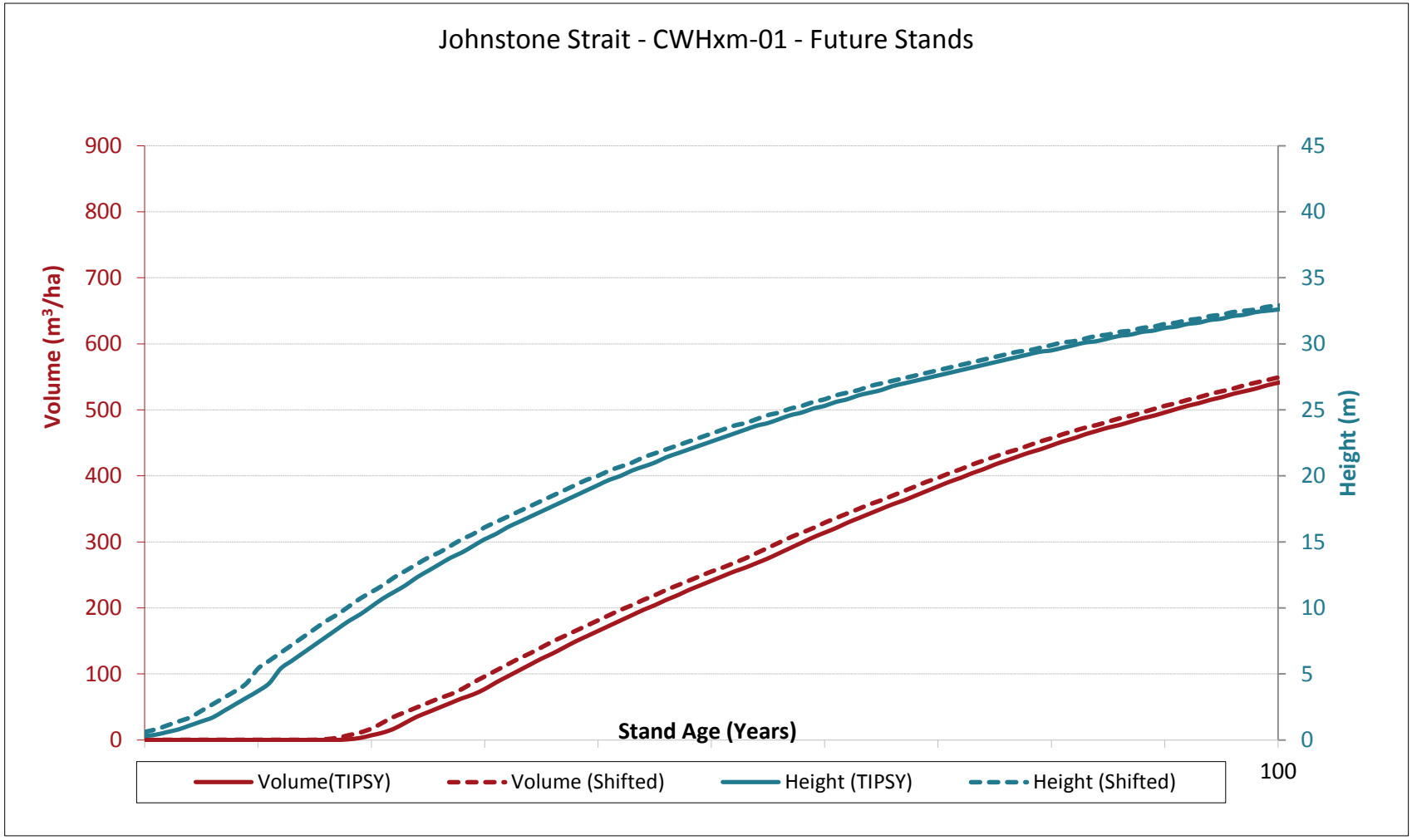
- Inventory, best guesses, reality are all sources of species composition for Timber Supply
- The benefits of the silviculture label
    - Best representation of the future crop
- Need a well structured survey but not a more expensive survey

Years to breast height

- Direct input into the yield curves
- Default is very conservative
- Make this a performance measure

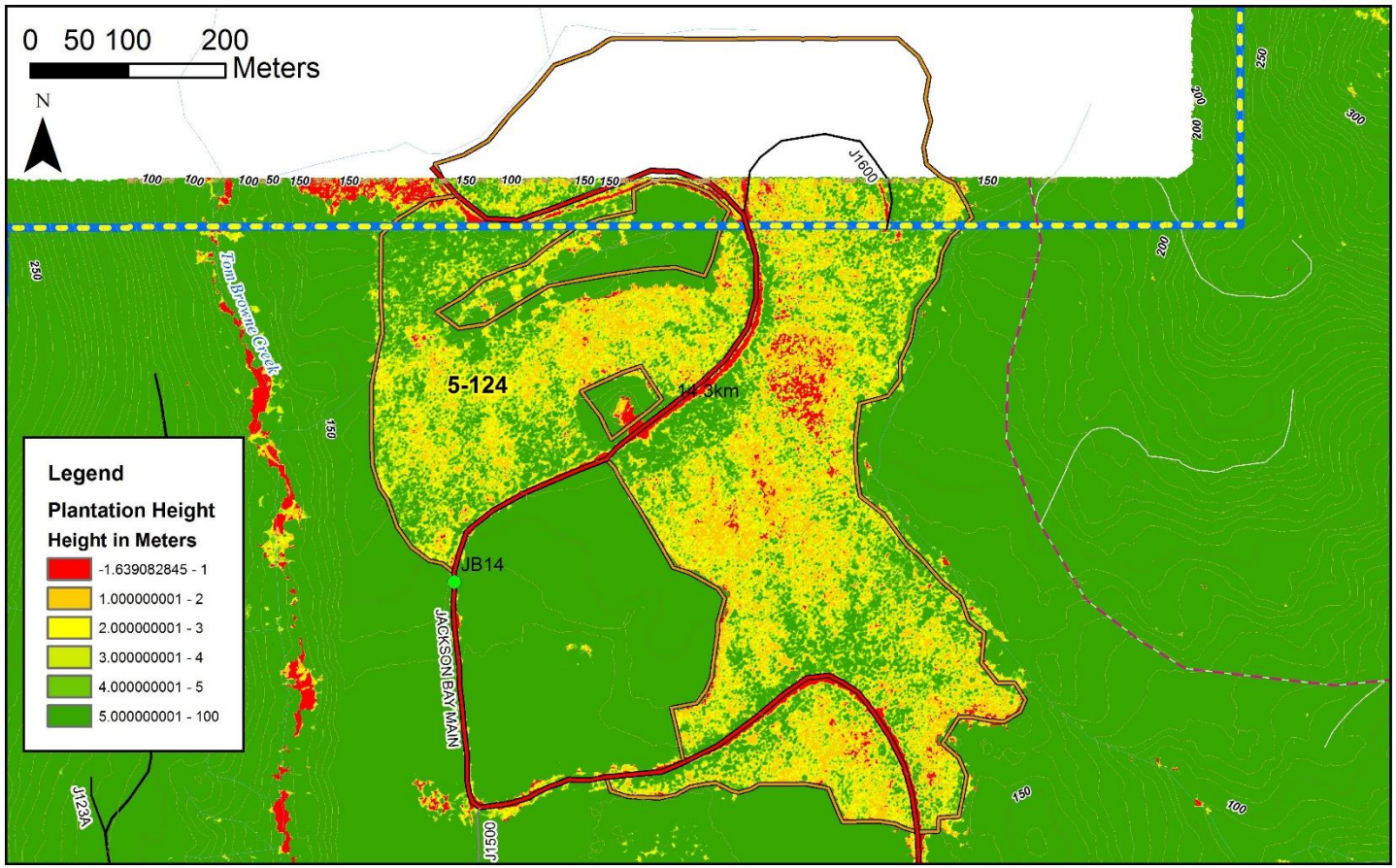
Years to breast height

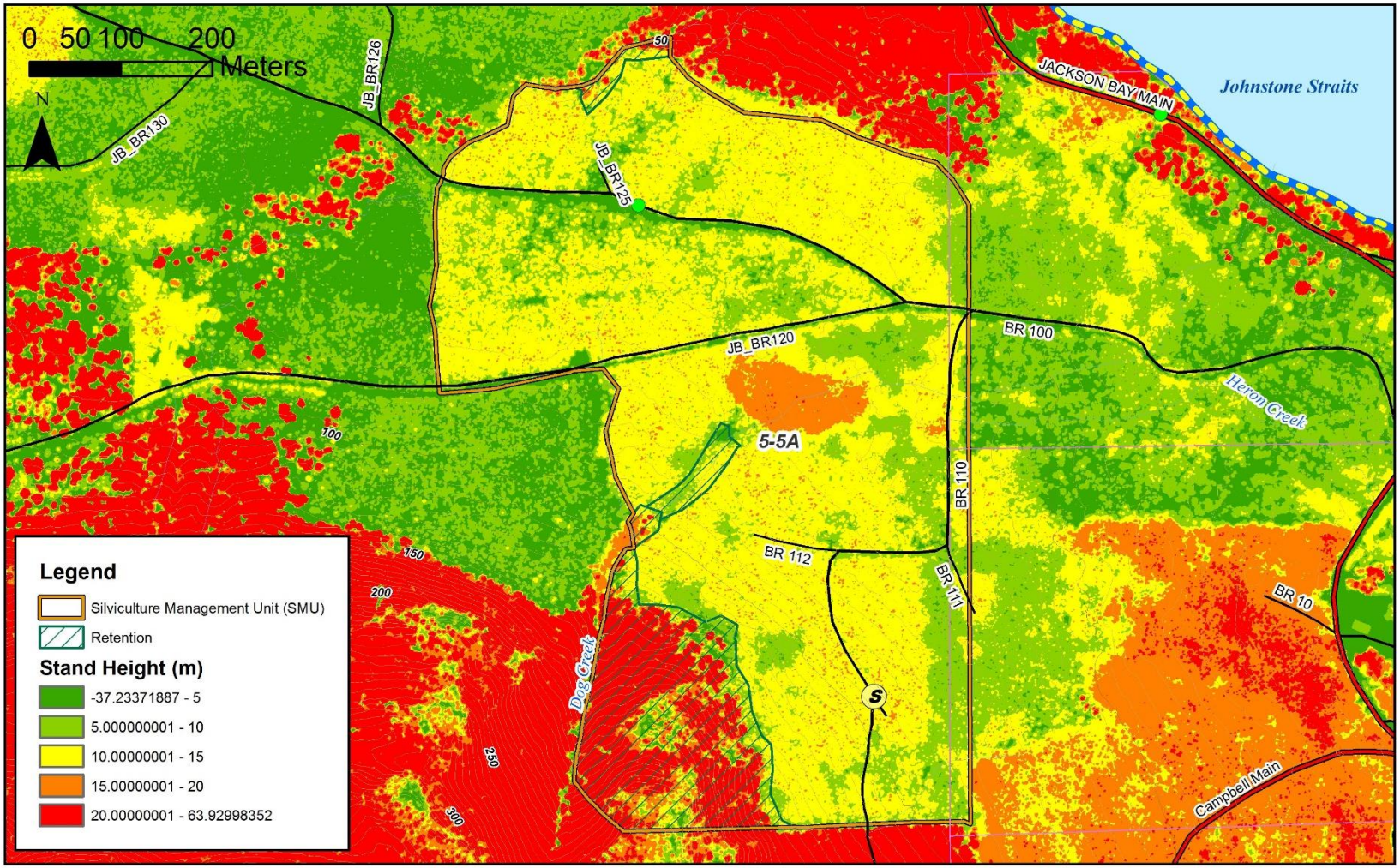



Johnstone Strait - CWHxm-01 - Future Stands
Volume (m³/ha)
900
800
700
600
500
400
300
200
100
0
Height (m)
45
40
35
30
25
20
15
10
5
0
Stand Age (Years)
100
Volume(TIPSY)
Volume (Shifted)
Height (TIPSY)
Height (Shifted)

Operational adjustment factors

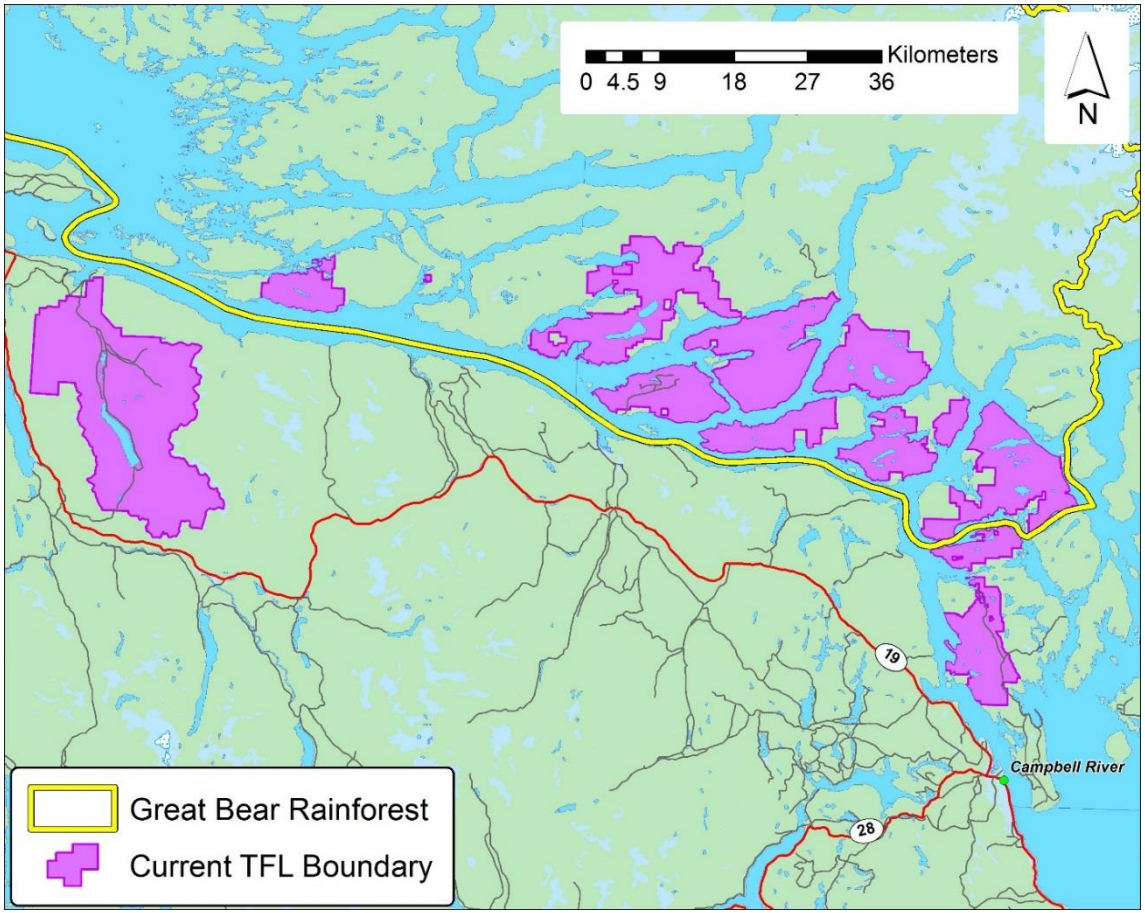
- OAF1 and OAF2
- OAF1 = assumed 15% loss in year 1
  - Slash, brush 4%
  - Unmappable NP 4%
  - Forest health 4%
  - Windthrow 3%

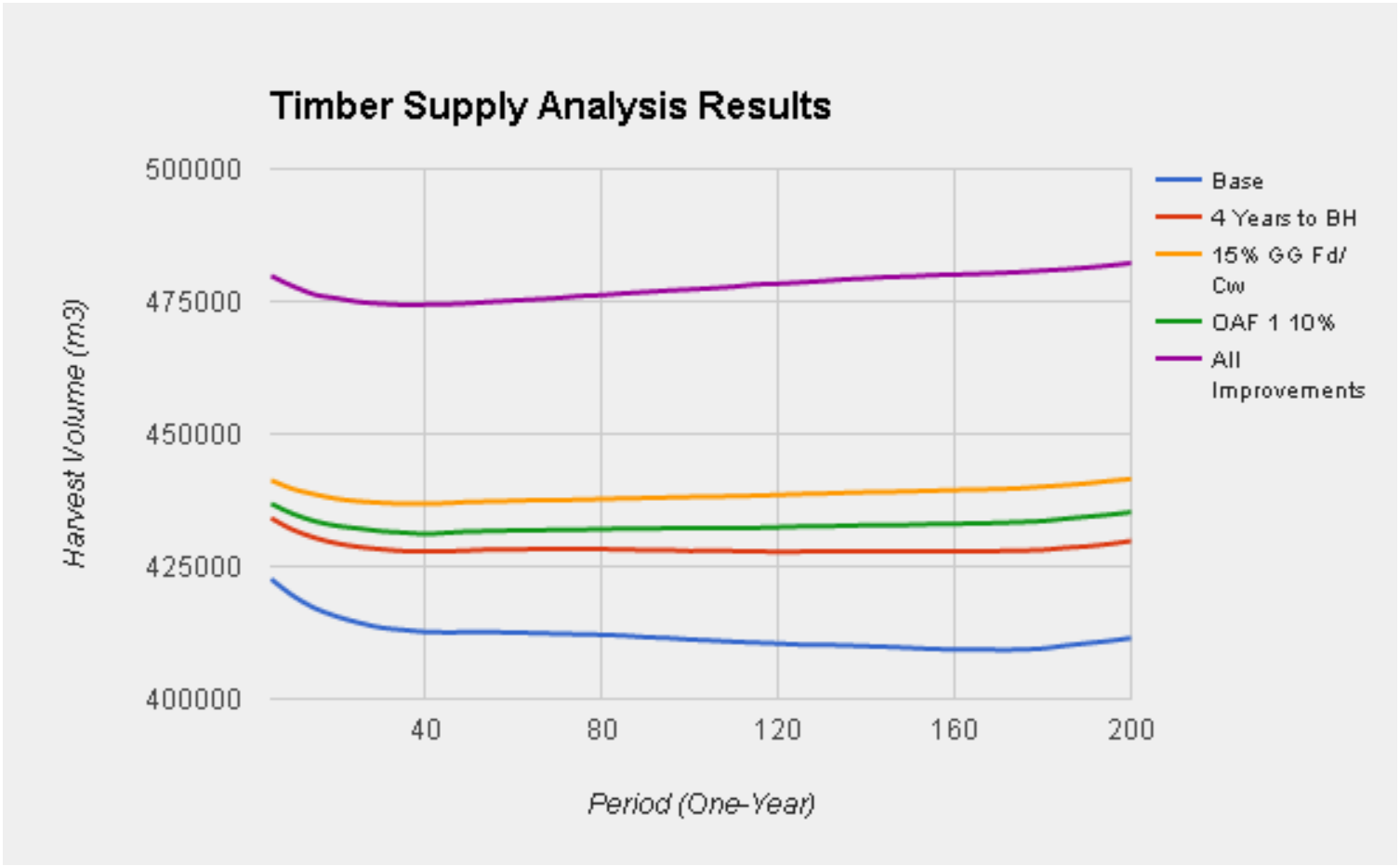

0 50 100 200
Meters
N
5-124
14.3km
JB14
JACKSONBAY MAIN
J1600
J1500
J123A
Tom Browne Creek
Legend
Plantation Height
Height in Meters
-1.639082845 - 1
1.000000001 - 2
2.000000001 - 3
3.000000001 - 4
4.000000001 - 5
5.000000001 - 100

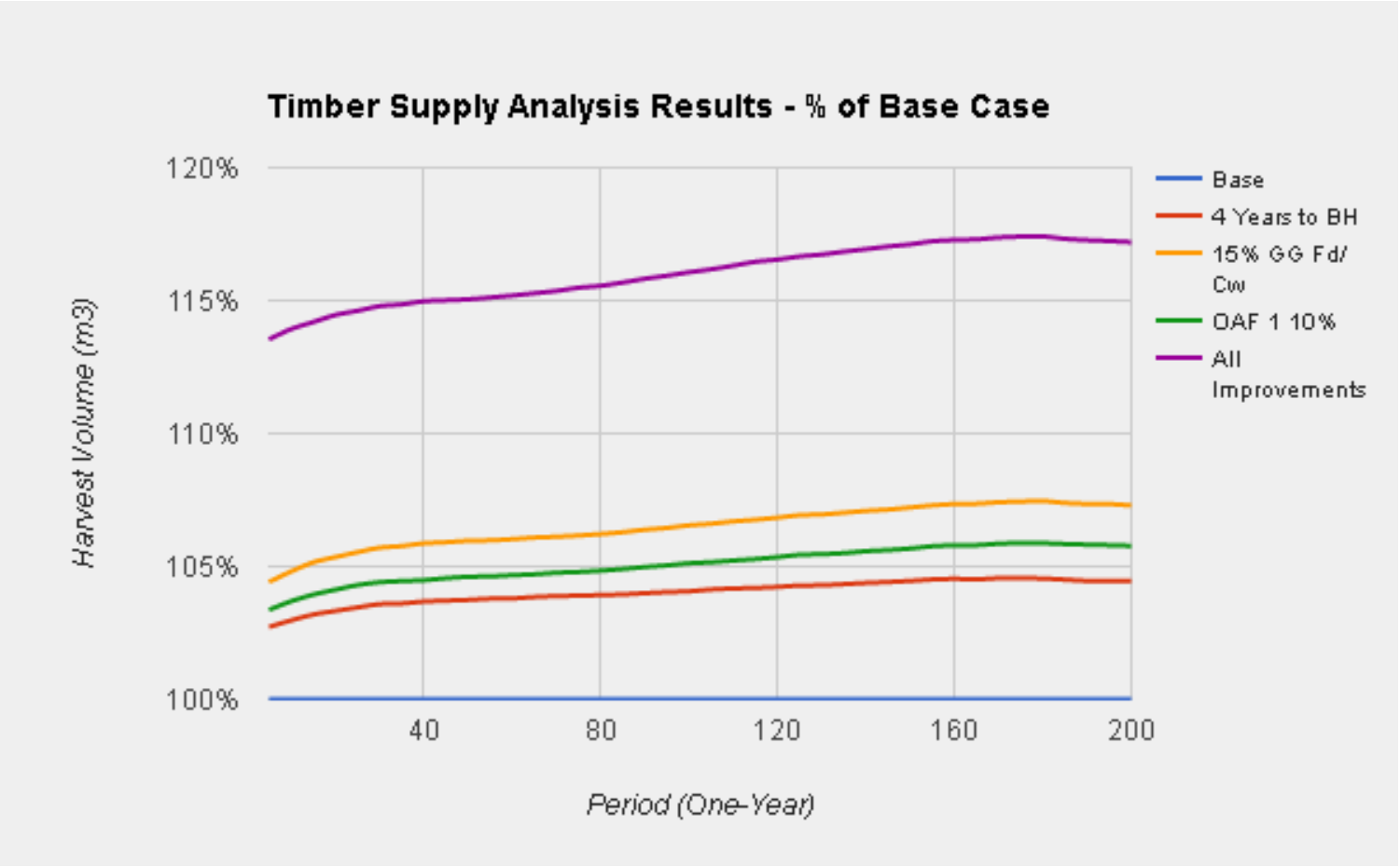

0 50 100 200
Meters
N
JB_BR126
JB_BR130
JB_BR125
JB_BR120
JACKSON BAY MAIN
Johnstone Straits
BR 100
Heron Creek
5-5A
BR 110
BR 112
BR 111
BR 10
Dog Creek
Campbell Main
50
100
150
200
250
300
Legend
Silviculture Management Unit (SMU)
Retention
Stand Height (m)
-37.23371887 - 5
5.000000001 - 10
10.00000001 - 15
15.00000001 - 20
20.00000001 - 63.92998352

Timber supply – why silviculture matters

How big is the prize?



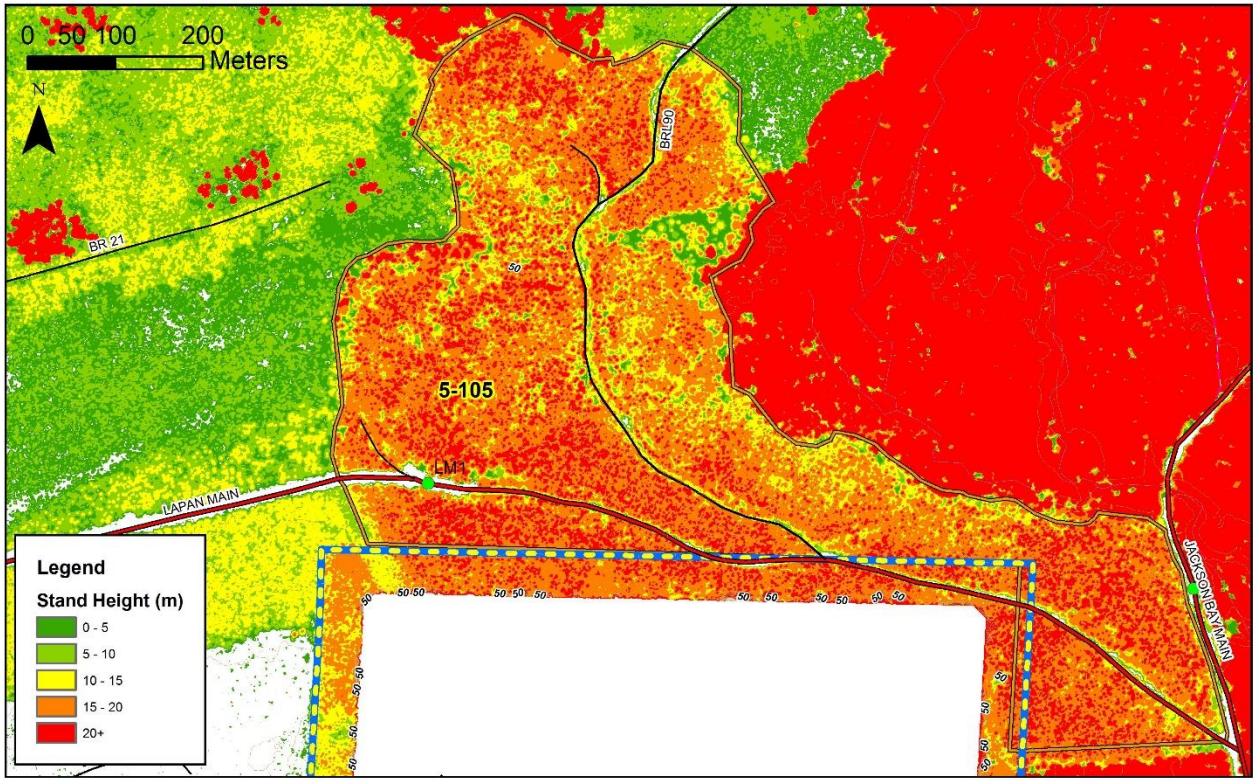

Timber Supply Analysis Results
500000
475000
450000
425000
400000
Harvest Volume (m3)
40
80
120
160
200
Period (One-Year)
Base
4 Years to BH
15% GG Fd/ Cw
OAF 1 10%
All Improvements


Timber Supply Analysis Results - % of Base Case
120%
115%
110%
105%
100%
Harvest Volume (m3)
40
80
120
160
200
Period (One-Year)
Base
4 Years to BH
15% GG Fd/ Cw
OAF 1 10%
All Improvements

Timber supply – why silviculture matters

How big is the prize?

		% above base case	
		Period 1	Period 200
Y2BH	6.5 yrs ---> 4 yrs	3	4
OAF	15% --->10%	4	6
Genetic Gain	0% --->15% Fd,Cw	5	7.5
All in		13.5	17.5


0 50 100 200
Meters
N
BR 21
BR190
5-105
LM1
LAPAN MAIN
JACKSON BAY MAIN
Legend
Stand Height (m)
0 - 5
5 - 10
10 - 15
15 - 20
20+

Timber Supply – why silviculture matters

Let's recap:

- Coastal silviculture is well done
- Silviculture is an opportunity - the only silver bullet we have to boost timber supply
- Gains to Timber Supply can be significant and cost virtually nothing
- So, how do we move forward?

Timber Supply – why silviculture matters

Licencees and BCTS (aka the stewards):

- Be informed
- Strength in a common approach
- TSAs need not be left out

Timber Supply – why silviculture matters

Government (aka the land owner):

- Be informed
- Reward good performance
- Incent good performance

Timber Supply – why silviculture matters

- On public land in BC, silviculture must be viewed as a cost
- What if silviculture could be viewed as an investment?
- What would be a suitable reward to get buy in for performing above the bar?
- How about getting the incremental AAC stumpage free?

Oh, crap! Was that TODAY?
REGAN

May the force be with you