



Ministry of Forests, Lands
and Natural Resource Operations

Post Pine Beetle Timber Supply in British Columbia

An Overview and Look Forward

September 30, 2016

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Federation of British Columbia Woodlot Associations' 29th
and Woodlot Product Development Council's 19th



Ministry of Forests, Lands
and Natural Resource Operations

PINE



Beyond the Beetle



**September 29 - October 1, 2016
Prince George, BC**



Federation of British Columbia Woodlot Associations' 29th
and Woodlot Product Development Council's 19th

**Joint Annual General Meetings
and Conference**



Outline

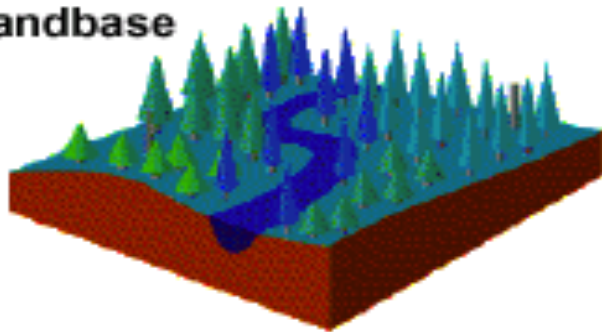
- Timber Supply Analysis Principles (TSA 101)
- Current Timber Supply Projections: Regional and Provincial
- Prince George TSA
- Future influences on timber supply
- Why should you care?

Timber Supply Analysis 101

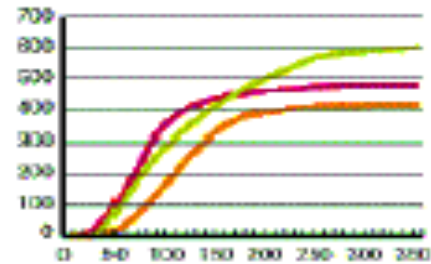
Timber supply analysis uses a computer simulation model that projects the state of the forest into the future, given a set of assumptions about harvesting, forest management, and stand growth.

Timber Supply Analysis 101

landbase



growth and yield



management



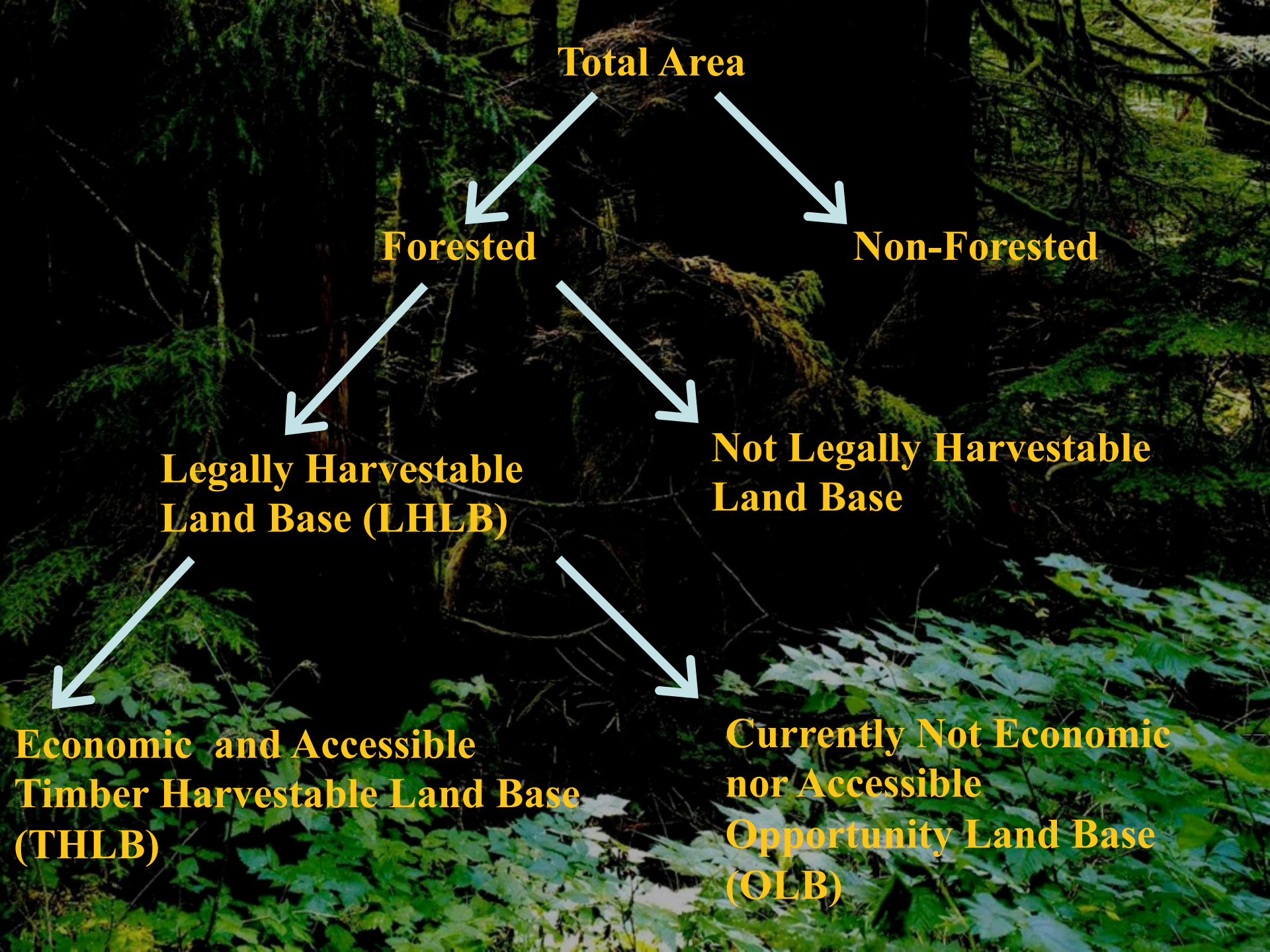
inventory



Landbase and Timber Merchantability

Definition

- Forest Definition
- Slope & Elevation
- Distance
- Low volume stands and non-merchantable timber types
- Terrain Stability
- Areas reserved for the management of other resource values



Total Area

Forested

Non-Forested

**Legally Harvestable
Land Base (LHLB)**

**Not Legally Harvestable
Land Base**

**Economic and Accessible
Timber Harvestable Land Base
(THLB)**

**Currently Not Economic
nor Accessible
Opportunity Land Base
(OLB)**



Alaska

Territory

Territories

Alberta

Robson Valley
TSA

Timber Supply Areas

Washington


Idaho

Montana



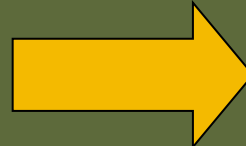
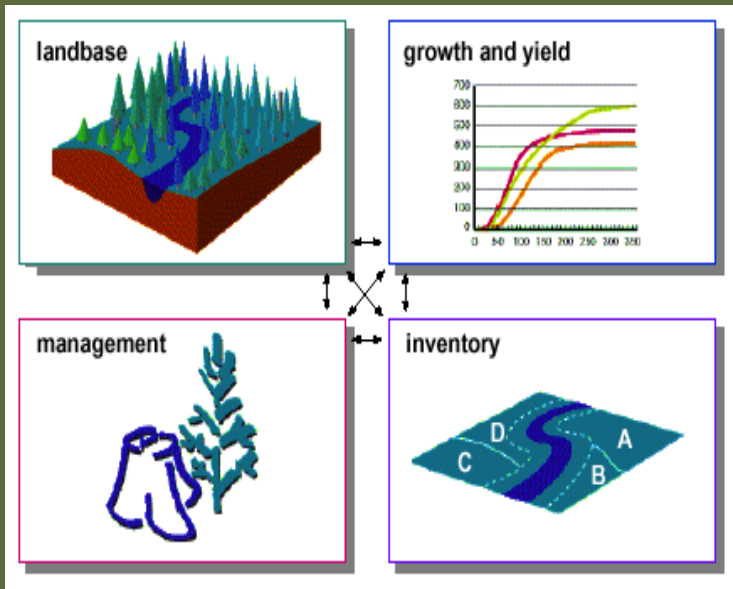
Gross Area

35

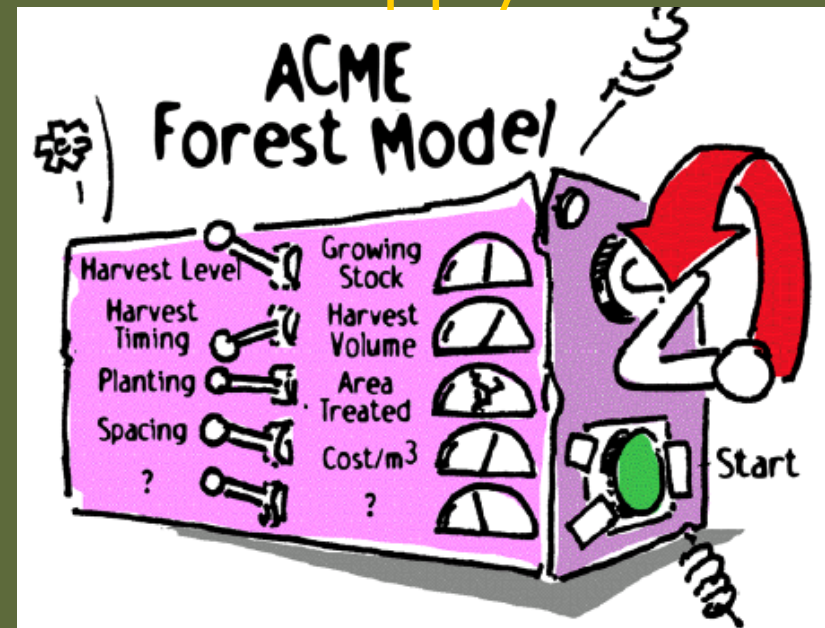


Gross Area

Timber Supply Analysis 101

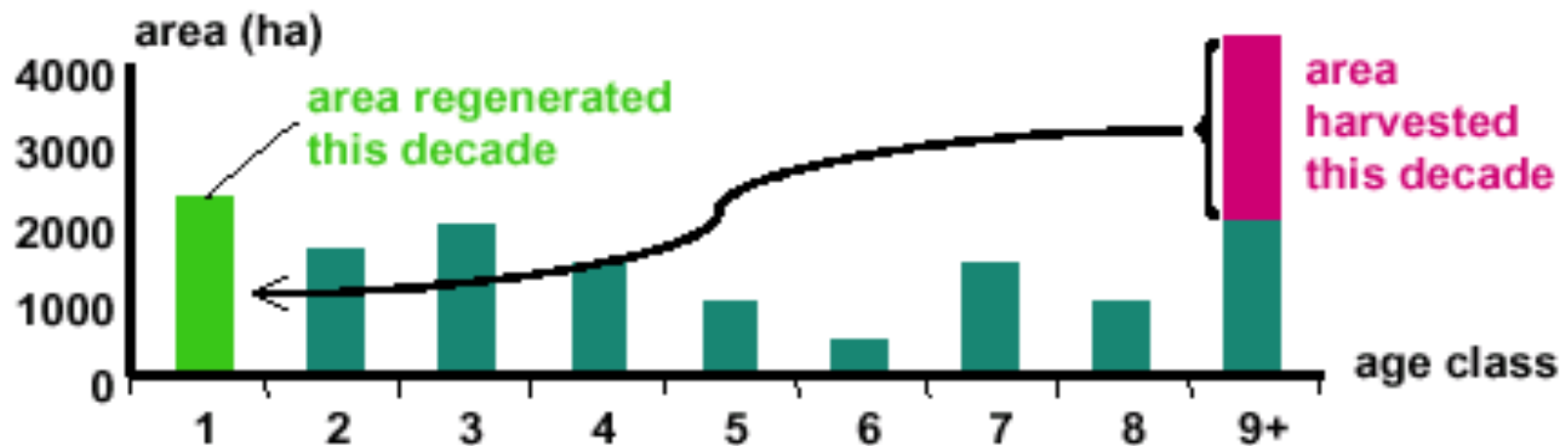
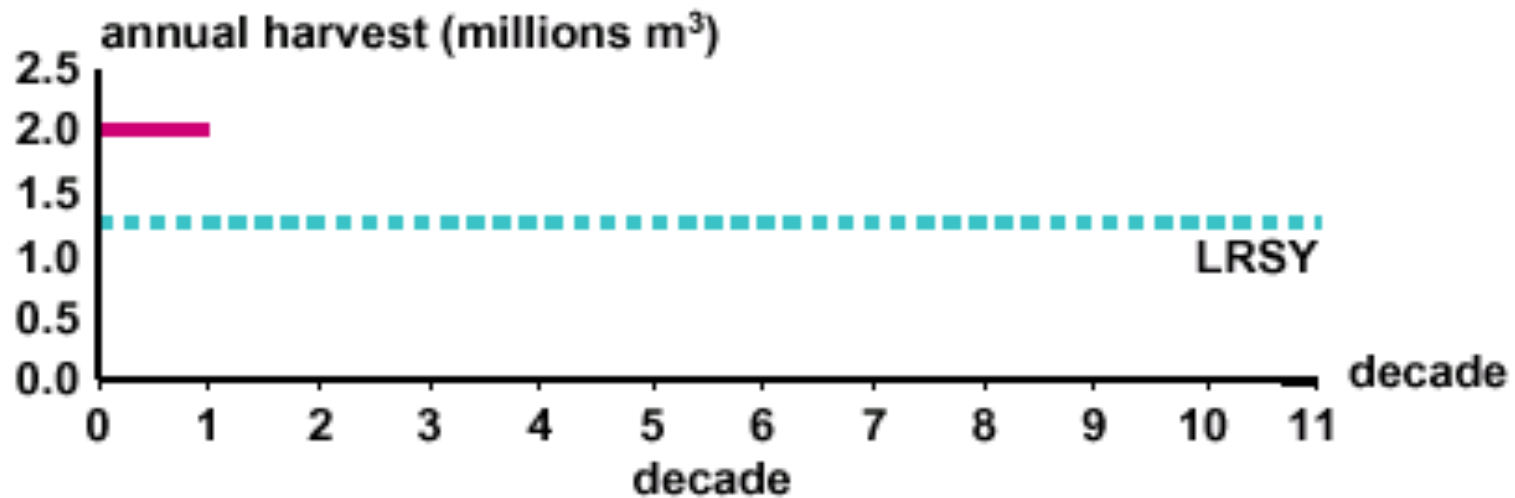


Timber Supply Model

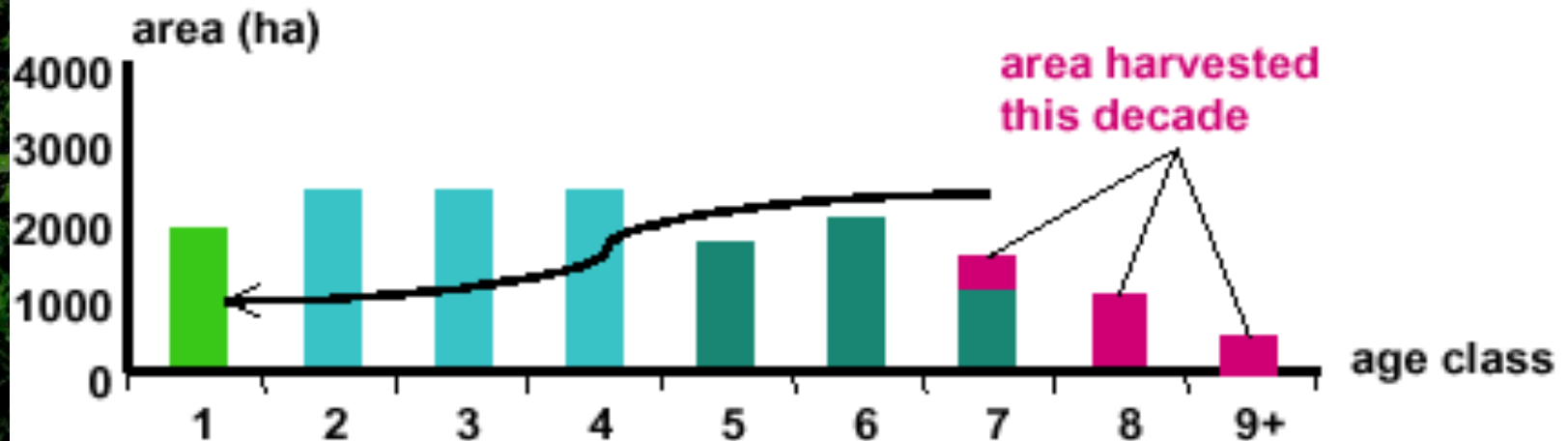
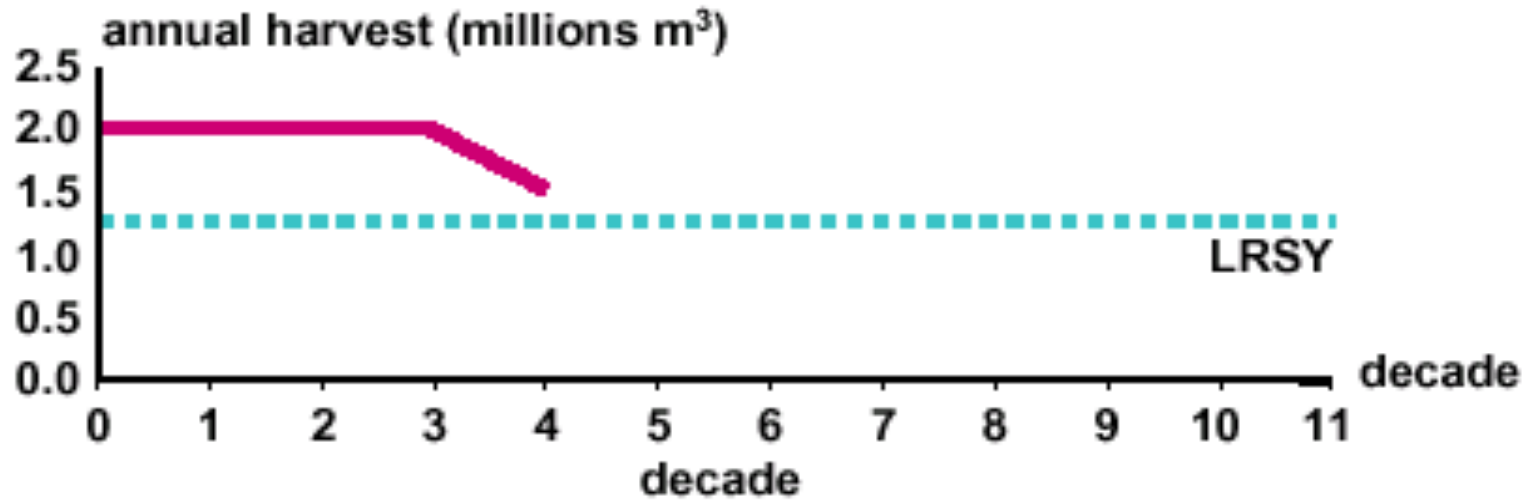


Case study forest

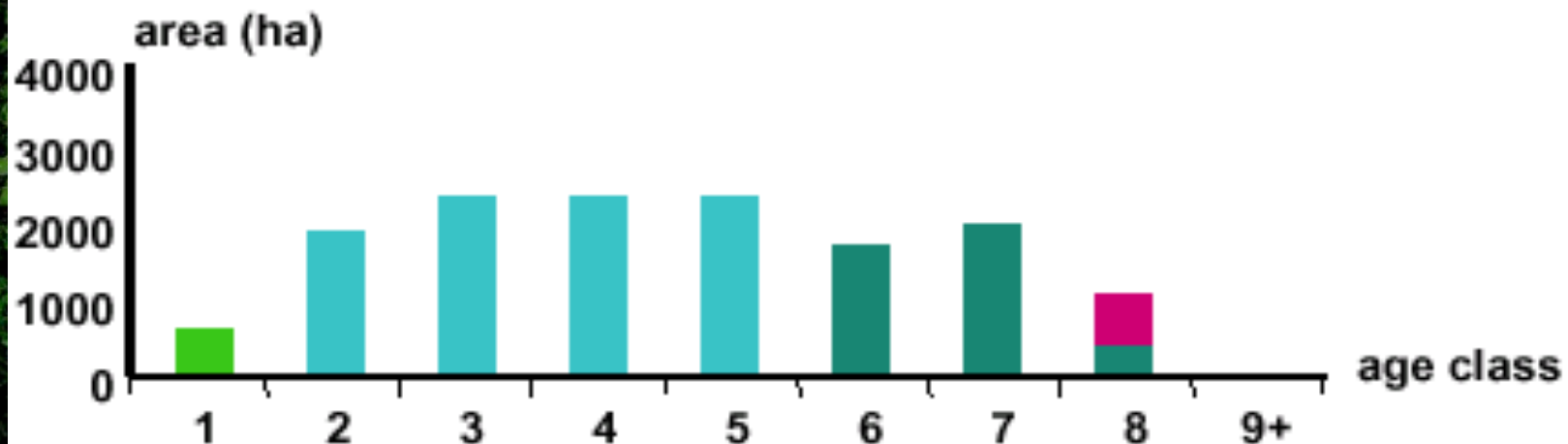
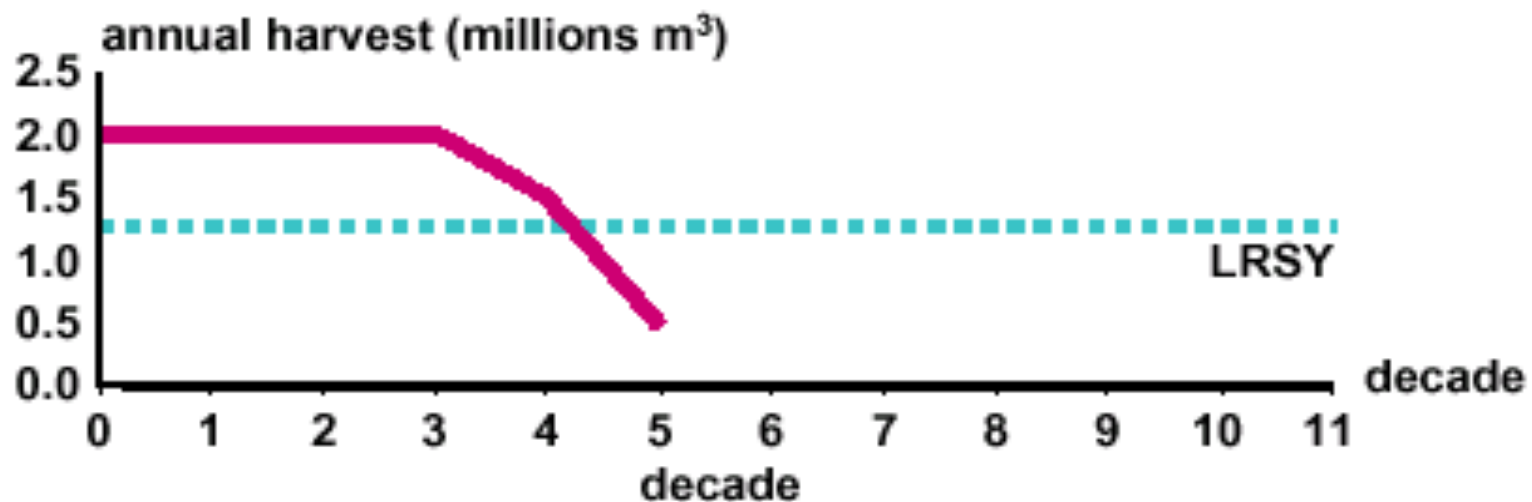
End of decade 1, after harvest



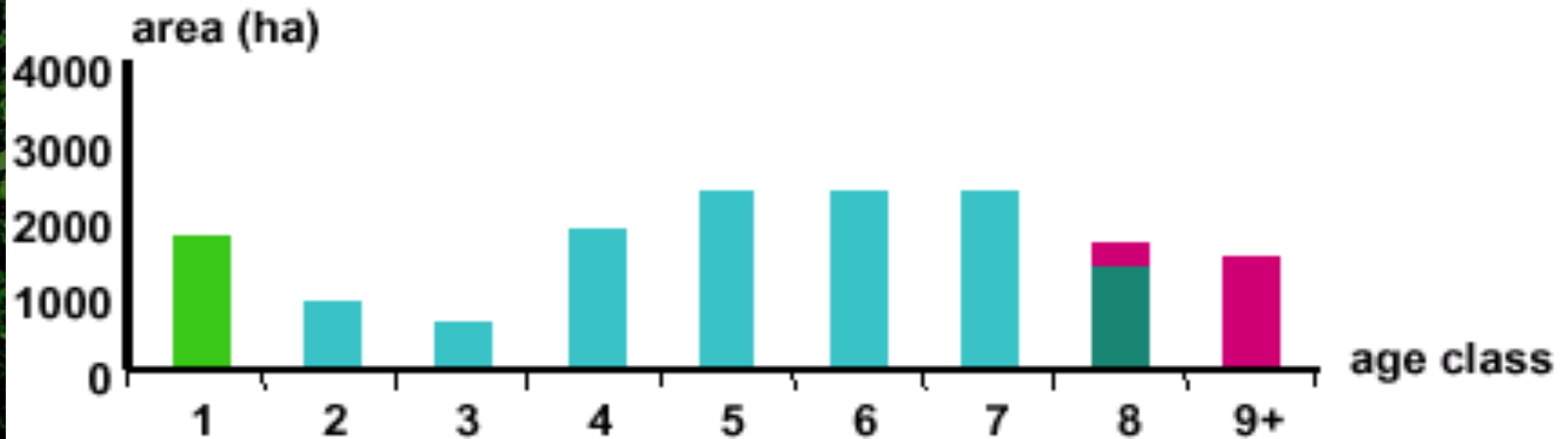
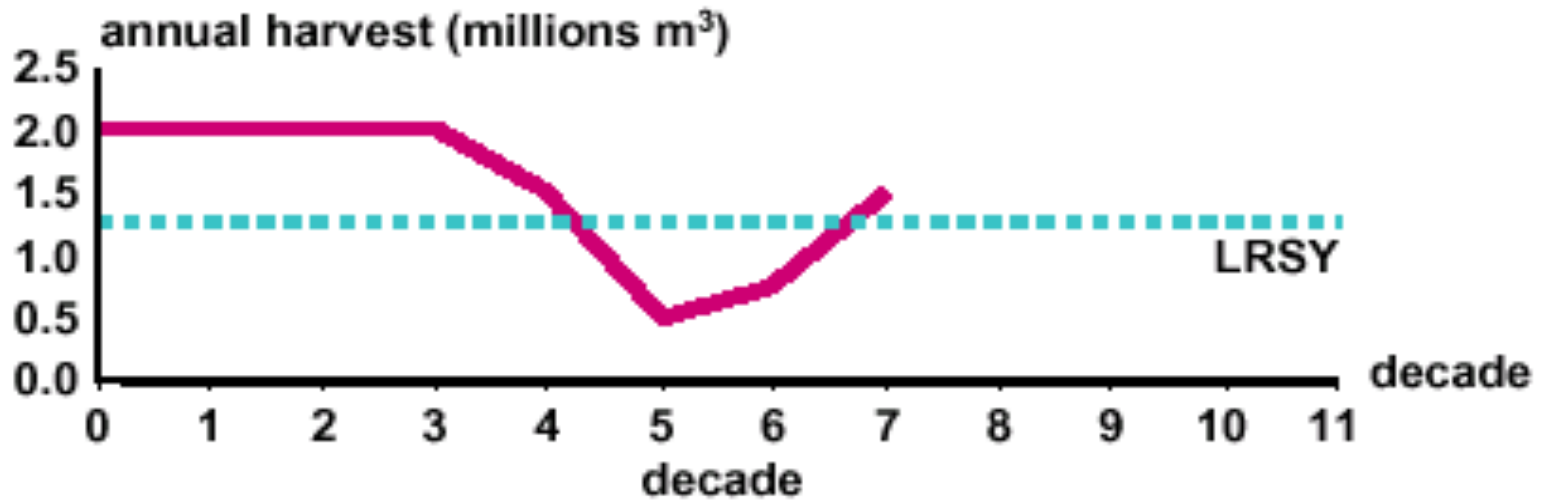
End of decade 4



End of decade 5

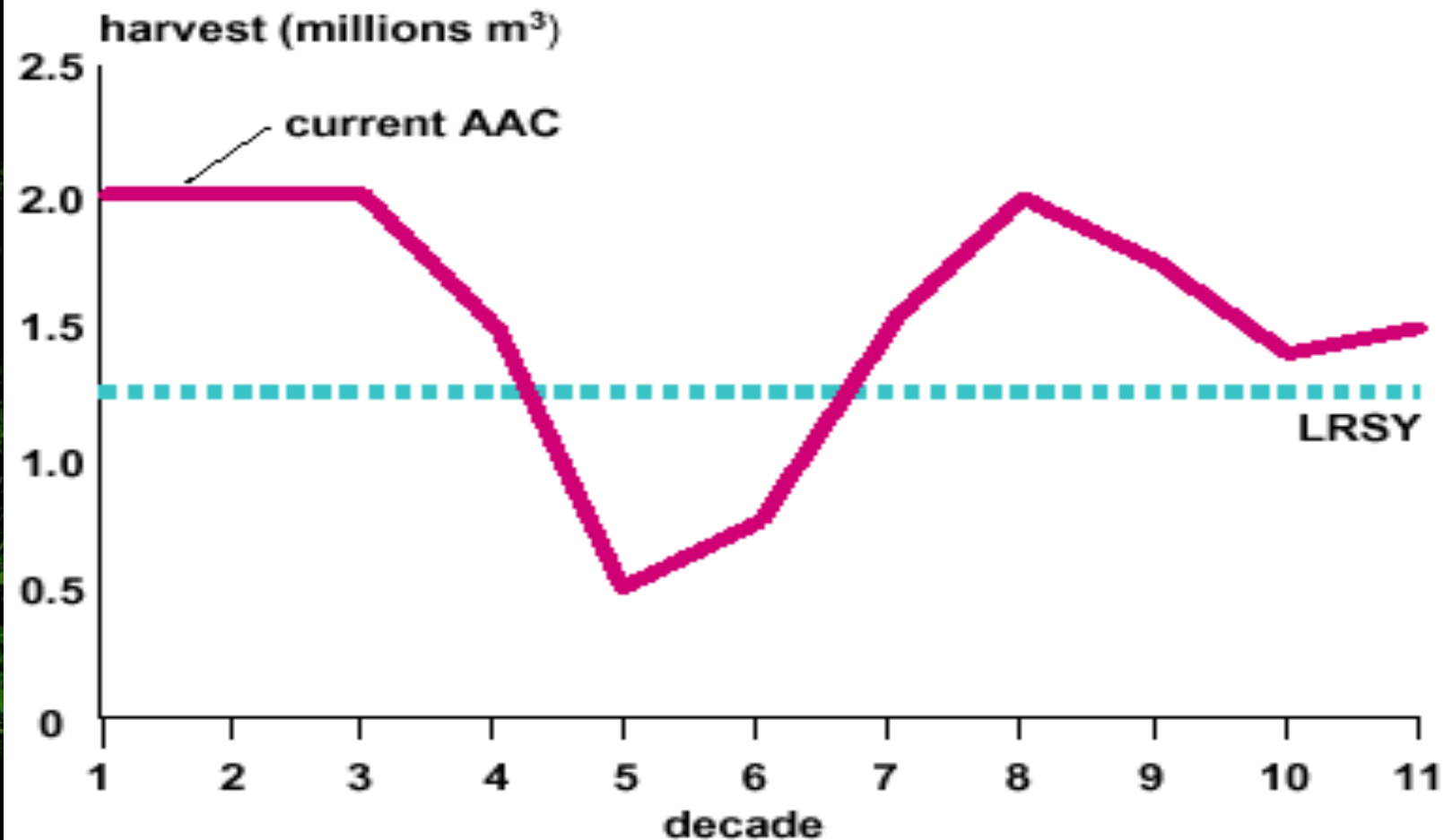


End of decade 7

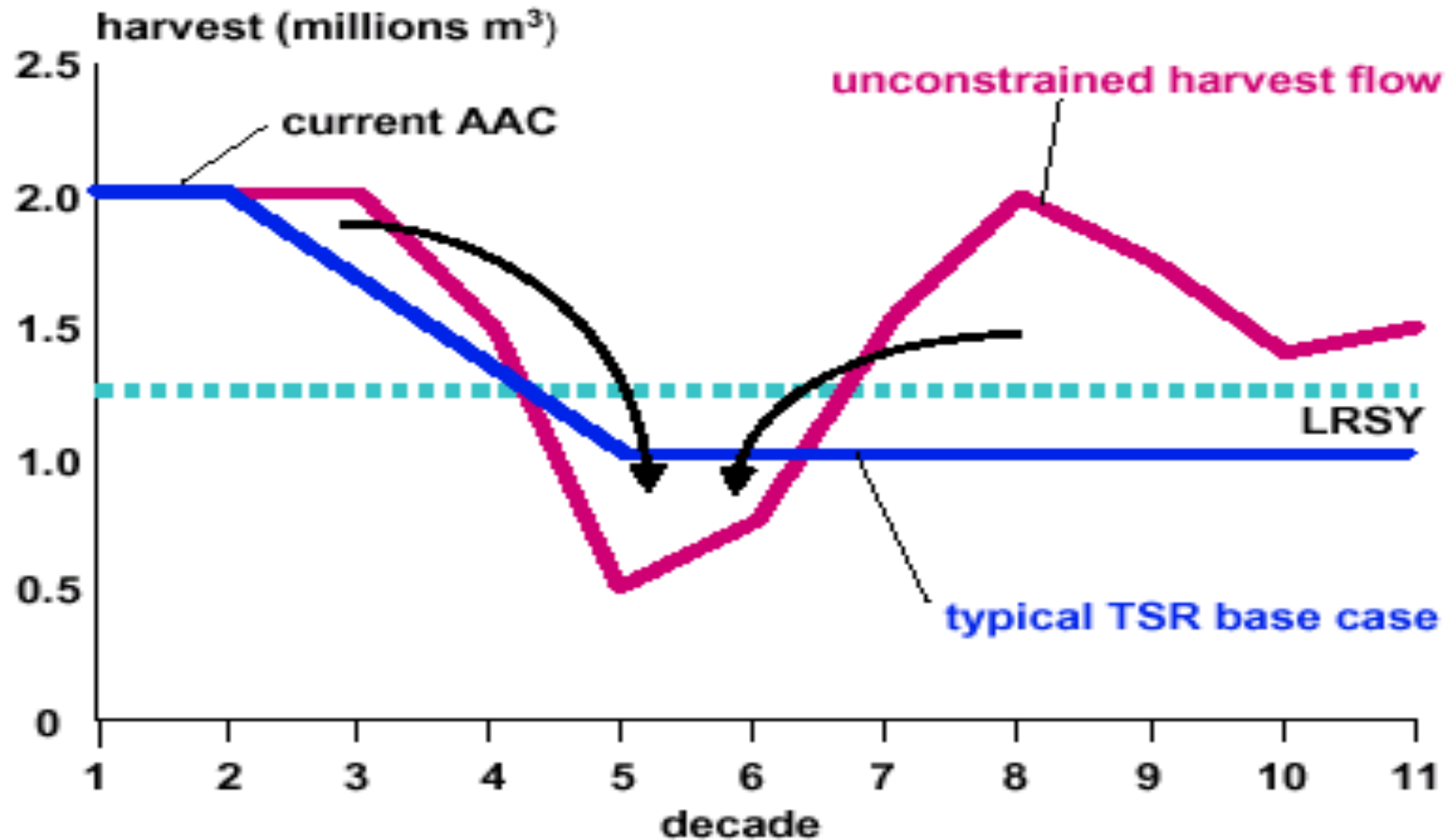


Case study forest harvest schedule

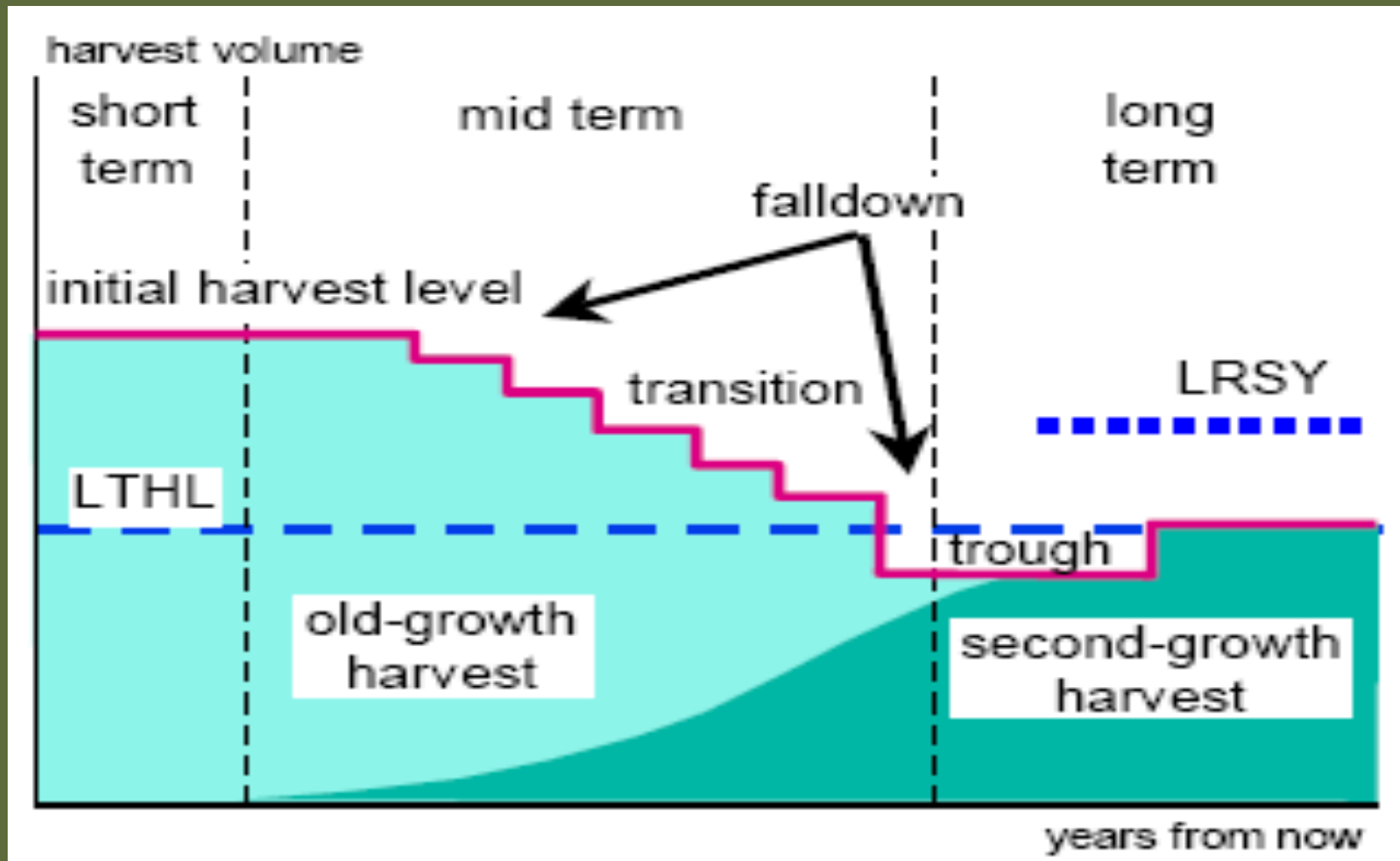
Without harvest flow constraints



With harvest flow constraints



Timber Supply Analysis 101



Harvest forecast



Jobs

Immigration

Travel

Business

Benefits

Health

Taxes

More services

Home → Environment and natural resources → Weather information → Weather → Local forecasts → British Columbia

[Access city](#) | [Weather Topics](#)

Prince George, BC

▶ BC Highway alert(s) in effect

Current Conditions

[Past 24 hours](#) | [Radar](#) | [Satellite](#) | [Lightning](#)



-1°C

°C | °F

Observed at: Prince George Airport

Date: 12:00 AM PDT Friday 30 September 2016

Condition: Clear

Pressure: 102.1 kPa

Visibility: 16 km

Temperature: -0.7°C

Dewpoint: -1.4°C

Humidity: 95%

Wind: S 5 km/h

Wind Chill: -2

Forecast

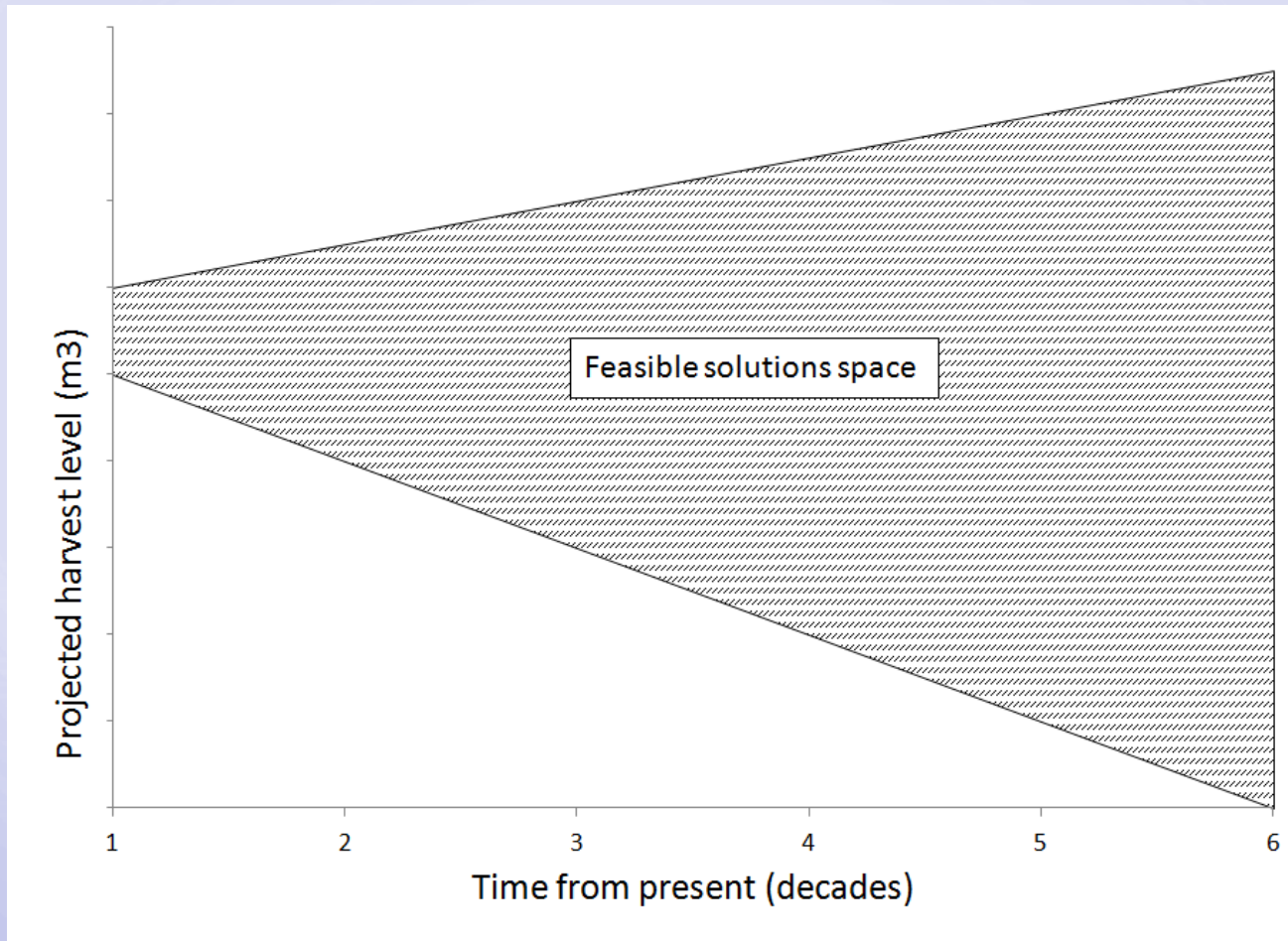
[24 Hour Forecast](#) | [AQHI](#) | [Alerts](#) | [Jet Stream](#)

Thu 29 Sep	Fri 30 Sep	Sat 1 Oct	Sun 2 Oct	Mon 3 Oct	Tue 4 Oct	Wed 5 Oct
0°C	10°C	8°C	9°C	9°C	11°C	10°C
		4°C	1°C	0°C	1°C	1°C



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Timber Supply 101 – Uncertainty in Forecasting



**MANAGEMENT UNIT MAP
 TREE FARM LICENCE (TFL)
 TIMBER SUPPLY AREA (TSA)
 REGIONS AND DISTRICTS LOCATION MAP**

Updated January, 2014



Regions and Districts

- Steele Region**
 Nepean Mills District
 North Coast District
 North District
- Northwest Region**
 Fort Nelson District
 Peace District
- Coastal Region**
 Fort St. James District
 West Bulkley District
 Bulkley Valley District
 Bulkley/Chilcotin District
 Bulkley District
- Cariboo Region**
 Mt. Waiyapa District
 Central Cariboo District
 Okanogan District
- West Coast Region**
 South Island District
 North Island District
 Campbell River District
 North Coast District
- South Coast Region**
 Southern Coast District
 Vancouver District
 Okanagan District
- Thompson/Changam Region**
 Carleton Place District
 Thompson District
 Okanagan - Arroway District
 Bulkley District
- Kootenay/Boundary Region**
 Kootenay District
 Boundary District
 Columbia District
 Area Boundary District

Other Symbols:

- Parks, Lands & Resource Op., Regional Office
- Coast/Interior Appraisal Line
- F.L.N.R.O. Area Boundaries
- District
- Timber Supply Area
- Cascade TSA
- Pacific TSA
- Parks & Protected Areas
- Treaty Lands

0 20 40 60 80 100 120 140 160
 Kilometers

TREE FARM LICENCES

1. Coast Timber Resources Limited Partnership
2. International Forest Products Ltd.
3. Western Forest Products Inc.
4. International Forest Products Limited
5. Timber Industries Ltd.
6. Canadian Forest Products Ltd.
7. Western Forest Products Inc.
8. International Forest Products Ltd.
9. Western Forest Products Inc.
10. The Corporation of the District of Westcoast
11. Canadian Forest Products Ltd.
12. Carco Forest Products Limited
13. West Forest Timber Ltd.
14. Western Forest Products Inc.
15. Northwest Squamish Forestry Limited Partnership
16. Western Forest Products Inc.
17. Stearns Sawmills Ltd.
18. Enger Products Limited Partnership
19. Western Forest Products Limited
20. International Forest Products Limited
21. Ted Carter Products Ltd.
22. Timberland Forest Corp.
23. Canadian Forest Products Ltd.
24. Tiller Industries Ltd.
25. West Forest Mills Ltd.
26. Donkey Lumber Ltd.
27. McMillan Forest Resources Ltd.
28. Louisa - Pacific Canada Ltd.
29. Hazelton Community Forest Corporation
30. West Forest Resources Ltd.
31. Ted Carter Products Ltd.
32. Westcoast Forestry Company Ltd.
33. West Forest Limited Partnership
34. Parkhurst Anderson Timber Holdings Limited Partnership

This map is for informational purposes only. For more information, contact your local Forest Officer and Forest Resource Operations. Date: 1/14/2014 10:00 AM





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- Timber Supply Forecasts taken from Base Case analysis supporting the most recent Allowable Annual Cut decision.
- Current to January 2016
- Curtesy of Forest Analysis and Inventory Branch (FAIB) FLNRO
- Harvest from Harvest Billing System (HBS)

Lakes

m³/year

5,000,000
4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0

2010

2020

2030

2040

2050

2060

2070

2080

2090

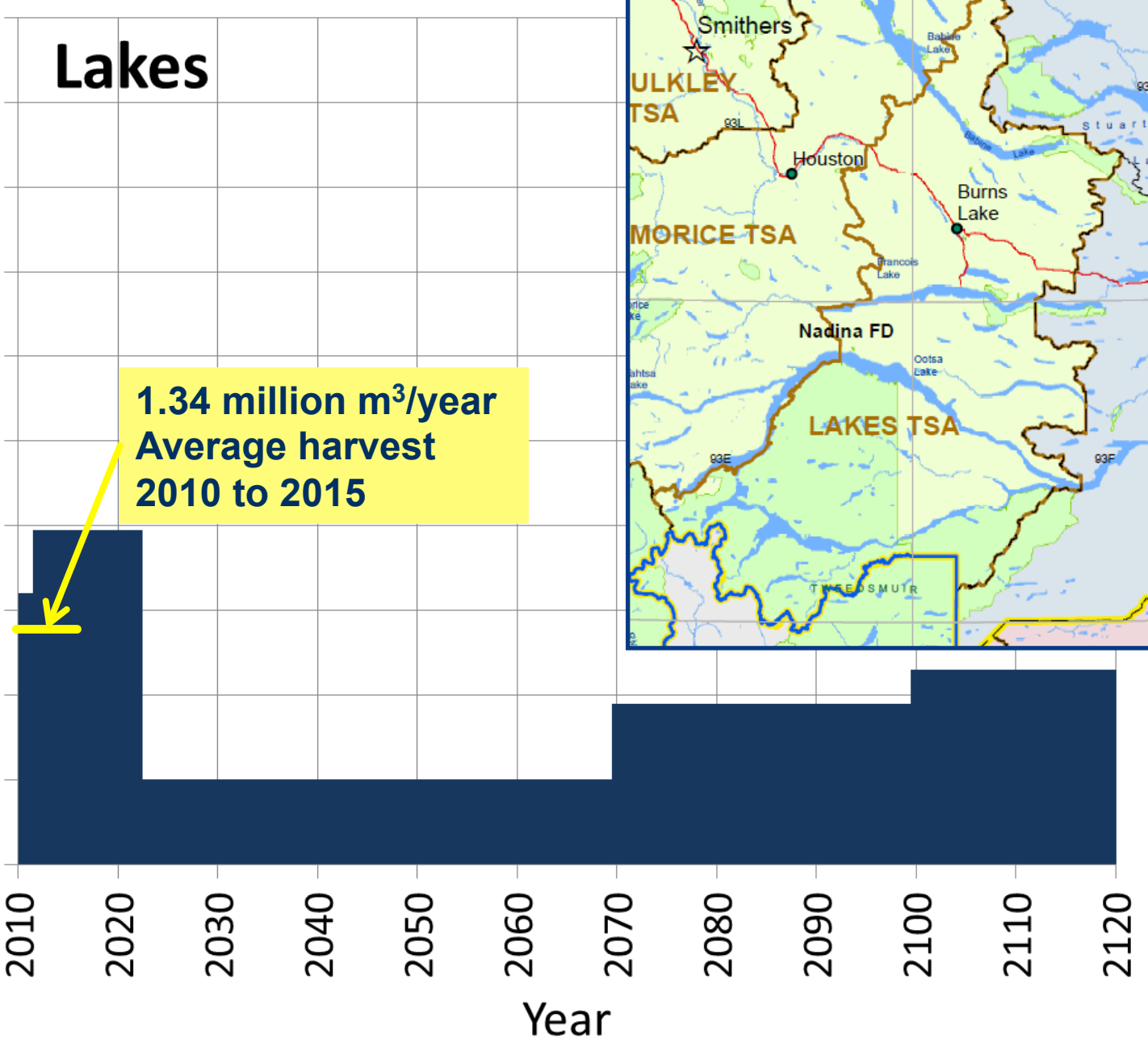
2100

2110

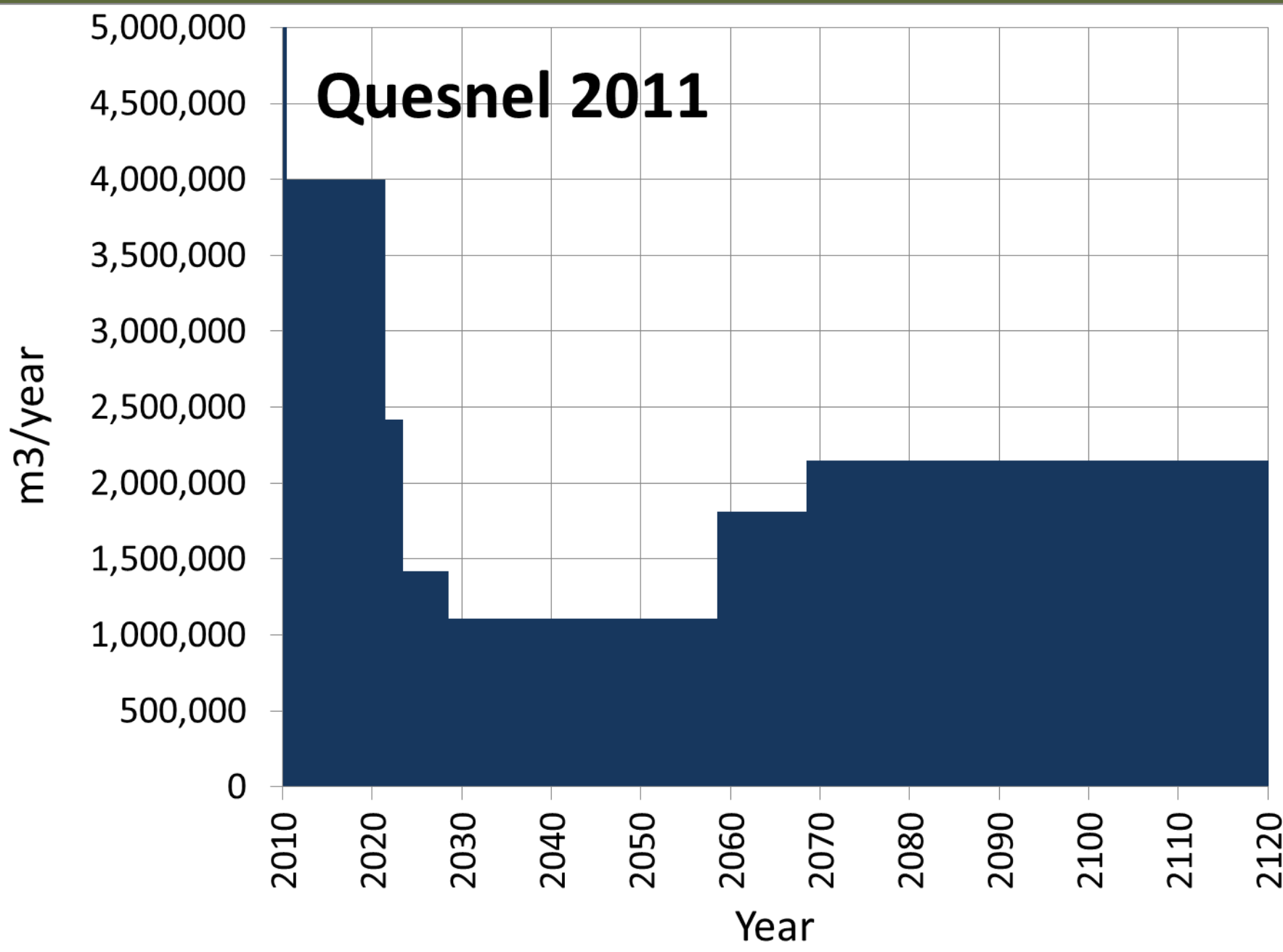
2120

Year

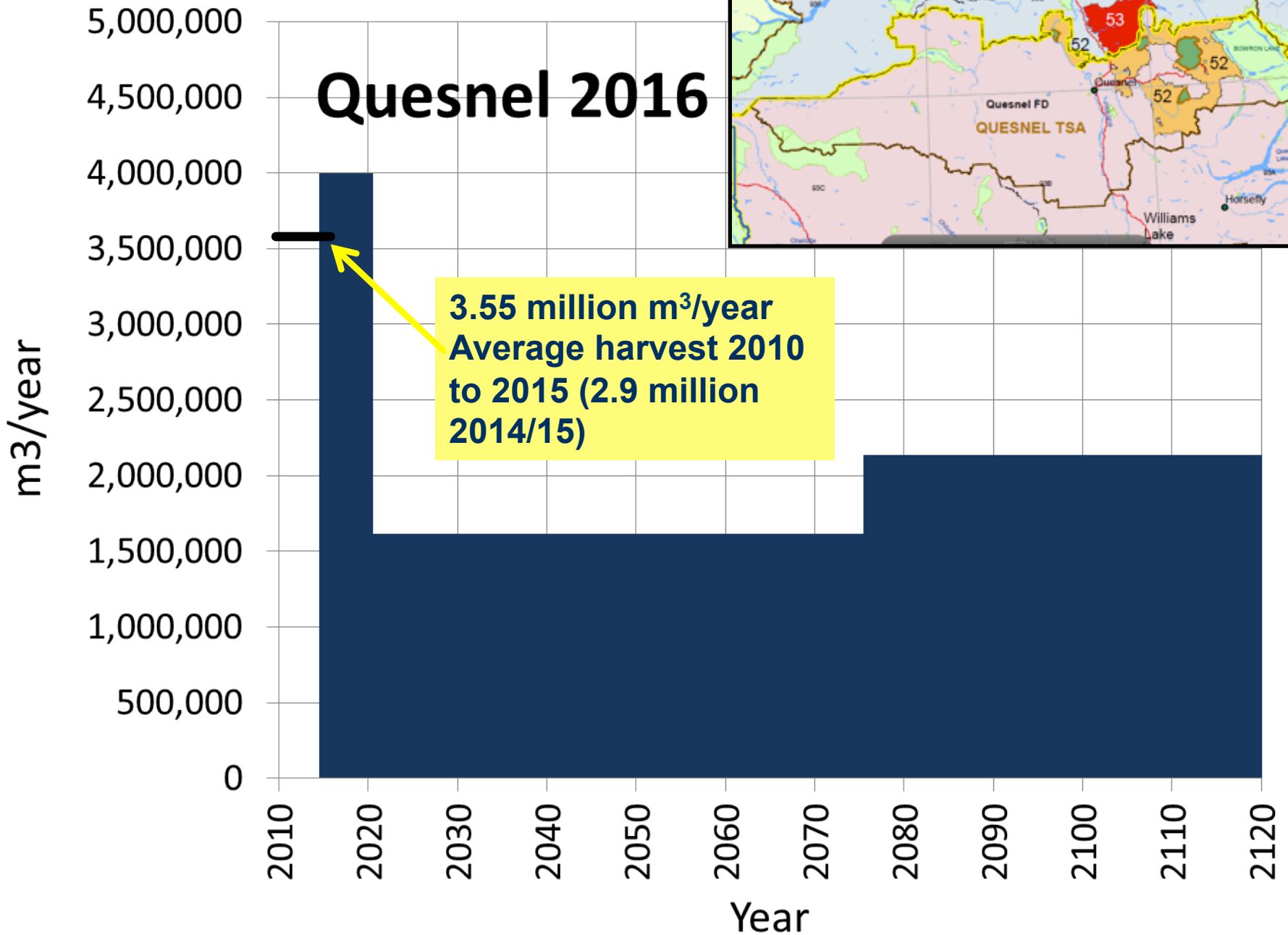
**1.34 million m³/year
Average harvest
2010 to 2015**



Quesnel 2011



Quesnel 2016



Robson Valley

m³/year

5,000,000
4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0

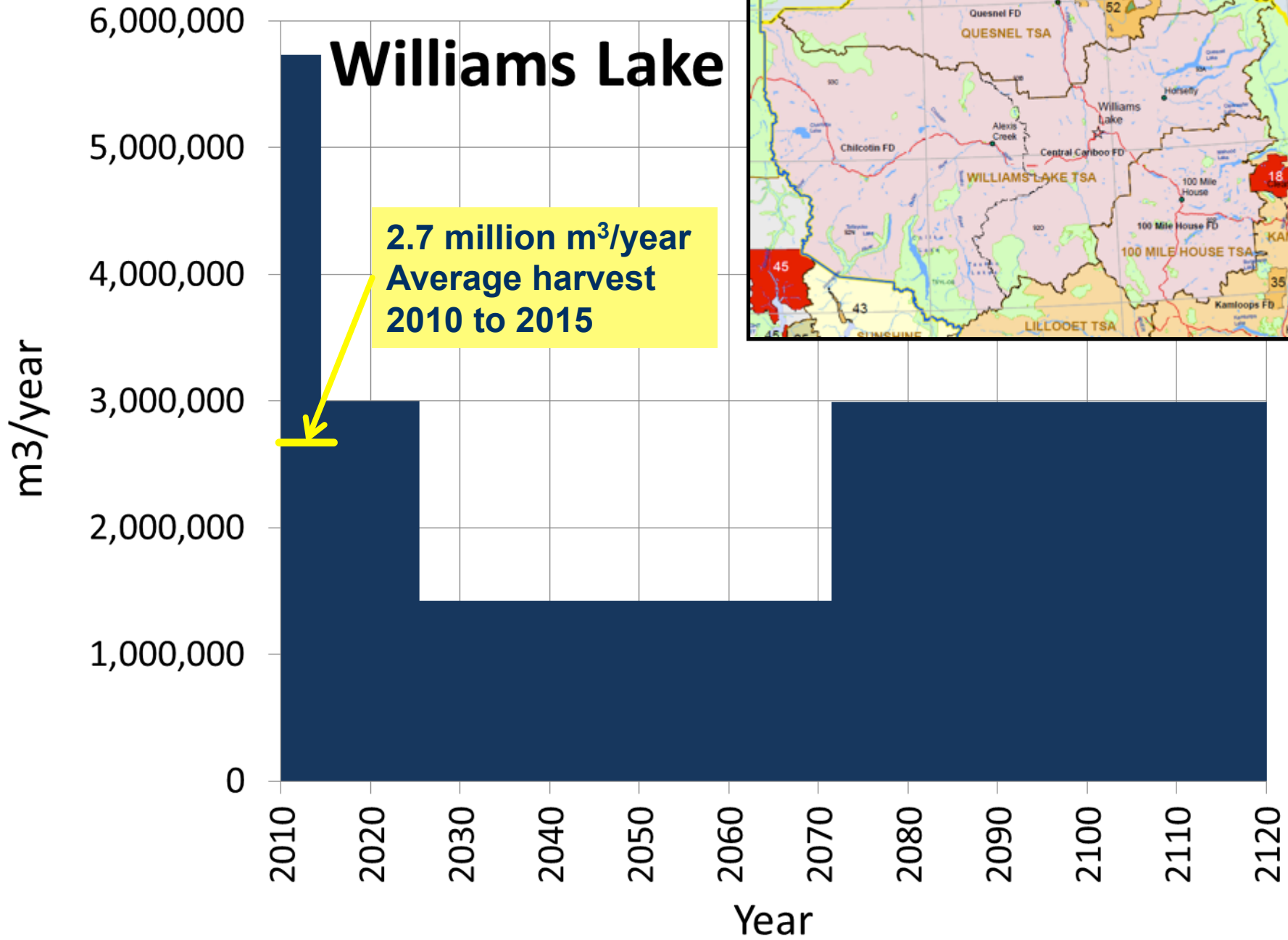
2010 2020 2030 2040 2050 2060 2070 2080 2090 2100 2110 2120

Year

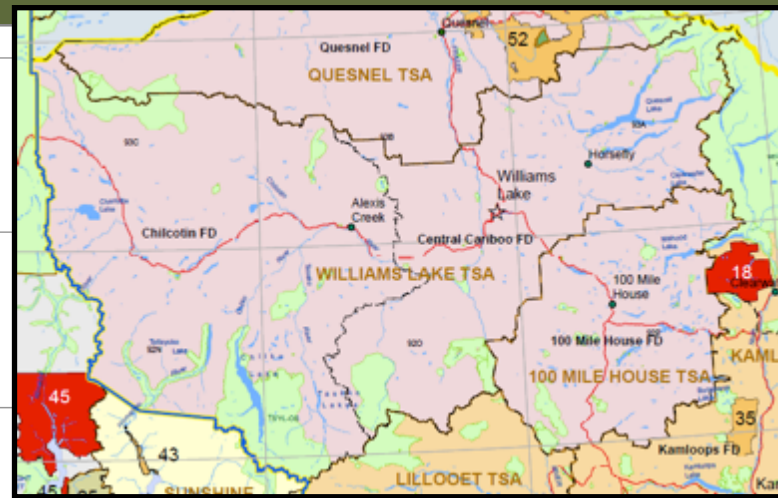
**99,000 m³/year
Average harvest
2010 to 2015**



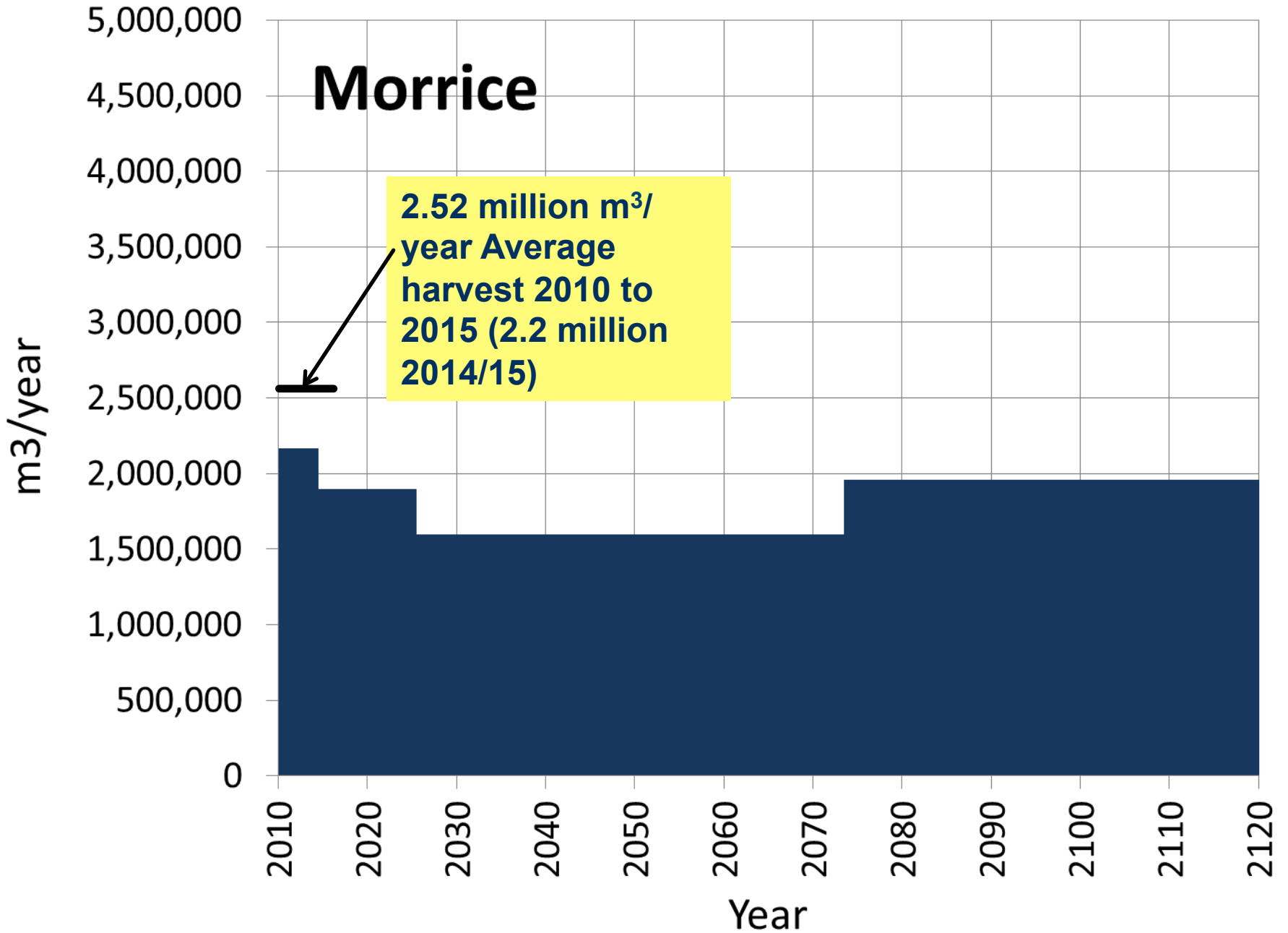
Williams Lake



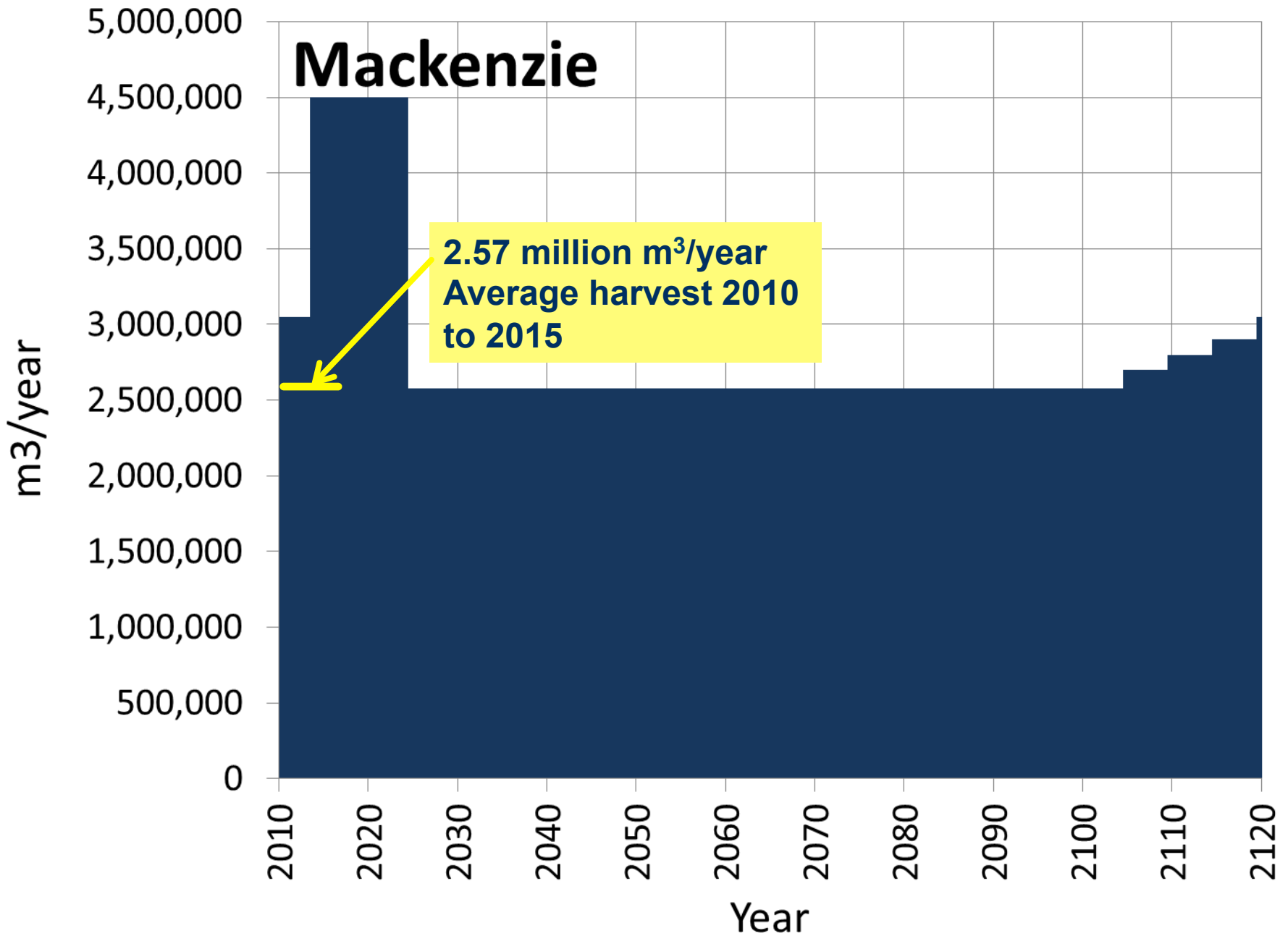
**2.7 million m³/year
Average harvest
2010 to 2015**



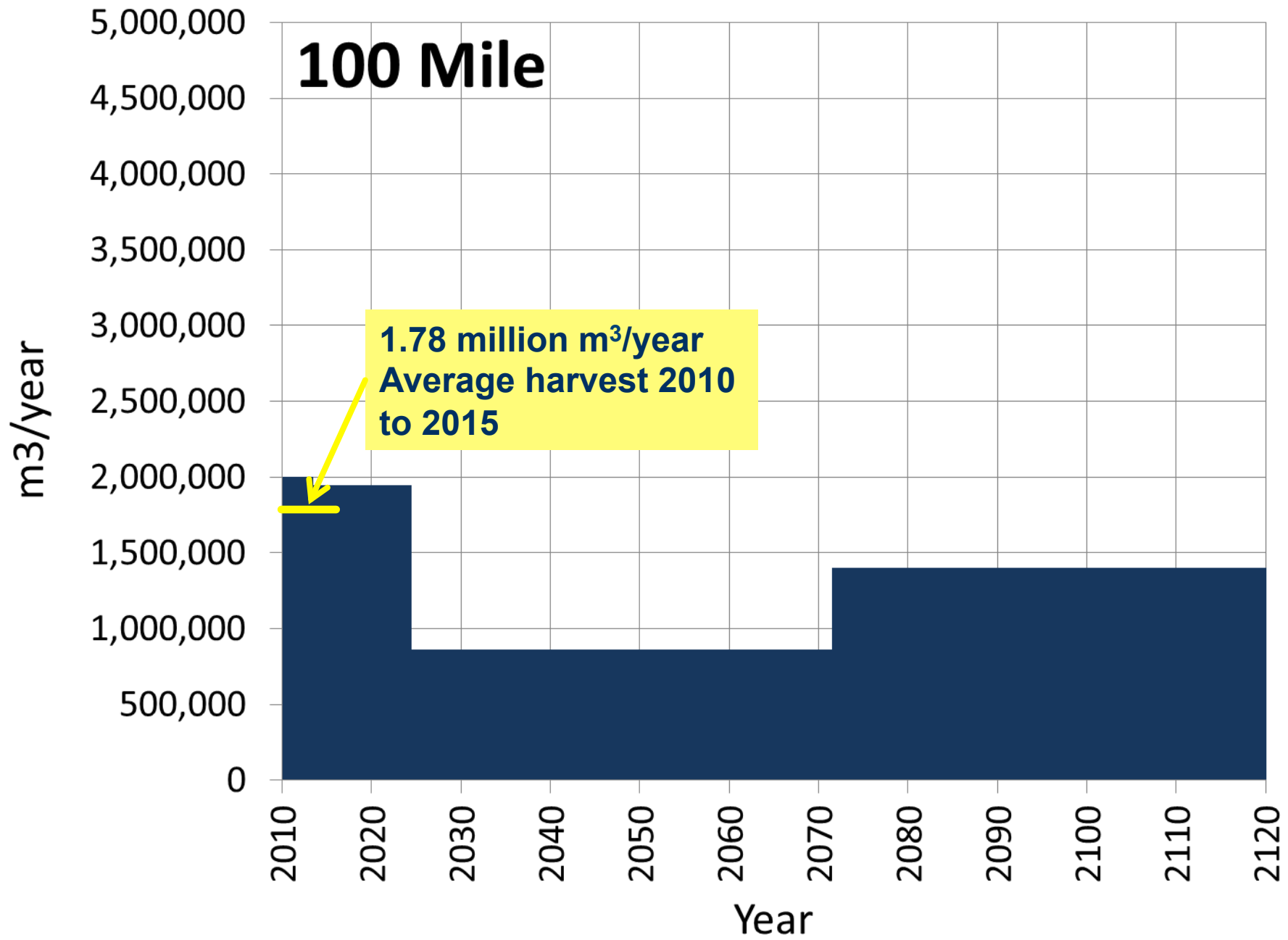
Morrice



Mackenzie

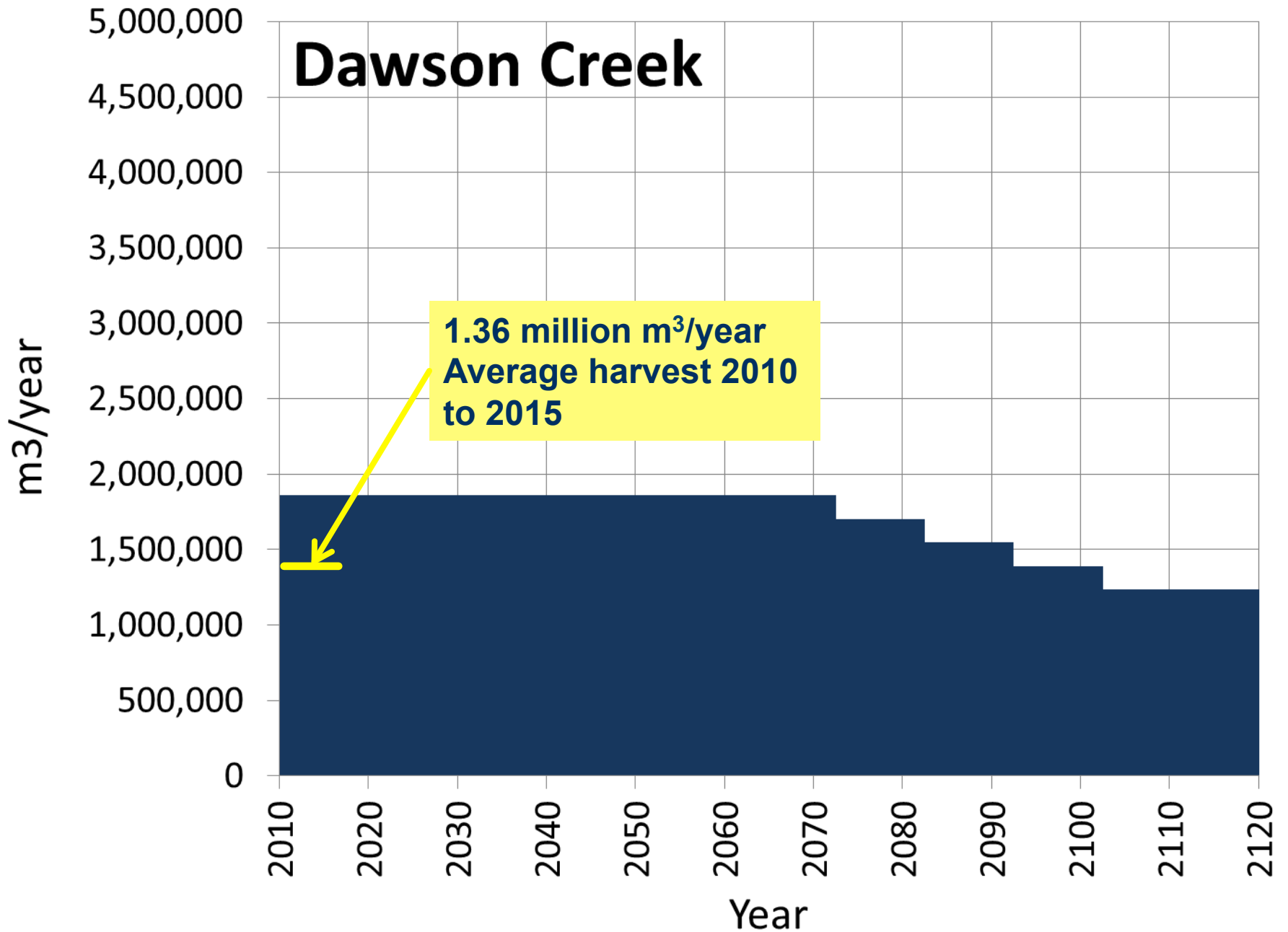


100 Mile

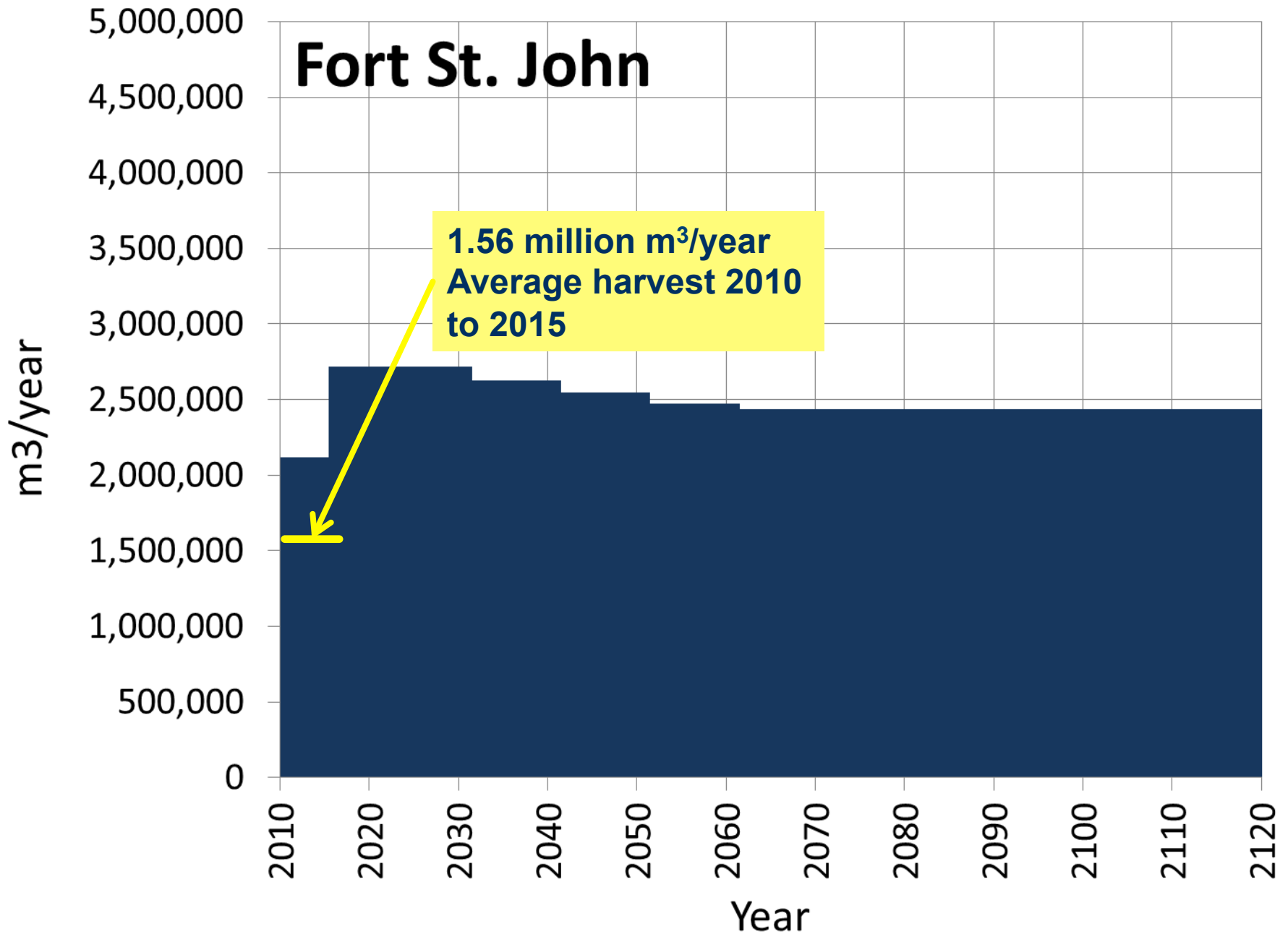


**1.78 million m³/year
Average harvest 2010
to 2015**

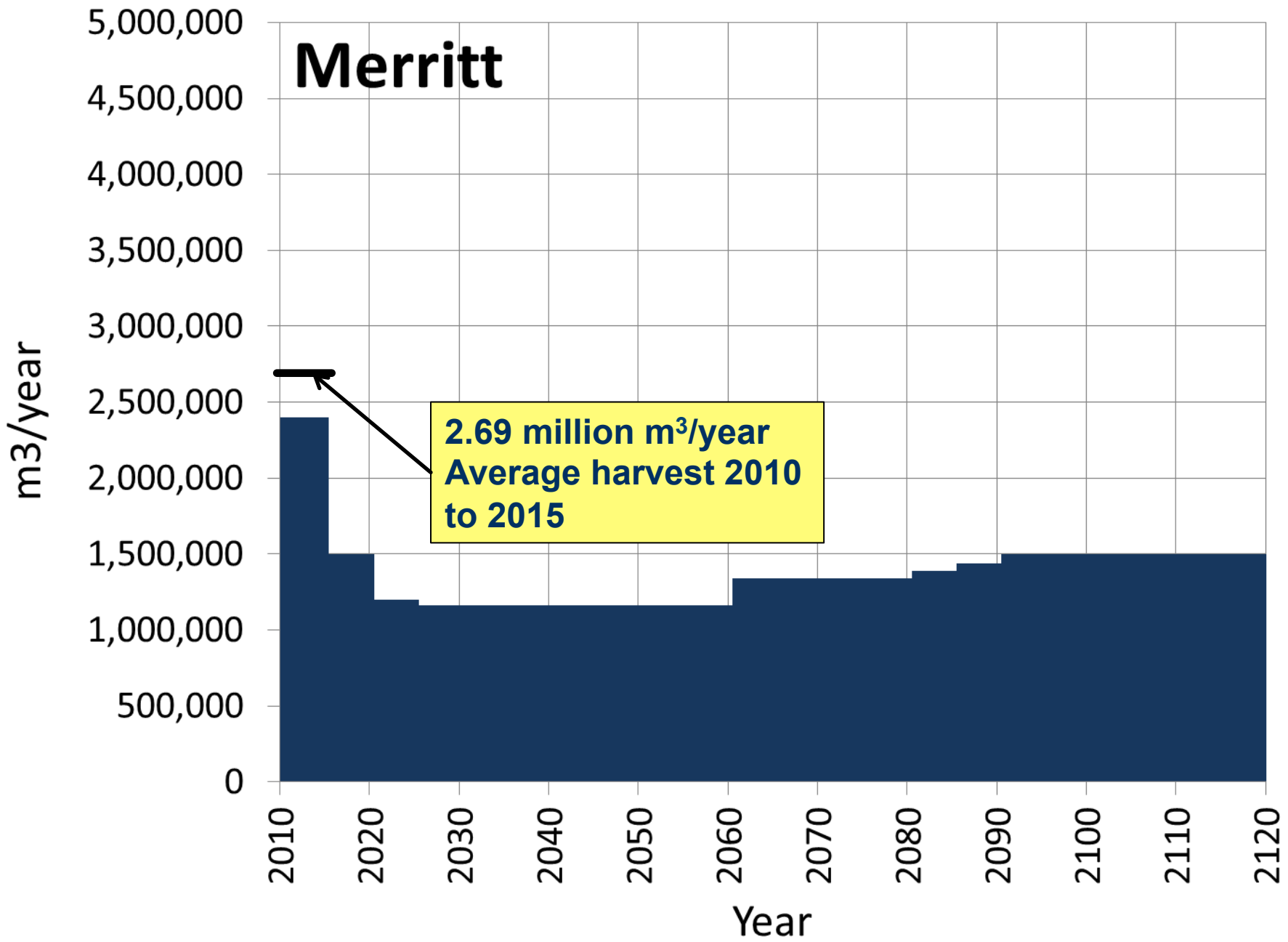
Dawson Creek



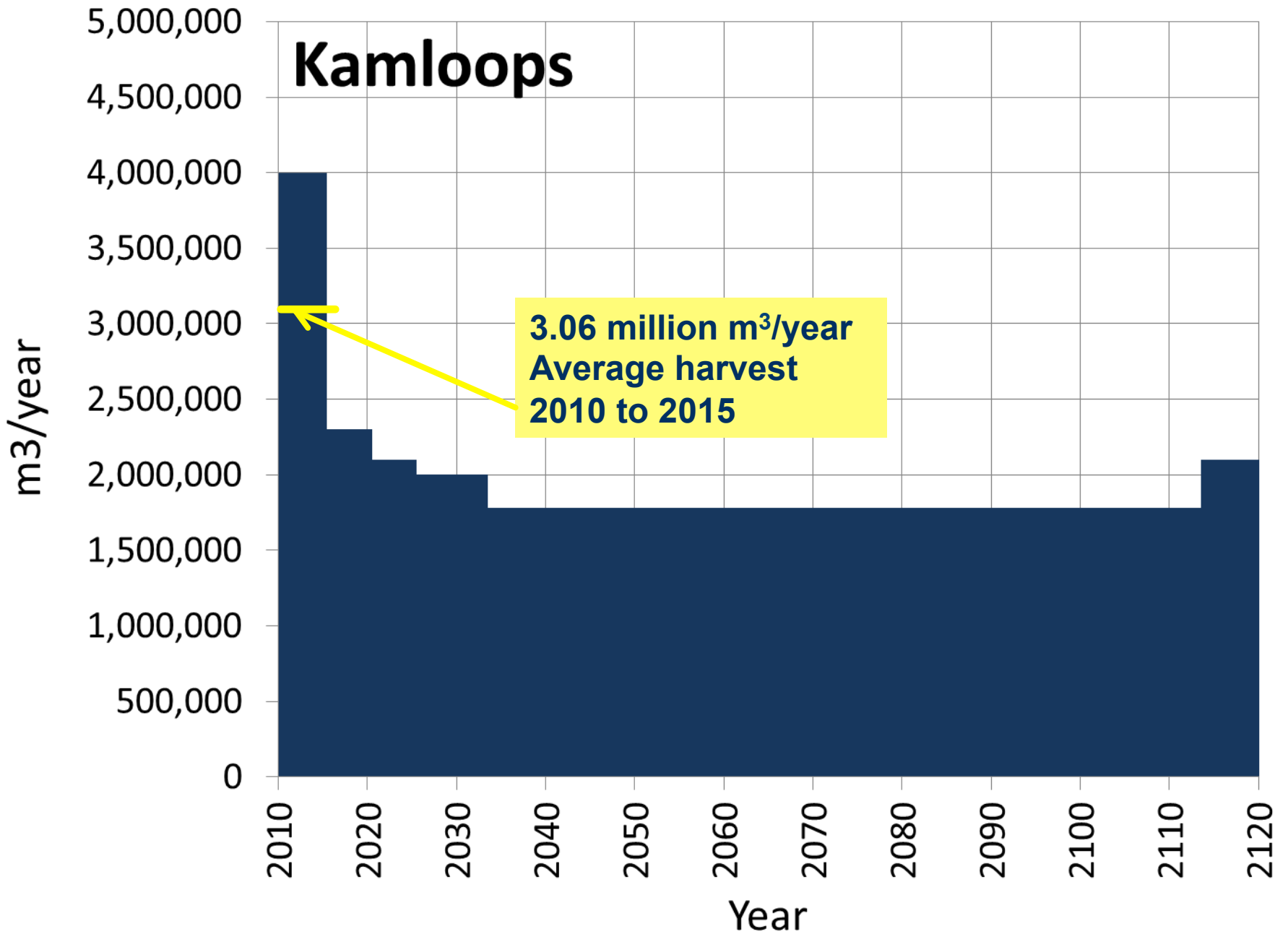
Fort St. John



Merritt

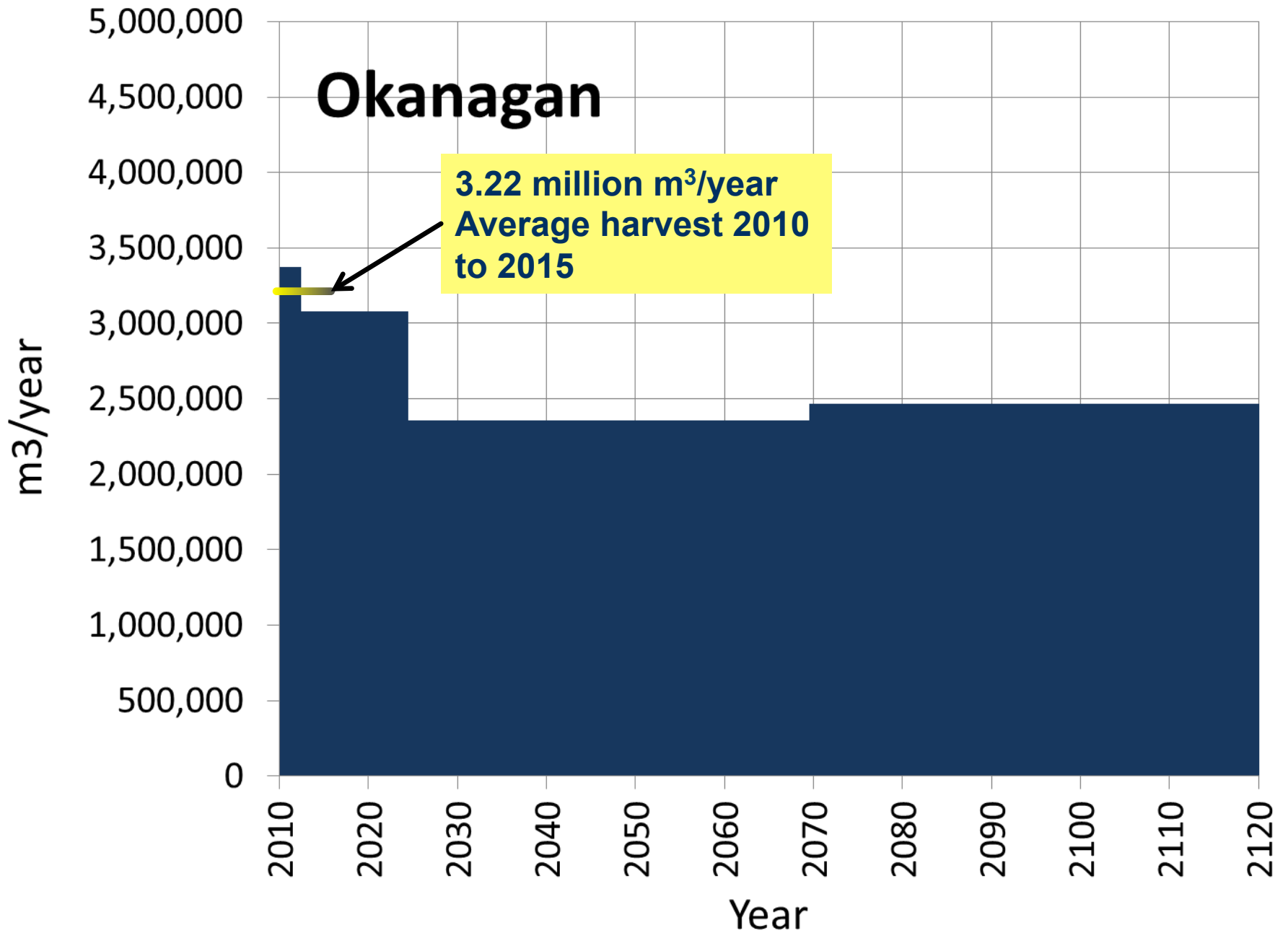


Kamloops

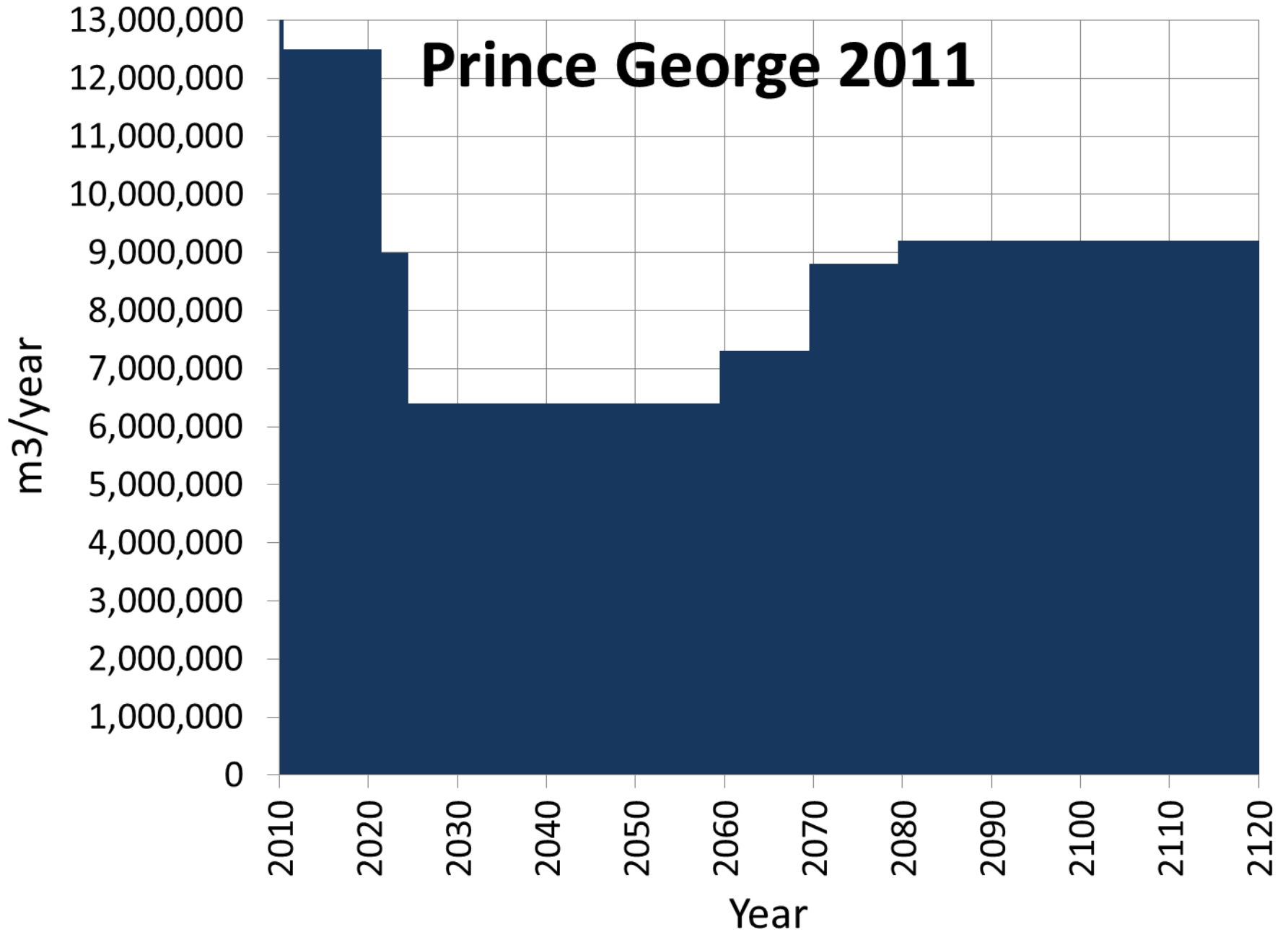


Okanagan

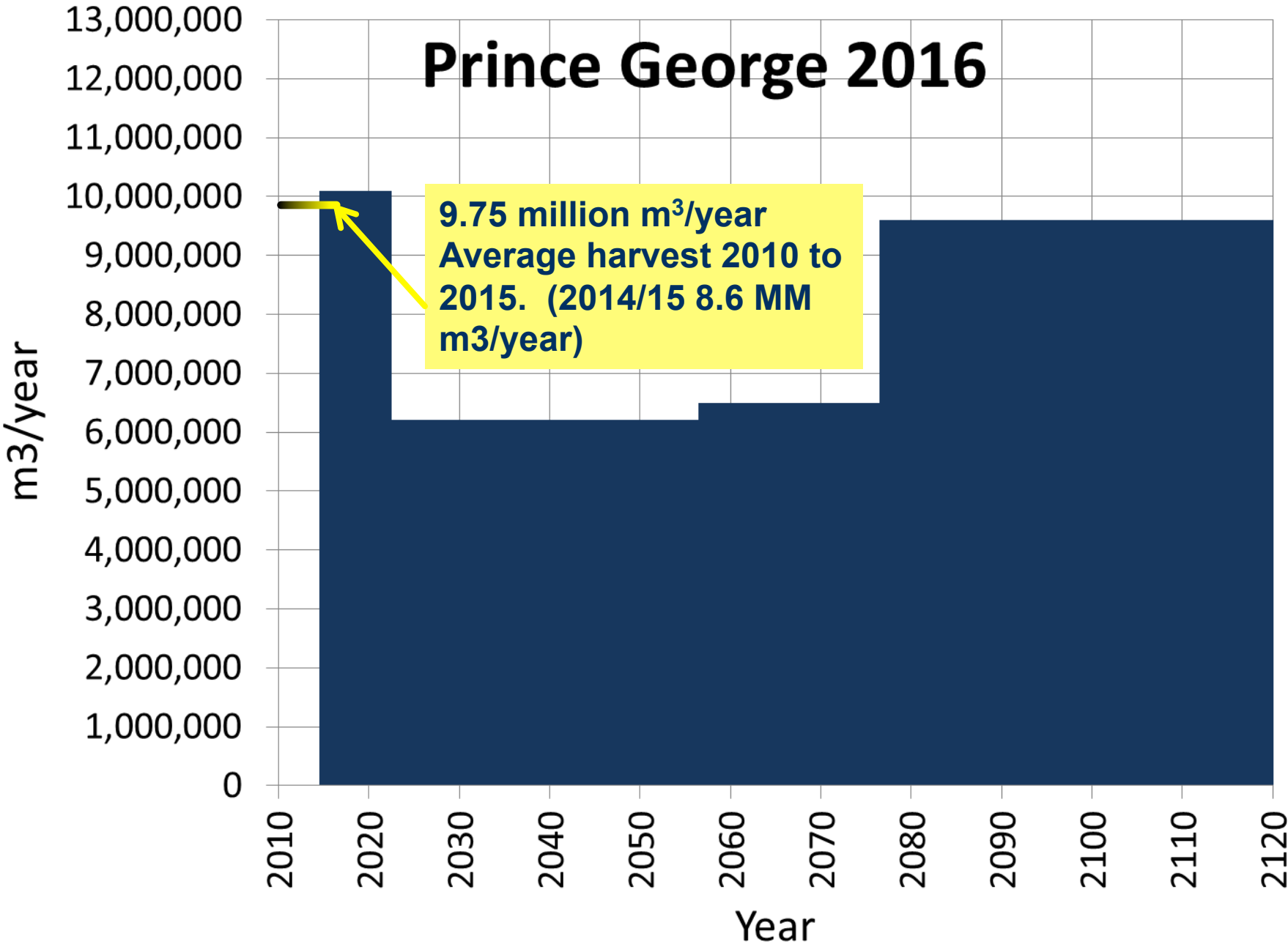
**3.22 million m³/year
Average harvest 2010
to 2015**



Prince George 2011

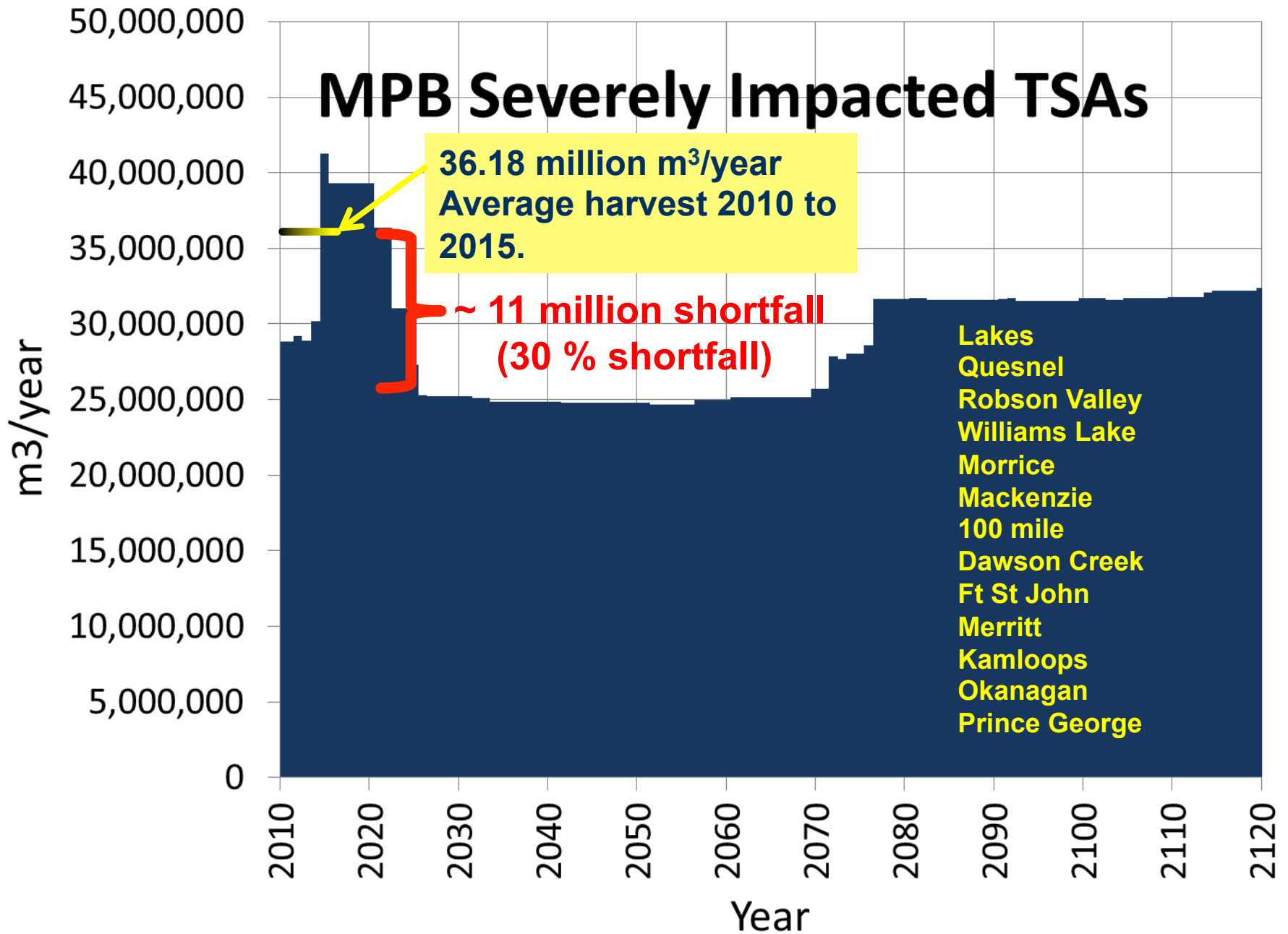


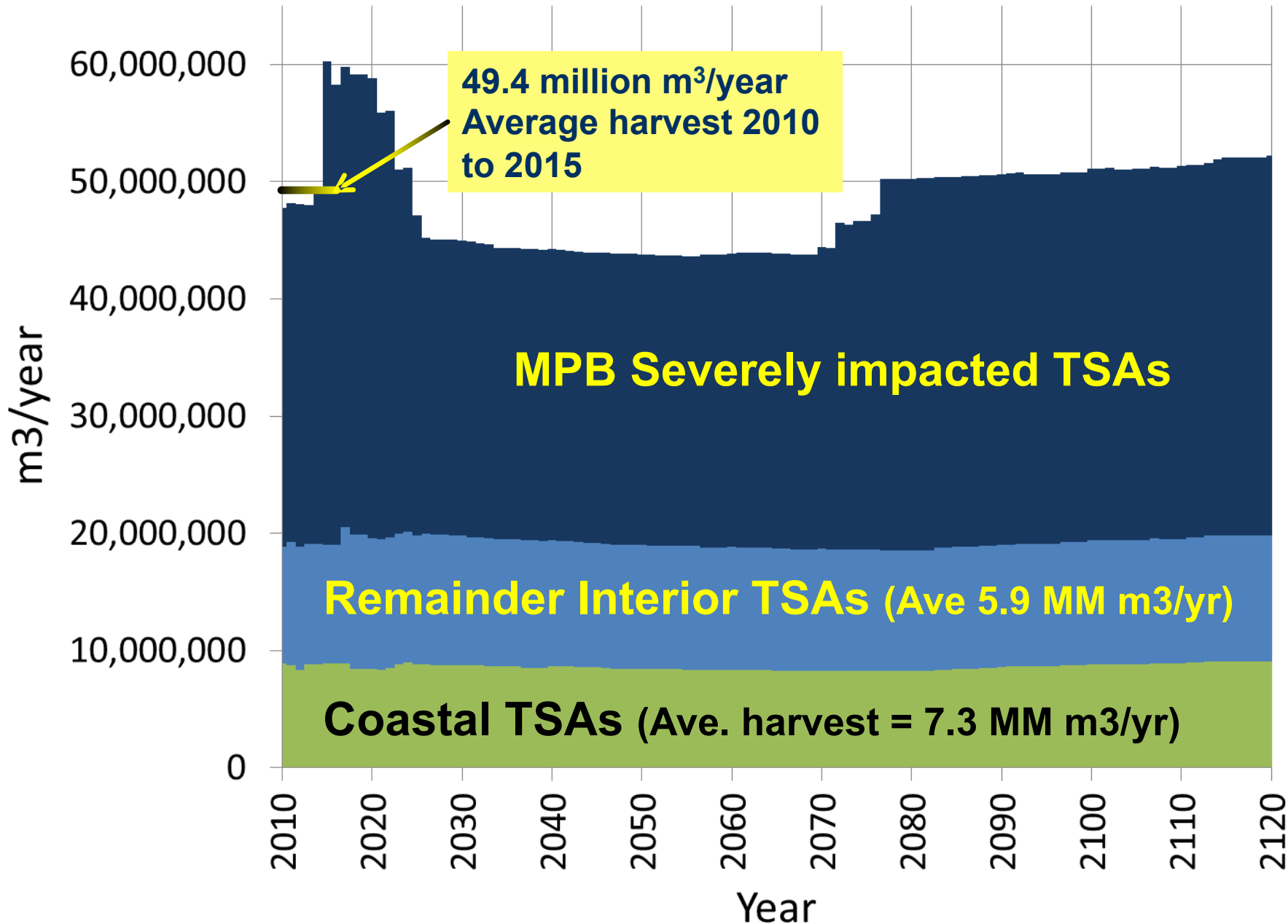
Prince George 2016

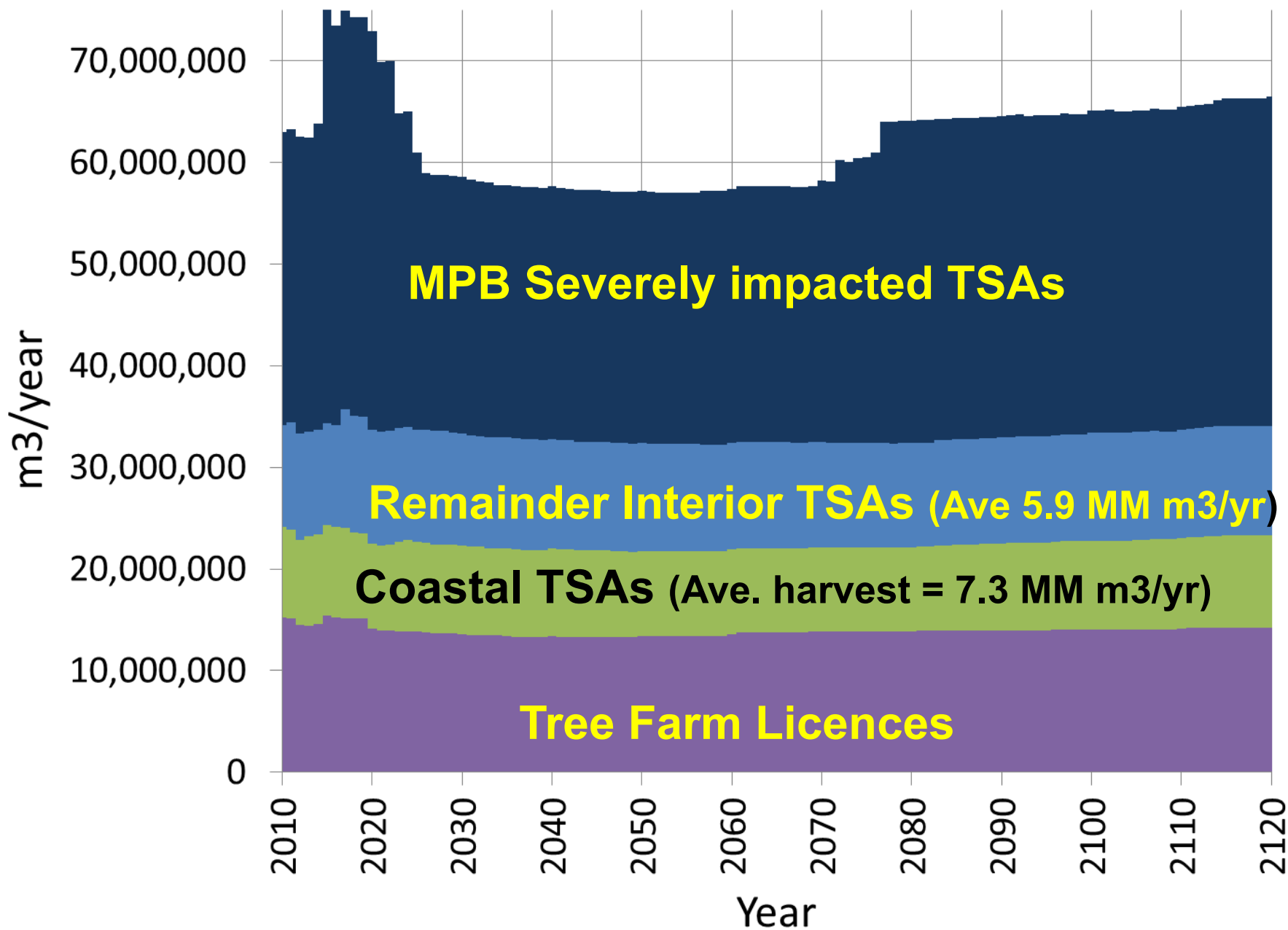


9.75 million m³/year
Average harvest 2010 to 2015. (2014/15 8.6 MM m³/year)

MPB Severely Impacted TSAs









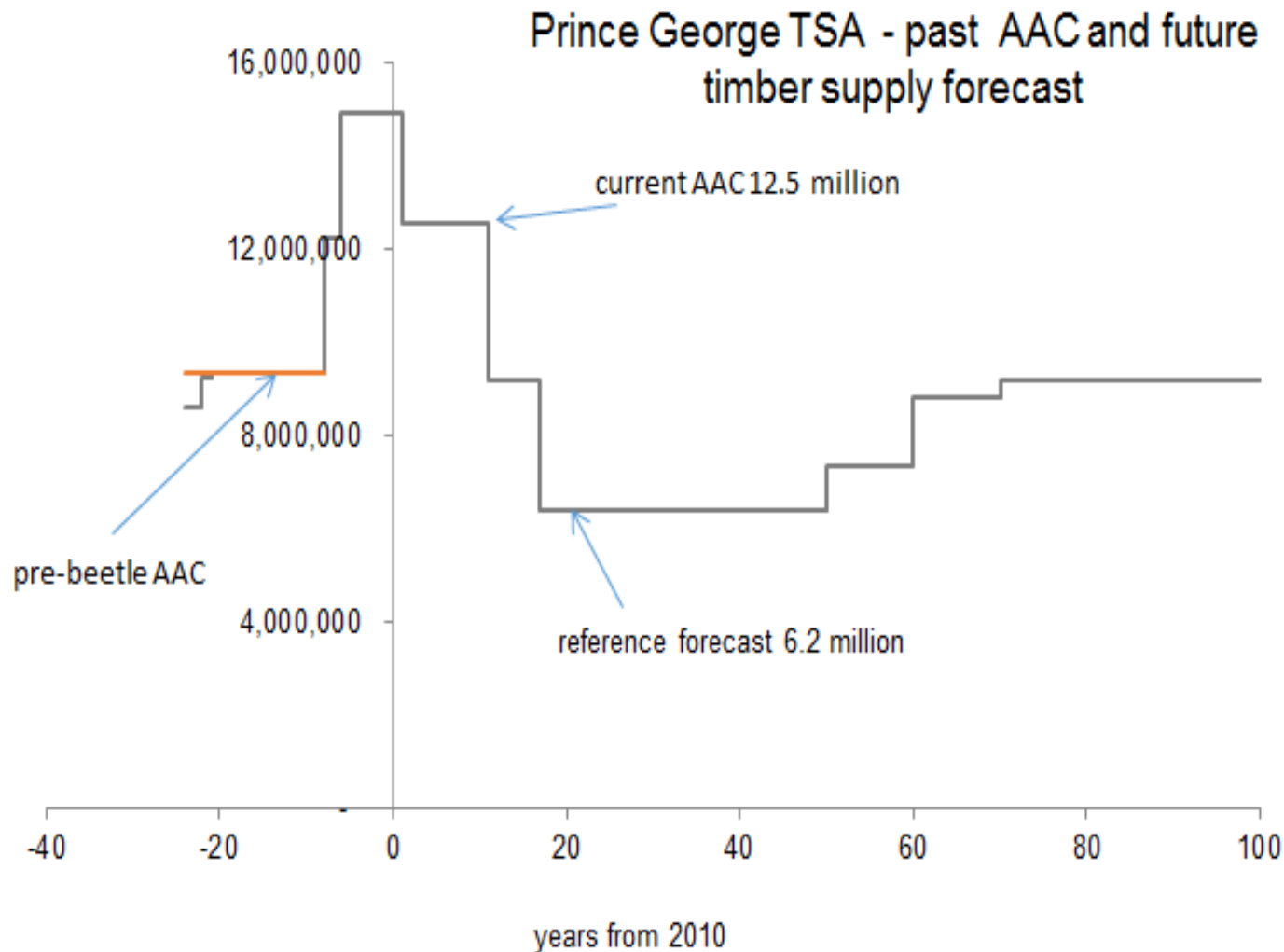
Other Sources of Timber:

- Community Forests
(AAC = 2.07 million m³/yr) n=55
- First Nations Woodland Licences
(AAC = 183,000 m³/yr) n=8
- Private timber
- Woodlots



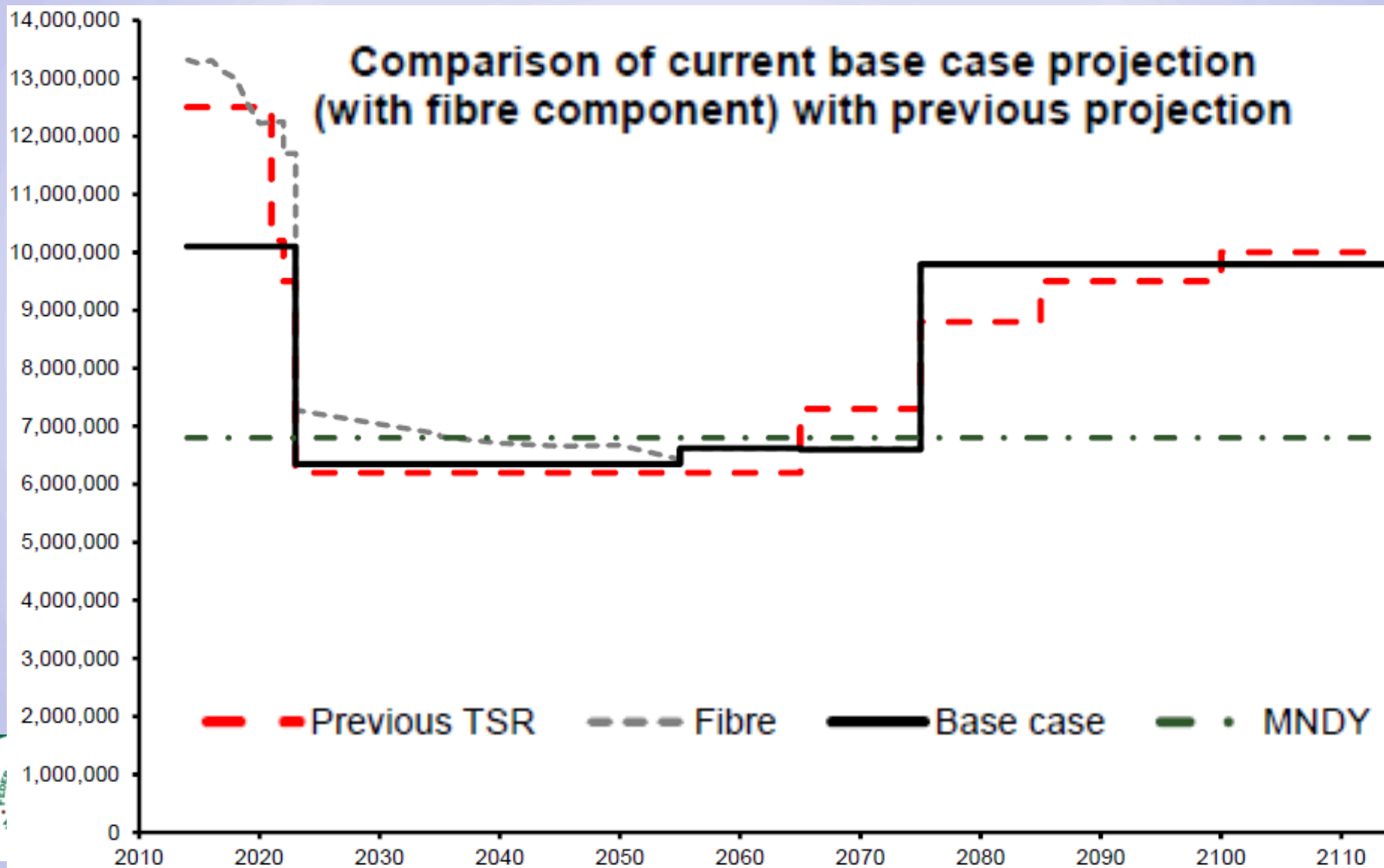
Ministry of Forests, Lands and Natural Resource Operations

Prince George TSA Context - 2010



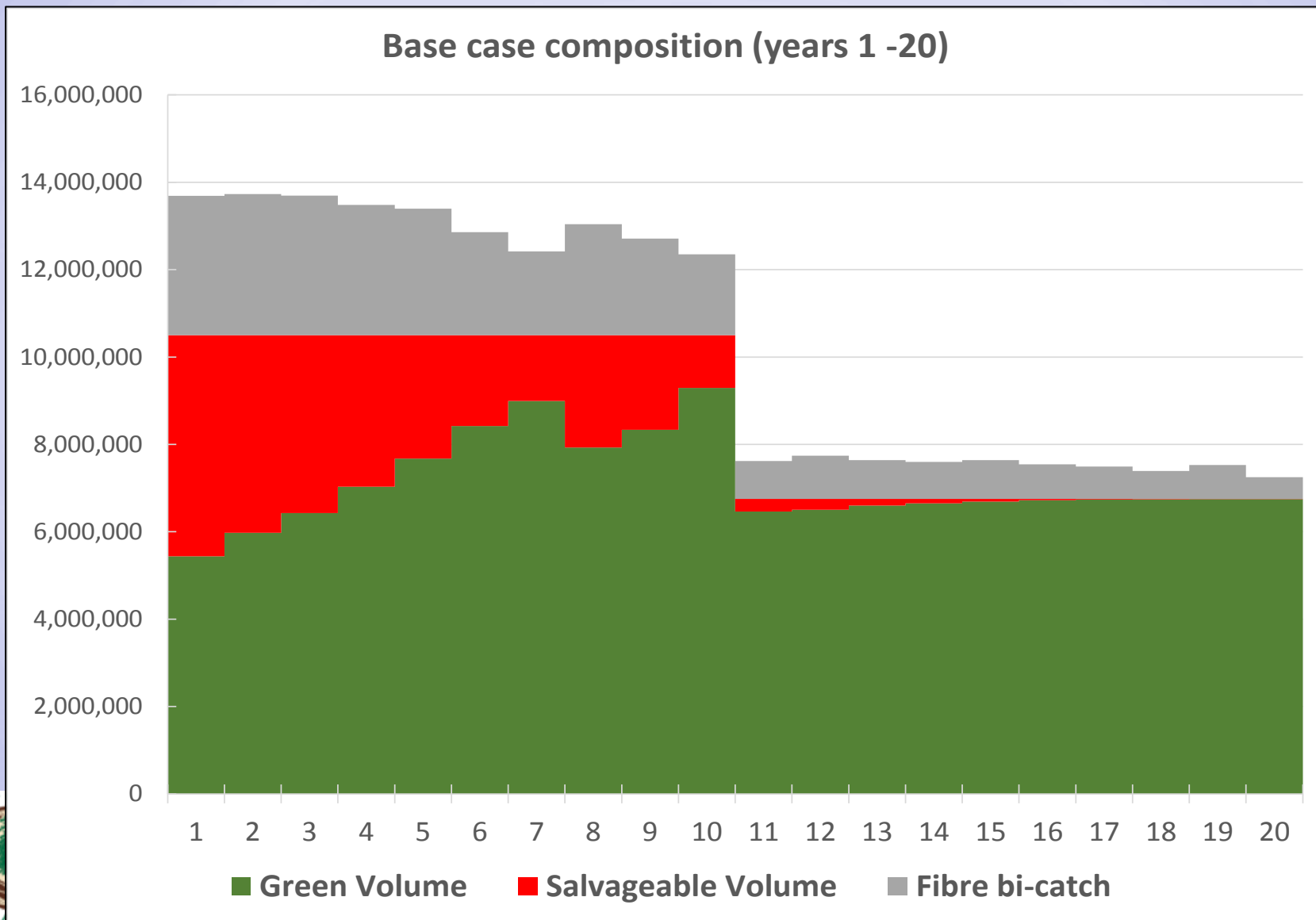


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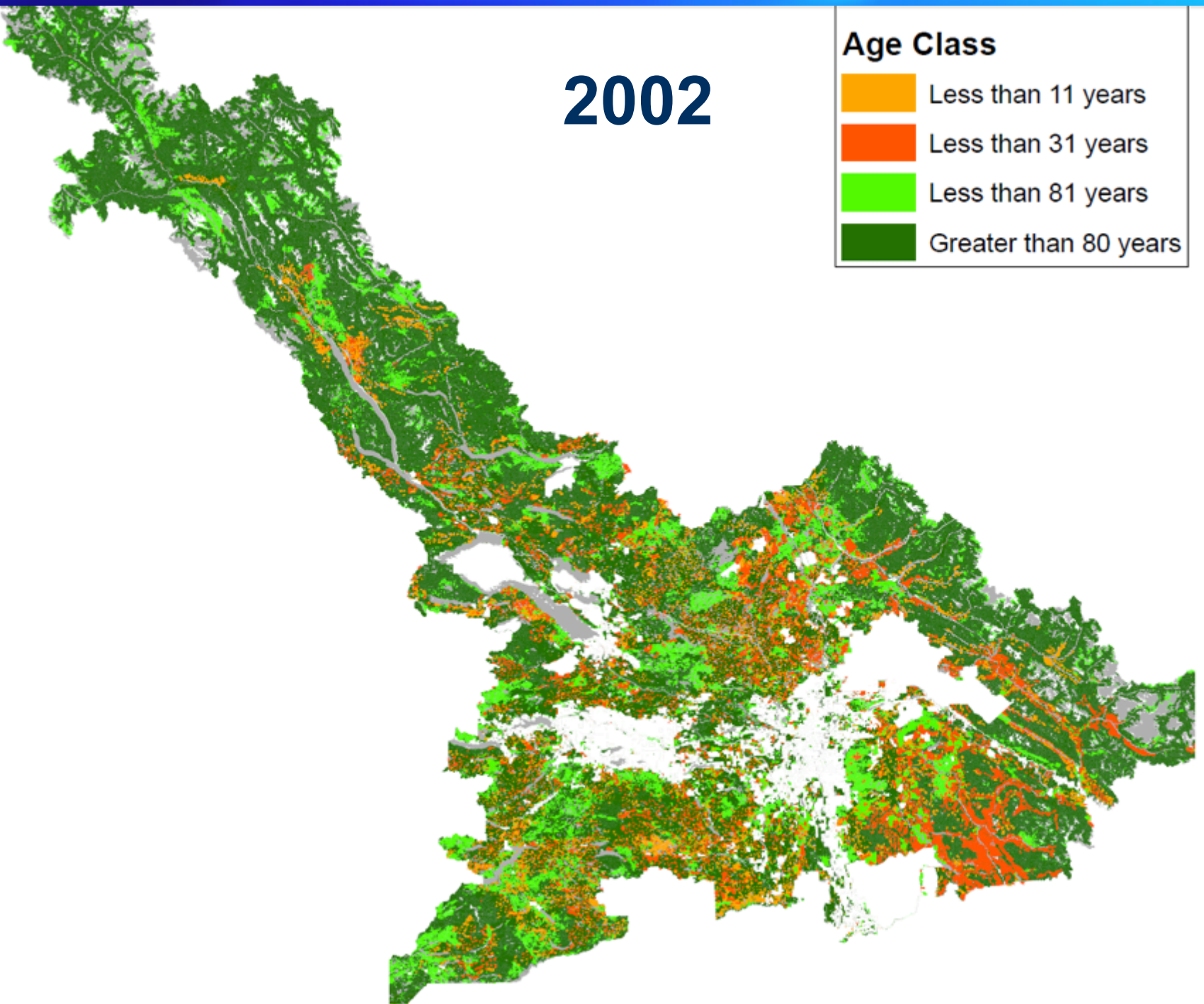
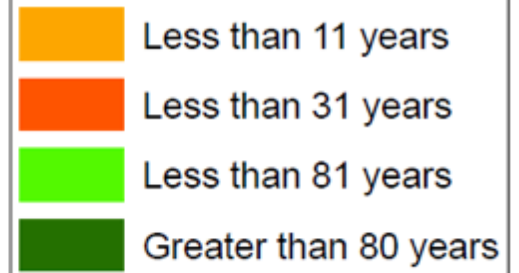


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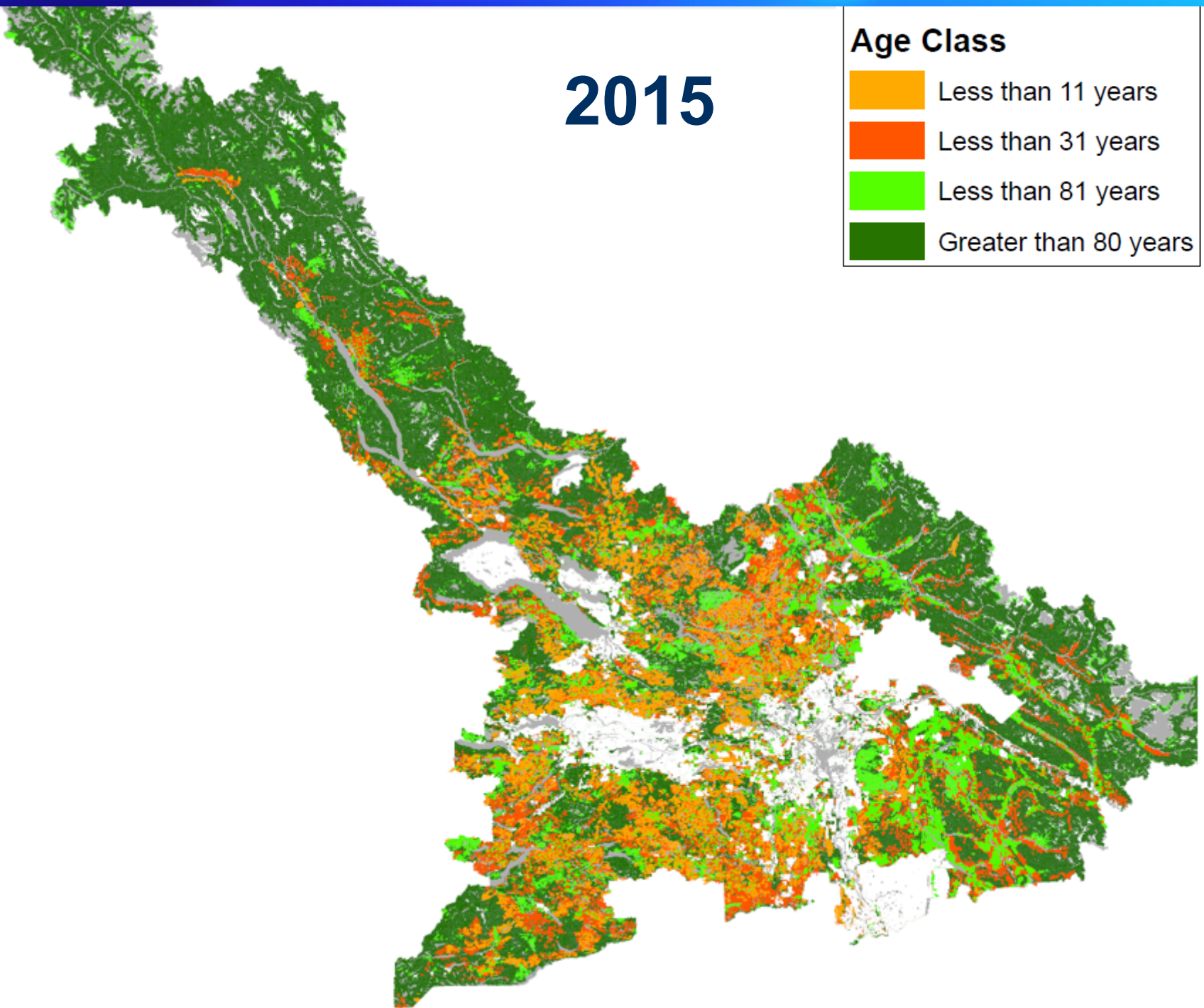
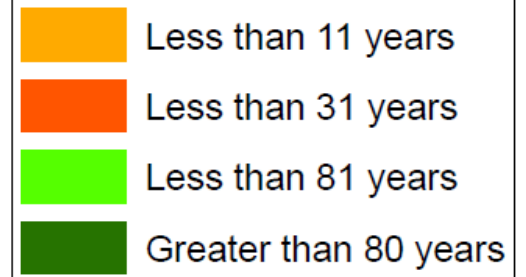
2002

Age Class



2015

Age Class





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PINE



**September 29 - October 1, 2016
Prince George, BC**

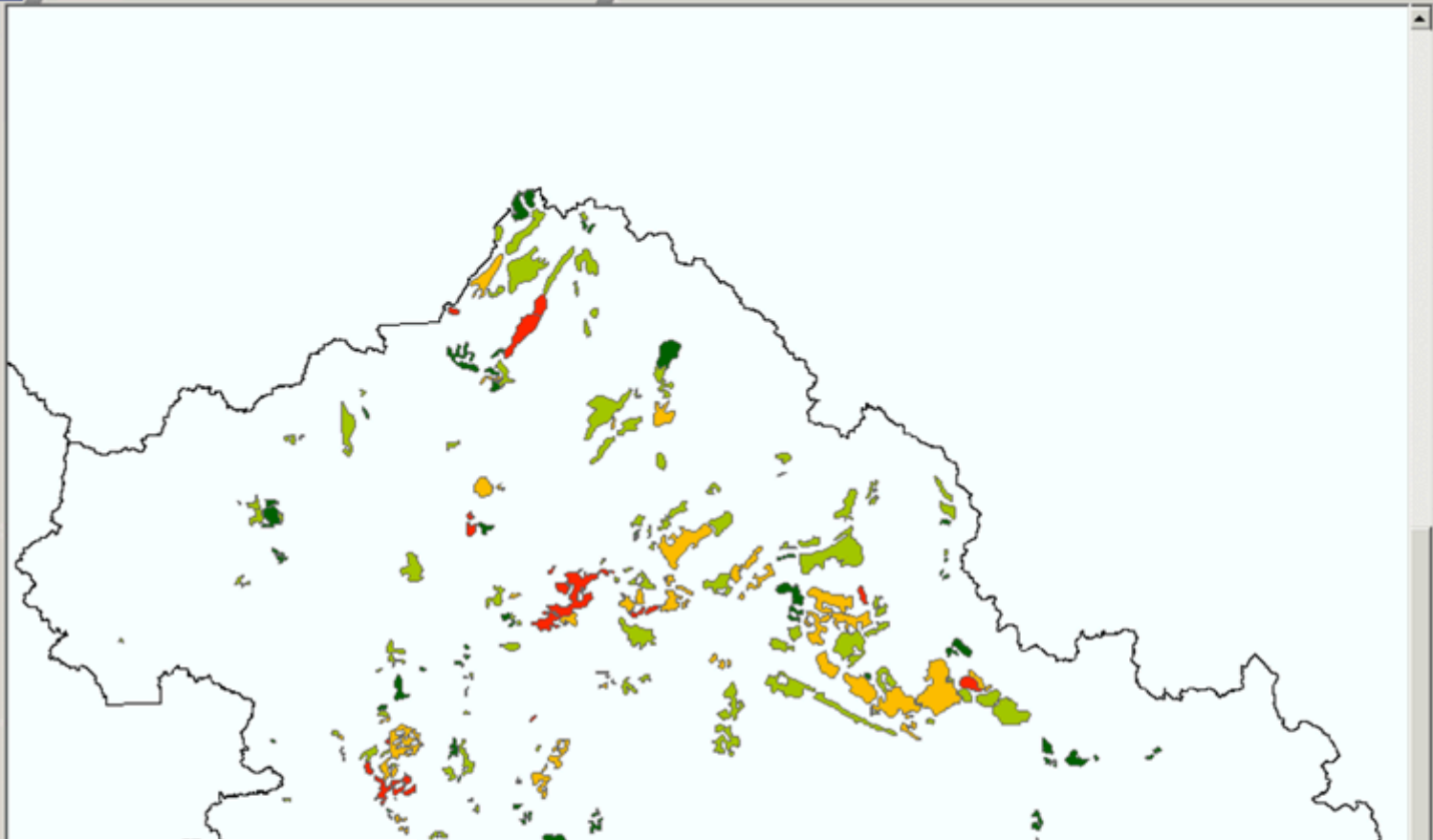
**Let's welcome the
SPRUCE BEETLE !**



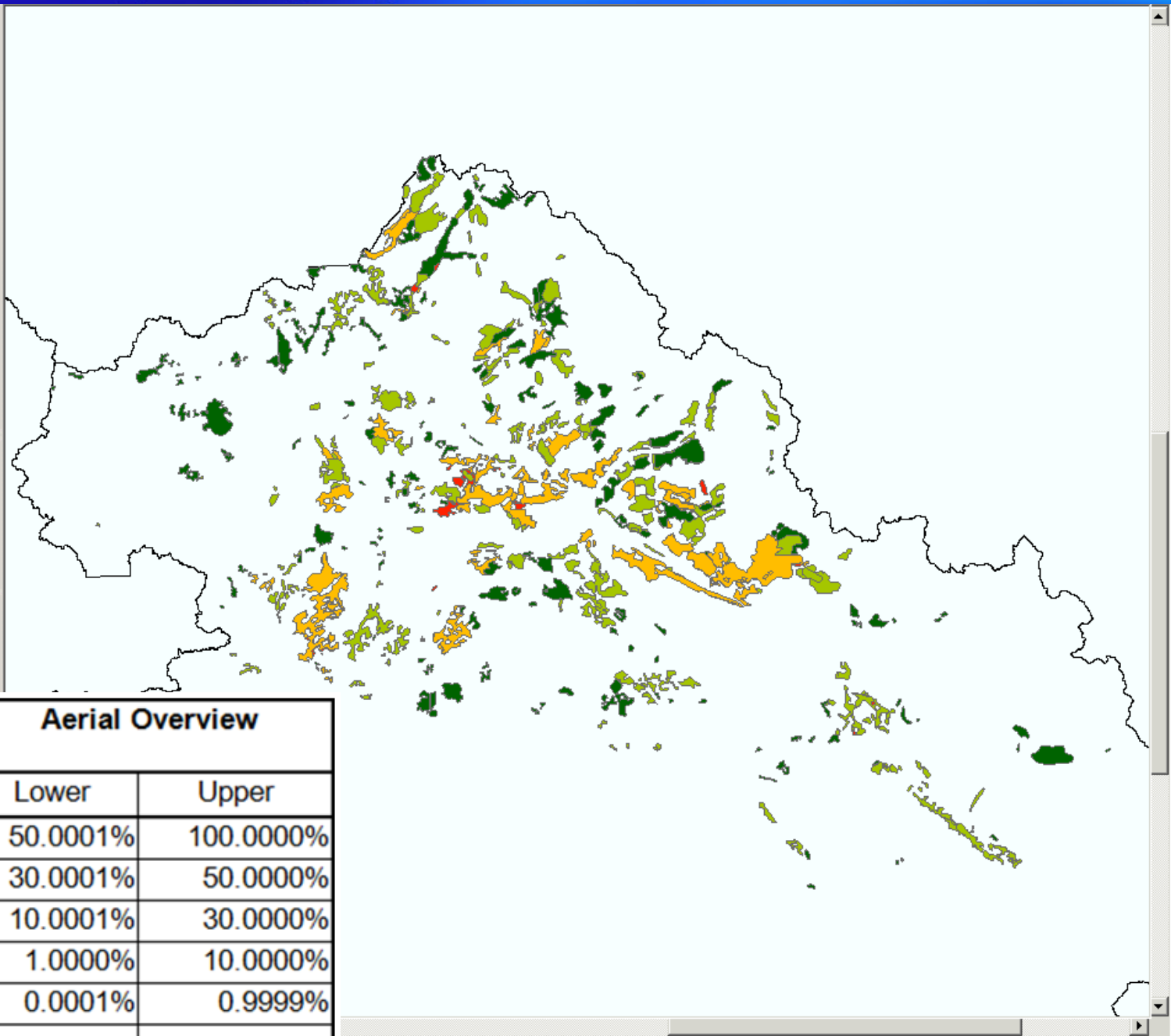
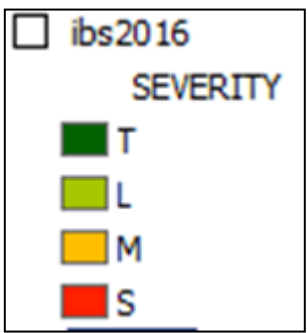
ibs2015

SEVERITY

- T
- L
- M
- S



Aerial Overview		
	Lower	Upper
Very Severe (V)	50.0001%	100.0000%
Severe (S)	30.0001%	50.0000%
Moderate (M)	10.0001%	30.0000%
Low (L)	1.0000%	10.0000%
Endemic (T)	0.0001%	0.9999%
None		



Aerial Overview		
	Lower	Upper
Very Severe (V)	50.0001%	100.0000%
Severe (S)	30.0001%	50.0000%
Moderate (M)	10.0001%	30.0000%
Low (L)	1.0000%	10.0000%
Endemic (T)	0.0001%	0.9999%
None		



Photo Courtesy of Dunkley Lumber



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and Natural Resource Operations

Questions?