



Update on the Western Oregon Streamside Protections Review

**Board of Forestry Meeting
September 4, 2019**

Adam Coble

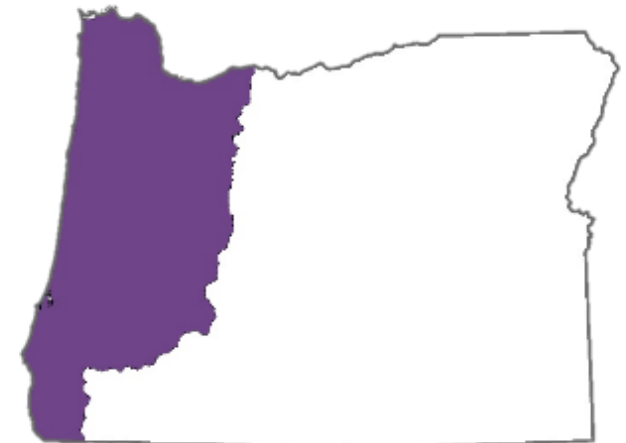
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Presentation Outline

- Project Objectives
- Background: Desired Future Conditions and FPA Rules
- Western Oregon Streamside Protections Review
 - Field Data Analysis
 - Systematic Review
 - Modeling Analysis



Project Objective

Determine if the rules are effective in achieving the goals for:

- Desired future conditions in the riparian mgmt. area (RMA)
- Large wood in streams

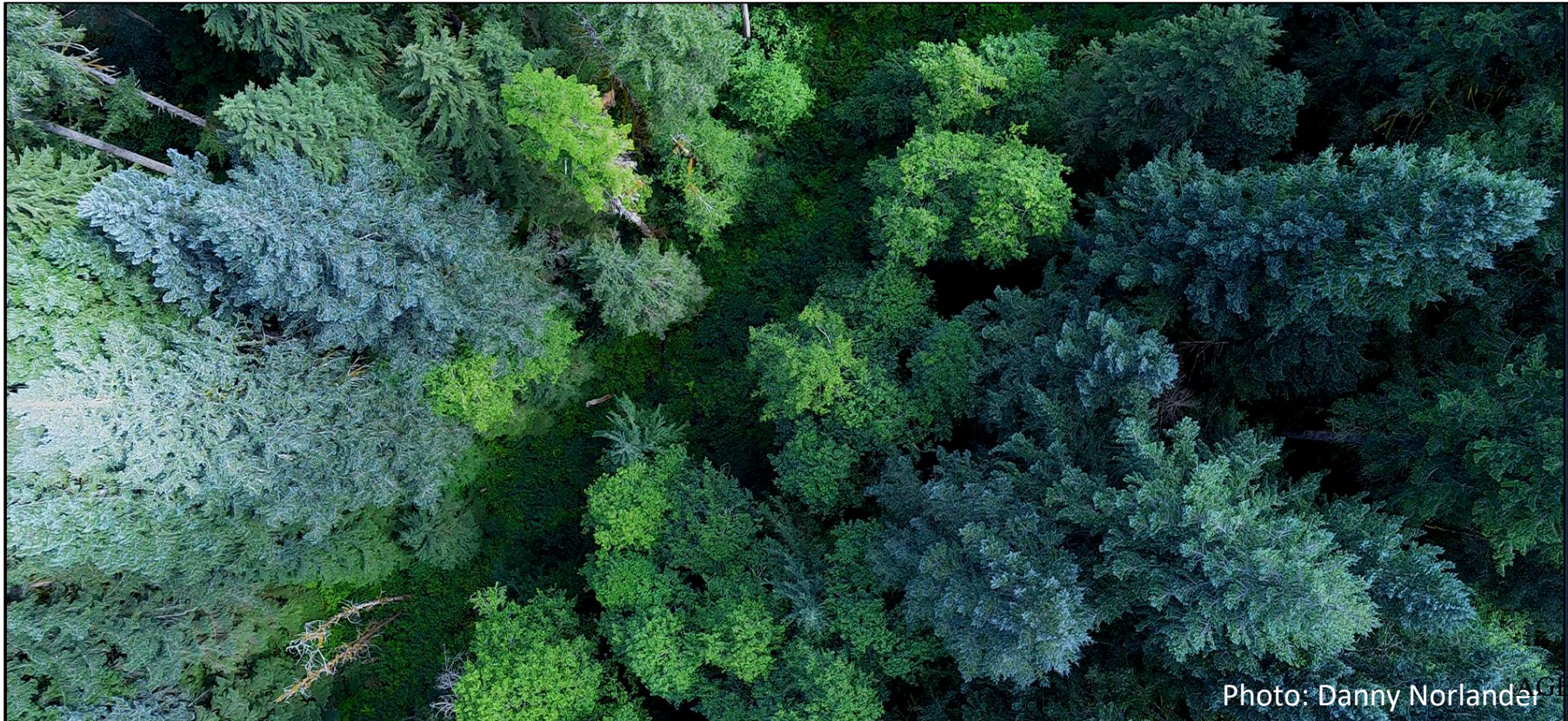


Photo: Danny Norlander

NDA ITEM A
Attachment 13

Page 3 of 31

Desired Future Conditions

Division 642

- **Desired Future Condition (DFC):**

“...to grow and retain vegetation so that, over time, average conditions across the landscape become similar to those of mature streamside stands.”

- **Mature streamside stands**

- Often conifer dominated
- Age: 80-200 yrs old
- Provide multiple functions



What do mature riparian stands look like?

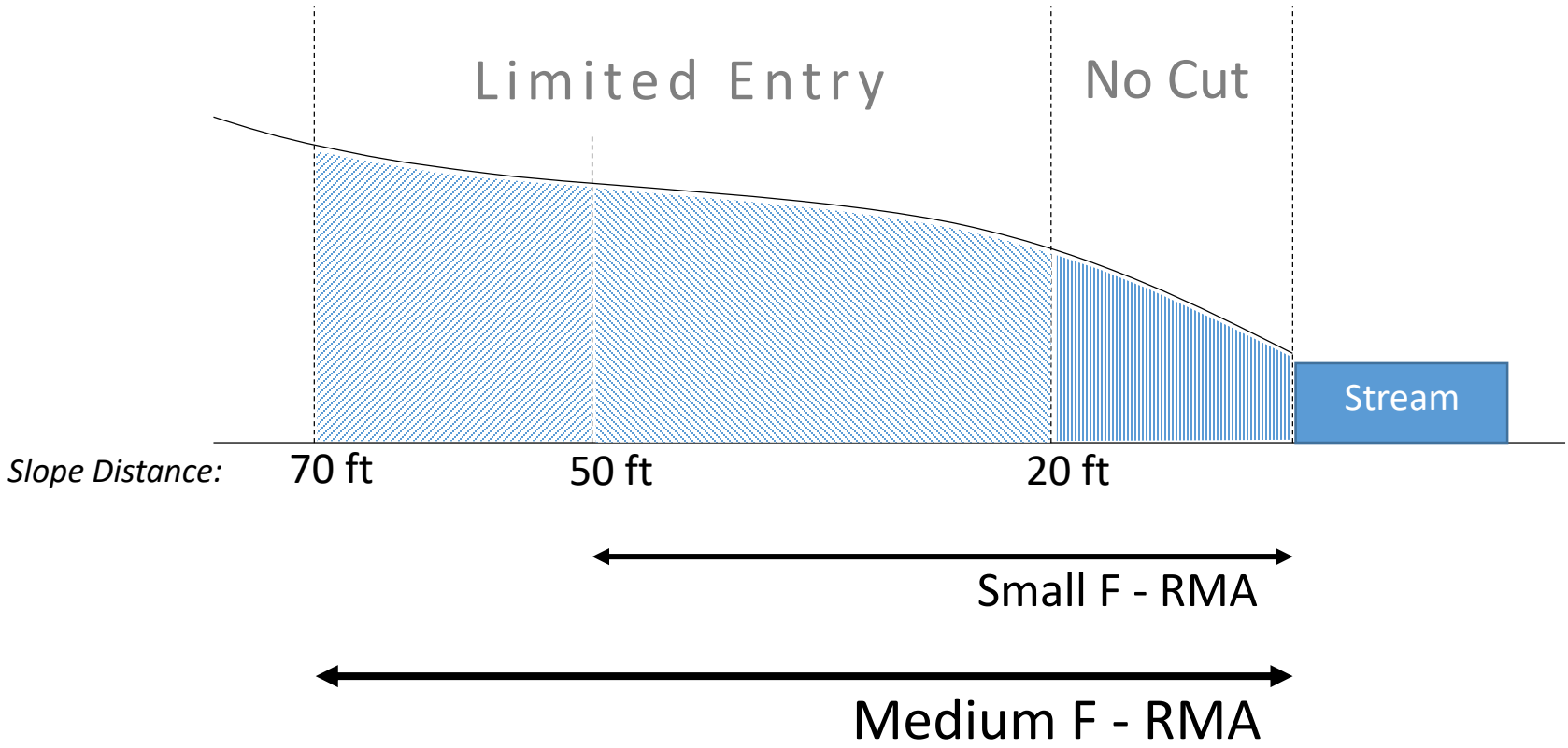


AGENDA ITEM A

Attachment 13

Page 5 of 31

FPA Rules on Riparian Management Areas (RMAs)



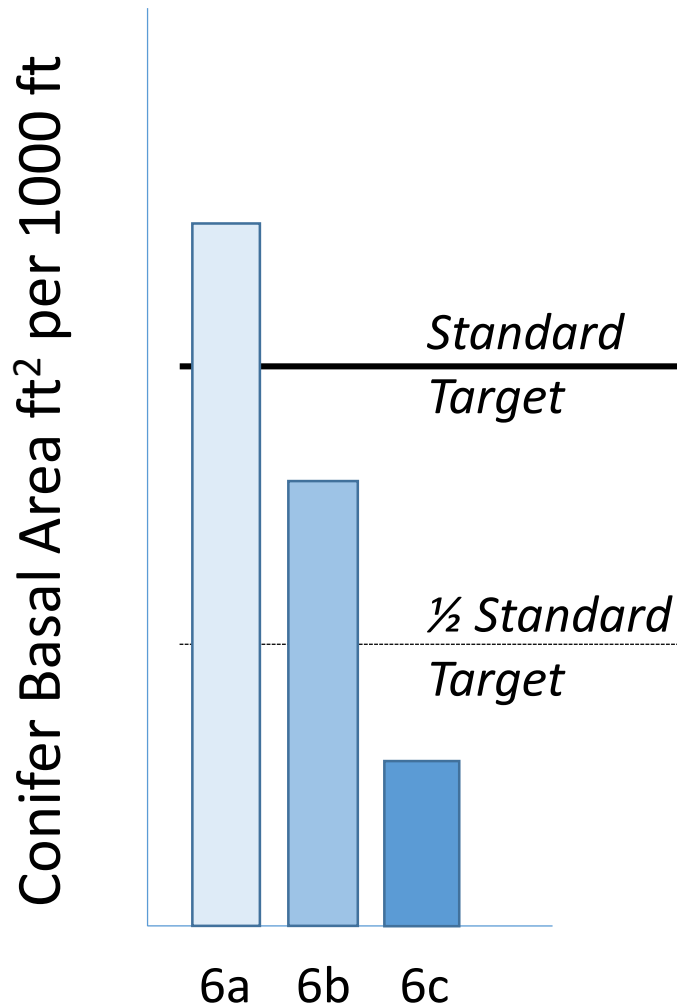
Vegetation Requirements: Prescription for Type F streams

OAR 629-642-0100

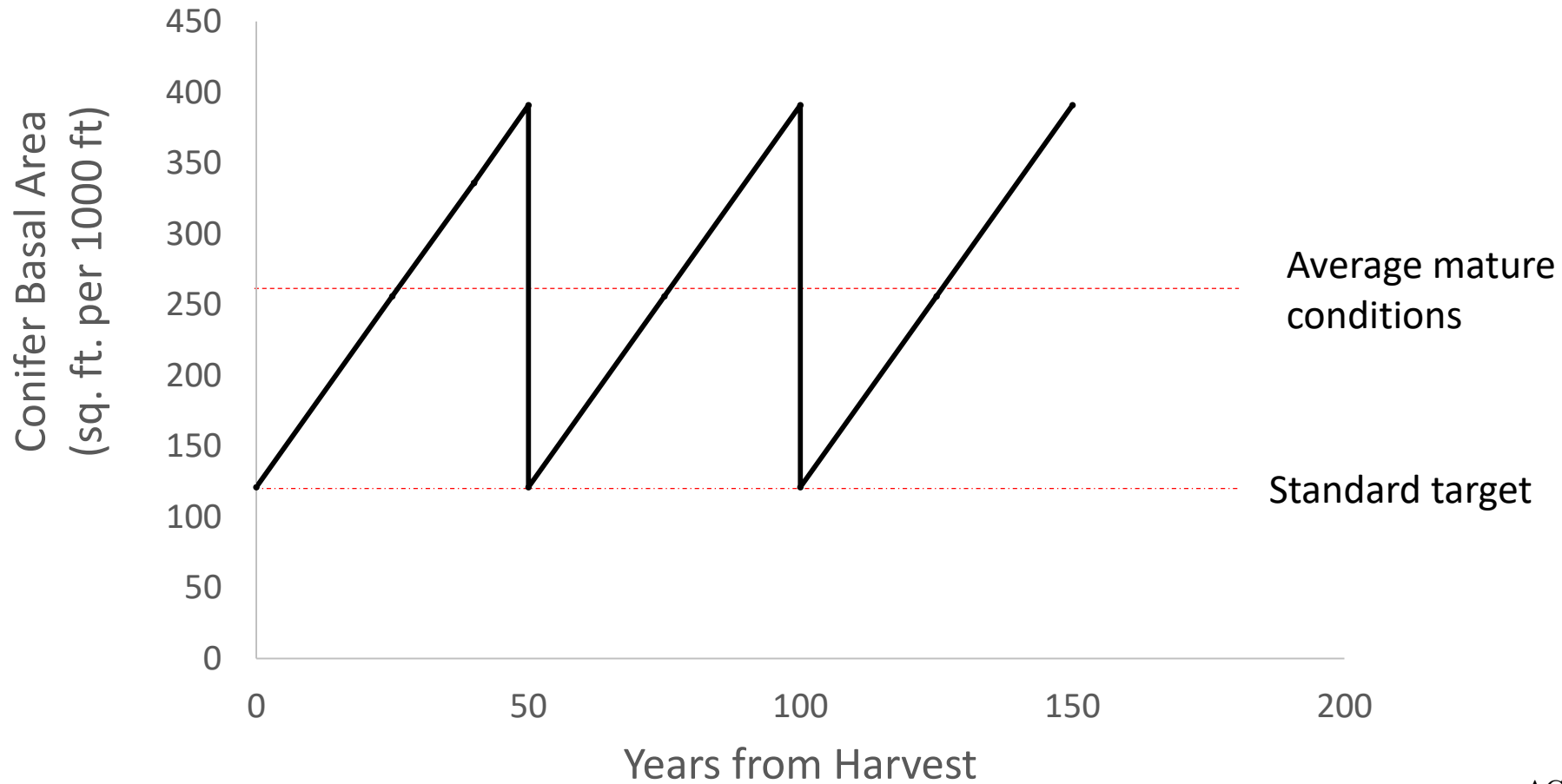
Rule '6a': Keep at or above ST
(10% snags and hardwoods)

Rule '6b': Retain all conifers in the
RMA

Rule '6c': Retain all conifers in the
RMA and hardwoods within X
distance



Conceptual 'Saw-tooth' diagram



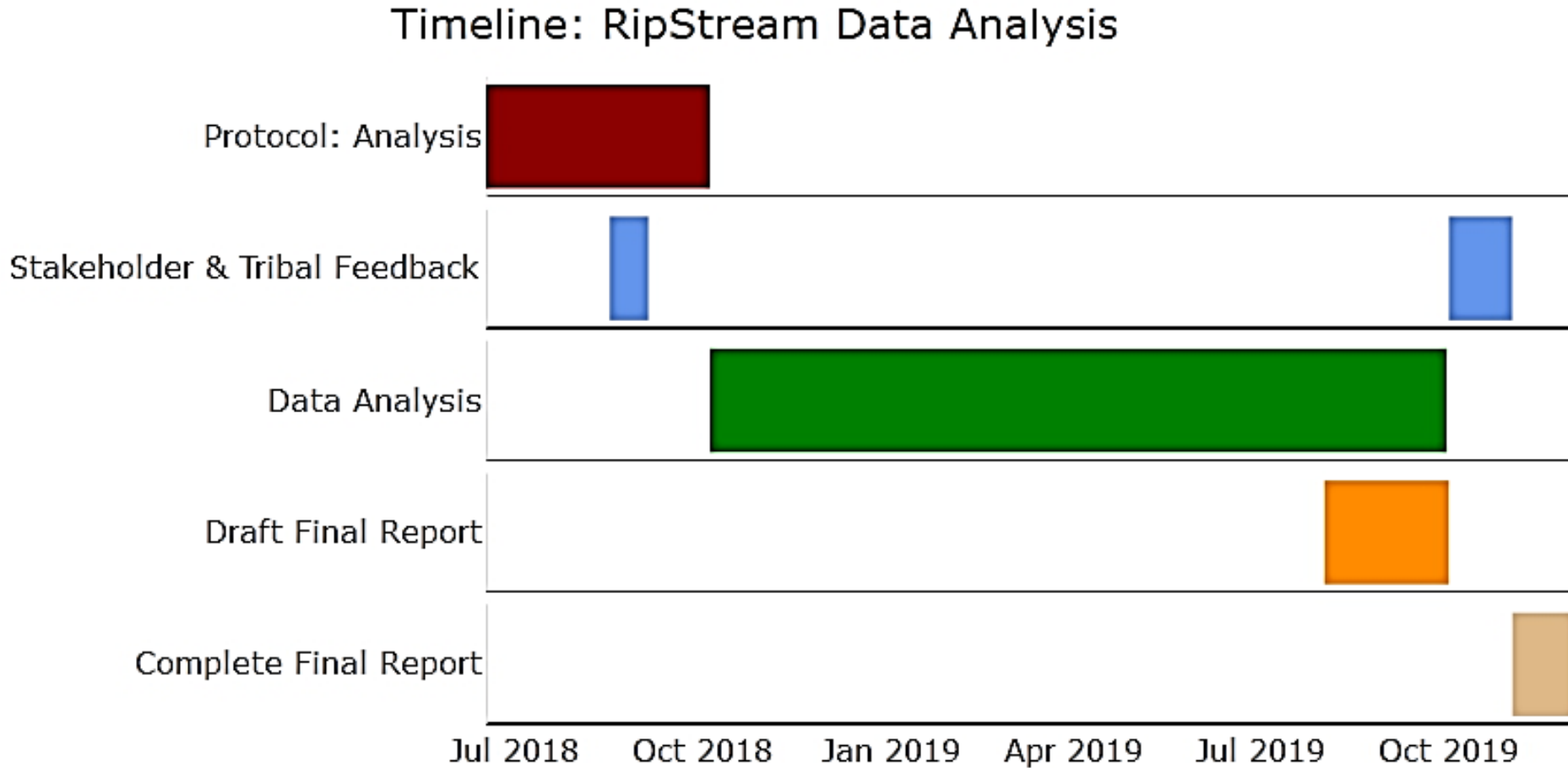
Project components

1. Field Study and Data Analysis - 'RipStream' study
2. Systematic Literature Review
3. Modeling Analysis

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Timeline: Data Analysis



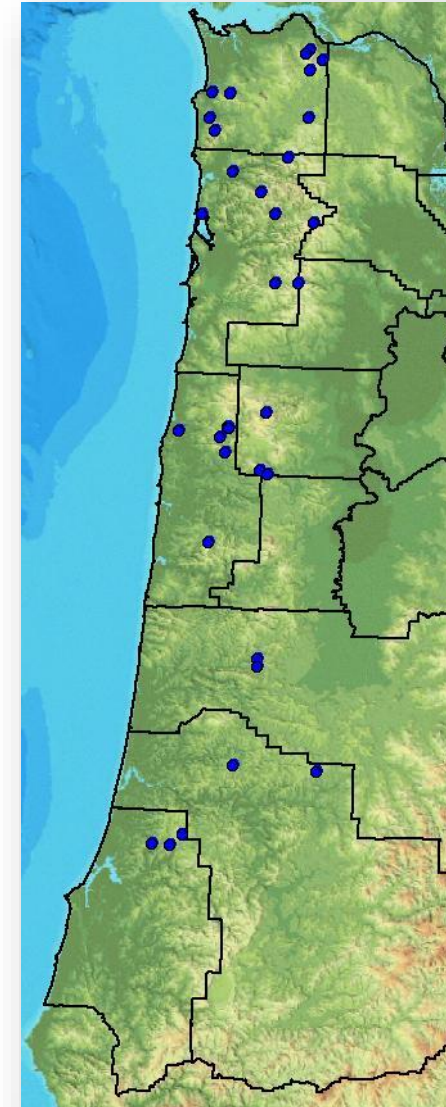
Western OR Streamside Protections Review: Field Data Analysis

RipStream Protocol Questions

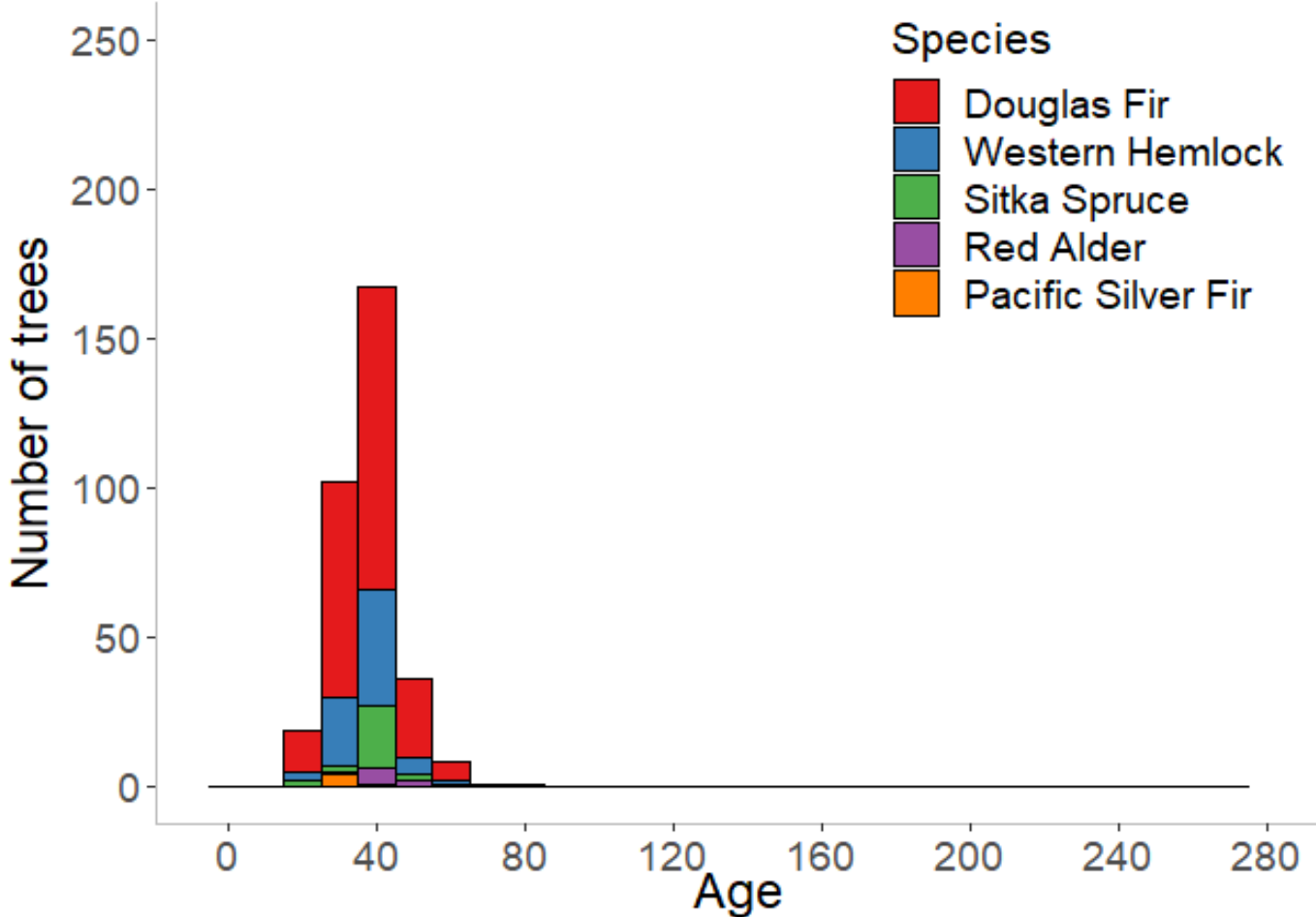
1. Trends in overstory & understory
2. Trends in regeneration
3. Large wood recruitment to streams & riparian

RipStream study

- 18 sites on private land
 - Coast Range & Interior
- Small (4) & Medium (14) F streams
- Pre- and post-harvest data



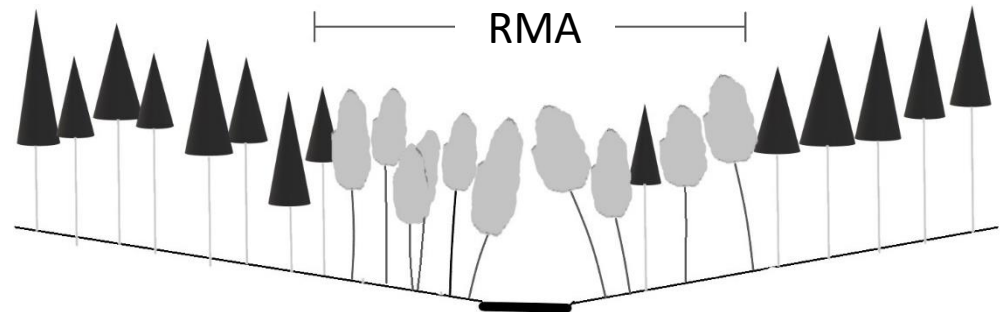
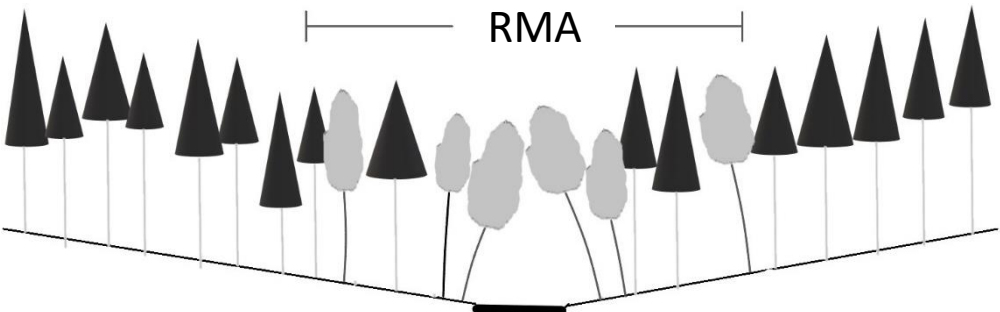
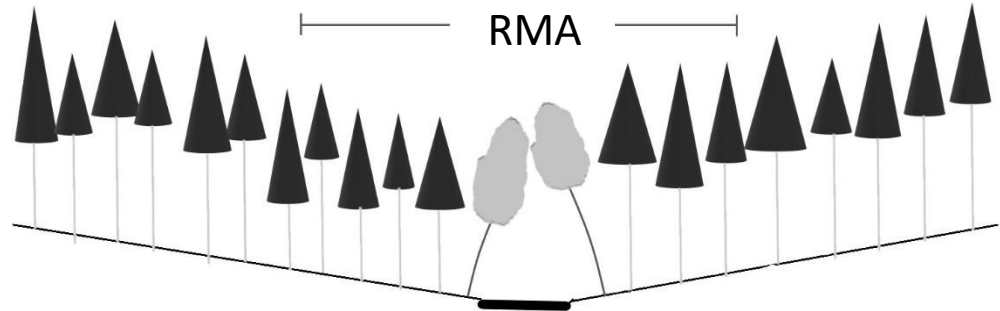
Private, Small & Medium Type F: Tree Age



Summary

- Mean tree age: 38 yrs
- Even-age distribution
- Establishment:
Late 1950s - early 1970s

Private Land: Pre-Harvest



*Conifer-Dominated
'6a'*



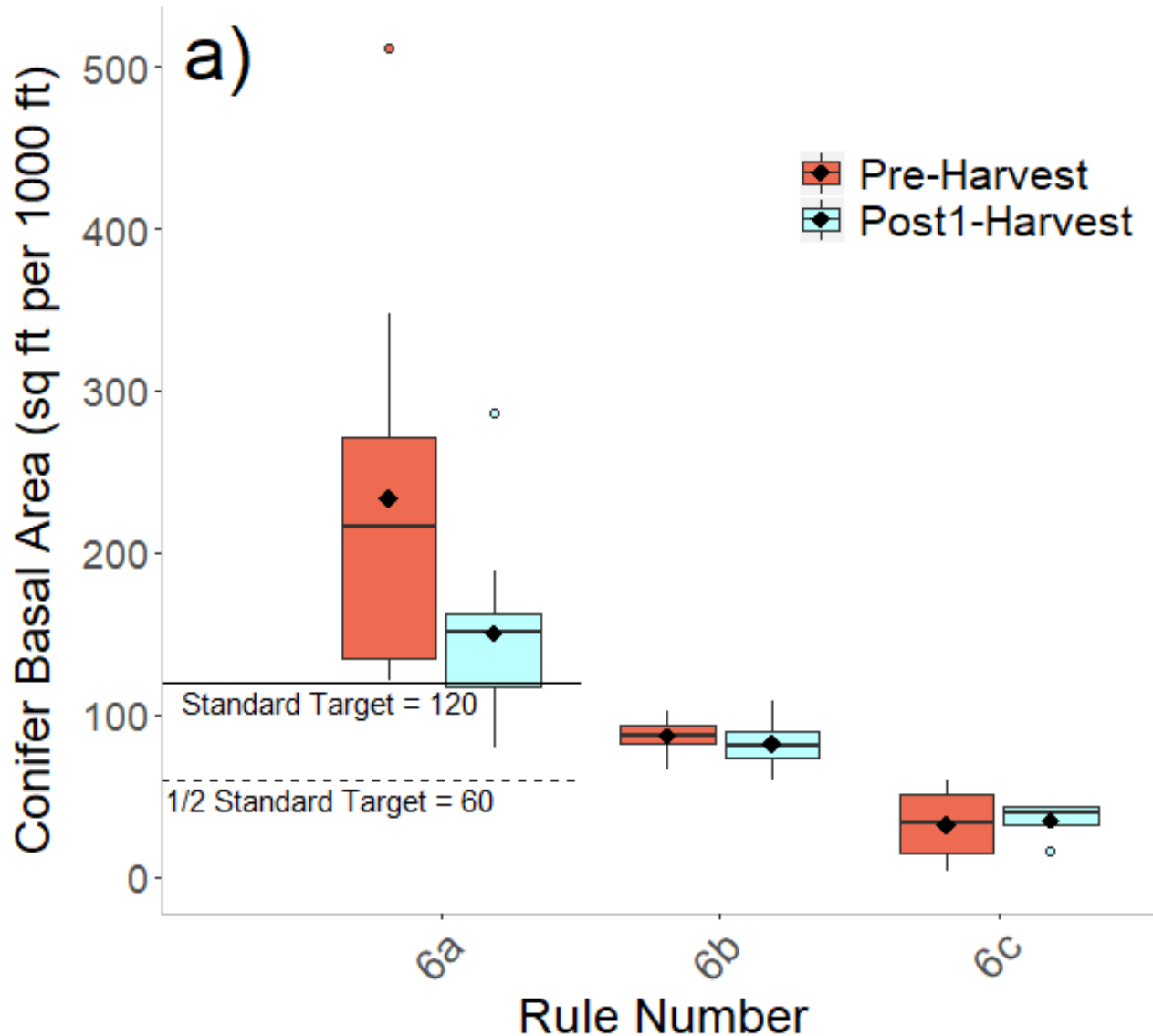
*Mixed Conifer-Hardwood
'6b'*



*Hardwood-Dominated
'6c'*



Private, Medium Type F: Pre- vs. post-harvest basal area



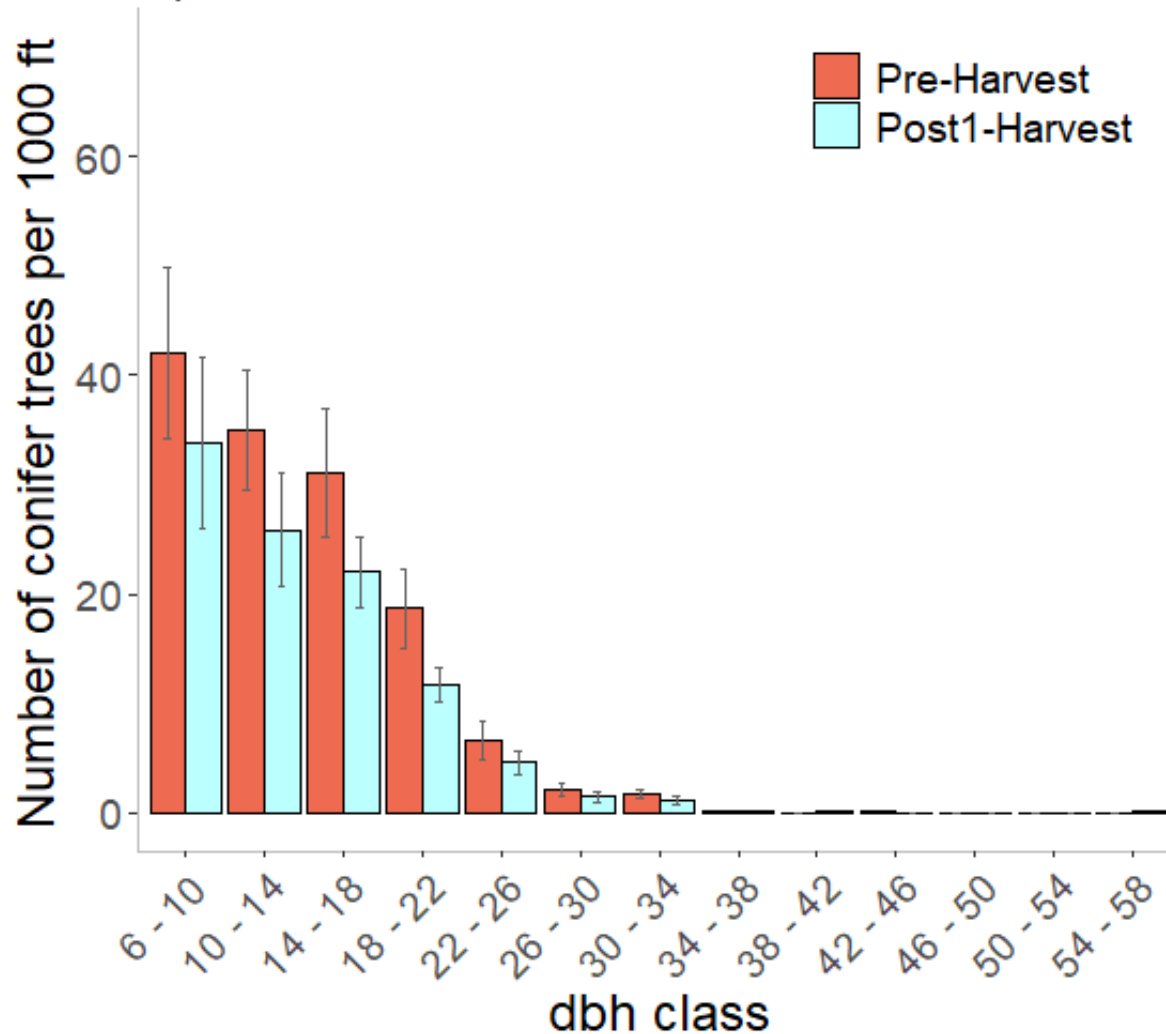
'6a' Sites

- 35% decrease
- 30 sq. ft./1000 ft above ST

Above ST = more harvesting

Private, Medium Type F: Pre & Post-harvest dbh distributions

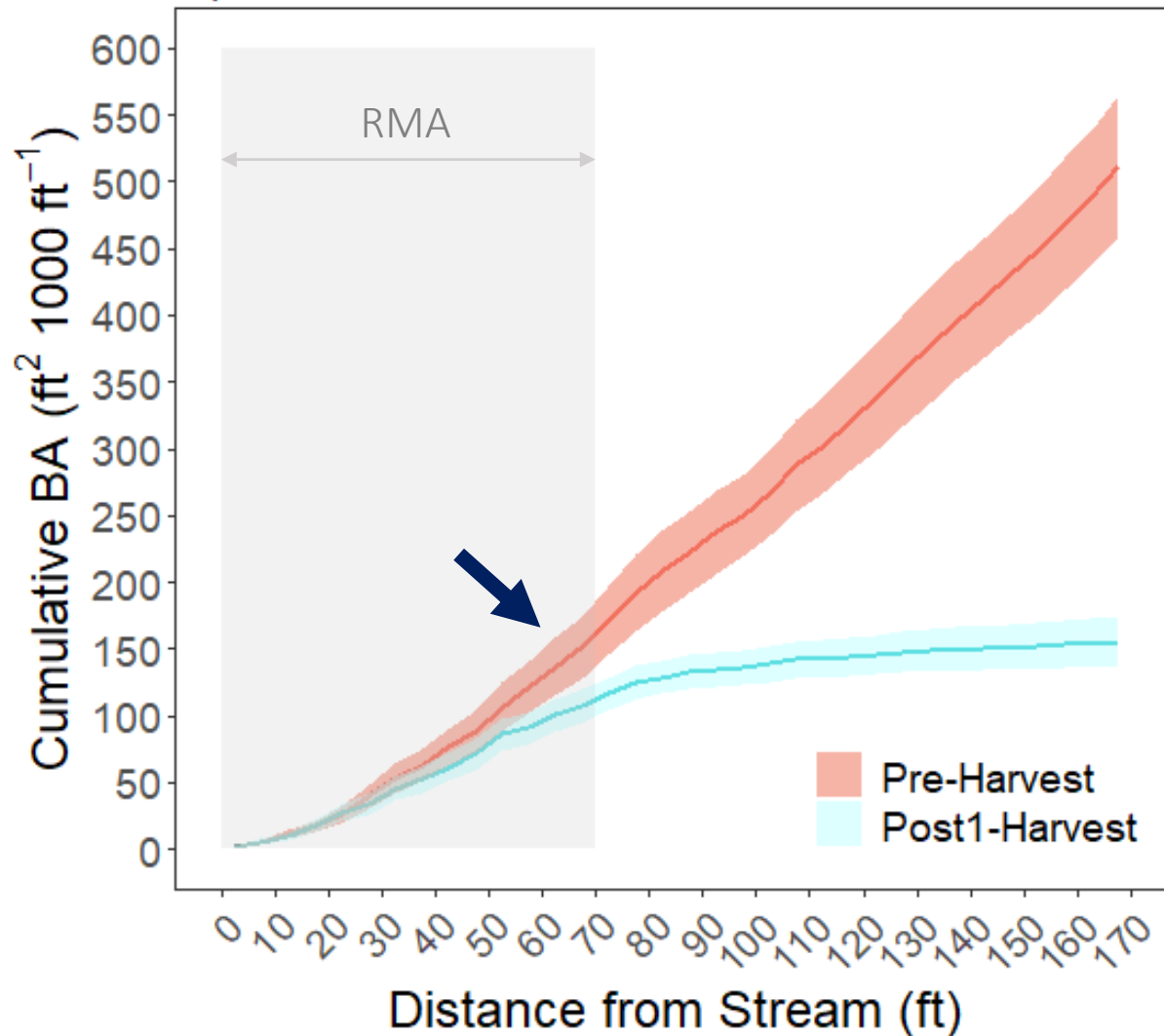
a) Conifers - Medium Streams



- Conifers: decrease for small to medium trees (6 – 26")
- Hardwoods: No apparent trend (not shown)

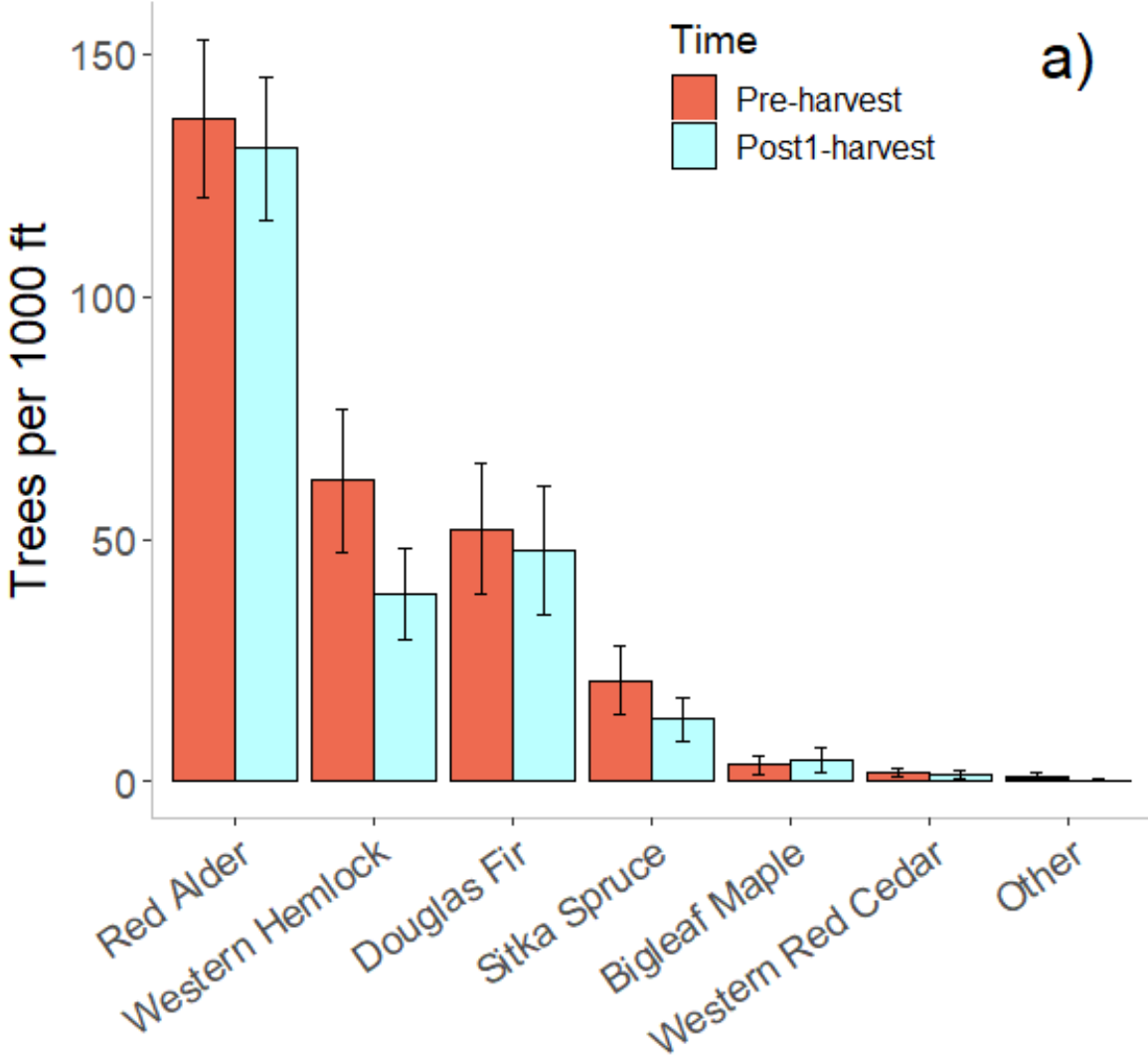
Private, Medium Type F: Change in conifer basal area

a) Conifers - Medium Streams



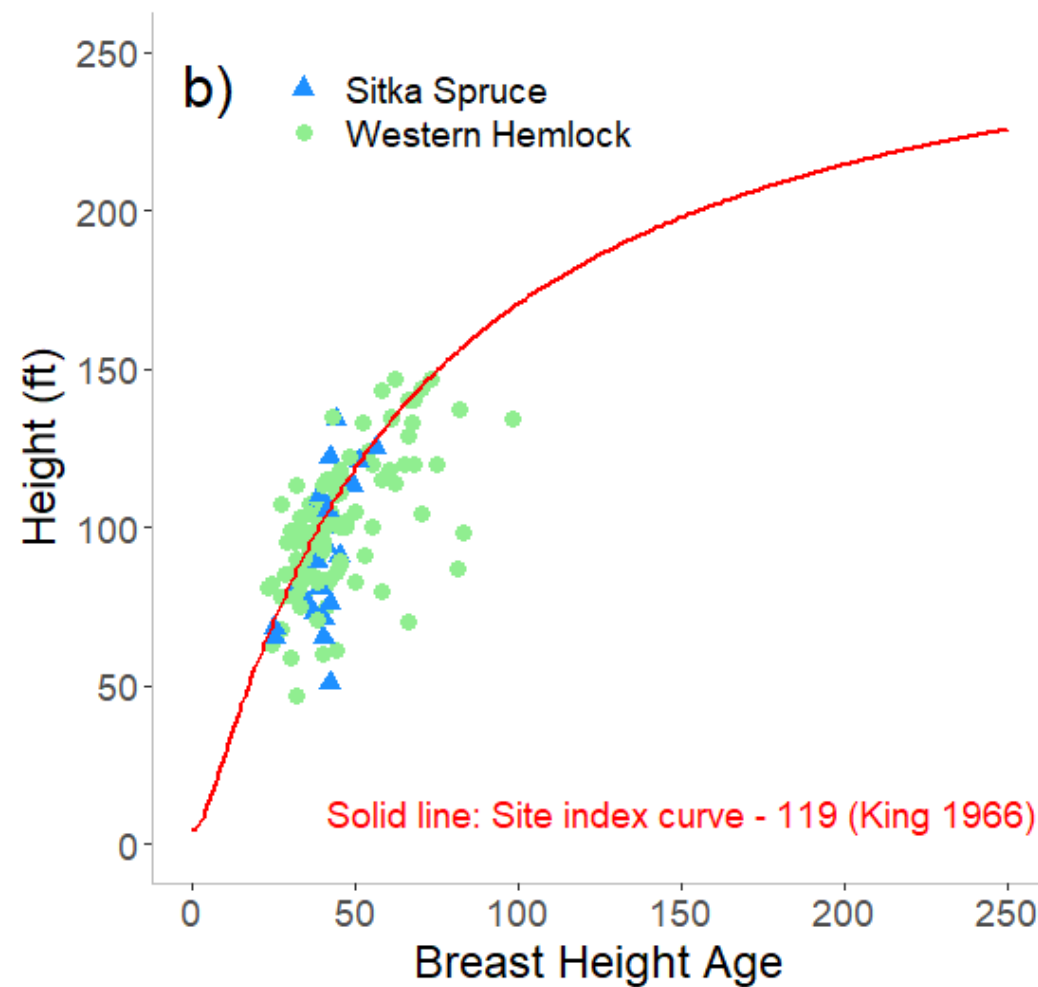
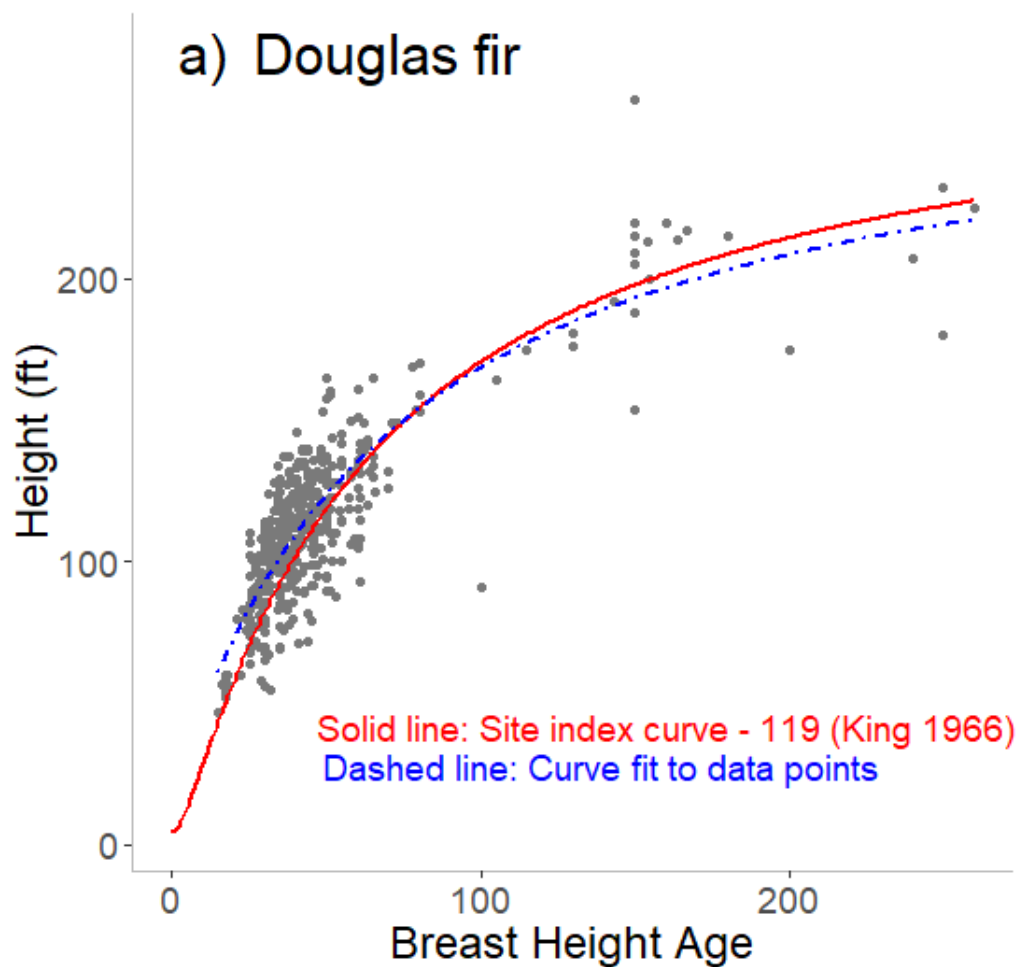
- Most harvesting outside of RMA
- In RMA, most harvesting occurring near edge of RMA

Private, Medium Type F Streams: Density by species in RMA



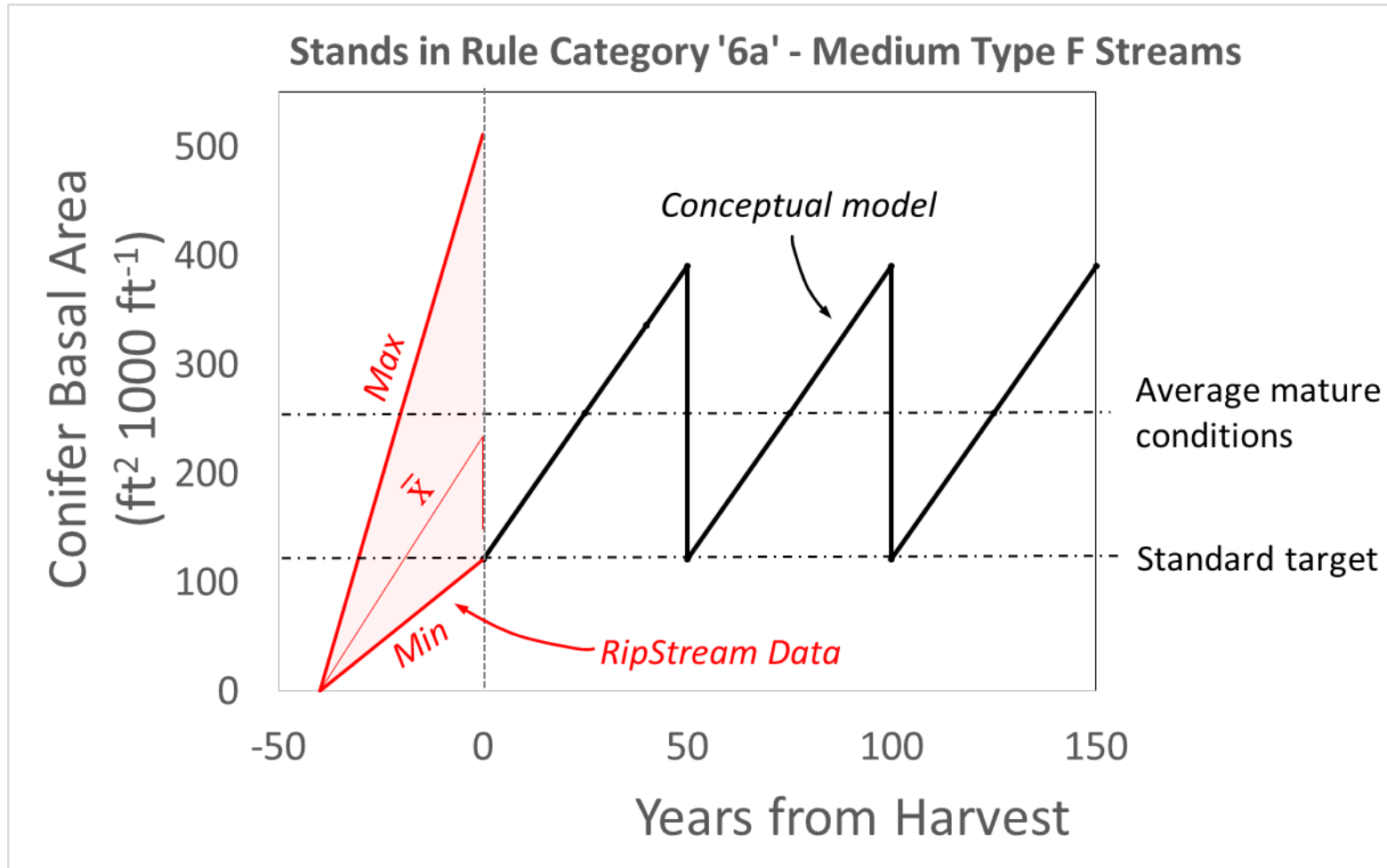
- Most common species - Red alder
- Greatest change – Western hemlock and Sitka spruce
- Small streams – Douglas fir

Age vs. height – site index



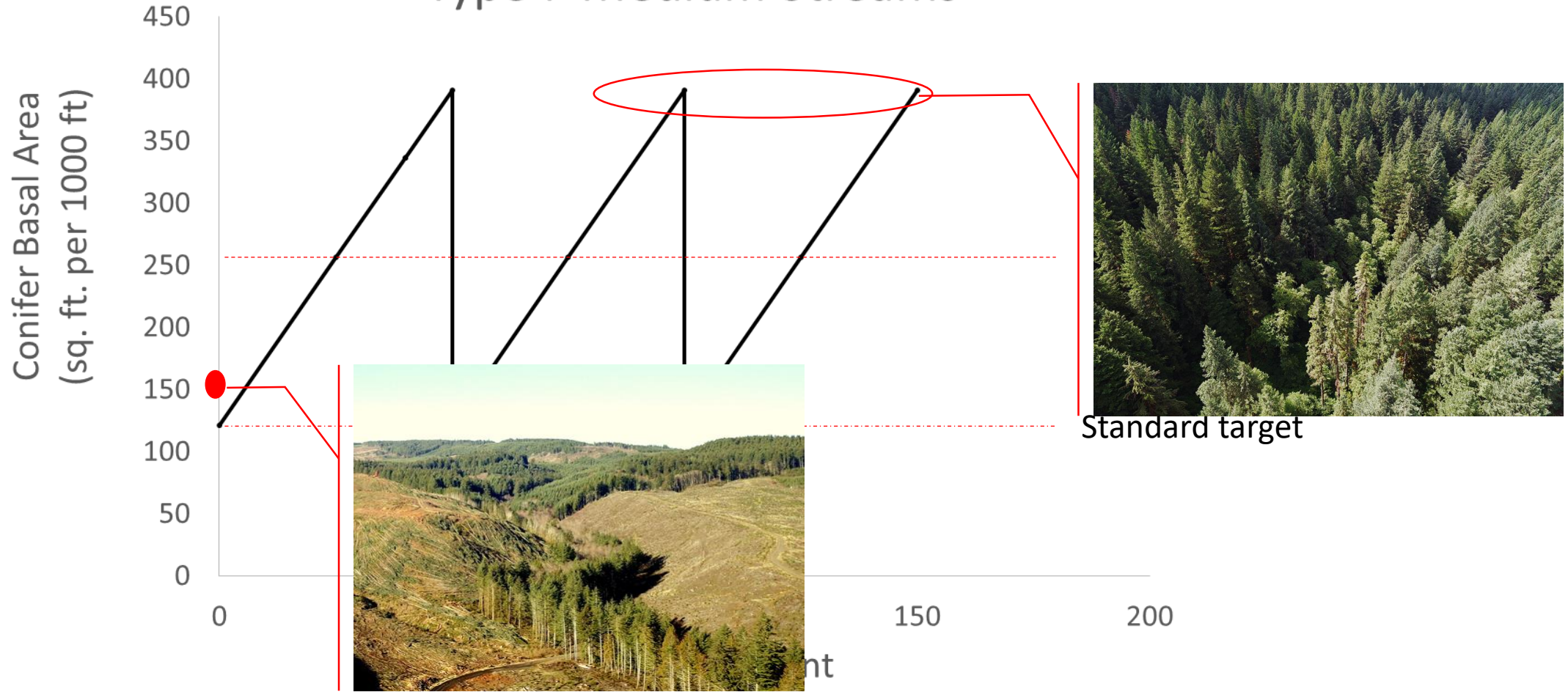
- Assumptions for site index appear to be valid for conifers

Private, Medium Type F Streams



- Wide range of trajectories
- Starting point: above ST

Type F Medium Streams

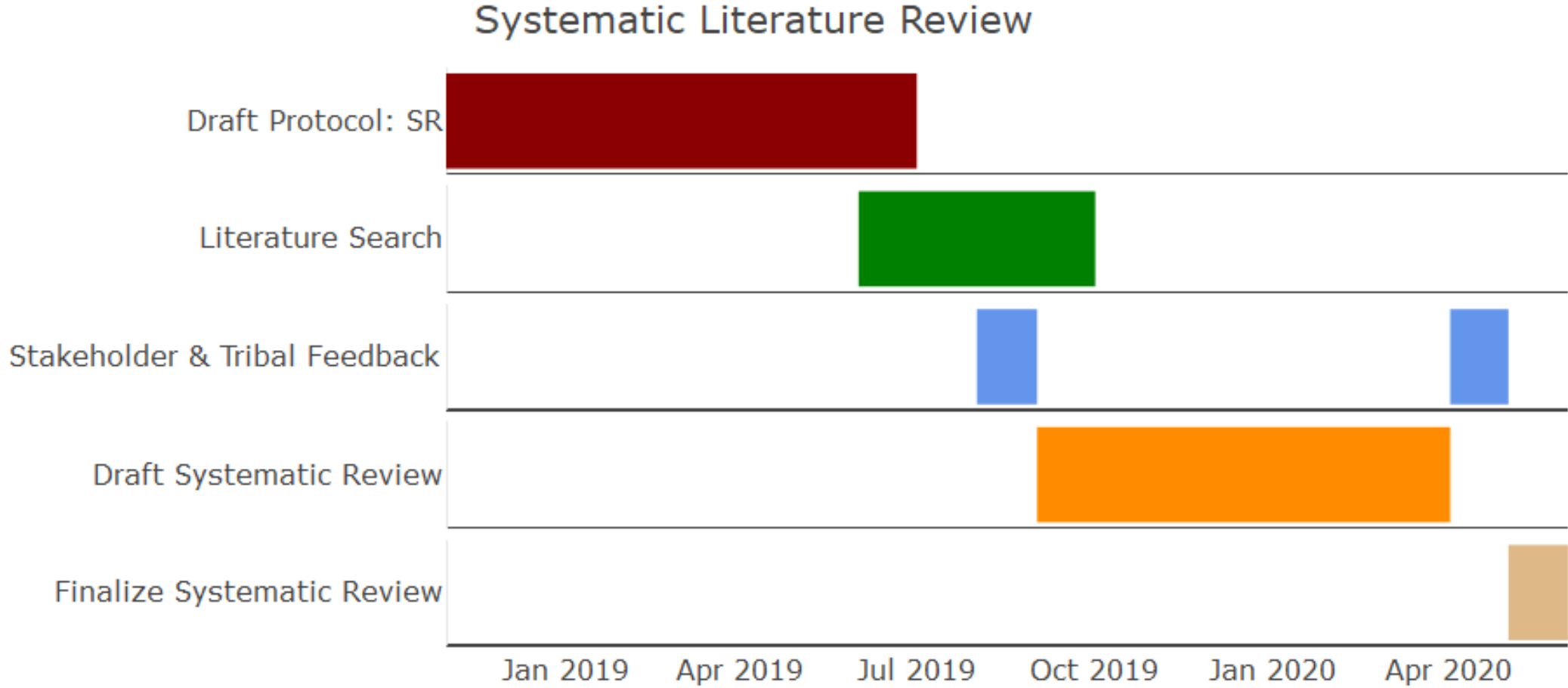


Project components

1. Field Study and Data Analysis - 'RipStream' study
2. Systematic Literature Review
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Timeline: Systematic Review



Western OR: Systematic Review

Systematic Review

- **Draft protocol:** similar to Siskiyou SR protocol
- **Initial literature search (DFC):** contracted out to OSU Institute of Natural Resources

Western OR: Systematic Review

DFC

- *Forest management and desired future condition (DFC)*
- *Range of DFC conditions*
- *Species composition*
- *Regeneration*

Large Wood

- *Forest management and large wood recruitment from RMA*
- *Range of large wood*
- *What is considered 'abundant large wood'?*

Western OR: Systematic Review

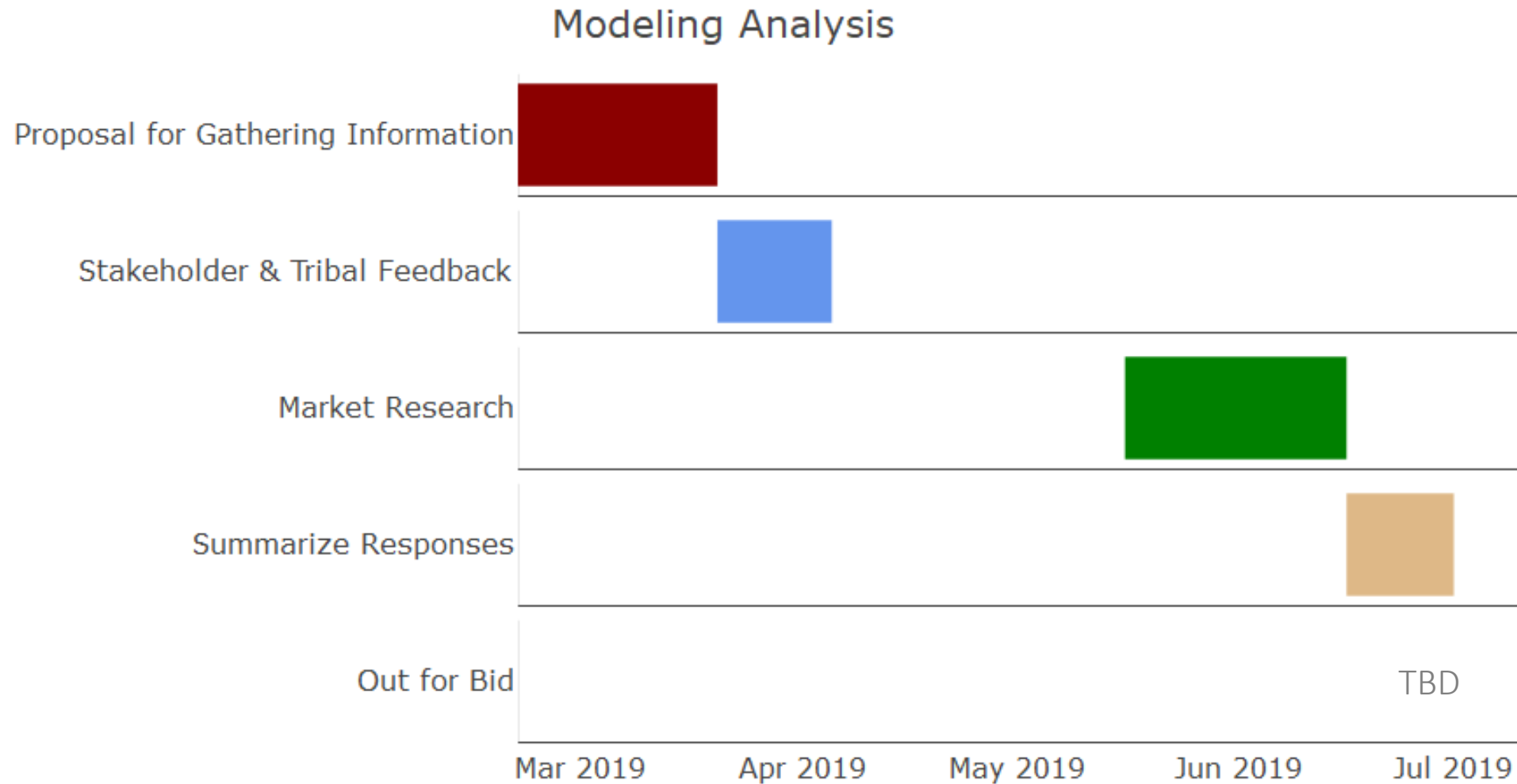
Next Steps: Systematic Review

- Stakeholder and tribal feedback on lit search & protocol
- Inclusion criteria of literature
- Draft systematic review

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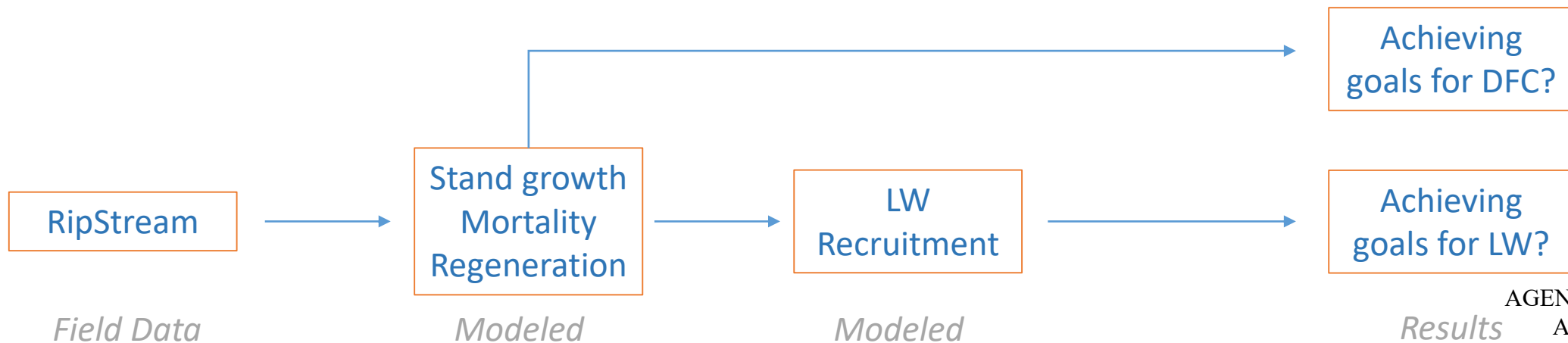
Timeline: Modeling Analysis



Western OR: Modeling Analysis

Overview

1. Project stand growth, mortality, and regeneration over time (+200 yrs) –
 - RipStream – input data
 - Unharvested, As-harvested, FPA minimum requirements (F, SSBT)
2. Project large wood recruitment over time



Western OR: Modeling Analysis

Next Steps:

- Draft Request for Proposal (RFP)
- Stakeholder and tribal feedback
- Out to bid

Questions?

