

Juneau Economic Development Council
(JEDC)

Timber Cluster Working Group

Tongass National Forest
(TNF)

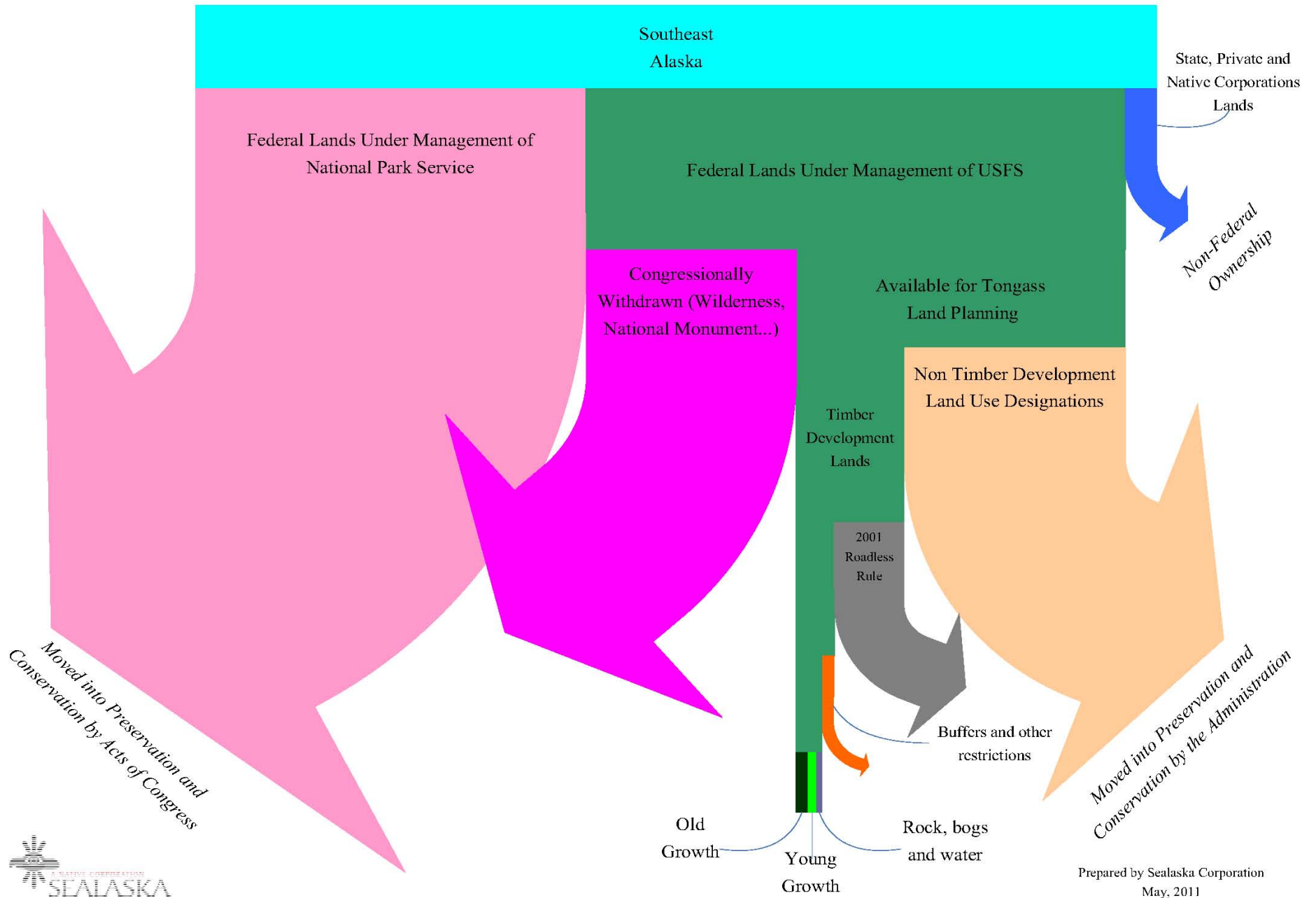
Young Growth Sustained
Yield Analysis

Southeast Conference
September 14, 2011
Ketchikan

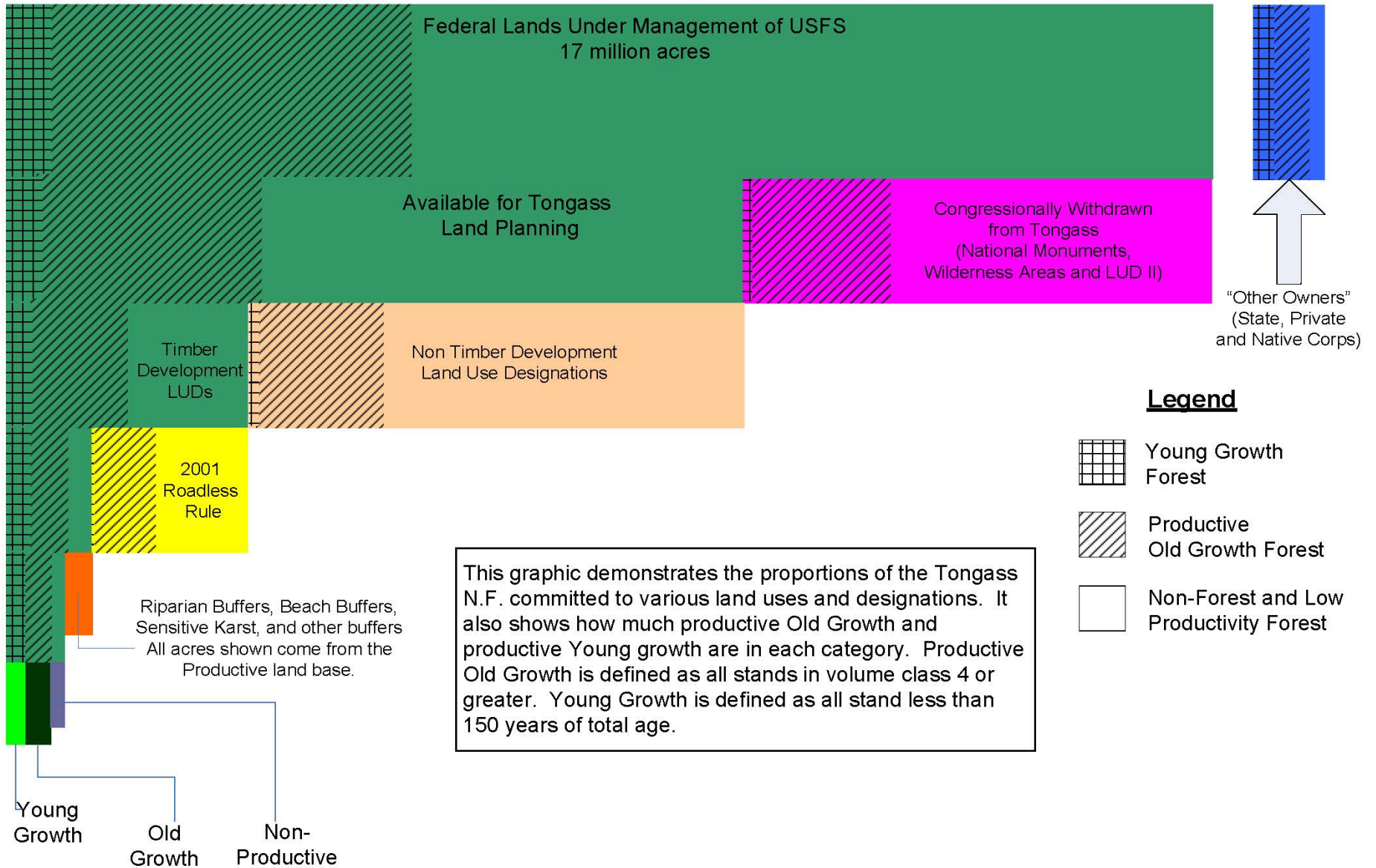
Explore TNF Young Growth Sustained Yield Capacity

- Central Questions
 - Define maximum
 - Quantify impact of administrative reductions
 - Impact of Culmination of Mean Annual Increment (CMAI) ability to transition to young growth harvests
- First step is to define the land base

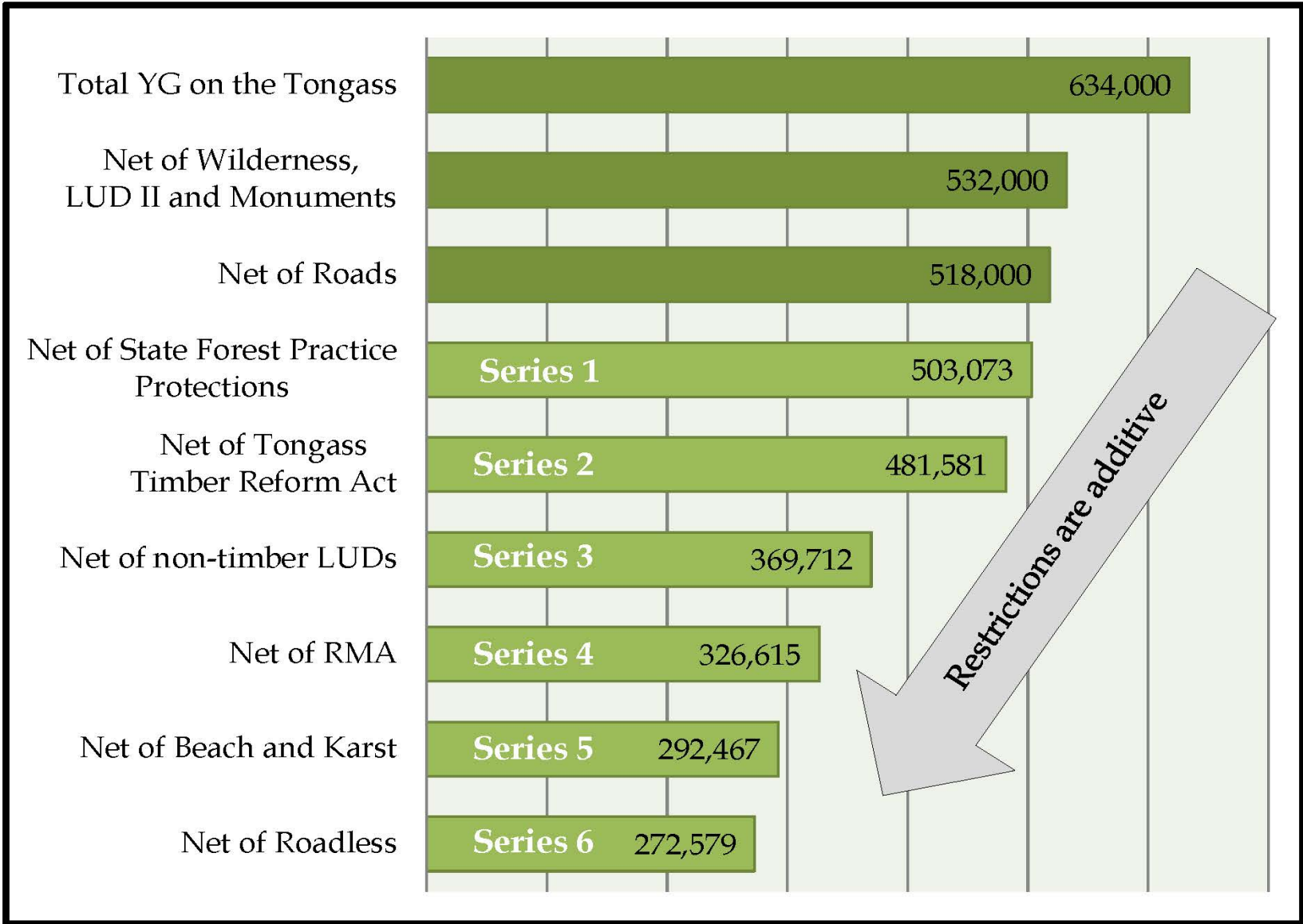
Southeast Alaska Lands and Preservation Status



Proportion of Tongass National Forest Land Committed to Forest Mangement



This graphic demonstrates the proportions of the Tongass N.F. committed to various land uses and designations. It also shows how much productive Old Growth and productive Young growth are in each category. Productive Old Growth is defined as all stands in volume class 4 or greater. Young Growth is defined as all stand less than 150 years of total age.



Necessary Concepts for Sustained Yield Analysis

Define TNF Land Base (OG & YG)

634,000 total acres of young growth

-361,412 acres no cut restrictions

272,579 acres Young Growth suitable

Note: Over 100,000 acres of the 361,412 are removed by 2 or more constraints

Necessary Concepts for Sustained Yield Analysis

- Rotation Length - time to grow the next crop of trees
- Tongass National Forest rotation
 - CMAI
 - TNF 80 - 100 years
- Industry rotation
 - Usually shorter
 - Driven by economic constraints

12 - 25 Alternate Rotation

- Current round log export market conditions
- Balanced with growth rates
- Trees in a “stand” reach:
 - 12 in. Quadric Mean Diameter Breast Height (QDBH)
 - **AND** have 25 Thousand Board Feet per acre (MBF/ac)
- 12 – 25 AR
 - Guideline
 - Useful to account for regional market conditions
 - Evaluate rotation ages with different parameters

150 Year Planning Period (1½ Rotations)

- Annual TNF Sustained Yield (SY) for 272,579 suitable acre base
 - Essentially same for CMAI and 12 – 25 AR
 - CMAI 95 million board feet (MMBF)
 - 12 – 26 MMBF
 - Insufficient YG to reach 95 MMBF
 - for first 4 decades (to 2055) for CMAI
 - For first 3 decades (to 2045) for 12 – 25 AR

Considerations

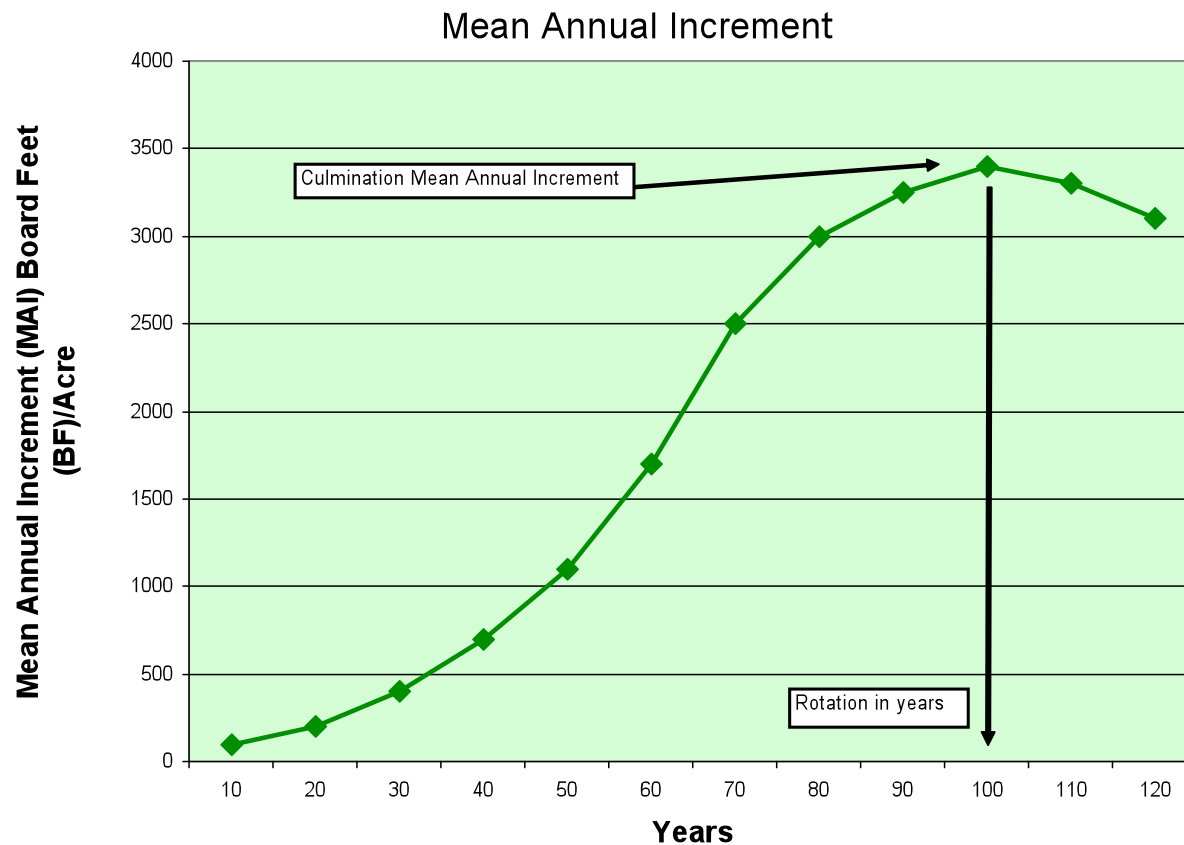
- Additional old growth volume necessary for 3 or 4 decades
- Some YG may be substituted for OG that supports local industries
- No net downs

Recommendations

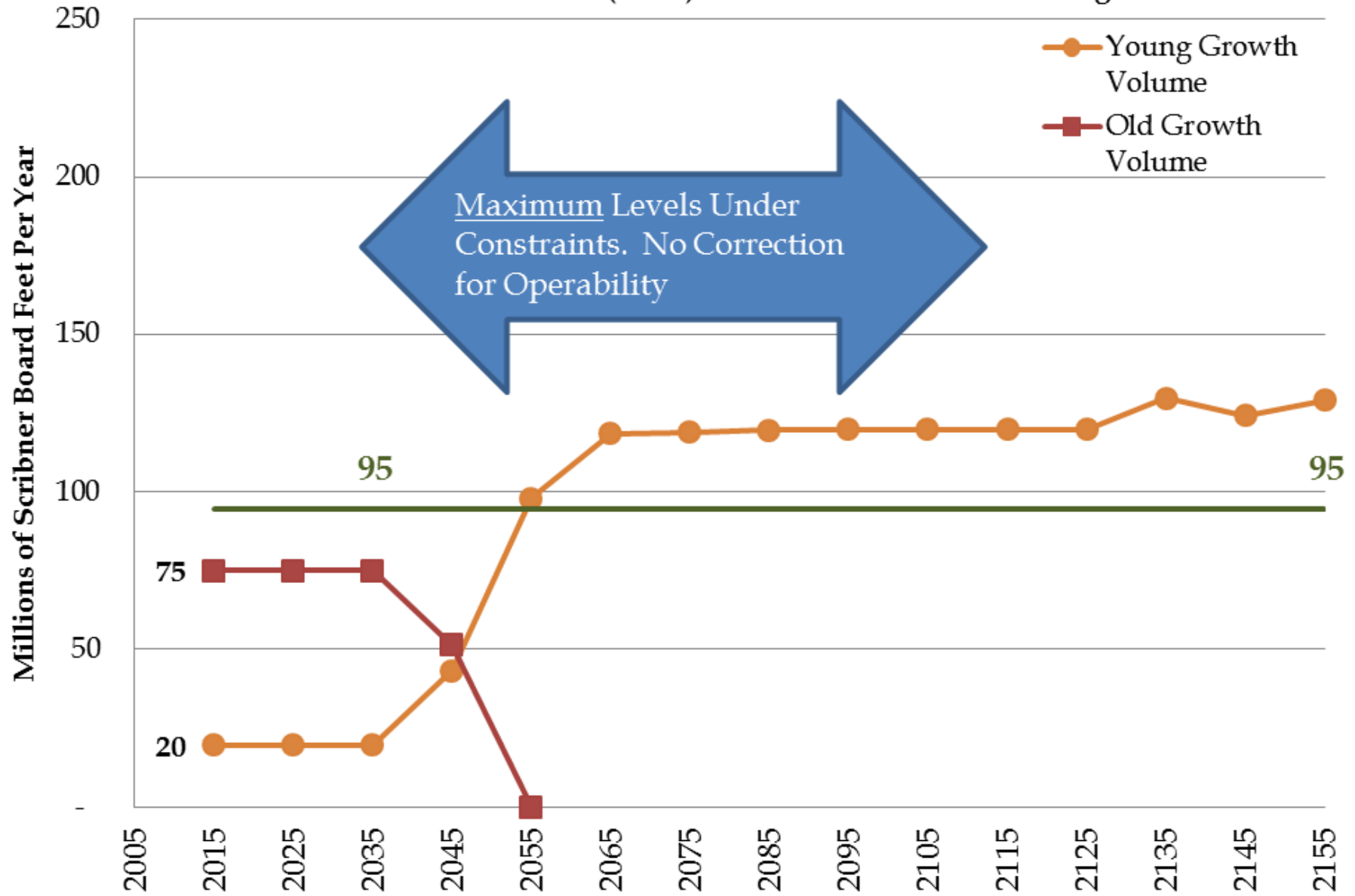
- Need additional analysis
 - OG post roadless
 - Net downs
 - All landowners
- Updated stand level inventory
 - New timber typing
 - 30% more inventory sample by acres; statistically sound methods
 - Ground base operability analysis 10 year horizon
- Re-evaluate TNF administrative restrictions on land base and 2nd growth

Culmination of Mean Annual Increment (CMAI) Rotation

- National Forest Management Act requires Forest Service to use CMAI for regeneration harvests
- Growth rate begins to level off



Transition to YG Harvest Under Current Conditions -Net of all area restrictions (run 6) and with the CMAI rotation age-



Transition to YG Harvest Under Current Conditions -Net of all area restrictions (run 6) and with the 12-25 rotation age-

