Tongass Young Growth Update Report 2021
Prepared by Catherine M Mater, President
Mater Ltd.; Corvallis Oregon

Transition to young growth logging away from old growth logging can happen now … in 2020. This, according to the latest timber inventory work and analysis conducted by three independent organizations between 2015-2019:

- **2015:** Alaska-based timber cruising company Terra Verde was contracted by Oregon-based Mater Engineering dba Mater Ltd to undertake young growth timber inventory on the Tongass using a one plot per acre cruise protocol. Almost 900 YG acres aged 40 to 55 years in the Thorne Bay Ranger and Petersburg Ranger Districts were inventoried and analyzed. All timber cruise data (~ $200,000 paid for by private funding) was delivered to the Tongass National Forest (TNF) free of charge.

- **2016:** In exchange for the new timber cruise data shared by Mater, the TNF provided all GIS metadata files on the Tongass National Forest allowing for comprehensive analysis of all young growth acres throughout the national forest. For analysis purposes, all young growth acres with environmental issues were eliminated from the analysis (karst, cave, beach, LUD, roadless, etc). Remaining acres were deemed “suitable”. Suitable acres were then netted down to only those acres located within 800’ of currently open Forest Service roads (“roaded”). From a starting point of ~ 430,000 acres of young growth throughout the entire national forest, a total of ~ 130,000 acres of suitable, roaded young growth stands were identified for current and future harvest spanning over 5 decades. Approximately 85% of these acres were “clustered” (vs scattered) acres where 500 + contiguous acres of 55 + yr old stands were identified per working circle. Almost 60% of these acres were pre-commercially thinned. Approximately 50% of all acres had a site index of 90+; another 40% had a site index of 74-89.

- **Between 2016-2018,** the US Forest Service in partnership with the State of Alaska Division of Forestry conducted an intensive young growth inventory covering ~ 40,000 acres in five working circles throughout the Tongass (Klawok, Ketchikan, Petersburg, Wrangell, and Kake)

The results contained in this summary on young growth options and opportunities in SE Alaska have resulted from over 6 years of UFSF GIS metadata analysis, in-field timber cruising conducted throughout the Tongass National Forest by the USFS Region 10 and the Tongass National Forest District Office, the USFS Pacific Northwest Research Station, and Mater Engineering dba Mater Ltd. (under contract with the Natural Resource Defense Council in Alaska and Oregon-based GEOS Institute).
Total of 43 timber volume working circles analyzed:

- 15 DataBasin working circles in the Thorne Bay region;
- 4 working circles in the Craig region;
- 8 working circles in the Ketchikan region;
- 9 working circles in the Petersburg region;
- 7 working circles in the Wrangell region.

2017-2019 USFS young growth timber cruise sites shown as gray outlines with DataBasin working circles as overlay.
Between 37.5 to 41.3 mmbf/yr (9,367 cluster acres; 10,328 total acres) of merchantable volume from suitable, roaded young growth acres within 800' of open Forest Service roads (no road building required). 91% of those acres are contiguous acre clusters of 500 acres or more. 35% of acres are PCT; 65% are non-PCT.

<table>
<thead>
<tr>
<th>Supply Area</th>
<th>Total * (55 yr old harvest)</th>
<th>Total acres in 500 + acre clusters **</th>
<th>% of total acres in clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thorne Bay</td>
<td>4,286 acres: 86 mmbf/yr 17 mmbf/yr</td>
<td>Cluster areas: 3,756 acres 67 mmbf/yr or 15 mmbf/yr 33% PCT; 67% non-PCT</td>
<td>88%</td>
</tr>
<tr>
<td>Total All Supply Areas</td>
<td>10,328</td>
<td>Cluster areas: 2,344 acres 77 mmbf/yr or 15.4 mmbf/yr 30% PCT; 70% non-PCT</td>
<td>100%</td>
</tr>
<tr>
<td>Craig</td>
<td>3,845 acres 77 mmbf 15.4 mmbf/yr</td>
<td>Cluster areas: 3,845 acres 77 mmbf/yr or 15.4 mmbf/yr</td>
<td>100%</td>
</tr>
<tr>
<td>Ketchikan</td>
<td>1,437 acres 28.7 mmbf 5.7 mmbf/yr</td>
<td>Cluster area: 6 24.4 mmbf/yr 5 mmbf/yr 35% PCT; 65% non-PCT</td>
<td>85%</td>
</tr>
<tr>
<td>Petersburg</td>
<td>733 acres 14.6 mmbf 3 mmbf/yr</td>
<td>Cluster area: 5 544 acres 10.9 mmbf/yr 2.2 mmbf/yr 88% PCT; 12% non-PCT</td>
<td>74%</td>
</tr>
<tr>
<td>Wrangell</td>
<td>27 acres .541 mmbf 1.066 mmbf/yr</td>
<td>NA NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

* = 1) Harvest at 55 years old;  
2) All environmentally sensitive acres excluded from harvest consideration;  
3) Only young growth stands within 800' of currently open FS roads included for harvest.  
** = Cluster acres are contiguous (not scattered) 500 + acre clusters within 800' of open Forest Services roads.

Note: 2020 - 2029 @ 20 mbf/ac  
2030 - 2050 @ 25 mbf/ac  
Includes 10% netdown for downfall & defect
Between **63.7 to 66 mmbf/yr** (15,920 cluster acres; 16,517 total acres) of merchantable volume from suitable, roaded young growth acres within 800' of open Forest Service roads (no road building required). 96% of those acres are contiguous acre clusters of 500 acres or more. 89% of acres are PCT; 11% are non-PCT.
Between 65 to 74 mmbf/yr (12,979 cluster acres; 14,730 total acres) of merchantable volume from suitable, roaded young growth acres within 800' of open Forest Service roads (no road building required). 88% of those acres are contiguous acre clusters of 500 acres or more. 88% of acres are PCT; 12% are non-PCT.

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**Supply Area**

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<tr>
<th>Total * (55 yr old harvest)</th>
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</thead>
<tbody>
<tr>
<td>Thorne Bay</td>
<td>Areas: red cluster + 2,3,6,10,11,13</td>
<td>Cluster areas: 4,7,9</td>
</tr>
<tr>
<td></td>
<td>5,930 acres</td>
<td>5,094 acres</td>
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<tr>
<td></td>
<td>148 mmbf</td>
<td>127 mmbf or 25.4 mmbf/yr</td>
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<tr>
<td></td>
<td>30 mmbf/yr</td>
<td>77% PCT; 23% non-PCT</td>
</tr>
<tr>
<td></td>
<td>86%</td>
<td></td>
</tr>
<tr>
<td>Ketchikan</td>
<td>Area: 2</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>93 acres</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>2.3 mmbf</td>
<td></td>
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<tr>
<td></td>
<td>465 mmbf/yr</td>
<td></td>
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<tr>
<td></td>
<td>86%</td>
<td></td>
</tr>
<tr>
<td>Petersburg</td>
<td>Areas: red clusters + 2,8</td>
<td>Cluster areas: 1,3,7</td>
</tr>
<tr>
<td></td>
<td>3,156 acres</td>
<td>2,979 acres</td>
</tr>
<tr>
<td></td>
<td>79 mmbf</td>
<td>74.5 mmbf or 15 mmbf/yr</td>
</tr>
<tr>
<td></td>
<td>16 mmbf/yr</td>
<td>91% PCT; 9% non-PCT</td>
</tr>
<tr>
<td></td>
<td>94%</td>
<td></td>
</tr>
<tr>
<td>Wrangell</td>
<td>Areas: red clusters + 3,</td>
<td>Cluster areas: 4,5</td>
</tr>
<tr>
<td></td>
<td>4,085 acres</td>
<td>3,641 acres</td>
</tr>
<tr>
<td></td>
<td>102 mmbf</td>
<td>91 mmbf or 18 mmbf/yr</td>
</tr>
<tr>
<td></td>
<td>20.4 mmbf/yr</td>
<td>95% PCT; 5% non-PCT</td>
</tr>
<tr>
<td></td>
<td>89%</td>
<td></td>
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3) Only young growth stands within 800’ of currently open FS roads included for harvest.

** = Cluster acres are contiguous (not scattered) 500 + acre clusters within 800’ of open Forest Services roads.

Note: 2020 - 2029 @ 20 mbf/ac
2030 - 2050 @ 25 mbf/ac
Includes 10% netdown for downfall & defect
Between **57 to 72 mmbf/yr** (11,459 cluster acres; 14,412 total acres) of merchantable volume from suitable, roaded young growth stands within 800' of currently open Forest Service roads (no road building required). 80% of those acres are contiguous acre clusters of 500 acres or more. 84% of acres are PCT; 16% are non-PCT.

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<tr>
<td>Thorne Bay</td>
<td>Areas: red clusters + 1,2,4,6,9,12-15</td>
<td>Cluster areas: 3,5,7,8,11 3,540 acres 88 mmbf or 17.6 mmbf/yr 85% PCT; 15% non-PCT</td>
</tr>
<tr>
<td>4,615 acres: 115 mmbf 23 mmbf/yr</td>
<td>77%</td>
<td></td>
</tr>
</tbody>
</table>

**Total All Supply Areas**

<table>
<thead>
<tr>
<th>Total acres: 14,412</th>
<th>5-yr total: 360 mmbf</th>
<th>Total per yr: 72 mmbf</th>
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</thead>
</table>

**Acres in cluster areas 500+ contiguous acres:** 11,459 acres (80% of total)

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**Craig**

- Area: 2
  - Total Acres: 30 acres
  - 75 mmbf
  - 150 mmbf/yr
  - NA
  - NA

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**Ketchikan**

- Areas: red clusters + 1,2,3,8
  - Total Acres: 1,655 acres
  - 41 mmbf
  - 8 mmbf/yr
  - 41 mmbf
  - 7.3 mmbf/yr
  - 49%

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**Petersburg**

- Areas: red clusters + 7
  - Total Acres: 6,645 acres
  - 166 mmbf
  - 33 mmbf/yr
  - 161 mmbf or 32 mmbf/yr
  - 81% PCT; 19% non-PCT

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**Wrangell**

- Areas: red clusters + 3,6,7
  - Total Acres: 1,467 acres
  - 36.6 mmbf
  - 7.3 mmbf/yr
  - 17 mmbf or 3.3 mmbf/yr
  - 79% PCT; 21% non-PCT

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**Note:**

- 2020 - 2029 @ 20 mmbf/ac
- 2030 - 2050 @ 25 mmbf/ac
- Includes 10% netdown for downfall & defect

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**Clusters:**

- Clusters are contiguous (not scattered) 500+ acre clusters within 800' of currently open Forest Service roads.

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**Permissions:**

- Pre-Publication Data and Analysis Conducted by Catherine Mater; Mater Engineering dba Mater Ltd
- Permission Required to Circulate

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**Maps:**

- Thorne Bay
- Craig
- Ketchikan
- Petersburg
- Wrangell
Between 78 to 94 mmbf/yr (15,169 cluster acres; 18,868 total acres) of merchantable volume from suitable, roaded young growth acres within 800' of open Forest Service roads (no road building required). 83% of those acres are contiguous acre clusters of 500 acres or more. 91% of acres are PCT; 9% are non-PCT.

### Thorne Bay Supply Area

- **Total * (55 yr old harvest)**
  - Areas: red clusters + 2,6,9,11,13,15
  - 6,189 acres: 155 mmbf 31 mmbf/yr

- **Total acres in 500 + acre clusters **
  - Cluster areas: 1,3,5,4
  - 4,762 acres
  - 119 mmbf or 24 mmbf/yr
  - 87% PCT; 13% non-PCT

- **% of acres in clusters**
  - 77%

### Craig Supply Area

- **Total All Supply Areas**
  - Total acres: 18,868

- **5-yr total: 472 mmbf**

- **Total per yr: 94 mmbf**

### Ketchikan Supply Area

- **Total acres: 1,2421 acres 10.5 mmbf 2 mmbf/yr NA NA**

### Petersburg Supply Area

- **Areas: red clusters +2, 4,7 5,607 acres 140 mmbf 28 mmbf/yr**

### Wrangell Supply Area

- **Areas: red clusters +2, 4,7 5,607 acres 140 mmbf 28 mmbf/yr**

### Cluster Acres

- Cluster acres are contiguous (not scattered) 500 + acre clusters within 800' of open Forest Service roads.

### Note:

- 2020 - 2029 @ 20 mbf/ac
- 2030 - 2050 @ 25 mbf/ac

Includes 10% netdown for downfall & defect
Between 47 to 65 mmbf/yr (9,442 cluster acres; 13,035 total acres) of merchantable volume from suitable, roaded young growth acres within 800' of open Forest Service roads (no road building required). 72% of those acres are contiguous acre clusters of 500 acres or more. 58% of acres are PCT; 46% are non-PCT.

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<td>Thorne Bay</td>
<td>Areas: red clusters + 23,6,9, 11-14 5,059 acres 126 mmbf 25 mmbf/yr Cluster areas: 1,4,5,8 4,294 acres 107 mmbf or 21 mmbf/yr 41% PCT; 59% non-PCT</td>
<td>85%</td>
<td></td>
</tr>
<tr>
<td>Craig</td>
<td>Areas: red cluster +4 728 acres 18 mmbf 3.6 mmbf/yr Cluster area: 2 497 acres 12.5 mmbf or 2.5 mmbf/yr 10% PCT; 90% non-PCT</td>
<td>68%</td>
<td></td>
</tr>
<tr>
<td>Ketchikan</td>
<td>Areas: red clusters + 1,2,5,8 793 acres 20 mmbf 4 mmbf/yr NA NA</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Petersburg</td>
<td>Areas: red clusters + 1,7,8,9 4,547 acres 114 mmbf 23 mmbf/yr Cluster areas: 2,3,4,6 3,858 acres 96 mmbf or 19 mmbf/yr 75% PCT; 25% non-PCT</td>
<td>85%</td>
<td></td>
</tr>
<tr>
<td>Wrangell</td>
<td>Areas: red cluster + 4-7 1,908 acres 48 mmbf 9.5 mmbf/yr Cluster area: 1 794 acres 20 mmbf or 4 mmbf/yr 71% PCT; 29% non-PCT</td>
<td>42%</td>
<td></td>
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Note: 2020 - 2029 @ 20 mmbf/ac 
2030 - 2050 @ 25 mmbf/ac 
Includes 10% netdown for downfall & defect
Between **53 to 72 mmbf/yr** (10,571 cluster acres; 14,405 total acres) of merchantable volume from suitable, roaded young growth acres within 800' of open Forest Service roads (no road building required). 73% of those acres are contiguous acre clusters of 500 acres or more. 41% of acres are PCT; 59% are non-PCT.