Impacts of Arrearage on the Sustainable Harvest Calculation

A report to the Board of Natural Resources

presented by

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October 4, 2016
Purpose

• To compare arrearage scenarios by their relative effects on harvest levels.

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The following scenarios are for comparative purposes only. These numbers should only be viewed in the context of this exercise, as further choices around the Sustainable Harvest Calculation will influence final volume levels.

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Trust Mandate

As manager of state trust lands, DNR has legal fiduciary responsibilities under the State Constitution to:

- Generate revenue and other benefits for each trust, in perpetuity
- Preserve the corpus of the trust
- Exercise reasonable care and skill
- Act prudently to reduce the risk of loss for the trusts
- Maintain undivided loyalty to beneficiaries
- Act impartially with respect to current and future beneficiaries
If an arrearage exists, then the department will:

- Conduct an analysis
- Identify greatest return to the trusts
- Offer for sale the arrearage in addition to the sustainable harvest level, if in the best interests of the trusts
Arrearage

Western Washington FY 2005-2014

Volume we planned to sell
- Volume we sold
Arrearage

5,500 MMBF
- 5,038 MMBF
462 MMBF
Arrearage by Sustainable Harvest Unit

![Map showing harvest volume by sustainable harvest unit with data points representing different regions.](image-url)
Arrearage by Sustainable Harvest Unit

Only Sustainable Harvest Units in Arrears

702 MMBF
Choices that had to be made

- Is the arrearage **462 or 702**?
- If not rolled in, when should it be offered? **10 years, or less**?
Arrearage Options

Harvest is included in decadal harvest level

462 mmbf from SHUs in arrears in 1 year

702 mmbf from SHUs in arrears in 5 years

462 mmbf from SHUs in arrears in 10 years
Why was there an arrearage?

<table>
<thead>
<tr>
<th>Trust Land Transfers</th>
<th>Riparian Harvests</th>
<th>Murrelet Conservation</th>
<th>Financial Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>302 MMBF transferred</td>
<td>346 MMBF unharvested</td>
<td>371 MMBF in deferred status</td>
<td></td>
</tr>
</tbody>
</table>

*From the August 2015 BNR Presentation*
Arrearage Scenarios
Scenario Harvest Levels

- 462 MMBF / 10 Years
- 702 MMBF / 5 Years
- 462 MMBF / 1 Year
- Rolled In

Harvest Level (MMBF/Decade) vs Decade
### Decade 1 Harvest Level (MMBF)

*By Arrearage Scenario*

<table>
<thead>
<tr>
<th></th>
<th>Rolled In</th>
<th>462 MMBF / 1 Year</th>
<th>702 MMBF / 5 Years</th>
<th>462 MMBF / 10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Harvest Level</td>
<td>4,644</td>
<td>4,310</td>
<td>4,148</td>
<td>4,310</td>
</tr>
<tr>
<td>Arrearage Harvest</td>
<td>0</td>
<td>462</td>
<td>702</td>
<td>462</td>
</tr>
<tr>
<td>Total Harvest</td>
<td>4,644</td>
<td>4,773</td>
<td>4,850</td>
<td>4,773</td>
</tr>
</tbody>
</table>
Why these outcomes?
Arrearage explained
Decade 1
Collect Inventory
Calculate Harvest Level
Calculate Harvest Level

3 trees
Implement harvest schedule

a decade goes by
Implement harvest schedule
2 of 3 were cut
Implement harvest schedule

2 of 3 were cut, 1 became the arrearage

Arrearage
Collect Inventory

Arrearage
Calculate Harvest Level - Options
Calculate Harvest Level - Options

Option 1 – Roll it in
Calculate Harvest Level - Options

Option 1 – Roll it in
Calculate Harvest Level - Options

Option 1 – Roll it in
Sustainable Harvest Level = 4 trees
Calculate Harvest Level - Options
Option 2 – Take it out, add it back
Calculate Harvest Level - Options
Option 2 – Take it out, add it back
Sustainable Harvest Level (3 trees) + Arrearage (1 tree) = Total Harvest 4 trees

inventory minus arrearage

Arrearage
What you **can’t** do is cut 5
What you **can’t** do is cut 5

**WRONG**

1 2 3 4

Arrearage

entire inventory

+ 1

Arrearage

+ arrearage
Arrearage

Inter-decadal differences
Scenario Harvest Levels

Harvest Level (MMBF/Decade)

Decade

- 462 MMBF / 10 Years
- 702 MMBF / 5 Years
- 462 MMBF / 1 Year
- Rolled In
## Arrearage

### Scenario Harvest Volumes (MMBF)

<table>
<thead>
<tr>
<th>Scenario Harvest Volumes</th>
<th>Decade 1</th>
<th>Decade 2</th>
<th>Decade 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolled In</td>
<td>4,643</td>
<td>4,513</td>
<td>4,657</td>
<td>13,815</td>
</tr>
<tr>
<td>462 MMBF / 10 Years</td>
<td>4,773</td>
<td>4,439</td>
<td>4,609</td>
<td>13,821</td>
</tr>
<tr>
<td>702 MMBF / 5 Years</td>
<td>4,850</td>
<td>4,362</td>
<td>4,579</td>
<td>13,792</td>
</tr>
<tr>
<td>462 MMBF / 1 Year</td>
<td>4,773</td>
<td>4,439</td>
<td>4,609</td>
<td>13,821</td>
</tr>
</tbody>
</table>
By Sustainable Harvest Unit

Decade 1 Harvest Volumes (MMBF/Year)

<table>
<thead>
<tr>
<th></th>
<th>2007 Projection</th>
<th>Rolled In</th>
<th>462 MMBF in 10 Years</th>
<th>702 MMBF in 5 Years</th>
<th>462 MMBF in 1 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skamania</td>
<td>5.8</td>
<td>8.0</td>
<td>9.0</td>
<td>9.4</td>
<td>9.0</td>
</tr>
<tr>
<td>OESF</td>
<td>52.6</td>
<td>80.7</td>
<td>90.4</td>
<td>94.3</td>
<td>90.4</td>
</tr>
</tbody>
</table>
In Conclusion

This presentation was to compare arrearage scenarios by their relative effects on harvest levels.

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