

DRAFT**Prince of Wales Island – Game Management Unit 2
Young Growth Management Strategy****1.0 Introduction**

Timber harvesting on Prince of Wales Island, in Game Management Unit 2 of Southeast Alaska, has resulted in old-growth forest habitat reduction and alteration of wildlife forage and cover. Potential effects of past timber harvest on the population of Sitka black-tailed deer (*Odocoileus hemionus sitkensis*) in Unit 2 have received particular attention, as regenerating “young growth” forests pass through forest stages that produce fewer deer, and improved ferry and road access bring more hunters to more areas of the island to harvest deer.

The Forest Service (FS) sees very encouraging possibilities for thinning or otherwise treating young growth forest stands on Prince of Wales Island, and elsewhere on the Tongass National Forest, to:

- Benefit wildlife (particularly deer), by improving habitat conditions that promote wildlife productivity.
- Benefit users of wildlife, by increasing wildlife populations and harvest accessibility and opportunity.
- Contribute to local communities’ economies.
- Accomplish other forest resource-related objectives (e.g., riparian habitat restoration, timber stand improvement.)

Managing young growth forests for the benefit of wildlife is endorsed by the Southeast Alaska Subsistence Regional Advisory Council. The Council made the following recommendation to the Forest Service in its final report to the Federal Subsistence Board on the *Unit 2 Deer Planning Process* (April 2006):

Action 9. Rehabilitation of Young Growth Forests

Continue and expand USFS research, and implement a comprehensive program to restore and rehabilitate young growth forests in Unit 2 for the benefit of deer. The young growth forest rehabilitation program should target areas that would provide the greatest benefit by increasing the supply of deer in areas intensively used for hunting (to address the issues with deer supply relative to demand).

This *Prince of Wales Island Young Growth Management Strategy* has been developed by the Craig and Thorne Bay Ranger Districts (with support/involvement from ADF&G et al at earlier meetings?), which manage Tongass National Forest lands on Prince of Wales Island. The strategy implements the Regional Advisory Council’s recommendation, and echoes the Forest Service’s current emphasis on increasing young growth management throughout the Tongass National Forest (See Section 3.0 Background).

This strategy document presents:

- Section 2.0 – Purpose and objectives.
- Section 3.0 – Background information.
- Section 4.0 – Method for developing the strategy. (Note: sections are arranged in different order in this document?)
- Section 5.0 – Opportunities for young growth management on Prince of Wales Island.
- Section 6.0 – Key elements of the strategy, including:
 - Identification of priority areas on Prince of Wales Island for young growth treatment to meet strategy objectives.
 - General guidelines for layout and design of young growth treatments within the high priority areas.
 - Cross-reference to the forest-wide *Tongass Young Growth Strategy 2006*, for silvicultural prescriptions in young growth to improve wildlife habitat.
 - A framework for preparing detailed Vegetation Management Plans for the high priority areas.
- Section 7.0 – Discussion of monitoring, with a summary of limited monitoring information from past young growth treatments on Prince of Wales Island.
- Section 8.0 – Implementation guidance.

This strategy is a dynamic document. The strategy will be revised and updated as new information is gained and protocols are developed – from on-going forest-wide young growth management, scientific research, more in-depth field investigations, monitoring, and other efforts.

2.0 Purpose & Objectives

The purpose of the *Prince of Wales Island Young Growth Management Strategy* is to identify high priority young growth areas for treatment on National Forest lands, which would provide the greatest benefit for Sitka black-tailed deer(, other wildlife?) and for people who use deer. The Craig and Thorne Bay Ranger Districts intend to increase young growth treatments on National Forest lands on Prince of Wales Island, from the current rate of approximately 2,000 acres/year. The Districts will use this strategy to: (1) guide expenditure of available funds to the highest priority areas, (2) demonstrate the need for funding and effort to support additional young growth treatment, and (3) look for opportunities to collaborate with other partners to fund and/or achieve the strategy's objectives.

The objectives for the *Prince of Wales Island Young Growth Management Strategy* include:

1. Enhance and sustain the deer and other wildlife populations, by rehabilitating stem exclusion young growth forest stands to reinitiate development of a vegetated understory that will provide more productive deer and wildlife habitat, and improve forest diversity at both the stand and landscape scales.
2. Improve deer harvest by increasing deer productivity and improving “hunt-ability” (e.g., addressing hunters’ ability to more readily sight and access deer).
3. Contribute to local community economies by developing a “restoration economy” (e.g., value derived from rehabilitation of the forest environment.)
4. Contribute monitoring and evaluation information from young growth treatments on Prince of Wales Island, to enhance the Forest Service’s adaptive management of young growth stands.

3.0 Background

Even-aged timber management using clearcut harvesting has been the dominant management regime on Prince of Wales Island and elsewhere on the Tongass National Forest for the last 50 years. Clearcutting has reduced the quantity and quality of old-growth forest habitat available to Sitka black-tailed deer and other wildlife, particularly impacting deer winter range.

After clearcutting, conifers, shrubs and herbaceous plants rapidly reestablish. Sitka black-tailed deer browse and use cover in harvested stands from the seedling stage until approximately 15-20 years after the clearcut. From 20-30 years post-clearcut, most of the understory plants are shaded out by the closing forest canopy. Beyond 30 years post-clearcut, forest canopy closure is complete in most young growth stands. In this stem exclusion stage, understory vegetation is nearly absent, and forage for wildlife species such as deer, bears, small mammals, marten, and many songbird species is nearly absent. ***Large wildlife may also avoid stem exclusion forests due to dense vegetation*** (Is this known or can be supported by known scientific literature? It seems speculative to me, especially considering how many deer I saw this November in some of these forests during some extremely cold weather.). The dense conditions can also make it far more difficult for hunters to sight and access game.

Untreated, even-aged young growth stands are believed to contribute little to deer carrying capacity from the time stem exclusion occurs at about 30 years post-harvest, until old-growth characteristics are reestablished as much as 150 years later. Studies have found that silvicultural treatments of young growth stands benefit wildlife by accelerating the development of old-growth stand characteristics. Beneficial characteristics for wildlife include an uneven-aged forest with a multi-storied canopy, snags and downed woody debris, occasional small openings with shrub thickets, an

abundance of herbaceous plants, high snow interception, and less obstructed space for wildlife to travel.

The Tongass National Forest has conducted young growth treatments to accomplish wildlife and riparian habitat enhancement objectives, timber intensification objectives, and for other purposes. Forest Service districts have tried a range of treatment techniques and combinations of techniques, including: thinning, girdling, pruning, creating canopy gaps, maintaining unthinned corridors, retaining thickets/cover, planting alder, and other treatments. The Forest has identified good habitat benefits from multiple treatment entries and a combination of thinning/pruning (e.g., as was done at Cave Creek on Prince of Wales Island.) (Don't use the words "most benefit" as we have neither tried nor adequately studied most treatments to provide evidence to make that statement.) However, multiple treatment entries raise the cost considerably. The results of young growth treatments have generally not been sufficiently monitored, measured, reported and considered in an adaptive management process.

The 1997 Tongass Land Management Plan (TLMP) provides for establishing a Forest-wide young growth management program. The Tongass National Forest has been developing its *Tongass Young Growth Strategy 2006* (most recent draft June 2006). The draft strategy includes in-depth information about the history of timber management (including past young growth management) on the Tongass National Forest, and discusses how the 1997 TLMP and the TLMP Adjustment underway in 2006 address young growth management.

The *Tongass Young Growth Strategy 2006* emphasizes using young growth treatment to accomplish *multiple* resource objectives and outcomes (e.g., wildlife habitat health and productivity, riparian habitat health, timber production, and ***operational considerations?***). The draft strategy recommends that the Tongass National Forest establish an interdisciplinary team to further the Forest's efforts in planning for, funding, implementing and evaluating young growth treatments. It is recommended that each Ranger District develop a five-year plan and schedule for young growth management, as the building blocks for a forest-wide integrated young growth management plan. This *Prince of Wales Island Young Growth Management Strategy* will serve as a foundation for a more detailed five-year plan and schedule for the Craig and Thorne Bay Ranger Districts.

The Tongass-wide Young Growth Study (TWYGS), an adaptive management / research program begun in 2001, is underway to evaluate the potential benefits of treating young growth stands to increase wildlife habitat and timber production.¹ TWYGS is a cooperative effort between the Tongass National Forest and the USFS Pacific Northwest Research Station. TWYGS is intended to last a minimum of 30 years, in order to adequately assess long-term responses to silvicultural treatments. Long-term experimental treatments include:

¹ Information on TWYGS presented by Mike McClellan, USFS Pacific Northwest Research Station, January 24-26, 2006, working group meeting.

- Module 1: A test of mixed hardwood/conifer stands, created by planting red alder at low and high densities in recently cut (0-5 years) stands (2003).
- Module 2: A test of moderate and heavy precommercial thinning in 15-25 year-old stands (2002-2003).
- Module 3: A test of moderate and heavy precommercial thinning, combined with two pruning treatments, in 25-35 year-old stands (2002-2003).
- Module 4: A test comparing girdling and conventional thinning, with and without slash treatment, in stands over 35 years old (2005-2006).

Another TWYGS module, that tests treatments in riparian areas, is being planned for 2007. Large-animal exclosures were constructed within Modules 1-3, to allow researchers to examine the effects of deer and other large herbivores on treatments.

With continued funding, TWYGS' results will help increase knowledge of the effectiveness of using thinning, interplanting alder, pruning, girdling, and slash treatment to achieve various objectives in forest stands, including wildlife habitat improvement, enhanced timber production and riparian habitat restoration.

4.0 Opportunity for Young Growth Treatments on Prince of Wales Island

Approximately 200,500 acres of timber has been harvested on Forest Service land on Prince of Wales Island. Of this, about 71,000 acres (35% of the harvested acres) has been treated (generally thinned) in its young growth stage to achieve timber, wildlife or other objectives. The USFS currently treats about 2,000 acres/year on the island to intensify timber growth, and about 250 acres/year for wildlife habitat restoration. The acreage treated fluctuates with available funding.²

The harvested forest stands on Prince of Wales Island were grouped into the following age size classifications:

- 0-15 years post-harvest - Stand initiation stage
- 15-40 years post-harvest – Stem exclusion stage
 - Untreated, or treated more than 10-15 years in the past
 - Treated within the past 10 years
- 40-80 years post-harvest – pre-commercial sized, pole-sized and/or commercial-sized timber; alder mix

The primary opportunities for young growth treatment on Forest Service lands on Prince of Wales Island are in: (1) forest stands harvested 15-40 years ago that were untreated, (2) forest stands treated (generally thinned) more than 10-15 years ago, and (3) 40-80

² Information on past young growth management presented by Gary Lawton, USFS Silviculturalist, January 24-26, 2006, working group meeting.

year old stands. Many of the large blocks of acreage in the 15-40 year stands have been treated more recently than 10-15 years ago, reducing opportunity in that age class.

There has also been significant clearcut timber harvest on non-federal (private and State) lands on Prince of Wales Island. This strategy does not address the potential for young growth management on these lands. However, the approach used to identify high priority areas for young growth treatment and the suggested guidance for layout and treatment design may benefit other forest land managers in achieving timber or wildlife goals on their lands.

5.0 Methodology to Develop Strategy

The Craig and Thorne Bay Ranger Districts invited an interagency, interdisciplinary working group to assist with developing the young growth management strategy for Prince of Wales Island.³ The working group met via teleconference on November 22, 2005, to plan its work, and then met in a three-day intensive work session on January 24-26, 2006, in Ketchikan. The working group had access to and utilized USFS Geographic Information System data and mapping capability at its January 2006 meeting.

At its January work session, the working group accomplished the following tasks. The products of this work form the framework for the Prince of Wales Island young growth management strategy document (Section 6.0), and are described in more detail in the following sections.

1. **Identified priority areas for young growth treatment.** The working group identified 13 large-scale areas on Prince of Wales Island, considered to be the highest priority for young growth treatment in the near-term (Figure 1, Table 1). These 13 areas are at the scale of Wildlife Analysis Areas (WAA).⁴
2. **Within priority areas, mapped forest conditions.** Forest service staff prepared maps for the 13 priority WAAs that show more detailed attributes of forest conditions (Figures 2-14). These maps will help USFS staff determine where, *within the high priority WAAs*, young growth treatments would yield the most beneficial results in terms of achieving the objectives of this strategy (e.g., boost to deer productivity, hunt-ability, etc.)
3. **Provided guidance to help determine where to locate young growth treatments, within the priority areas.** The working group listed considerations to guide future decisions on where young growth treatments should be located within the high priority WAAs (Table 2).

³ Members of the interagency working group are listed in Appendix 3.

⁴ “Wildlife Analysis Areas” (WAA) are areas delineated in Southeast Alaska by the Alaska Department of Fish and Game for the purpose of compiling wildlife harvest statistics (generally deer). A WAA generally includes several watershed drainages.

Following the January 2006 working group meeting, Forest Service staff has been working on additional tasks that will contribute to the *Prince of Wales Island Young Growth Management Strategy*. These tasks are still underway and final products will be integrated into the strategy as they are completed and refined.

4. **Developing prescriptions (recommended techniques) for treating young growth stands, with the objective of improving wildlife habitat.** Tongass National Forest staff has been drafting the *Tongass Young Growth Strategy 2006* (draft June 2006) that will guide young growth efforts throughout the forest. The Prince of Wales Island young growth management program will use the “toolbox” of prescriptions recommended for forest-wide application.
5. **Crafting a detailed “pilot” young growth management plan for a high-priority WAA on Prince of Wales.** A Forest Service interdisciplinary team (IDT), led by silvicultural staff, are developing a detailed young growth management plan for a high priority area – WAA 1315 in the Kasaan and Thorne Bay area (Figure 4, Table 1). The IDT will produce a detailed young growth vegetation management plan for the WAA, using the guidance provided in this strategy document and applying the prescriptions from the draft forest-wide *Tongass Young Growth Strategy 2006*. The vegetation management plan for WAA 1315 is expected to be completed in early 2007, and will be appended to this strategy at that time. Ultimately, such detailed vegetation management plans should be developed for each of the 13 high priority WAAs identified in this strategy.
6. **Compiling existing monitoring data for young growth management efforts on Prince of Wales Island.** The monitoring data for past young growth treatments on Prince of Wales Island is very limited (Table 3). District staff will participate in the Forest-led effort to establish protocols for monitoring and data management for young growth treatment areas. These protocols will be integrated into this strategy as they are developed.

The Craig and Thorne Bay Ranger Districts presented information about the *Prince of Wales Island Young Growth Management Strategy* to the Unit 2 Deer Planning Subcommittee at its February 22, 2006, meeting in Craig, and invited comment regarding the methodology and areas that had been identified as high priority for young growth treatment.⁵ The Subcommittee did not recommend any changes to the strategy, but strongly encouraged the Forest Service to expand its funding for treatment of young growth forests and to move ahead with an active treatment program in high priority areas.

6.0 Young Growth Management Strategy

This section describes the young growth management strategy for National Forest lands on Prince of Wales Island. The strategy identifies the priority young growth treatment

⁵ The Forest Service also advertised a public meeting regarding the Prince of Wales Island Young Growth Management Strategy on February 22, 2006, in Craig, but there was no public attendance.

areas, with the objective of enhancing wildlife habitat. It also provides guidance for the layout and design of young growth treatments.

This strategy is a dynamic document. The strategy will be revised and updated as new information is gained and protocols are developed – as a result of forest-wide young growth planning, scientific research, more in-depth field investigations, monitoring, and other sources.

6.1 Priority Areas for Young Growth Management

Thirteen Wildlife Analysis Areas (WAAs) on Prince of Wales Island have been identified as the highest priority for young growth treatment (Table 1, Figure 1). The Craig and Thorne Bay Ranger Districts will focus young growth treatments within suitable forest stands on National Forest lands within these 13 high priority WAAs.

There is no prioritization among these 13 high priority areas to direct the order in which the areas should receive young growth treatment. That decision will be made by the Ranger Districts and will depend upon considerations such as feasibility and operability, funding, staff availability, extent to which a treatment program would serve as an effective demonstration project, and other considerations.

In general, the 13 high priority WAAs on Prince of Wales Island include those which:

- Have experienced substantial past timber harvest and have young growth forest stands “ripe” for treatment,
- Have high road density (which improves treatment feasibility and an indicator of good hunting access), and/or
- Are intensively used for deer hunting (where an increase in deer production would likely benefit hunters).

To identify the high priority WAAs for young growth treatment in the near-term, the group considered the following information:

- Percent of harvest (USFS Managed Stands database).
- Road density (miles of road/square mile).
- Deer harvest data (considered ADFG 1987-2003 mail-out survey data, USFS 2003-2004 federal registration permit reporting data, and best professional judgment/local knowledge relative to high use hunting areas).

Appendix 1 presents data for past timber harvest, road mileage and density, and deer harvest for each of the 13 high priority WAAs.

| Table 1 Priority Wildlife Analysis Areas (WAAs) for Near-Term Young Growth Treatments on Prince of Wales Island | | | |
|--|--|------------|---|
| WAA No. | Location | Figure No. | Comments/Rationale |
| 1003 | Heceta Island | 2 | High past timber harvest; moderate deer harvest per ADFG data; already planned for young growth treatment (commercial thinning). |
| 1214 | Polk and McKenzie Inlet | 3 | High past timber harvest; high road density; ADFG data does not show particularly high deer harvest, but deer harvest may be under-reported and is increasing; high road density/accessibility; adds a treatment area on southern island. |
| 1315 | Kasaan and Thorne Bay | 4 | High past timber harvest; high road density/accessibility; high deer harvest per ADFG data. |
| 1318 | Craig, Klawock and Klawock Lake | 5 | |
| 1422 | Staney Creek (I think) | 6 | |
| 1529 | Point Baker and Red Bay | 7 | |
| 1317 | Hollis, Maybeso (?) and Twelvemile Arm | 8 | Moderate past timber harvest; medium road density; medium deer harvest per ADFG data. |
| 1319 | Thorne River and Angel Lake | 9 | |
| 1323 | Sale Lake and Nossuk Bay | 10 | |
| 1420 | Eagle Creek, Luck Lake and Ratz Harbor | 11 | |
| 1421 | Sweetwater, Hatchery and Honker Lake | 12 | |
| 1527 | El Capitan Peak | 13 | |
| 1530 | Whale Pass and Exchange Cove | 14 | |

* Timber harvest includes all federal, state and private lands. (is this accurate or rephrase....?)

Figure 1

Priority Areas for Young Growth Treatment on Prince of Wales Island
(not included in emailed draft, due to size of file – Also John is adding
Figure # for me)

6.2 Locating and Designing Young Growth Treatment Projects

This strategy includes maps and guidance to help: (1) determine where young growth treatment projects should be located within high priority WAAs, and (2) design the layout and treatment prescriptions or protocols for young growth projects.

Figures 2-14 (Appendix 2) are maps of relevant forest conditions in the 13 high priority WAAs. The following information is mapped for each WAA:

- Forest stands most suitable for treatment, including those that are located on south-facing slopes and at less than 800 feet – Low elevation, south aspect stands would offer the opportunity to rehabilitate important deer winter range. (Just a note for later consideration or plan updates: I still believe we should be including west-facing slopes with south-facing as both provide similar positive benefits in regard to winter sunlight, decreased snow accumulation, etc. West vs East is night and day, as anyone here over the winter can attest to.)
- Forest stands that were cut more than 16 years ago, but have been treated since 1996 – these stands *do not need treatment in the near-term*.
- Forest stands that are 0-15 years old – These stands *do not need treatment in the near-term*. However, in determining which young stands to treat, it may be beneficial to treat stands adjacent to 0-15 year stands where “hunt-ability” is high, due to relatively high deer use and ease of sighting.
- Natural openings (e.g., alpine, muskeg) – In determining which stands to treat, it may be beneficial to treat young stands adjacent to natural openings such as alpine and muskeg meadows where “hunt-ability” is high, due to relatively high deer use and ease of sighting.
- Productive old growth – In determining which stands to treat, it may be beneficial to treat young stands adjacent to productive old growth habitat.

Table 2 addresses “Attributes, Guidance and Considerations to Apply to Select Young Growth Treatment Stands and Design Treatment Projects.” This chart will guide staff as they select forest stands for treatment and design young growth treatment projects. Table 2 lists landscape (topographic, spatial and vegetative) and social attributes of forest stands, and indicates why it is important to consider these attributes. Table 2 also provides guidance and considerations for using attribute information to select young growth stands for treatment and for designing treatment projects.

| <p align="center">Table 2 Attributes, Guidance and Considerations to Apply when Selecting Young Growth Treatment Stands and Designing Treatment Projects</p> | | |
|---|---|--|
| Attribute | Why Consider This? | Guidance/Considerations |
| TOPOGRAPHIC ATTRIBUTES | | |
| Slope/Aspect | <ul style="list-style-type: none"> - Habitat: Snow reduction for winter range - Predation refuge (slope) - Side-lighting | <ul style="list-style-type: none"> - Consider slope along with aspect. - Generally: Highest value (winter (or “year round accessible” range) is S aspect, >20% slope; medium W&E (see earlier note on W vs E) aspect; lowest N. - Look at deer pellet data (if available) for slope/aspect use. |
| Elevation | <ul style="list-style-type: none"> - Habitat: winter range | <ul style="list-style-type: none"> - Consider elevation along with aspect. - Generally: Highest value (winter range) 0-500'; medium value 500-800'; lowest > 800'. - Look at deer pellet data (if available) for elevation use. |
| Shading | <ul style="list-style-type: none"> - Habitat: winter range | <ul style="list-style-type: none"> - Avoid snow holes. |
| Cold air drainages | <ul style="list-style-type: none"> - Habitat: winter range | <ul style="list-style-type: none"> - Avoid snow holes. |
| Wind-firmness | <ul style="list-style-type: none"> - Habitat: long-term benefit | <ul style="list-style-type: none"> - Apply Wind Risk model (Kramer model). - Consider history of wind throw. - Retain higher densities as risk of wind throw increases. - Consider moving on landscape to areas of lower risk for wind throw. |
| SPATIAL ATTRIBUTES | | |
| Proximity to Muskeg | <ul style="list-style-type: none"> - “Hunt-ability” – landscape suited to readily sighting deer - Habitat | <ul style="list-style-type: none"> - If there are opportunities to treat stands proximate or adjacent to muskeg, those are higher value areas to treat. |
| Proximity to Alpine | <ul style="list-style-type: none"> - “Hunt-ability” - Habitat: summer range | <ul style="list-style-type: none"> - If there are opportunities to treat stands proximate or adjacent to alpine, those are higher value areas to treat. |
| Proximity to Summer Range | <ul style="list-style-type: none"> - Habitat: summer range | <ul style="list-style-type: none"> - It is a higher priority to treat winter range that is adjacent or proximate to valuable summer range. - Take advantage of naturally occurring patches that are productive summer habitats (e.g., alder). - Look for treatment opportunities that would benefit deer habitat in the proximate summer range (e.g., improve summer forage on a north facing slope). |

| <p align="center">Table 2 Attributes, Guidance and Considerations to Apply when Selecting Young Growth Treatment Stands and Designing Treatment Projects</p> | | |
|---|--|--|
| Attribute | Why Consider This? | Guidance/Considerations |
| Proximity to Old Growth | <ul style="list-style-type: none"> - Habitat: sustain displaced deer, winter range | <ul style="list-style-type: none"> - If the ratio of old growth to young growth acreage in the area is high, may not be a priority for treatment, as old growth is providing quality habitat. - If the ratio is low, locating young growth treatment area adjacent to an old growth reserve can be beneficial as, (1) in the short-term it provides habitat for deer displaced from the treatment area, and (2) in the long-term the old growth offers winter range of higher quality than the treated area. |
| Beach | <ul style="list-style-type: none"> - Habitat: Winter refugia - Hunt-ability: important access for non-roaded communities | <ul style="list-style-type: none"> - Beach stands are not available for commercial timber harvest. While it may take multiple treatment entries to meet desired conditions for wildlife in the treated stand, once this condition is reached it wouldn't require future rehabilitation for wildlife. (regarding this section: same is true for many zoned Forest areas) - Consider need to provide deer cover from predation on beach. |
| Proximity to Roads | <ul style="list-style-type: none"> - "Hunt-ability" - Operability/Feasibility - Merchantability | <ul style="list-style-type: none"> - Review Access Travel Management Plan for future road condition. Closer to road is "better" for hunter access, reduced cost of operation, may make removed material merchantable. |
| Connectivity | <ul style="list-style-type: none"> - Habitat - Predation | <ul style="list-style-type: none"> - Maintain/provide connectivity between important, diverse habitats: winter & summer range, old growth blocks, beach, alpine, muskeg. - Address need for connectivity to seek refuge from predation. |
| VEGETATION ATTRIBUTES | | |
| Stand Structure & Composition (stand age, composition, tree size) | <ul style="list-style-type: none"> - Landscape character/diversity | <ul style="list-style-type: none"> - How does the stand relate to the rest of the landscape? Does it, or could it if treated, offer desired habitat value and/or diversity? |

| | | |
|--|---|--|
| Stand-specific Treatment History | <ul style="list-style-type: none"> - Effects feasibility of treatment - understory characteristics, size of trees, taper - Merchantability | <ul style="list-style-type: none"> - Consider when treated, type of treatment, history of wind-firmness issues. |
| <p>Table 2</p> <p>Attributes, Guidance and Considerations to Apply when Selecting Young Growth Treatment Stands and Designing Treatment Projects</p> | | |
| Attribute | Why Consider This? | Guidance/Considerations |
| Planned Timber Harvest | <ul style="list-style-type: none"> - Long-term effectiveness & benefit of treatment | <ul style="list-style-type: none"> - Is there timber harvest planned in or adjacent to this area in the future? |
| Young Growth Patch Size | <ul style="list-style-type: none"> - Habitat diversity | <ul style="list-style-type: none"> - Look for large blocks of contiguous young growth to improve age class, stand structure and patch size, based on deer home range requirements. |
| Understory Characteristics & Potential for Reinitiation of Productive Understory | <ul style="list-style-type: none"> - Habitat: winter/spring range; nutrients | <ul style="list-style-type: none"> - <u>At project layout</u>: Would require field investigation (no database at this level of detail.) - Consider whether understory shows evidence of potential to regenerate important winter forage (<u>Vaccinium</u>, evergreen forbs, shield ferns, beard lichens) or spring forage (skunk cabbage.) Note: I don't believe this is well known or understood. Could be very difficult to determine. |
| SOCIAL ATTRIBUTES | | |
| Opportunities for Local Capacity Building | <ul style="list-style-type: none"> - Economic feasibility. - Community/Tribal support. - Partnerships. - Community economic sustainability. | <ul style="list-style-type: none"> - Consider opportunities for local community and/or Tribal involvement |
| Contribution to Resource Economy | <ul style="list-style-type: none"> - Community economic sustainability. - Community/Tribal support. - Partnerships. - Economic feasibility. - Merchantability. | <ul style="list-style-type: none"> - Consider merchantability, business partnerships. (# and duration of jobs provided?) |
| Potential Partners to Accomplish Project | <ul style="list-style-type: none"> - Economic feasibility. - Community/Tribal support. - Partnerships. | <ul style="list-style-type: none"> - Look for Partnership opportunities to gain additional funding and/or treatment capabilities (e.g., in-kind services). |
| Cost Effectiveness | <ul style="list-style-type: none"> - Economic feasibility. | <ul style="list-style-type: none"> - Cost/benefit |
| Suitability of Site for Project Demonstration | <ul style="list-style-type: none"> - Community/Tribal support. - Public support can translate into additional Partnerships, funding, opportunity. | <ul style="list-style-type: none"> - Location suited to demonstration and interpretation of project. - Inform public and build support for program. |

6.3 Silvicultural Prescriptions for Young Growth Treatments on Prince of Wales Island

Tongass National Forest staff has drafted a *Tongass Young Growth Strategy 2006* (more recent draft June 2006) that will help guide young growth management efforts throughout the forest. Instead of developing a separate set of prescriptions, the Craig and Thorne Bay Ranger Districts will begin with the “toolbox” of prescriptions from the Tongass-wide strategy in designing and implementing treatments to address the Prince of Wales Island young growth strategy.

“Exhibit 3 – Wildlife Emphasis” of the draft *Tongass Young Growth Strategy 2006* provides guidance on determining the “Desired Condition” for young growth stands treated to achieve a wildlife habitat objective.⁶ It also presents silvicultural prescriptions to achieve wildlife objectives, for the following representative site types (Exhibit 3, Section D-II-b):

- Type 1 – Commercial size class, No past intermediate treatments
- Type 2 – Commercial size class, with past intermediate treatments
- Type 3 – Pole size class, No past intermediate treatments
- Type 4 – Pole size class, with past intermediate treatments
- Type 5 – Pre-commercial size class, even-aged
- Type 6 – Pre-commercial size class, two aged dispersed residuals
- Type 7 – Pre-commercial size class, site index less than 70

“Exhibit 4 – Integrated Treatment Tool Matrix” of the *Tongass Young Growth Strategy 2006* provides guidance on using combinations of prescriptions to achieve desired objectives and conditions.

Note that the Tongass-wide strategy also discusses how to prioritize areas for treatment (e.g., Exhibit 3, Section D-II-a and Section E). However, the Craig and Thorne Bay Ranger Districts will use the guidance provided in this strategy (Sections 6.1 and 6.2) to prioritize areas and select forest stands for treatment. This POW strategy is based on more specific information about forest conditions and represents an interagency, interdisciplinary recommendation for priority areas and stands.

6.4 Detailed Young Growth Management Plans for High Priority WAAs

To implement this young growth strategy, interdisciplinary teams (IDT) of Forest Service staff will develop detailed vegetation management plans for each of the 13 high priority WAAs. The plans will determine where young growth treatments should be located in each high priority WAA (using GIS and other data, field investigation, and based on

⁶ The *Tongass Young Growth Strategy 2006* also provides prescriptions for young growth management to achieve objectives for timber intensification (Exhibit 1) and riparian habitat management (Exhibit 2).

guidance from Table 2), and will determine which silvicultural prescriptions will be applied to accomplish treatment (based on the *Tongass Young Growth Strategy 2006* and other guidance.) However, preparation of these vegetation management plans is very labor-intensive and time-consuming. The plans will be added into the Prince of Wales Island Young Growth Management Strategy as they are completed.

A Forest Service IDT is currently developing a detailed vegetation management plan for WAA 1315 in the Kasaan and Thorne Bay area (Figure 4 in Appendix 2). Field investigations were completed in the summer of 2006. The vegetation management plan for WAA 1315 is expected to be completed in early 2007.

NOTE TO SUSAN – We need to include any more detail about how the vege mgt plan for WAA 1315 is being prepared (staffing, process, other), the elements that will be in the plan (bulleted outline?), and how it will be used. This will lay the groundwork for how the other plans are done. Can you draft a paragraph to insert here?

7.0 Monitoring the Young Growth Management Program

The *Tongass Young Growth Strategy 2006* (Exhibit 12) provides a summary of past young-growth treatments on the Tongass National Forest. Unfortunately, most were not well-documented and results have not been consistently monitored. The Forest is attempting to obtain funding to complete an analysis of past young-growth treatment efforts, determine if enough similarity exists to warrant follow-up evaluations, and schedule another look at the sites that may provide results relevant to adaptive management. An access data base has been created as a reference to previous studies and treatments.

The forest-wide strategy emphasizes that “it is essential to assess the effectiveness of any treatments applied and adapt the results to future treatments.” The strategy recommends that a forest Young Growth Management Team develop a monitoring protocol that would be applied to treatment areas, based on the potential/desired condition that was the objective of the treatment. “Exhibit 13 – Monitoring” of the *Tongass Young Growth Strategy 2006* suggests general monitoring questions, measurement variables and methods to consider in development of the protocol. It also recommends that the monitoring plan and protocol be tailored to funding levels, to ensure that it can be accomplished.

The forest-wide strategy recommends that proposed treatments (and monitoring results) be tracked in the Forest Service Activity Tracking System (FACTS), through the data management/treatment schedule outlined in “Exhibit 5 – Data Management/Treatment Schedules” of the *Tongass Young Growth Strategy 2006*. Information about past treatments (currently compiled in an access database) will also be transferred to FACTS.

The Craig and Thorne Bay Ranger Districts recognize the importance of monitoring the results of young growth management projects, and will use the forest-wide protocol and

data management system designed through the *Tongass Young Growth Strategy*. The limited monitoring information from past young growth treatment projects on Prince of Wales Island is provided in Table 3.

QUESTIONS:

(1) The Tongass-wide Strategy recommends that a Monitoring protocol and database be developed. It does not offer that direction now. In the interim, what more do the Craig and Thorne Bay Ranger Districts want to say about monitoring projects on those districts? (Sheila and Gary?)

(2) Is there more to be added to Table 3? Ray mentioned that he was doing monitoring work in 2006?

| Table 3 Prince of Wales Island Young Growth Management – Monitoring Information from Past Treatments | | | | | | | | |
|---|--|------------------------|--------------|-------------------------|---|---|---|--|
| Treatment Project Name | Location | WAA | When Treated | Number of Acres Treated | Purpose of Treatment (e.g., wildlife, silviculture) | Type of Treatment | Results of Monitoring (if done) | Contact Person and References |
| Second Growth Management Program | Tongass-wide. 5 sites on POW | 1422, 1319, 1003, 1529 | 1985/1986 | <100 ac | wood fiber production, deer habitat | CT and PCT with various spacings, strips and clumps. | Thinning can improve forage production over unthinned conditions. | Mike McClellan, USFS/PNW (See Reference 1, below) |
| Canopy Gap Monitoring | Island-wide be more specific? | ? | 1989 | <200 | deer habitat | Small (<.1 ac) canopy gaps cut in second growth to improve deer forage. | Subset of gaps revisited in 2006. UNCLEAR WHAT THIS MEANS | Susan Howell, Thorne Bay Ranger District |
| Variable-Spaced Thinning | Polk Inlet, Staney Creek, Goose Creek, Yatuk Creek | ? | 92, 93, 95 | <100 | silviculture, wildlife | Comparison of understory and overstory response to fixed spaced and variable spaced thinning | Inconclusive. | Susan Howell, Thorne Bay Ranger District. (See Reference 2, below) |
| Slash Depth Monitoring | Thorne Bay RD need to be more specific | ? | 2004-present | 500 | silviculture | Slash depth measurements and site photos used to monitor long-term impacts of slash to deer movement. | Not analyzed yet. | Susan Howell, Thorne Bay Ranger District |

References:

1. Understory Vegetation Development Following Commercial Thinning in Southeast Alaska: Preliminary Results from the Second-growth Management Area Demonstration Project. Zaborske, Hauver, McClellan and Hanley.
2. Effects of Variable-Spaced and Fixed-Spaced thinning on Second Growth Wildlife Habitats on Prince of Wales Island, Tongass National Forest, Alaska.

8.0 Implementing the Strategy

Young growth management on Prince of Wales Island is a priority for the Craig and Thorne Bay Ranger Districts. Preparation of this strategy is an important first step in ensuring that funding is put toward the highest priority projects to benefit wildlife (especially deer) and the people who use deer. The strategy will also assist with demonstrating the need for additional funding and partnerships to carry out an effective young growth management program on the island.

Young growth management projects will be implemented as funding allows and/or as opportunities to implement stewardship projects or small timber sale contracts arise that enable the District's to meet wildlife habitat enhancement objectives. Commercial thinning in older young growth stands offer opportunity for treatment in higher need areas, while removing excess slash, and providing marketable wood products and additional jobs. When possible, wildlife habitat enhancement contracts will be paired with timber stand improvement projects in order to share contractor and administration costs, and increase the young growth acres that can be treated with available funds.

NOTE GREG & JAY: I “took” some of the above language from the Sitka Ranger District YG Strategy -- Is there more we can put in here about the emphasis that will be put on young growth management, work underway, potential budgets & levels of effort, etc.? (perhaps more on partnership opportunities, e.g. TNC)

The Craig and Thorne Bay Ranger Districts will meet annually to plan the young growth treatment program for the coming year and discuss any needed updates in the treatment strategy. The meeting will include representation from all resource staff disciplines: fisheries, wildlife, timber, silviculture, recreation, and engineering/roads. Other representation should include partners, State – ADF&G, and private land owners cooperating in the young growth program. This will ensure that interdisciplinary staff expertise contributes to decisions regarding where to work, what desired conditions should be met in each treatment area, which prescriptions to use, etc. Public involvement will occur during the NEPA scoping stage of planned projects.

The *Prince of Wales Island Young Growth Management Strategy* is a dynamic document and will need to be updated to incorporate new information, policy, and directives. Examples of information that should be incorporated as soon as it becomes available include: guidance from the *Final Tongass Young Growth Management Strategy*, relevant policy from the TLMP Adjustment, detailed vegetation management plans for the 13 high priority WAAs, information gained from monitoring, and other relevant information.

The strategy should be fully reviewed every five years to update the status of the young growth management program on Prince of Wales Island, incorporate the results of TWYGS research or monitoring results from other District young growth programs, and to adjust guidance regarding management priorities and approaches.

Appendix 1

| High Priority WAAs for Young Growth Treatment on Prince of Wales Island Percent Timber Harvest, Road Mileage & Density, and Deer Harvest Data | | | | | | |
|--|--|--------------|---|-----------------------|-----------------------------------|---|
| WAA No. | Location | Acres | Percent Timber Harvested | Road Miles | Road miles/sq mile | ADFG Deer Harvest Data (1987-2003) |
| 1003 | Heceta Island | 44,467 | 20.4 | 151.5 | 2.2 | 1,711 |
| 1214 | Polk and McKenzie Inlet | 98,537 | 19.6 | 130.0 | 0.8 | 1,560 |
| 1315 | Kasaan and Thorne Bay | 97,659 | 18.4 | 198.2 | 1.3 | 3,629 |
| 1317 | Hollis, Maybeso? and Twelvemile Arm | 70,747 | 5.6 | 128.3 | 1.2 | 1,376 |
| 1318 | Craig, Klawock and Klawock Lake | 127,515 | 8.8 | 97.1 | 0.5 | 4,887 |
| 1319 | Thorne River and Angel Lake | 104,519 | 12.7 | 186.5 | 1.1 | 4,457 |
| 1323 | Sale Lake and Nossuk Bay | 40,778 | 7.5 | 13.40 | 0.2 | 1,239 |
| 1420 | Eagle Creek, Luck Lake and Ratz Harbor | 47,069 | 18.8 | 131.3 | 1.8 | 2,719 |
| 1421 | Sweetwater, Hatchery and Honker Lake | 92,254 | 15.1 | 190.1 | 1.3 | 2,793 |
| 1422 | Staney Creek ? | 126,485 | 20.1 | 367.2 | 1.9 | 5,542 |
| 1527 | El Capitan Peak | 44,413 | 8.4 | 100.0 | 1.4 | 1,112 |
| 1529 | Point Baker and Red Bay | 71,397 | 20.9 | 169.2 | 1.5 | 3,327 |
| 1530 | Whale Pass and Exchange Cove | 64,663 | 13.4 | 170.7 | 1.7 | 2,396 |

Appendix 2

NOTE: Appendix 2 will include Figures 2-14. These figures are not included in this email due to size, and John Stevens is adding figure numbers and new titles to the files.

Appendix 3

Working Group Participants

The following individuals participated in the development of the Unit 2 Young Growth Management Strategy, by attending the January 2006 working group meeting and sharing data, expertise, advice and recommendations:

Jason Anderson, Thorne Bay District Ranger, USDA Forest Service (USFS)
Steve Fadden, USFS
Colleen Grundy, USFS
Pat Haley, USFS
Tom Hanley, USFS/Pacific Northwest Research Station (PNW)
Don Hernandez, Southeast Alaska Subsistence Regional Advisory Council
Susan Howell, USFS
Greg Killinger, Craig District Ranger, USFS
Dave Johnson, USFS
Gary Lawton, USFS
Sheila Jacobson, USFS
Mike McClellan, USFS/PNW
Doug Larsen, Southeast Regional Supervisor, Division of Wildlife Conservation, Alaska Department of Fish and Game (ADFG)
Boyd Porter, Wildlife Biologist, Division of Wildlife Conservation, ADFG
Jill Reeck, USFS
Bob Schroeder, USFS
Raymond Slayton, USFS
Scott Snelson, USFS
John Stevens, USFS
Todd Tisler, USFS