

**DRAFT Minutes**  
**Region II-III Reforestation Science & Technical Committee (S&TC)**  
**Meeting #9 – September 8, 2015**

ADF&G Ptarmigan Conference Room - Fairbanks

S&TC Attendance

Amanda Robertson

Roger Burnside

Jim Durst, co-chair

Marty Freeman, co-chair

Doug Hanson

Glenn Juday

Tom Paragi

Will Putman

Trish Wurtz

John Yarie

Unable to attend: Nancy Fresco, Teresa Hollingsworth, Nick Lisuzzo, Mitch Michaud, Amanda Robertson (afternoon), John Winters, Brian Young

**Note:** Handouts referenced in the minutes are available from either co-chair.

**Agenda and minutes.** The Committee approved the agenda, and the minutes from both the May 6, 2015 meeting and the July 23, 2015 check-in teleconference as corrected.

**Public Input since May 6.** Freeman reviewed comments from the Board of Forestry during their July 28-29 meeting and field trip in the Fairbanks area. S&TC members gave presentations to the Board prior to the field trip. After the field trip, Board members seemed comfortable with the S&TC's interest in creating increased variability in stocking targets and processes rather than a one-size-fits-each-region approach.

The committee discussed comments and literature received from DOF's Jeff Graham. Jeff expressed concerns that logging without scarification may not be conducive to extended recruitment of natural regeneration. The committee agreed that length of recruitment on logged sites can depend on the region and stand type in which logging occurs, and whether or not grass is present. Initial indications are that Kenai and Mat-Su areas, and mixed stands in the Interior, are the most problematic due to grass takeover. In the Interior white spruce stands have extended recruitment, aspen stands have mixed results. The Copper Basin tends to have little or no birch or grass and trees seed in over time. It might be helpful to get more analysis of site type on Miho's data set.

Paragi noted that research by Zasada and Wurtz (2001) showed the potential for overstocking. That can benefit some wildlife, but also may result in increased susceptibility to insects, disease, and browsing. Wurtz added that an upland study of scarified and unscarified sites over 20 years found that unscarified sites became stocked and scarified sites were overstocked.

Hanson said that logging white spruce only from a mixed spruce-birch stand results in a stand that stays understocked in areas with grass problems. White spruce regenerates well under aspen stands.

The S&TC agreed to maintain the **C5** recommendation allowing a longer period for natural regeneration where there is a high likelihood of regeneration success based on the indicators. Factors such as presence of grass and absence of mineral soils indicate that success is not likely and the regeneration period should not be extended under those conditions. **C10** was added to clarify that a regeneration report is required five years after harvesting where an extended period is allowed for natural regeneration.

## CONSENSUS POINTS

Freeman led continuing discussions of existing standards and recommend changes, updating both the Draft Consensus Findings and Recommendations document and the Draft Review of Standards matrix. See those document updates as attached.

## FINDINGS

F2am: Check with full committee on applicability to Region II.

F8: Add statement regarding seeding similar to F7.

F9: In Copper Basin, harvesting spruce sometimes leads to mixed stands that include alder.

F14: Need to continue working on this item to focus on commercial species. Point was edited so that the indicators are clearer, and the revised F14 + C1 replaces C2.

F19: Accommodating climate change better handled by artificial vs. natural regeneration.

F3am: Reworked text to clarify sources and what was being quantified.

F13: Discussion on level of light interception by 405 stems/ac lead to removal of statement on fully using available light.

## RECOMMENDATIONS

C1am: Expanded and incorporated C2.

C6am, C8 (new), and C12 (new): Discussed how to accommodate naturally unstockable areas and use variation procedure in DPOs to address unevenness in stocking level throughout harvest areas, and the need to consider site conditions and non-stockable areas when reviewing variation requests regarding stocking distribution

C5: Continued discussion on practicality and administrative tracking of 12-year natural regeneration window. C10 (new) clarifies that a regeneration report is required after 5 years where an extended period is allowed for natural regeneration. One problem area is that, if problems are documented with a 5-year review, it will be difficult to meet the 7-year requirement of 2-year survival for regen.

New C7: The use of natural regeneration success indicators will require training for DOF staff, landowners, and operators.

New **C9**. Encourages use of new technologies to assess areas of dead and dying trees when reviewing requests for reforestation exemptions under 11 AAC 95.375(g) and (h).

## RESEARCH NEEDS

Juday said that research is needed on form, site growth, mortality, and risks to natural regeneration (see R4).

## STOCKING STANDARDS

11 AAC 95.375 residuals(b)(4) and seedlings (d)(2):

Do the numbers currently in (b) make sense based on what the committee knows to date? Partial harvests in the state are primarily to harvest spruce and leave birch. With improved markets for birch, harvests in mixed stands now commonly include both spruce and birch. In practice, regeneration does not typically depend on residuals.

The committee generally agreed with the numbers in (b) for residuals. Mortality of seedlings was discussed. Yarie said that with a good planting crew, seedling survival is high, particularly after 2 years.

(b), (d)(2), & (d)(3) – look at possibility of reordering and/or combining, and adding language on variations

(g) dead & dying – in making this determination, only count what's being cut, not what may or may not have been on site in previous stand.

On average, 120 sawtimber stems/ac is approximately 18' spacing, and 450 seedlings/ac is approximately 10' spacing. Hanson and Putman said that 12' spacing (300 trees/ac) is typically used for planting at this time, with the goal of developing a mixed stand.

Juday said we need to follow low-stocked and high-stocked stands over time to see what works best in the long term. Yarie said that Van Cleve's plots had 7200 stems/ac white spruce in 1966, were thinned and fertilized, and still have about 6000 trees/ac. They are exhibiting slow growth and low mortality.

Juday said the LOGS study planted areas ranging from 4x4 to 12x12 in 1982 after a fire (see Hollingsworth 2002, Packee 2001, Packee 1999b). The 4x4 areas are sense with crowns only in the upper 1/3 of tree height. The 12x12 areas look great with wide, full canopies and good height including both spruce and hardwoods. Mortality decreases as spacing increases. If the residuals are well-distributed there is less concern of understocking.

[Note: Hollingsworth 2002 reported that height growth was best at spacings from 6x6' (1210 trees/ac) to 10x10' (435 trees/ac). Packee 2001 reported that densest spacings reduced grass cover and increased self-pruning. For good yields of high quality fiber, Packee 199b recommended 8x8' spacings (680 trees/ac) for white spruce stands, 9x9 (540) for aspen, and 10x10 (435) for birch. Mixed stands would vary.]

The S&TC particularly emphasized the importance of capturing and synthesizing existing institutional knowledge on the role of the professional in developing the FRPA and regulations, identifying research priorities, and exercising professional discretion in applying the standards. It is important to convey the reasons for developing the standards to agency staff, landowners, and operators. This is particularly important in the context of losses of experienced staff.

Note: UAF and Coop Extension have expertise in developing training materials, including video presentations.

**Stocking distribution.** Putman and Hanson: 90% distribution is a high standard. Patchiness is common in natural stands. Juday: 90% is hard to achieve with natural regeneration, especially if the stands are evaluated at 5-7 years post-harvest. Distribution approaches 90% over time. In Morimoto's study, regeneration was good over time, but wouldn't have met the 90% distribution requirement in 5 years.

Putman: The standard could be 40% at 5 years and 90% at 15 years.

Hanson: 80% would be a better standard than 90% for evaluation at 5 years based on regeneration survey results. There is a range of stand densities at that time and infill occurs over time.

Paragi: We need to review the proposed standards and distribution requirements with people knowledgeable about Region II as well.

## **NEXT MEETING DATES AND AGENDA.**

The next meeting is Thursday August 24, 2015 with teleconference webinar sites in Anchorage and Fairbanks. Agenda items will include white spruce seed viability, hardwood seeding distances, and applicability of extended recruitment to Copper Basin and Region II.

## **To Do List**

### **▶ Freeman and Durst:**

- Minutes #9 and summary of draft consensus points (draft attached)
- Consult with Mitch and John W. on applicability of success indicators to Region II
- Agenda for next meeting

### **▶ Paragi:**

- Get citation(s) for birch seeding distances.

## **Other attendees**

Julie Hagelin, ADF&G

Todd Nichols, ADF&G

## **Attachments**

Draft consensus points