

Minutes
Region II-III Reforestation Science & Technical Committee (S&TC)
Meeting #11 – October 22, 2015

DNR Medium Conference Room – 3700 Airport Way, Fairbanks
DNR Conference Room – Suite 1450, 550 W. 7th Ave., Anchorage

S&TC Attendance

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|-------------------------|---------------|------------------|
| Jim Durst, co-chair | Glenn Juday | Hans Rinke |
| Marty Freeman, co-chair | Nick Lisuzzo | Amanda Robertson |
| Nancy Fresco | Mitch Michaud | Trish Wurtz |
| Julie Hagelin | Tom Paragi | John Yarie |
| Doug Hanson | Will Putman | |

Unable to attend: Roger Burnside, Teresa Hollingsworth, 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 the September 24, 2015 meeting as corrected.

Public Input since September 24. Freeman reported that the only public inquiry received was one about meeting schedule and locations. The draft minutes from Meeting #10 were sent out to the technical experts list. The minutes from #10 will be sent out to the general public mail list after approval by the S&TC.

BIBLIOGRAPHY

Freeman led a discussion of updates to several of the bibliography section introductions, and requested all Committee members check the introductions for which they are responsible. If Committee members have added papers to their introductions, be sure they are added to the bibliography ASAP. Get all edits and additions to Freeman for inclusion.

General Background: Freeman captured a few additional references based on Committee discussions.

Insects & Diseases: Lisuzzo made some brief changes based on work done this summer. The Sitka spruce weevil was found in nursery stock brought to Anchorage, and the DNR Division of Agriculture is handling the control efforts. Juday said that he has found this pest in his study plots. He found that high temperatures were required to get the weevil established in Sitka spruce. The weevil destroys the terminal shoot. The Committee noted that imported firewood remains a concern for its ability to bring live wood boring insects into the state.

Non-Native & Invasive Species: Minor change made.

Wildlife-Reforestation Interactions: Paragi and Hagelin have updated the bibliography and introduction to include both seed consumption by voles and herbivory by Kodiak mammals. Hagelin spoke about a 2014 review article on “seed predation” by rodents. Coniferous and deciduous forests have different dynamics, with squirrel harvest and storage complicating coniferous forest dynamics. Small mammal survival is not related to mast years in spruce. Bird dispersal of tree seeds does not appear to be a factor in either forest type. White spruce seeds in squirrel middens do not sprout and establish so do not contribute to regeneration.

Bibliography – genetics and refugia. Juday said that a paper looked at genetics of 22 western North America conifers and interactions with glacial dynamics (Gauthier, 2015; added to bibliography). Conifers that persisted in large and diverse refugia had higher genetic diversity, while those in smaller refugia were less genetically diverse, more uniform, and less able to accommodate climatic changes. Continuously available refugia are important to survival. Half of the genetic diversity in white spruce in North America is in Alaska. This might suggest managing for genetic diversity. Alaska has a high level of boreal diversity due to inclusion of Asian species. It turns out that both Interior and Southwest Alaska were boreal refugia. White spruce in Alberta that are halfway between Alaska and Lower 48 refugia have lower genetic diversity. Robertson said the same pattern holds for cottonwoods, and that diversity in Alaska is among populations rather than within populations.

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.

Consensus points added or amended as part of the September 24 meeting were reviewed. The notations “K-No” and “K-Yes” refer to applicability to Kodiak/Afognak based on discussions between Freeman, Michaud, and Rinke.

Patchiness (F11, C6, C8)

Committee considered changing generic allowance for plots not meeting reforestation stocking standards from 10% to 20%. Hanson and Putman supported the change as better approximating regeneration they have seen in old harvest units. Achieving regeneration on 90% of the plots within the 5-7 years allowed for surveys is a high bar Rinke said it hasn't been a problem on the Kenai since the informal practice has been to allow patches “where there are no stumps.” With that approach, 90% or more plots fully stocked has been workable when regeneration surveys have been done. Juday said that on harvested landscapes he has sampled, examined plots are not showing 90% fully stocked. Within the time period we are recognizing for regeneration, there will be gaps and patches within harvest areas. Michaud noted that regeneration patchiness often occurs where patchiness existed pre-harvest. Hanson

clarified that some areas within notified harvest areas are not harvested (too rocky, an alder patch, etc.) and those areas do not require successful regeneration. Michaud said he believed that allowing up to 20% of plots to not be fully stocked made it easier to target a variety of landowner objectives. He noted that landowners interested in maximizing production may target a higher percentage of coverage within 5-7 years. Juday noted that filling holes by planting generates a disproportionate amount of operational costs. Unstocked patches within stockable areas tend to fill in over time, and they provide value for wildlife.

Putman added that costs of documenting reforestation vary depending on the method selected, and are often overlooked when landowners consider harvest and regeneration costs.

Natural Regeneration (95.380, F5, F14, R5)

F5. Juday said that we are finding that birch trees are older than we originally thought. He said that 40-60 year old birch are often only 5 inches dbh, and we are probably harvesting birch that are 80-100 years old but have no good data set. Hanson concurred with these observations. Juday said that he knows of a data set in process that may be able to provide better numbers. Juday noted that the 40-60 age range for decreasing sprouting from birch is too specific. **F5** was revised to a more general statement that sprouting decreases with aging.

F14. There is some uncertainty as to the source of a 2% threshold for *Calamagrostis* cover being the tipping point for grass competition. Paragi said that Bob Ott said that even 1% grass cover prior to harvesting a stand is a warning of potential problems after harvest. The indicator is for cover, and a small percentage of cover can be significant. Freeman will contact Brian Young.

F14, F17, R5. The Committee discussed language for vole predation on seeds and seedlings. Hagelin reported that vole herbivory on seedlings is less than herbivory by hares in Alaska, except possibly on Afognak. In Europe, the situation is reversed likely due to lower hare populations. Rinke will get information on Kodiak voles (source – Dave Nesheim). Durst, Hagelin, and Paragi will work on wording.

Other Topics

F21. The Committee continued discussions on the role of, and ways to manage, genetic diversity on the landscape. Fresco noted that factors other than latitude affect suitability of seed, including slope, aspect, and elevation.

C13. Robertson agreed that 5-10° northward assisted migration seems to be appropriate for North America, while 5-7° seems to be better for Europe. She will provide citations, and track down available data on provenance trials in Palmer. Michaud will get provenance trials data from Afognak.

Fresco said that she had no outstanding issues related to climate change other than those that have been addressed.

F17, F24, R13. Lisuzzo clarified that slash or downed trees 4-10 inches diameter present the highest hazard for *Ips* infestations, while those >10 inches in diameter have the greatest bark beetle risk. **F17, F24,** and **R13** were amended to specify slash or woody debris 4" diameter.

In response to a question, Juday said that nurse logs don't play a big role in regeneration in Regions II and III. They are more important in wetter areas and areas where harvesting is primarily in uneven-aged systems. Germination on nurse logs is high, but first-year and subsequent mortality is also high.

Invasive species

C14. There are currently five tree species on the Alaska Exotic Plants Information Clearinghouse (AKEPIC) non-native species of concern list. The Committee agreed to use European bird cherry as an easily identifiable example that has been shown to be invasive, and noted the need to coordinate with the Division of Agriculture.

C18. Freeman presented sample language used in some contracts for state timber sales in the Mat-Su that requires equipment washing. Rinke noted that federal agencies have required power-washing for ten years. If this is required for private landowners, they could be asked to certify that they had complied by checking it off on the DPO. Wurtz commented that prevention is necessary – if you wait until an invasive species problem arises, the game is over. Paragi agreed with comments from Jandreau that recreational travel is a bigger risk for introduction of invasives than logging equipment.

F29. The committee added **F29** regarding transportation of fuelwood and other solid-wood packing materials as a vector for introducing exotic insects.

Research recommendations

R6. Paragi and Hagelin added language to the intro for this recommendation to provide context on the size of historical harvests relative to burned areas.

R6. Committee: Need to expand adaptive management research from trial sized to larger-scale disturbances and harvest regimes.

R14. New consensus point added. Yarie and Juday: Need to look at effects of changing regeneration timelines on rotation ages, including what happens in the time between disturbance(s) and establishment of the canopy. We probably miss many important events.

NEXT MEETING DATE AND AGENDA

This was the final meeting for the Region II-III Reforestation Science & Technical Committee. The chairs very much appreciate the time, hard work, and insightful discussions the Committee members brought to this effort. Thank you.

To Do List

- ▶ **Freeman and Durst:** Draft Minutes #11 and send out for review. (done)
- ▶ **Freeman:**
 - Update and finalize consensus points and chart of changes and distribute for approval (done)
 - Add citations from Robertson re seed sources (done)
 - Check with Young on 2% grass cover threshold. (done)
 - Send Board of Forestry agenda to S&TC (done)
- ▶ **Hagelin and Paragi:** Get language for **F14** on vole herbivory (done)
- ▶ **Robertson:** Track down available data on provenance trials in Palmer.
- ▶ **Michaud:** Find out whether provenance trials data from Afognak is available (*done-not publicly available*).
- ▶ **All Committee Members:**
 - Check your bibliography section, particularly the introduction, for any changes needed based on additional citations or Committee discussions, findings, or recommendations.
 - Carefully read entire package one more time and e-mail us to note your concurrence or identify any remaining concerns.

NEXT STEPS

- Freeman will present consensus package to Board of Forestry at November 12 meeting.
- Expect Board will accept findings and recommendations from Committee.
- Expect Board will direct that Implementation Group (IG) of stakeholders be formed in early 2016 and given task of turning S&TC recommendations into draft regulations and/or educational material.
- Board will review any consensus products from Implementation Group.
- Probable date for adoption of any new regulations is end of FY16 at the earliest.

Handouts

Agenda

Minutes from 9-24-15

Bibliography excerpts with revised introductions

Draft consensus points from 9-24-15

Chart of FRPA standards and notes/recommended changes from 9-24-15