

Minutes
Region II-III Reforestation Implementation Group (IG)
Meeting #4 – May 26, 2016

Teleconference: Anchorage, Fairbanks, Galena, Soldotna, Palmer

IG Member present:

Theo DeLaca	Rick Jandreau	Mark Stahl
Clare Doig	Tim Kalke	Wade Wahrenbrock
Jeremy Douse	Kevin Meany	Joe Young
Jim Durst	Tom Paragi	
Marty Freeman	Jeff Selinger	

IG Members unable to attend:

Rod Arno	Amy O'Connor
Joe Bovee	Paul Slenkamp

Public attendees

Todd Nichols, ADF&G

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

Introduction and Background. Minutes from the May 19, 2016 meeting were reviewed, and approved as corrected. Freeman reviewed the agenda, reminding the committee that the goals for the current meeting are to finalize all proposed changes and concurrences.

Public Comments. A response was received from Carl Roland, raising concerns about the robustness of the information used by the S&TC and the Implementation Group to support allowance for the planting of non-native species under certain circumstances. The committee will discuss this later today.

Cal Kerr, Northern Economics Inc., provided some comments on IG recommendations to date, provided some additional information, and asked for copies of some of the stocking data. Freeman incorporated his citations and provided the additional information. Kerr also had initial information on reforestation on Afognak Island and in the Tyonek area. Doig and Wahrenbrock were able to provide more recent information for these areas. A Juneau seed source has continued to outperform local seed on Afognak, and Koncor continues to plant Juneau seed stock. Freeman said she was getting Tyonek records from Joel Nudelman, but that most regeneration surveys for the more recent Tyonek area harvests (1990-2003) showed that residual hardwoods met the reforestation standard. Doig said that he has not seen much spruce regeneration through the grass beneath hardwood residuals at Tyonek, but he has seen regeneration at the edge of openings where the grass was less dense. Paragi suggested this might be worth a specific research recommendation. Wahrenbrock said that the Kenai Peninsula Borough has planted spruce on 2000 acres of private lands that had grass, and this

should be looked at in the future to see if it was successful. Doig suggested that research on the effect of fire following planting in the Caribou Hills area would also be valuable. Jandreau said that a study done in about 2004 looked at Kenai sites exempted from reforestation, and found spotty regeneration that often did not meet the reforestation standard.

Implementation of S&TC Recommendations. The committee continued discussions on how to implement recommendations from the Science and Technical Committee forwarded by the Board, including continued discussions begun during the previous three meetings.

S&TC C22 -- FRPA Applicability Thresholds: Freeman presented a revised draft table of conversions that included conversion information by species for weight, and formulas for converting from dry tons to green tons if moisture content is known. She is still trying to get weight of log load information from Jeff Hermanns. Selinger and Doig liked the updated chart. Young said that he sent samples from Tok to a lab to check moisture content. Green spring white spruce had 50-52% moisture, green white spruce that had sat a year had 32-35% moisture, and standing fire killed white spruce in the 1990 burn had 17-18%.¹ Wahrenbrock said that spruce bark beetle-killed trees on the Kenai had 12-16% moisture when examined. Doig reminded the group that this table just provides rules of thumb to determine whether or not an operation is covered by FRPA. Freeman added notes to the conversion table to capture the noted variability.

S&TC C3am and R4, R10, and R14 -- Stocking density: Freeman reminded the committee of Young's recommendation that the stocking standard be raised based on rotation stocking levels last meeting, and Wahrenbrock's recommendation after the meeting that it be lowered based on economics. After discussion, there was consensus to leave the stocking density unchanged.

S&TC C17, C19, C18, R9 -- Invasive species: Freeman said she had talked with Mia Kirk (ADNR Division of Agriculture Inspector) about phytosanitary certification. Mia said that anyone ordering seedlings can request a phytosanitary certificate. Costs vary depending on the number of plants but are generally around \$100 per order so may not cost prohibitive.

S&TC F19am, F21, C13am, C14 – Seed source: The committee discussed Cal Kerr's comments that the benefits of non-local seed sources may be short lived. Paragi noted that John Alden found that planted lodgepole pine seedlings were overtopped by local white spruce after 40 years. Douse, Paragi, and Wahrenbrock noted that this is further evidence of the need to conduct provenance trials and to remeasure existing provenance trials and keep track of them (see F21 and R9). Research should be coordinated with the US Forest Service. Jandreau noted the installation of circumpolar Siberian larch provenance trials (including Wasilla, Fairbanks, and Tok) and reported that DOF's Jeff Graham had remeasured the Wasilla site. John Alden's PNW GTR 664 identified the stand locations. Doig noted that lodgepole pine may be subject to

¹ Note: Young shared moisture data following the meeting showing that the green spruce moisture content was 53%, the partially dried spruce was at 32%, and the dead and dry at 13%.

moose browsing, unlike white spruce. Young recommended that the Red Fox plantings of non-natives need follow-up measurements.

Selinger asked if there was guidance on how much of a harvested stand could be replanted with non-native species. Freeman said there is nothing currently in writing. Douse said that DPO review could be a time to comment on proposals on private lands. Paragi said that in previous discussions for lodgepole pine on the Kenai, about 5000 acres was planned but abandoned due to growth and fire concerns. DeLaca said that if planting occurred in 100 acre units, he didn't see it as much of a concern, but could see how it might be a concern in the aggregate in heavily harvested areas. Freeman said that, for commercial operations, it was unlikely a landowner would totally convert from native to non-native species, but rather might use non-native plantings as a bet hedge for future conditions. Where climate change pressure is high and drought limitations on growth are a concern, it may be worth the cost and risk to diversify seed provenances and test planting of more diverse species. Jandreau and Paragi agreed. Jandreau added that change usually increases costs at least in the short term, and will likely not be done if a mix of local seed and inexpensive seedlings can meet regeneration requirements.

The IG confirmed the recommendations in **C13** and recommended adding the following to **F21**: [More information is needed on how seeds from other provenances and non-native species grow over a full rotation. Existing and future provenance trials need to be tracked over long periods of time and documentation preserved and publicly available.](#)

S&TC F14, C1am – Natural regeneration information for DPO Supplement: As a reality check, Meany completed the proposed DPO supplement check boxes based on a high quality state white spruce sawlog sale in the Interior. He checked several “NO”s, including amount of expected scarification during a winter harvest, and was wondering if the committee believed such a sale would qualify for the proposed extended regeneration. Meany said that the extension option will be popular, and could be hard to deny. Douse said that, in recent winters, snow cover has been low enough that an operator could do blade scarification if needed.

Freeman said that DOF would rely on forester and operator expertise when evaluating requests for extension; extensions should not be granted where success is not likely. Information indicating likely success is required in the DPO in order to approve an extension. Part of the answer will revolve around landowner regeneration goals including seed source and hardwood component. If the goal is a white spruce stand, then grass presence may mean there is a need to scarify and plant in the short term rather than relying on extended recruitment. Douse said there might be suitable mitigation actions (for example, blade scarification) for boxes checked “NO”. Doig and Durst pointed out that the checklist is not a rigid evaluation but rather a listing of indicators of likely success. The “Notes” box is probably the most important one on the supplemental form, since it allows operators to describe what is on the harvest site now and what the plan is for the future.

Doig noted that biomass harvests may only reach threshold acreage over time, so a landowner may face some difficulty trying to reforest multiple small stands with differing ages since

harvest. Meany said he felt this could be handled with contract conditions on active operations. Wahrenbrock felt it could be addressed through a variation process.

Doig asked if there had been trials on methods of site preparation, and if any had been published. Although much of what is known has been trial and error, Paragi noted that Bill Collins had a publication on scarification trials in the Mat-Su, with recommendations on types and considerations of organic layer thickness (Collins, W. B. 1996). Freeman suggested looking at the S&TC annotated bibliography for scarification references, and that Lieffers had published on *Calamagrostis* (Lieffers, V.J., S.E. Macdonald, and E.H. Hogg. 1993). Paragi noted that it could be beneficial to schedule harvest at times that will assist with site preparation. Young said that no one system fits all harvests. Ground type, snow cover, moss depth, etc. are all site-specific. Meany has written standards for scarification on DOF Fairbanks Area sales, but agrees that implementation is site-specific. Freeman reminded the committee that the DPO supplemental checklist is intended as guidance to (1) allow flexibility to landowners and operators where indicators show that natural reforestation is likely to succeed and (2) provide a heads-up on potential problem areas. Identifying likely problems in advance can save the landowner money. Jandreau added that a site pre-inspection may be needed when evaluating a DPO. Young noted that DPOs usually come back from the agencies with recommendations on practices to increase success.

DeLaca agreed with the general direction of the committee but expressed concerns that granted reforestation extensions will be problematic to administratively track and will be economically difficult to resolve if small-scale planting is needed several years after harvest. Wahrenbrock asked about the Prevailing Winds checkbox. In portions of regions II and III where such information is obvious or known, it is good to include; if not, check “Unknown.” Similarly, some parts of regions II and III have only sparse *Equisetum* and “Unknown” may be appropriate; in an area (such as much of the Interior) where dense stands of *Equisetum* can be present, check “Yes” or “No”.

The IG concurred with their prior recommendation on **C5am** and with the following addition: [If the indicators support continuing the extended period, a final regeneration report is required within 12 years of harvest.](#)

Draft Implementation Group Recommendations. Freeman walked the committee through the current draft Implementation Group recommendations. (*handout*)

Alaska Statutes. No statute changes are recommended.

Alaska Administrative Code (Regulations). (All sections are under 11 AAC 95)

No changes are recommended to the following sections of the regulations related to reforestation:

- Applicability (.190 – add conversions to Implementation Handbook/“Purple Book”)

- Land use conversions (AS 41.17.110, 11 AAC 95.200. 11 AAC 95.375(b), 11 AAC 95.900(13))
- Clearing of spruce (11 AAC 95.195)
- Harvest unit planning and design (11 AAC 95.340)
- Material extraction and disposal sites (11 AAC 95.325(d)(1))
- Stocking numbers (11 AAC 95.375(b)(4) and (d)(2) and (3))
- Extensions (.375(e) –no change to existing language; add subsection on considering stockable and non-stockable areas)
- Vegetative reproduction (.380(b))
- Regeneration survey review (.385 (b))
- Exemption allowance for dead and dying stands (.375(b)(2), (h))
- Site preparation (additions to training and FLUP)

Changes are recommended to the following sections of the regulations related to reforestation:

- Reforestation requirement (.375 (b)(4)) – add Greater than or equal to 9 (inches) in the residual table.
- Stocking distribution (.375 (c)) – clarify that natural variability in both stocking amount and distribution are to be considered when evaluating a variation request.
- Stocking distribution (.375 (d)(4)) – increase allowance for patchiness in stocking during regeneration surveys from 10% to 20%.
- Stocking distribution (.375 (e)) – add new section that includes consideration of non-stockable areas when evaluating a variation request.
- Natural regeneration (.375 (d)) – add new section that allows DOF to extend the period for natural regeneration up to 12 years where appropriate.
- Natural regeneration (.380 (a)) – clarify that the section is dealing with natural regeneration from seed.
- Natural regeneration (.385 (a)) – add flexibility for DOF to approve alternate documentation of regeneration, and add language prescribing timelines for surveys if under extended regeneration.
- Seed source (.375(f)) – add flexibility to use seed from up to 10° latitude south and other sites approved by DOF; prohibit planting of species known to be invasive.
- Exemption from reforestation requirement (.375 (g)) – add flexibility on documentation that can be approved by DOF for dead and dying stands.

Non-Regulatory Implementation. The committee also recommended a number of non-regulatory implementation actions for the Implementation Handbook (“Purple Book”), Detailed Plans of Operations (DPOs) for private lands, Forest Land Use Plans (FLUPs) for state lands, cooperative planning opportunities, and training activities.

- Implementation Handbook – add conversion factors for board feet to cubic feet, cunits, cords, and tons.
- Implementation Handbook – add explanation of option for DOF approval of non-native species and seed from distant locations.

- DPOs – add to Supplement C options for DOF approval of other commercial tree species.
- DPOs – add checkboxes for indicators of natural regeneration likelihood and request for extended natural regeneration period, and add large “Notes” box for explanations.
- DPOs – add checkboxes for season(s) of harvest.
- DPOs - add list of acceptable species for vegetative regeneration.
- FLUPs – add same information as added to DPOs.
- FLUPs – add guidance on avoiding large den sites with heavy equipment.
- Training – training on the identified natural regeneration indicators.
- Training – education on identification of, and avoidance of, large den sites.
- Training – develop/distribute materials providing invasive species awareness and guidelines to prevent spread during typical timber operations.
- Cooperative planning – reestablish the Northern Forest Cooperative or a similar group to share information on and support ongoing research, research needs, improve collaboration, etc. The Working Forest Group and the All-Hands/All-Lands group on the Kenai are other examples of groups that may be able to perform some of these functions.
- Cooperative planning -- conduct cooperative advanced planning among landowners to meet anticipated needs for reforestation. Possible actions include seed collection and maintenance of seed banks.
- Cooperative planning – encourage agencies, working groups, and NGOs to intentionally capture institutional knowledge, document locations and specifics of baseline and ongoing studies, and archive such knowledge in locations accessible to the public.

Research Recommendations: Freeman led the committee in a prioritization exercise of the research recommendations. The committee also discussed what to do with the list of recommendations. Suggestions included inclusion in the report to the Board of Forestry, and providing support to academic and monitoring groups that might be interested in pursuing the topics.

Very High Priority:

- R9 – systematic testing of non-native species over a full rotation to determine potential benefits and risks.
- R10 – systematic review of existing forest regeneration over time throughout regions II and III.
- New (IG) – determine optimum mechanical site preparation methods when heavy grass competition is present or predicted.

High Priority:

- R6 – long-term, stand- and landscape-level monitoring of various harvest treatments and responses to insect infestations, including adaptive management options for mimicking landscape patterns of natural wildland fires.
- R14am – assess/predict future growth and yield of spruce and hardwood stands, including different site preparation and reforestation methods

Moderate Priority:

- R3am – determine outcomes in areas exempted from reforestation following spruce bark beetle outbreaks, with and without burning.
- R4 – determine how both spruce and hardwood stands at densities of 450 seedlings per acre and higher develop over a rotation.
- R5am – short-term research to identify whether beneficial root-associated fungi are spread by small mammals in regions II and III as they are in the Pacific Northwest.
- R7 – compile and maintain records on seed sources used for reforestation so future growth and yield can be tracked back to stock.
- R13 – evaluate whether whole-tree and other yarding systems change beneficial small mammal population distributions or risks from insects such as *Ips* and spruce bark beetles.

Low Priority:

- R8 – determine optimum conditions and timing for use of prescribed fire to achieve regeneration in birch stands where grass is a major competitor (Note: low ranking primarily reflects difficulty of using prescribed fire in Alaska).

What's Next. Freeman gave an overview of the next steps in the Region II-III Reforestation Standards Review process.

- Draft minutes of this meeting will be sent out for committee member review and approval along with charts of the draft conversion factors, draft changes to the DPO, draft consensus points, and draft implementation recommendations.
- Implementation Group members will be asked to approve minutes, charts, and recommendations, probably by email.
- Materials capturing proposed changes to the Regulations, implementation handbook (purple book), and training packets will be prepared for presentation to the Board of Forestry at their August 10-11, 2016 meeting in Palmer as the final report by the Implementation Group.
- The Board of Forestry will act on the Implementation Group's report.
- If the IG recommendations are endorsed by the Board, the agencies will
 - proceed with the process to adopt regulations,
 - amend the implementation handbook,
 - amend the DPO and FLUP forms,
 - incorporate recommendations into training, and
 - share research and planning recommendations with the Board, agencies, universities, etc.

The Implementation Group completed its work for this meeting, and adjourned at noon.

Handouts

- Agenda

- Draft minutes from May 19 meeting
- Correspondence with Carl Roland regarding use of non-native species
- Correspondence with Cal Kerr regarding conversion factors, seed sources, and grass
- Revised draft threshold conversions
- Draft DPO Supplement, version 2
- Summary chart of S&TC recommendations and IG consensus points
- Rough draft of regulation and purple book language, and training needs

TO DO LIST.

All IG Members:

- **Review minutes and draft language. Be prepared to confirm consensus.**

Jim and Marty:

- Draft minutes and distribute to Implementation Group for review along with draft conversion, consensus points, and implementation recommendations charts.

Marty:

- Check with Jeff Hermanns for Tok truckload-to-green ton conversion formulas, then send out to committee.
- Update charts of consensus points and draft regulations/implementation recommendations.

SPECIAL NOTE:

The chairs acknowledge, and are very thankful for, the very significant efforts and contributions made by members of the Implementation Group to this effort on top of their normal workloads, job duties, and business activities. We simply couldn't have done it without you.