

FINAL MINUTES
Board of Forestry Meeting
December 13, 2016

Teleconference sites: Anchorage, Fairbanks, Juneau, Ketchikan, Nelchina, Sitka

Call to Order and Roll Call. Chris Maisch, State Forester, called the meeting to order at 8:03 a.m. Remote sites were connected by teleconference in Anchorage, Juneau, Fairbanks, Ketchikan, and Nelchina. Members Keith Coulter, Denise Herzog, Bill Morris, Eric Nichols, Will Putman, Chris Stark, and Mark Vinsel were present. Erin McLarnon was absent (she arrived midday). A quorum was established.

Public Meeting Notice. The meeting was noticed by issuing public service announcements and press releases (*See handout*), mailing announcements to interested parties, and posting a notice on the state and Department of Natural Resources (DNR) websites.

Approval of Minutes. The Board reviewed and approved by unanimous consent the August 10-11, 2016 minutes without change. (*See handout*)

Approval of agenda. (*See handout*) The agenda was approved by unanimous consent without changes.

Announcements:

- New DNR personnel: Andy Mack, Commissioner; Mark Wiggins Deputy Commissioner for Oil & Gas and DGGs and legislative liaison; Chantal Walsh, Director of Oil and Gas Division.
- Kevin Hanley is retiring at the end of December. Hanley has represented DEC at Board meetings since 2007, and has been an excellent colleague and cooperater during implementation of FRPA on detailed plan of operation reviews, field inspections, and science and technical committees.

Forest practices budgets and staffing. Chris Maisch, Department of Natural Resources (DNR) Division of Forestry (DOF): DOF expects a flat budget for FY18 in Governor's budget; changes could occur in the Legislature. The Division had heavy cuts in the past two years, including a 42% cut in forest management.

DOF is having difficulty filling vacancies in the resource management program even after nationwide advertising. There are few candidates, and candidates have relatively little experience. Vacancies are affecting our timber program in Southeast. We may need to use contractors for layout to move forward.

The DOF managers for the Community Forestry (Patricia Joyner) and Forest Stewardship (Jeff Graham) programs retired. DOF has hired Trevor Dobell-Carlson for the Forest Stewardship position, but has not yet filled the Community Forestry vacancy. The Division has had success hiring entry-level positions in the fire program, but it is hard to keep employees as they gain experience and move to federal agencies or other states with better funding and benefits.

Michelle Hale, Department of Environmental Conservation (DEC) Division of Water: Turnover in the Division is primarily in younger Tier IV staff – Tier IV provides no incentive to stay with the state, and over half of DEC is now Tier IV employees. Many vacancies are in the compliance program. Hale is hopeful that the Division’s budget will be relatively flat for DEC this year in the Governor’s budget – she does not expect to lose additional positions. We don’t know what actions the legislature will take. Gretchen Pikul in the DEC non-point source program will take over FRPA work when Hanley retires. She will participate at Board and effectiveness monitoring group meetings, submit the annual report, respond to questions on water quality, and participate in one FRPA inspection per year if funding is available. Pikul will not review detailed plans of operation (DPOs) or state forest land use plans (FLUPs) unless DNR flags particular water issues. DEC will participate on critical issues subject to available funding. DEC receives no state funding for FRPA work. Hanley’s position is converting to a full-time position in the compliance section. DEC has lost 20% of its positions in the last three years, mostly from attrition though some layoffs have been required. We are now trying to fill compliance program holes.

Hale will provide the Board a list of what will and will not be done by DEC. Hanley: When the public has water-related concerns they usually contact DEC directly. When DOF hears concerns, they can direct them to Pikul. Vinsel: We need to be vigilant on FRPA implementation when the Act says “shall.”

Coulter: I am sorry to see Hanley go – he was experienced with logging. Maintaining the integrity of the Forest Resources and Practices Act (FRPA) is difficult without that level of expertise. Maisch: We can include this in the annual Board report to the Governor.

David Rogers, Director, Department of Fish & Game (ADF&G) Division of Habitat: ADF&G depends on state General Fund (GF) money for FRPA implementation. The Division had an \$894,000 funding cut over the last two years. Implementation is a worry – we have addressed the cuts with audits, reorganization, and leaving some positions vacant. ADF&G is committed to doing the best we can with the money we have. I believe we are OK this year; the future is uncertain. We hope to have a flat budget for FY18. The Division also has a 3-year Sustainable Salmon Fund project to survey fish habitat on Sealaska ground and additional grants for habitat mapping on Kodiak and Afognak islands. We are scheduling FRPA inspections to coincide with the survey work.

Pittman-Robertson funds (see *handout*). Tony Kavalok, ADF&G Div. of Wildlife Conservation (DWC) Assistant Director: DWC appreciates forestry work and is sensitive to the effect of budget cuts. DWC has had GF cuts of 80%; additional cuts would mean loss of important programs such as research on species considered for listing under the Endangered Species Act. The GF funds are also important as matching funds for other grant sources. The Division also has recruitment challenges, and sees the effect of the Tier IV retirement program.

The Pittman-Robertson wildlife restoration program is funded through an excise tax on arms and ammunition. Funds are allocated to states for terrestrial wildlife maintenance and enhancement, access, and hunter education. Alaska gets the maximum allotment possible, and has to match it

with non-federal funds. DWC has had a surplus of federal money available, and the State has increased license fees to provide the required match. The Pittman-Robertson money can't be spent on enforcement. It is short-term funding for projects, not ongoing maintenance funding.

The Alaska allocation has been as high as \$35 million in recent years and we want to fully use these funds. Major user groups lobbied to increase Alaska hunting license fees; the increase takes effect January 1, 2017 which will help provide another \$6-7 million match. The fee increase and matching funds/in-kind work can provide sufficient match at this time. In-kind match can include volunteer time, e.g., with hunter education instruction volunteers.

Current forestry-related projects with DOF support in funding or services follow:

- Tok roller-chopping in the 1990 fire area
- Delta prescribed fire plan for the bison range
- Kenai fuel breaks to allow for wildfire and prescribed fire use
- Matanuska Moose Range prescribed fire plan
- Alphabet Hills prescribed fire plan for willow, aspen, and birch regrowth
- Improvement of Tanana Valley forest roads and parking for hunting access

Kavalok noted that Durst, Paragi, and Rodman have done great work on habitat assessment and enhancement.

Vinsel: Harvesting can also improve wildlife habitat. Could this program also fund that type of activity? Kavalok: Yes, but the primary purpose of the project must be habitat improvement.

Maisch: DOF competes for funds for fire mitigation, and the funders like large-scale projects. Some DOF project proposals could be strengthened by cooperating with DWC to increase their scope. We need to look at opportunities for match.

Coulter: Is this program limited to public land? Kavalok: The intent is to improve habitat for public use; we have to ensure that public has access if work is done on private land. ADF&G is just starting some work on Kodiak. Stark: What do we need to do to get more involvement on private land? Can DWC provide a summary of guidance for work on private land and providing private in-kind match? Kavalok: Contact me to discuss this in more depth. We need to explore more what other states are doing.

State legislation and regulations:

- Maisch: 2017 bill proposals are still under consideration by the Governor. DOF submitted one fire-related proposal this year. We will provide more details after the Governor's review.
- 11 AAC 71 regulations for timber and material sales (*see handout*). Jim Schwarber, DOF: DOF is proposing two changes to the state timber sale regulations:
 - Change 11 AAC 71.045(e) to lengthen the maximum time for small negotiated sales under AS 38.05.115 from one to two years. This would provide the state a better tool for addressing the needs of small operators by providing them with longer windows of secure timber for their businesses.

- Amend 11 AAC 71.055(a) to conform to the changes to AS 38.05.118 made by SB 32 in the last legislative session. This would delete the subsection that limits .118 sales to areas of high unemployment, underutilized manufacturing capacity, and underutilized allowable cut and provide state increased flexibility to use negotiated timber sales to meet local manufacturing needs.

These changes were recommended by the Alaska Timber Jobs Task Force. Maisch: Coffman Cove sale will be first DOF sale to take advantage of the changes.

Freeman: DOF met with the DNR Division of Mining, Land, and Water (DMLW) and agreed that DOF would proceed with these changes in advance of other proposed changes to the material and timber sale regulations in 11 AAC 71 because DMLW has other regulation priorities ahead of this package.

- Fee regulations. Freeman: This is currently a high priority regulation project for DNR. The Division of Mining, Land, and Water is leading the effort. The revision will move each type of fees into its own section, and some divisions are proposing fee increases. DOF currently charges the following fees:
 - beach log salvage license (\$1,000);
 - log brand registration (\$50);
 - transfer of log brand registration (\$25); and
 - renewal of log brand registration (\$25)

The Division does not propose changes at this time. Draft regulations are in internal review; DMLW expects to start agency review soon. DOF will send them to the Board as soon as they are publicly available. Changes in other fees such as those for material sales, tideland permits, publications, and digital data could affect forestry activities.

Coastal forest management

Roadless Rule update and Big Thorne litigation. Tom Lenhart, Asst. Attorney General, Dept. of Law: Budget cuts have not affected our ability to represent DOF. The federal Big Thorne timber sale is still in court; oral argument was completed last February 3 and we are awaiting the decision. The State joined with the US Forest Service in defending the sale. This is a very long time for a decision. There was no injunction, so the sale has proceeded and some timber has been harvested.

Roadless Rule – Briefings on the State challenge to the Roadless Rule in the D.C. federal district court finished a year and a half ago. The court asked for a supplemental brief on the impact of the 9th Circuit ruling against the Tongass exemption to the Roadless Rule. Alaska argues there's no impact – it is a different subject. The new federal administration's impact on the Roadless Rule status is unknown. An administration would have to go through the rule-making process to change either the overall rule or the Tongass exemption. Either action could wind up in court.

Tongass Plan amendment process. Maisch: The USFS signed the final Record of Decision (ROD) for the amendment last week. The state had participated in the objection process to the draft. DOF raised concerns about the length of time for a transition to young-growth harvesting, the economic analysis for the transition, and the amount of young-growth volume available.

DEC added concerns on reciprocal easements – the State didn't expect to have to conduct NEPA processes on federal land under the agreements. The Shelter Cove Road is a test case for the easement questions. DOT objected to removal of the Transportation overlay on the land use designations. The overlay included roads, utility lines, etc. ADF&G was concerned with the lack of documentation on wildlife issues. The State also hammered on treatment of the “seek to meet demand” standard from the Tongass Timber Reform Act (TTRA) and a weak demand study.

The USFS responded to the objections and signed the ROD without any significant changes, despite requests to delay the signature until additional information is available from timber studies now in process.

Nichols: The Tongass annual allowable cut has been decreased to 46 MMBF on 250,000 acres of young-growth. If that timber base is not intensively managed, there will be too little timber to support an industry, and it will be hard to find sufficient volume on that land base to support the industry until there is a transition to a young-growth industry. He disagreed strongly with the demand analysis – the data used was very weak.

Lenhart: The Congressional Review Act allows congressional review within 60 days and effectively a veto. The incoming US Secretary of Agriculture has the option to immediately commence another plan amendment process using the facts from the recent process but instituting a change in policy. The State could also challenge the ROD decision in federal court and has six years to do that. That's a long process. We don't know how aggressively the new administration would defend a legal challenge. Maisch: There are no more administrative options to challenge the plan. The State is considering options for a legal challenge.

Maisch: The State is still working with the USFS to implement the plan effectively because of the risk to the timber industry if timber isn't offered. DOF has an ongoing project to do young-growth inventory. The Division also signed a “Good Neighbor” authority master agreement with USFS Region 10. The agreement allows the state to do work on USFS lands other than federal review processes. DOF is working on a detailed agreement on Kosciusko Island where there is state and federal timber; the next sale after that would be on Gravina Island. The state would do layout, cruising, and appraisals. We are working with the USFS on options to forward-fund the project. We need to be sure the state is protected if work is done and then the sale doesn't sell. Typically the state is reimbursed when the sale is sold. Alaska is trying to learn from the experience of other states. One big challenge is finding experienced people to do the work on the ground – it may require contracting, rotating crews through from other DOF areas, or sharing staff with inventory crews. DOF is motivated to make this work – most of the funding for state timber positions statewide comes from Southeast timber sales. It will be an advantage to use the state appraisal and contracting systems. There may be changes to the Good Neighbor authority in the next Congress, e.g., to allow road work. Nichols: If the timber industry goes away due to lack of federal timber, it will affect the State's ability to sell timber also.

Many former Tongass Advisory Committee members formed the Tongass Transition Collaborative to push the USFS on implementation and inventory work. There is also a team of Prince of Wales Island (POW) communities advocating for a large landscape-scale National

Environmental Policy Act (NEPA) analysis that would cover multiple projects for timber, recreation, etc. If adopted, the USFS would not need project-level NEPA review for individual proposals within the covered area. This concept has been tried in the Lower 48.

Mental Health Trust exchange update. Paul Slenkamp, Mental Health Trust Land Office (MHT): The Trust has active sales in Haines and Gustavus and on POW and the Kenai Peninsula. The Trust is moving from an administrative to a legislative land exchange with good cooperation from the industry and the Alaska congressional delegation. The exchange was included in an energy bill that passed the Senate but died yesterday in the House. The Trust is uncertain how to move forward at this time. MHT has deferred a decision on proceeding with timber sales until the end of December. Maisch: The exchange could be included in a number of bills in the next Congress. Slenkamp: It would also require legislative approval by the state.

The Working Forest Group (TWFG). Slenkamp: TWFG has not been successful securing funds for some projects. The Group is subcontracting for some forest stewardship work on MHT land. We will also produce some public education articles for the Alaska Journal of Commerce and other publications. Clare Doig and others are working on biomass heating in Galena – the boiler fired up last week. The wood heat project is funded by the Alaska Energy Authority, Louden Tribal Council, and Galena.

Challenge Cost Share agreement. Maisch: Alaska has a Challenge Cost Share agreement with the USFS for workforce development and timber inventory. The inventory project covers two ages of young-growth and an old-growth category. About a third of the work is completed; the field work will finish in 2018. Data processing will start this winter, including analysis of fall-down due to buffers, TTRA requirements, and Tongass Plan criteria to determine how much of the young-growth is truly available – that will significantly affect the economics of timber harvest.

DOF hired crews from the technical academy graduates (see below) to do the field work and they stayed with the project throughout the field season. We hope to do another academy in February to provide another group for the remaining inventory work and work under the Good Neighbor authority.

Nichols: The industry wants to see the data come out as soon as possible. Stark: Will this be the first use of lidar on forest inventory in Alaska? Is there some place in Alaska where I can see that this works? We have not had success with it in fisheries work. Maisch: The Nature Conservancy (TNC) and others have used it. Conor Reynolds, TNC: – The Native Forest Partnership around Hoonah has used it to map forest structure and young growth based on modeling done in Pacific Northwest. They are also identifying fish-bearing streams for more detailed field inventory, including identification of likely barriers. Maisch: It has also been used by forest engineers, and we are using it in partnership with NASA for the interior inventory. It's not cheap, but the price has decreased some. The Washington DNR is using lidar to develop their inventory and allowable cut. Lidar is good at identifying karst terrain; remotely-sensed information should still be field-checked. Nichols: Sometimes the field work doesn't get done because of expense. He is concerned that it could be garbage-in/garbage-out. Brian Kleinhenz, Sealaska: The most useful thing to come out of our lidar work has been a detailed contour map

that we use for road design and general information for marginal timber land. The closer you get to harvesting, the more you need people on the ground. No one is using lidar to replace pre-harvest cruising. Some use it for allowable cut calculations. Kleinhenz: Doug Martin is the lead on the Hoonah work. We were able to compare lidar outputs to existing ground data and are using lidar to estimate stream productivity for fish. Morris: It depends on the data resolution; you need to get to ¼-meter resolution for fisheries work. Reynolds: We will have ¼-meter to 1-meter resolution; high-resolution is needed with the dense conifer cover. Coulter: What is advantage of lidar over 3-D air photo interpretation? Maisch: With lidar we can cover big areas, update data more frequently, and share data easily.

Workforce development. Maisch: The State has hired the project lead. We provide a technical academy to train people to do inventory work and the students were almost all local. The project will also provide internships for college students and career information for high school students in resource management and support fields. Contractors are having some of the same issues as agencies in hiring qualified people. Putman: Workforce development is a big topic for Native groups. Is there good outreach to the communities, including Metlakatla? Maisch: Will check on Metlakatla; we have done good outreach to find candidates. A Native non-profit is the contractor for this work. Maisch noted that some of POW trainees aren't interested in working off-island.

Maisch: The State has applied for additional grants on workforce development and lidar acquisition for the inventory area in partnership with TNC and the US Geological Survey (USGS). Reynolds: The USGS contributed \$330,000 for lidar work, is administering all contracting, and has low overhead charges. We hope to build on this to create more efficient large-scale inventory process.

Kleinhenz: Sealaska is looking to bring new blood into the region, including looking for a new logging contractor. We have gone from one or two large contractors to a few smaller ones.

DOF Planning and appeals. Schwarber, DOF:

- Mat-Su forest planning called for by area plan is on hold due to other work priorities
- Baby Brown – DOF has offered a competitive timber sale; the bid date is December 15, 2016. Comments are due January 5, 2017 on the draft Phase 1 FLUP.
- Edna Bay Parley timber sale: DOF is considering comments received on the revised preliminary Best Interest Finding (BIF). The Division plans to issue a final BIF in January 2017.
- Coffman Cove: The DNR Commissioner upheld the final BIF on appeal. Comments on the draft FLUP are due January 9, 2017.
- Vallenar Bay: Road construction underway in compliance with the Vallenar Access FLUP. DOF will issue a separate FLUP in 2017 for proposed timber harvesting.
- North Hollis timber sale: Comments on the preliminary BIF are due January 3, 2017. Subdivision road improvements to facilitate safe access to the proposed sale area have been completed.
- North Thorne Bay: DOF will issue a preliminary BIF in early 2017.

- Serpentine Island timber sale: Comments on the preliminary BIF and land classification order are due January 18, 2017. This is a sale to support the Galena biomass heating project. There is no area plan for state land in this area.
 - Two Rivers Junction #2 timber sale: Sold at auction December 9.
 - Mat-Su Area: The area has seven active sales and 117 firewood permits.
- DOF has a robust process for public review and comments on sales, and the Commissioner has upheld sale documents on appeals. There have been no recent court challenges on state sales.
- Maisch: All three recent DNR commissioners have upheld appeal documents.

Sanctioning and Monitoring Sustainable Harvest Plans. Brian Kleinhenz, Sealaska Corporation: A group of Native village and regional corporations are interested in carbon-credit sales in southcentral and southeast Alaska. California has the first stable market for carbon credit exchange that includes forest stands. Carbon credit sales change the market for timber from wood products to carbon credits. Landowners have to show that their harvest practices are sustainable. Native corporations are looking at doing that through Forest Stewardship plans. Sealaska is pleased that the DOF hired a new Forest Stewardship program manager. This is a big opportunity for private landowners. State entities can also participate, especially the university and mental health trusts. California appears determined to keep the market going to help manage its emission goals. Sealaska is the only Alaska entity to register a project with the California Air Resources Board. Up to a dozen Native corporations may eventually participate.

Buck Lindekugel, Southeast Alaska Conservation Council (SEACC): How long do the credits last? Kleinhenz: You sell a commitment to keep a certain amount of carbon on the landscape for 100 years. You can manage timber if you keep that amount of carbon on-site in trees, including non-merchantable trees.

Kleinhenz: When an owner puts land into a credit, 20% of the carbon gets put into an “insurance pool” to counterbalance losses to wildfire and other risks across the program.

Vinsel: The program is about preserving carbon that has already been taken out of the atmosphere, not new growth. I’m still wrestling with this concept. Kleinhenz: Carbon can be both in trees on the ground at initiation of the project and additional carbon captured in subsequent growth.

AEA Wood Energy project updates. Devany Plentovich, Alaska Energy Authority (AEA) (*Powerpoint*):

- Four feasibility study applications have been submitted for pellet facilities at Fairbanks elementary schools outside the natural gas buildout area and the air quality attainment area. Maisch: These projects could help create a market for the pellet mill.
- Kalskag submitted a feasibility study for a cordwood or chip system; AEA wants to get Aniak interested as well.
- The Galena boiler fired up on December 8. It will heat 14 buildings and save energy by converting to a hot water system and replacing the aging utilidor.
- New Thorne Bay school boilers are operational; the old boilers will be used elsewhere on POW.
- The Gulkana pellet mill is operational with a proprietary drying system.

- Design Requests for Proposals are to be released for Haines and Hydaburg projects.
- Problems with a small chip-fires system in Mentasta have been fixed.
- Chistochina and Tanacross have run out of funding to complete their projects.
- Tanana is adding another boiler and greenhouse.
- Fort Yukon has purchased a boiler and they plan construction for summer 2017.
- Flame tube failures have caused premature equipment failures due to chlorine corrosion due to chlorine in west coast pellets from storage in salt water. A material change adding about \$300 to the boiler costs has been developed by Maine Energy Systems. Haines has installed the replacement and so far the results look promising.
- The Alaska Wood Energy Conference is scheduled for April 11 in Ketchikan with a field trip to school biomass systems on POW on April 12.

Plentovich: Administrative Order 281 was issued in 2016 with an objective to streamline and better focus the State's economic development institutions, specifically the Alaska Housing Finance Corporation (AHFC), AEA, and the Alaska Industrial Development and Export Authority (AIDEA). A consultant was hired to evaluate opportunities; the report is not yet publicly available. The impact on the wood energy programs is unknown at this time. The biomass program receives a significant portion of funds through the USFS.

► Erin McLarnon joined the meeting; all Board members were present.

Public comment

Vinsel relayed comments from Buck Lindekugel that SEACC is opposed to expansion of the Southeast State Forest to two million acres.

Glen Holt, consulting forester, appreciates Board meetings and opportunities to participate in field trips in the past. Have been impressed with review of FRPA reforestation standards – that has been really good work. It was good to speak with the variety of interests. Holt is interested in the workforce development activity, and pleased with the Fairbanks school wood energy proposals.

Region II-III Reforestation review

Regulations process (see handouts). Freeman, DOF: The public notice period for the reforestation regulation changes ran from October 12 through November 23. We received comments from ADF&G, DEC, and three individuals. The agencies' comments supported the process and the proposed amendments. One individual requested more background information on the process, which was provided directly and posted on-line during the comment period. The other contacts were a request for a hard copy, and an acknowledgement of receipt of the notice. There were no requests for changes to the proposed amendments.

The next step is for DNR to adopt the amendments. DOF has provided a briefing and signature package to the DNR Commissioner's office. Once signed, the amendments go to the Department of Law for final legal review prior to filing by the Lieutenant Governor. The amendments would go into effect 30 days after filing.

Other implementation actions: Freeman, DOF: DOF has drafted changes to the regulations fieldbook implementation fieldbook (“purple book”), DPO forms. Final versions of these items and changes to the FLUP template to parallel the DPO changes await adoption of the regulations.

Research and planning recommendations: Freeman and Jim Durst, ADF&G Division of Habitat: The S&TC and Implementation Group identified research and planning needs, and the Implementation Group prioritized them as follows: (*see handout*)

Very high priority

- Document regeneration results long-term in areas with past harvesting.
- Test and monitor non-native species for potential benefits in adapting to climate change.
- Determine the optimum methods for mechanical site preparation.

High priority

- Assess the timing and processes that occur between harvesting and canopy closure. Develop Forest Vegetation Simulator modules predicting stand development in interior and southcentral Alaska.
- Establish and monitor an adaptive management program of stand- and landscape-level harvest treatments for forest regeneration and ecosystem services of wildlife: natural wildfire disturbances average 1000 times larger than average harvest patches.

Moderate priority

- Assess reforestation and forest development on harvested areas exempted from reforestation requirements following spruce bark beetle mortality.
- Determine how stands at densities ≥ 450 trees per acre develop over a rotation.
- Maintain good records of seed and seedling sources, assess successes and risks in selecting seed sources, and include information on Alaska tree seed sources in the national gene data bank.
- Identify whether Interior timber species rely on mycorrhizal fungi dispersed by red-backed voles.
- Determine whether changes in debris loading or dispersion after whole-tree logging alter peak rodent abundance.

Low priority

- Determine the optimum conditions and timing for prescribed fire in birch-dominated stands where grass competition after disturbance is a concern.

Stark: Does this propose stabilizing the wildlife populations? Natural populations have big highs and lows. Durst: The intent is to keep functional populations so that the systems are fully functional. Freeman: The indicators for likely natural regeneration success recognize highs and lows in animal populations – they can affect regen success.

Morris: Did the Science and Technical Committee talk about minimum sizes for retained islands based on research from other areas? Durst: Tom Paragi has been looking at this and the USFS has done some work in SE. The Division of Wildlife Conservation is trying to get funding to do more work on this. Morris: Could Pittman-Robertson funds help?

Stark: What drives the size of timber sales now? Maisch: It is a mix of the economics of a sale, stand size, and markets. Freeman: There might be a way to cluster small sales to cumulatively create bigger openings over time. Maisch: Fire mitigation activities can also create larger openings. We did try to create a larger sale in the Tok area and biomass markets may create opportunities to do that in the future. Stark: There has been larger scale harvesting in the past in the Fairbanks area.

Coulter: How can we incorporate these ideas on private land? Koncor does large cuts on private land on Afognak – larger openings wouldn't be welcomed publicly there. Maisch: The situation varies by location; natural disturbances are typically smaller scale in the coastal forest.

Forest Inventory and Analysis (FIA) update. Doug Hanson, DOF: This project is the first expansion of the federal FIA program to Interior Alaska. This is a \$1.1MM grant with a required 24% match which is challenging with tight state budgets.

We are looking at the relationship of forest cover to climate change; assessing biomass, carbon, wildlife habitat quality, and determining whether interior forests are a source or sink for carbon. The project uses standard FIA protocol with additional sampling of smaller trees, understory vegetation, downed woody material, mosses and lichens, soils and depths to permafrost, and measurements of non-forest conditions.

We are using a 1/5 sampling intensity (1 plot /30,000 acres) compared to FIA projects elsewhere due to the size of area compared to Lower 48. Combining field sampling with airborne remote sensing technology is important because of the reduced sampling intensity. The plan is to complete the initial sampling over 10-12 years, then start resampling. If fires burn over plots, they are re-measured in 10 years for all the original parameters.

The project covers all the forested area in Alaska except for Region I and the Kenai Peninsula using 4,500 plots. We are doing initial sampling in Tanana inventory unit, with a pilot study in the Tanana Valley State Forest and Tetlin Wildlife Refuge. The first field season involved joint DOF, University, and USFS crews; future work will be led by DOF crews. It has been a good cooperative effort. Aviation safety is a big issue because of dependence on helicopter access to remote sites and federal safety standards. We will complete sampling in the Tanana unit in 2018.

This project is using “G-LiHT” Lidar/Hyperspectral/Thermal sensing to supplement ground plots to increase precision and reduce costs given the coarse grid of ground plots. We will add real-color photography to the aerial information next year. Tying the data to the remotely-sensed info requires high-accuracy GPS location. Aerial data will be collected by flying 300-meter wide strips with 10km separation to produce a 3% sample of the area.

The USFS does all the data processing. The report on 2014 pilot study is in review and is due out soon. Sample errors are high for relatively rare forest types. The G-LiHT data should reduce the error significantly.

Putman: Tanana Chiefs Conference (TCC) is using Bureau of Indian Affairs funds for a GIS capacity-building and forest inventory project on Native allotments. We are using the same

protocols as the FIA project but at a higher sampling intensity. We have discussed sharing crews and logistics with FIA in the future, and have joined the USFS training sessions. TCC plans to re-measure the plots every 10 years, and it's the remeasurement data that is most interesting.

Willer-Kash Effectiveness Monitoring Study. Jeff Davis, Aquatic Restoration and Research Institute (*see handout; PowerPoint*): This was a pre- and post-harvest study on four Type IIC (small anadromous streams), with an unharvested reference site. The study area has small harvest areas within the watershed, no road crossings, and wide buffers. This is pretty typical of harvesting in the Susitna River basin. Freeman: We will provide information to the Board on the silvicultural prescriptions for the harvest units in this area.

There were no trends in measured parameters in the treatment streams that were different from those in reference stream, and there were no significant differences following storm events. Parameters included large woody debris, water temperatures, turbidity, total dissolved phosphorus, nitrogen, chlorophyll, fine particulate organic matter, macroinvertebrates, substrate size, and juvenile salmon abundance and condition. There are some differences between the treatment and reference streams, but nothing that could be attributed to timber harvest or road construction. Both the treatment and reference streams showed an increase in degree-days, but the streams are warming at the same rate. Davis tracked air temperatures as well.

DOF and the Mat-Su Basin Salmon Habitat Partnership (which is supported by the US Fish and Wildlife Service) provided funding for the project.

Stark: Were there adult salmon in these streams? Davis: The streams are catalogued for coho spawning and chinook; I believe there is also chinook spawning.

University of Alaska Fairbanks (UAF) Forestry program updates.

Forestry education. David Valentine, the Director of the UAF School of Natural Resources and Extension (SNRE) Academic Program reviewed the history of forestry at UAF. The school offers BS, MS, MNRM, and PhD degrees; all are now being evaluated by the university to determine whether or not they should be deleted as part of a review of cost-saving measures in response to budget cuts. SNRE has made a case for the efficient delivery of its academic programs as well as substantial research funding brought in by the program.

Since 2008, the Forest Sciences faculty has dropped from nine to two, and the SNRE faculty has dropped from 29 to 13. When people retire or move, SNRE has not been allowed to fill the positions. Every college department has had hits, but SNRE has been hit particularly hard because it had a lot of senior faculty who have retired. During the same time period, the number of active majors has increased from 85 to 128. Since 1987, SNRE has awarded 298 BS degrees in NR management, of which 29 were in the forestry option. This small number underlies the deletion of the Forestry Option within the NRM BS Degree. Degree requirements for the forestry option were tighter than the other options so that it could take longer and cost more for students to graduate with all the requirements. The University requires at least 10 students for a class to be offered – many forestry classes had less. With the retirement of John Yarie, there are no longer any foresters on the school faculty.

Current SNRE work includes,

- K-12 forest education (Project One Tree)
- The resilience and adaptation program
- The Mat-Su Farm
- Global Learning to benefit the environment (GLOBE)
- High Latitude Range Management

Incoming students are looking for programs with “sustainability” in the title. SNRE hopes to reach out to other colleges with programs in resources, such as fisheries and wildlife, and is looking at how to increase student enrollment. The SNRE faculty could be absorbed into another college within the university.

Forestry research. Milan Shipka, Director of the UAF Agriculture and Forestry Experiment Station (AFES) and Research Program reported that the AFES budget is less than half of what it was three years ago. Juday and Yarie have retired, but Juday continues productive research. Morimoto is funded to continue post-doc work for the coming year. Valentine is heading up the forest soils lab. AFES is trying to bring someone on to maintain the long-term forest growth and yield project which monitors 200 sites from the Brooks Range to the Kenai Peninsula. There are also long-term projects at the Bonanza Creek Experimental Forest on thinning and fertilization, log decomposition, and forest soil descriptions. Juday is continuing work on climate change effects, particularly in terms of precipitation. Sarah Trainor is working on fire and climate change. Dave Verbyla studies landscape effects of wildfire and boreal forest productivity. AFES is working with TCC in Stevens Village which is interested in reindeer production on land it owns in the Delta area.

We will work hard to keep important research going. AFES collaborates extensively with the Long-Term Ecological Research site and with and researchers in other states. WE need to find our way through these times while preserving important research.

Valentine: We have been able to hire some retirees as adjunct faculty to teach or contribute to classes at a lower cost. That has provided a grace period – there is concern that it will end. Gino Graziano has been hired to teach Conservation Biology.

Nichols: The irony is that Alcan is operating on a University timber sale that will return \$4 million to the University and yet we can't hire university grads to work in forestry. Most of the university work is in research and we don't get a lot back from the university. The industry needs technical people, not general degrees, and people who can stick out work in the woods. The turnover for young hires is horrendous. Valentine: Money from the University timber now goes to the Alaska Scholars program which is great, but it took away funds from the resource programs. Shipka: SNRE does fund some forest research work at UA Southeast, although most recent has been in the Interior because the people are there. Maisch: We need to bring our educational institutions together with the businesses that need workers. DOF has had to wade into workforce development through training academies. We may need to look at different programs like a technical associate degree. Linking the DOF fire academy to university certificate and associate degree programs has been successful. We want to create a pipeline for

work in the agencies and industry. Valentine: Are forestry work needs reflected in the Department of Labor's projections? Can we get graduates into jobs? Having hard numbers helps SNRE make its case. Shipka: UAF has tried to offer everything from a technical school through graduate degree programs. We need information on what the real needs are, e.g., internships for forest inventory.

Wrap-up

- **Next meeting date:** Friday, April 14 in Ketchikan.
- **Agenda items**
 - FY 17-18 Budgets and FRPA implementation
 - Legislation and regulations re negotiated sales; 2017 proposals
 - Reforestation regulations/implementation update
 - SE forest management issues including Tongass Plan Amendment
 - Status of state timber program: timber sales and appeals
 - Endangered Species Act yellow-cedar review
 - Wood energy projects
 - State sustainability sanctioning
 - Annual reports from agencies and Board
 - Annual compliance monitoring report
 - Doug Martin report on Hoonah work, including use of lidar.
 - Changes in the federal administration

Board comments

- Vinsel: I appreciated having gone to the Willer-Kash area prior to hearing the monitoring report – field trips are invaluable. We keep hearing about hiring difficulties. We need to embrace teaching of technical and practical skills as part of the educational needs and add direct, outdoor, hands-on experience to the educational experience.
- Stark: Thanks to Hanley for his work with us. I hope to drag him back in the future; same to Holt. I agree that we have lots of computer-literate folks who can't start a boat motor. Don't turn the design of programs over to the academics.
- Putman: Work force development issues pop up everywhere; it's a constant challenge at TCC.
- Morris: Thanks to presenters. My colleagues appreciated working with Hanley. The work force development discussion brought home the realization that there aren't programs to provide people in a professional development track. Keep people like Nichols involved to make sure programs produce people who can work in the field. Students don't get much field experience today.
- Herzog: Thanks to Hanley; he will be missed. The mining industry also has problems hiring qualified Alaskans. We set up a petroleum training service that might be relevant for forestry.
- McLarnon: We need to focus on the work force issues.
- Coulter: It is hard to see why people would go into forestry if the industry isn't in good shape. There's some agency work. Workers need more than a technical degree when you get beyond their 20s. Education costs are high, and if you pay for a 4-year degree it's hard to find competitive salaries, retirement programs, and locations in forestry. Why would people come to Alaska for private sector forestry work in this economic climate with the industry in decline? It's a complicated issue.

- Nichols: It would be good to simplify the information in the Willer-Kash report and get it to a broader base. I appreciate the report. You have to like this industry to be in it. As we retire, the question is who comes in behind us? People without Southeast experience and familiarity with marine work are hard to find.
- Maisch: Thank you to Hanley.

Adjourn: 4:34 p.m.

Attendees

- Tim Dabney, DOF (ANC)
- Jeff Davis, ARRI (ANC)
- Trevor Dobell-Carlson (PAL)
- Jim Durst, ADF&G (FBX)
- Marty Freeman, DOF (ANC)
- Michelle Hale, DEC (JNU)
- Kevin Hanley, DEC (JNU)
- Doug Hanson, DOF (FBX)
- Glen Holt, (FBX)
- Tony Kavalok, ADF&G (ANC)
- Cal Kerr (ANC)
- Brian Kleinhenz, Sealaska (JNU)
- Tom Lenhart, AGO (JNU)
- Buck Lindekugel, SEACC (JNU)
- Joel Nudelman, DOF (JNU)
- Gretchen Pikul, DEC (JNU)
- Devany Plentovich, AEA (ANC)
- Conor Reynolds, TNC
- David Rogers, ADF&G (JNU)
- Jim Schwarber, DOF (FBX)
- Elsa Sebastian, Sitka
- Milan Shipka, UAF (FBX)
- Paul Slenkamp, MHTLO (KTN)
- Greg Staunton, DOF (KTN)
- Matt Stevens, DOF (FBX)
- Jackie Timothy, ADF&G (JNU)
- David Valentine, UAF (FBX)
- Peter _____, (Bridgit)

Handouts

- Agenda
- Public notice
- Draft minutes from August 10-11, 2016 Board meeting
- Pittman-Robertson project list
- Small negotiated sale regulations
- Changes to Forest Management Statutes and Regulations fieldbook from SB 32
- Region II-III reforestation standards
 - Notice of proposed changes on reforestation standards
 - Region II-III reforestation draft regulations
- Additional regulation notice information
- Region II-III reforestation draft regulations – comments and responses
- Region II-III research and planning needs
- Response to public comments
- Region II FRPA Effectiveness Monitoring. J.C. Davis, et al. 2016
- S3203: Alaska Economic Development and Access to Resources Act