

**FINAL MINUTES**  
**August 1, 2017**  
**Board of Forestry Meeting**  
**Teleconference sites: Anchorage, Fairbanks, Juneau, Ketchikan**

**Call to Order and Roll Call.** Chris Maisch, State Forester, called the meeting to order at 8:01 a.m. Teleconference sites were connected in Anchorage, Juneau, Ketchikan, Fairbanks, and Petersburg. Members Chris Beck (Fairbanks), Denise Herzog (Fairbanks), Bill Morris (Fairbanks), Eric Nichols (Ketchikan), Will Putman (Fairbanks), Chris Stark (Fairbanks), Mark Vinsel (Juneau) were present. A quorum was established. Denise Herzog and Will Putman were reappointed to the Board and Chris Beck was appointed to fill the Recreation seat vacated by Erin McLarnon at the end of her last term. Beck is a principal and founding partner of Agnew::Beck Consulting, specializing in land use planning, public participation and facilitation, tourism planning, community development, and urban design across Alaska.

**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) website.

**Approval of Minutes.** By unanimous consent, the Board reviewed and approved the April 14, 2017 minutes with minor corrections. (*See handout*)

**Approval of agenda.** (*See handout*) The agenda was approved by unanimous consent with deletion of the topic on sanctioning and monitoring sustainable harvest plans – it is no longer needed.

**Announcements.**

- AK Coastal Rainforest Center and US Fish & Wildlife Service symposium on yellow-cedar October 24-25 in Juneau.
- Emma Cayer is the new Program Coordinator for the ADF&G Threatened, Endangered, and Diversity Program.
- Mat-Su Salmon Science and Conservation Symposium will be November 8th and 9th at the Palmer train depot.
- This is the last day for DNR Deputy Commissioner Ed Fogels. He will be missed.
- The Alaska Northern Forest Cooperative is planning a spring 2018 meeting to coordinate with the Society of American Foresters meeting, and focusing on forestry and carbon credits.

John Sturgeon, alternate for Keith Coulter in the Native Corporation seat, joined the meeting.

**Forest practices budgets.** Chris Maisch, Department of Natural Resources (DNR) Division of Forestry (DOF): The FY17 budget was flat compared to the previous year, but DOF had a 42% decrease in forest management in the previous three years. No capital items for forestry were in the capital budget this year. DOF is continuing work on the Gravina Road capital project. The bright spot for funds is in federal partnerships. The Forest Inventory and Analysis (FIA) project is continuing under a \$1.5-2 million annual contract, that covers seasonal inventory employees and two full-time foresters. DOF signed the first Good Neighbor Authority agreement with the US Forest Service (USFS) Region 10 for timber sale planning and administration on federal land. The first project is a young-growth sale on Kosciusko Island that provides about \$250,000 for 2017 to DOF. The Division is negotiating a second project for Gravina Island. Consolidated grants from the USFS for cooperative State and Private Forestry programs continue.

The state Office of Management and Budget (OMB) has not yet issued instructions to the agencies for preparing FY19 budget proposals.

Beck: Is the FY17 level funding a pause in declines, or a floor? Maisch: My sense is that it's a pause, depending on the state fiscal plan developed by legislature. There's more work to be done before there is a long-term fix. DOF doesn't know yet whether OMB will instruct DNR to prepare for more cuts or hold the line for next fiscal year.

Nichols: How much Good Neighbor Authority money would be needed for DOF to be self-funded?

Maisch: DOF receives \$800.0/year in state timber sale receipts to help fund the timber management program. Federal funds just pay the costs of DOF work on federal programs, including indirect costs.

The General Fund budget for DOF is just under \$4 million, including positions that are joint fire management and resource management positions. Significant additional funding would be needed, especially since the state forest footprint in Southeast Alaska is so small. Nichols: Figuring out how to get a larger timber base to self-fund would be valuable. Maisch: Agreed, but DOF would still be responsible for forest management statewide.

Gretchen Pikul, Department of Environmental Conservation (DEC) Division of Water: The Division and the Department as a whole was not cut beyond what was in the Governor's FY18 budget. Much of the cut was absorbed by a fund source switch in the Division of Water from Undesignated General Funds to General Funds Program Receipts – permittees' fees continue to rise, but that is according to statute that has been on the books since 2000. FY17 has been a year of stabilization as the Division accustoms itself to our new fiscal reality, and FY18 is expected to continue in that stable mode.

David Rogers, Department of Fish & Game (ADF&G) Division of Habitat: There has been no change from the Governor's budget in FY18. The Division of Habitat has had to adjust to cuts, but will continue to do its duty under the Forest Resources and Practices Act (FRPA). The Division's staffing has stabilized; we are assessing gaps and needs.

Rogers will send the Board figures for the Habitat Division's total budget, and for federal Dingell-Johnson and Pittman-Robertson funds. Is Habitat looking at ways to use those funds along with the Division of Wildlife Conservation? Maisch: DOF is working with Wildlife Conservation on using Pittman-Robertson funds for habitat improvement, including access for hunting and subsistence. DOF has suggested projects to maintain forest roads that are used heavily for sport hunting and to conduct prescribed burns. We expect to see some funding. ADF&G has been short of matching funds and DOF can provide matching funds from road maintenance funding. [Note: The non-federal match requirement for P-R funds is 25%.]

Antidegradation and Tier 3 Waters criteria. Earl Crapps, DEC Division of Water, summarized the processes to amend the Alaska antidegradation regulations and adopt a process for designating Tier 3 waters. The Clean Water Act and its regulations require states to have an antidegradation policy and implementation methods that:

- Protect existing uses,
- Authorize the lowering of water quality ("degradation") in high quality waters where necessary for social or economic importance, and
- Offer a mechanism to provide additional protection for water of exceptional ecological or recreational significance. These are called Outstanding National Resource Waters (ONRWs) or Tier 3 Waters.

Alaska's Water Quality Standards regulations identify three "tiers," of waters:

- **Tier 1** — This is the floor; it applies to all waters including waters for which not all water quality criteria are met whether due to naturally occurring constituents in the water or human activity. Waters are managed to protect existing uses.
- **Tier 2** — High quality waters, which include the vast majority of Alaska waters. In these waters, the water quality exceeds the water quality criteria.
- **Tier 3** — ONRWs that must be preserved in their current status (18 AAC 70.015).

This policy has been in regulation since 1997. Draft amendments to the Water Quality Standards Regulations on Tier 1 and 2 waters under 18 AAC 70 are out for review; public comments are due by August 7, 2017. The amendments address information and analysis required for Alaska Pollutant Discharge Elimination System (APDES) point source discharge permits. State regulated nonpoint source discharges are evaluated in coordination with other state agencies as necessary.

DEC is also developing a draft proposal for a Tier 3 Nomination and Designation Process after an initial legislative proposal was put on hold; a briefing on the proposed plan is tentatively scheduled for late-Fall 2017.

Antidegradation is a complex topic and the Clean Water Act is vague on several issues. Recent updates to the federal regulations at 40 CFR 131.12 have clarified some issues. There have been comments from both industry and non-governmental organizations. DEC has revised the regulations that are currently proposed in response to applicable public comments received during the 2014 public comment period and subsequent 2015 public workshop. The requirements include that the proposed discharge have a social or economic importance and that a range of practicable alternatives to degradation be evaluated. Some of the controversy is about whether the regulations are too restrictive or not restrictive enough.

Relation to FRPA: This set of regulations is limited to Alaska Pollutant Discharge Elimination System (APDES) point source discharges or state certifications of federal 404 permits (“401 certifications”). APDES permitting doesn’t affect FRPA per se, but DEC would have to make a finding for APDES point source permits to a receiving water body that also have state regulated non-point source discharges (e.g. forestry actions). If there is a Tier 3 waterbody is designated, its water quality must be maintained and protected – no additional degradation is allowed. This would not include natural degradation.

Stark: Is this a new layer of oversight by DEC of nonpoint source pollution? Crapps: If an applicant proposes to discharge to a water that also has a nonpoint source, DEC must make a finding of compliance with the standards. For a timber sale, the nonpoint source activity doesn’t require a finding unless someone else proposes a point-source discharge to the same water. DEC would have to say whether the nonpoint-source activity complies with regulations, and for forestry operations under FRPA, the FRPA regulations set the standards. DEC coordinates this review with other agencies.

Negotiated timber sales (see handout). Jim Schwarber, DOF: The Division proposes to extend the time limit for negotiated sales <500MBF from one year to two years to allow DOF to better support small operators (11 AAC 71.045(e)). For 11 AAC 71.055, we need to update the regulation on other negotiated sales to conform changes in the statutes. The statute provides more flexibility to offer negotiated sales to meet local processing demand. These changes were originally recommended by the Alaska Timber Jobs Task Force.

Public notice. Schwarber: The DNR Division of Mining, Land, and Water (DMLW) is reviewing public notice regulations and will propose changes. This project is expected to take 1-2 years. Public notice is a cornerstone of timber sale planning.

DNR Fee regulations (11 AAC 05). Marty Freeman, DOF: The public comment period for DNR fee regulations closed on July 28. The Division of Mining, Land, and Water is the lead on these regulations. The proposed regulations:

- Revise many existing fees, and establish new fees for DNR services, products, facilities, equipment and land use authorizations,
- add new definitions,
- address generally allowed commercial use of state land, and
- update citations to the fee regulations in other sections of the DNR regulations.

Division of Forestry fees are moved into a separate section. There are no changes to the DOF fees which cover only beach log salvage and log brands. The fee regulations do not cover commercial or personal use timber or firewood sales or permits.

The regulations do cover other activities that relate to some forest operations, including computer products, easements and rights of way, materials, surveys, and platting.

DMLW received 14 sets of comments, including five regarding Div. of Geologic & Geophysical Services fees, and three regarding fees for public utilities. There were no comments from the public on the DOF fees. The fees regulations are the top priority regulation project for DMLW.

FYI, DMLW is also conducting agency review of proposed amendments to the mining regulations. The amendments are technical changes to current mining claim requirements. Freeman will forward a copy when the public review period is set.

Reforestation regulation implementation. Freeman, DOF: An update to the implementation fieldbook (“purple book”) is in progress. DOF is incorporating changes from the reviews of mass wasting standards, Region II riparian standards, and Regions II-III reforestation standards. These include:

- a chart for converting the board-foot based FRPA applicability standards to other measures,
- information on commercial tree species for reforestation,
- information on invasive tree species identification,
- indicators of unstable slopes with respect to mass wasting best management practices (BMPs),
- the updated Region II stream classification system, and
- rating criteria for three BMPs on winter roads and ice bridges.

The last section is in progress and DOF plans to print the updated field book this fall. DOF will send the draft to the Board prior to publication.

## **Coastal forest management**

Big Thorne litigation. Tom Lenhart, Asst. Attorney General, Dept. of Law: Alaska prevailed in federal district court and before 3-judge panel in 9<sup>th</sup> Circuit on the case to uphold the Big Thorne timber sale in the Tongass. Plaintiffs filed a petition for review by either the same panel or en banc in 9<sup>th</sup> Circuit (11 judges). Less than 1% of petitions for review are granted. Most are rejected, but if even one judge would like a full briefing on review, then a briefing is required. We are now working on a briefing; it is due next week. The odds are still against the court granting a full review, but the 9<sup>th</sup> circuit previously took on a review for the Tongass Roadless exemption. We don't know when a decision on review will be made. If there is a review en banc, the case starts clean, not from the 3-judge panel decision.

Roadless Rule litigation. Lenhart: The Washington, D.C. District case has been ripe for decision for a year and a half. There is nothing to do on the case until the judge rules. Whichever way the ruling goes, the case will be probably be appealed.

No one has yet filed a legal challenge of the Tongass Plan amendment but they have 6 years to do so. There has been some interest in getting Congress to review it under the Congressional Review Act.

Mental Health Trust exchange. Paul Slenkamp, Mental Health Trust (MHT) Land Office: S131 was passed by Congress and signed into law May 5, 2017 by Pres. Trump. It authorizes the MHT-USFS land exchange. SB88, the accompanying state bill, also passed with significant support. Within 90 days, the USFS has completed survey and appraisal instructions. BLM is already surveying lands in Naukati for the first land transfer, along with parcels K-1 and K-2 near Ketchikan. There is no early entry allowed – the transfer process must be complete before the Trust can proceed with timber sales. Progress is challenging, and the Trust must cover all costs. Lively discussions with the USFS on policy decisions and charges continue, but the parties are moving through it, and the MHT is pleased with process.

The MHT has opened the Icy Bay logging camp and moved equipment on site in preparation for future activity.

Good Neighbor Authority (GNA). Jim Eleazer, DOF: DOF is assisting the USFS on the Kosciusko project with young-growth timber near Edna Bay. DOF is doing timber sale planning and layout for 30 MMBF. We have laid out the first unit with three different prescriptions which will be a demonstration unit and training ground for whoever wins the bid, as the winner will do subsequent layout. The whole sale has been cruised by DOF and Tongass Young Growth inventory cruisers. We are close to finalizing the contract, and are preparing a notice of timber sale to go out in mid-August for 30 days. Paul Slenkamp is leading contract development under a Reimbursable Services Agreement with DNR. He will also be the sale administrator. The bid opening is targeted for mid-September with contract signing by end of the federal fiscal year on September 30 to allow USFS to apply the sale to their FY17 volume targets. This will be the first state offered and administered sale on USFS ground in Alaska. We're optimistic that it will go well – there has been good interagency cooperation. The agencies hope to do a second sale on Gravina Island near Vallenar Bay in calendar year 2018. The USFS has done scoping for a young-growth project on Gravina but has not yet done an Environmental Assessment.

Stark: Will this timber sale make money? Eleazer: The feasibility appraisal determined that it would be a positive-value sale – that's why we agreed to move forward. We haven't yet done the final appraisal. Nichols – There is a market for this young growth if the contract and appraisal are reasonable. Eleazer will send the pre-feasibility appraisal to Board.

Sale revenue will go to the USFS; they just reimburse DOF for expenses of sale preparation, offering, and administration. The benefit to DOF is the support for staff capacity. Maisch – this is all done under state authority except for National Environment Policy Act (NEPA) clearance. Because this is a young-growth sale, NEPA review was done as an Environmental Assessment (EA) rather than an Environmental Impact Assessment (EIS). The benefit to the industry is having more timber volume available. Challenges to process would be under the NEPA process and dealt with by the USFS.

Nichols: If the sale is challenged when offered, the state could get dragged in, e.g., on appraisal. Maisch – the state doesn't issue decision documents, they are done by the USFS under federal processes. Good Neighbor Authority projects in other states have not been challenged. Slenkamp: The contract and Detailed Plan of Operations refer to the EA regarding all the layout decisions. Lenhart – It will depend on what is challenged. A challenge to NEPA would require the USFS to respond. If the state does multiple sales out of one EA, the state could wind up as a co-defendant. Putman: Doing a GNA project in Tongass may be a test of the process in terms of resilience to controversy. Maisch: Young-growth sales are less controversial than old-growth offerings.

Vinsel: Does the timber in this sale push the time frame earlier than the age for optimum volume growth? Maisch: The timber is about 60 years old; it is approaching the maximum growth rate. It would be nice to let it mature longer, but there is a need for timber. This is several decades ahead of the culmination of mean annual increment (CMAI) when the growth rate peaks. Nichols: I saw 52-year old timber on the site, but with good volume/acre and it's better than the volume in many old-growth sales. With pre-commercial thinning, Tongass growth potential can be competitive. Maisch: For young-growth sales The Tongass has an exemption from the federal requirement to wait for CMAI. Nichols – the higher site ground, including areas heavy to spruce, were thinned.

Eleazer: The estimated volume under all three silvicultural prescriptions averages about 35 MBF/acre. Buyers in the young-growth market are not interested in trees with a larger diameter at the small end. Nichols: There's a \$50-\$100 discount/MBF in Lower 48 markets for the larger trees. Think average volume estimates may be high. Sealaska found 29-35 MBF/acre on their young-growth. Eleazer: The volume estimates take in #4 sawlogs, and DOF doesn't intend to include them because they aren't commercial. Doug Hanson, DOF Inventory Forester: On the young-growth sites, we are probably in the 29-30 MBF range.

Maisch: We hope this process can help the USFS offer more timber on their land. The Good Neighbor Authority is now authorized under the Farm Bill for all states. It has support from a wide variety of interests. The Tongass is a late-adopter of this option.

Timber work force development. Stephen SueWing, DCCED-Div. of Economic Development:

- There were 12 graduates from the second training academy in March. Five have been hired by the USFS, three by DOF, and one by Sealaska. Of the 20 total students from the two academies, thirteen are employed this year.
- The state has joined with Sealaska, Kasaan, and other organizations in a training program for people 15-25 in rural villages, with preference for Natives. Had Eighteen people applied for seven spots; hires are from Hydaburg, Kake, and Klawock. Students are working on a variety of projects near Kake and on Prince of Wales Island. Work is supervised by Sealaska professionals. Training focuses on resource management opportunities and employability skills. DCCED will consider potential projects and partners for a second round next year.
- A regional youth workforce development meeting with people across Tongass is planned for September.

- Wood boiler technician training -- including greenhouse operation -- is planned for Prince of Wales Island. The island now has 10 wood boilers in operation. A second round is proposed in the Tanana valley.

All landowners group. Clarence Clark, consultant: The Alaska Forest Association is working under a Memorandum of Understanding with USFS to help the timber industry provide early input into the USFS timber sale process, and to reconvene a landowner's group with USFS, the University, MHT, DOF, and Sealaska to consider how to work together to improve Southeast timber sale programs -- *see handout for statement of purpose*. The group has met twice this year. It grew out of a prior group that organized to coordinate access among landowners. This year the group has produced a timber sale schedule showing proposed offerings, but it the members have not coordinated efforts to complement each other's sales nor to fill in gaps in offerings. Road use agreements for a GNA sale at Edna Bay are in draft. The group has not yet been successful in developing a region-wide road use agreement. Clark's work is currently funded with federal money passing through the state under the Challenge Cost Share Agreement.

Nichols: If various owners develop infrastructure, will this group discuss how to share costs as well as use? Clark: We haven't done that yet.

Beck: Are the challenges to cooperation primarily technical or political? Clark: They are largely political. However, there are huge potential benefits for all the landowners. For example, DOF has produced regional infrastructure maps. Draft maps are out for input to help identify missing pieces of infrastructure or areas with potential multiple benefits -- e.g., isolated road systems with separate log transfer facilities a few hundred feet apart. Connections would have big cost savings and could reduce timber costs by up to \$100/MBF. Beck: Can this Board encourage the landowners to take advantage of these opportunities. Clark: The Board's annual report to the Governor could include support for landowners' and for agencies' continued involvement in this process. Beck encouraged Clark to draft something persuasive on this for the Board. Stark: We can also take advantage of opportunities to advocate with other presenters about this issue. Eleazer: When the Board has a meeting in Juneau during the session, it is an opportunity for Board members to interface with state legislators.

Tongass second growth management. Sheila Spores, USFS Tongass Silviculturist: There is a total of approximately 420,000 acres of young-growth in the Tongass National Forest (TNF), 80% in the five southern districts, and over half is on Prince of Wales Island. The quality of the young-growth stands varies widely due to harvest method, stand age, intermediate treatments, and site quality. Average volume/acre increases steadily from about 25 to 95 years post-harvest. Most of the Tongass young-growth stands are 15-55 years old. Even flow, sustained yields will be challenging to achieve and likely not obtainable with one rotational period. About 208,000 of thinning has occurred. Precommercial thinning (PCT) between ages 15 to 30 can prolong understory vegetation, reduce competition between trees, increase growth rates, and improve wildlife habitat. Thinning is expensive. Most of the older stands are not thinned; the USFS tries to thin all the young-growth sites, with the priority on higher sites. Site productivity is greatly affected by soil drainage. Target 14' spacing for SS and WH, and 7' for cedar. Many areas of young growth are in areas that are now off limits to timber harvest, e.g., beach fringes, riparian buffers, eagle nests, and karst.

Although the National Forest Management Act requires that a stand reach the culmination of mean annual increment (CMAI) before harvest, the passage of SB340 (the Sealaska transfer) allows for an exemption to this rule in the Tongass. On the Tongass, the 2-Log rule was developed to better predict when stands may reach an economic condition to see where economic harvest opportunities may exist earlier than waiting for stands to reach CMAI. The 2-Log Rule implies at least half of the merchantable volume

within a stand is comprised of trees with two or more 34-foot logs. It bumped up the economic transition time by 10-25 years, but stands would be harvested at lower volumes per acre.

The USFS is targeting a transition to young-growth harvesting by 2025, while protecting a viable timber industry. Transitioning to young-growth harvesting within 10-15 years will require adding more areas to the suitable timber base, e.g., from beach fringes. The prior Tongass Plan standards and guidelines removed many areas of young-growth from the timber base. The Tongass amendment allowed some harvesting in beach fringe areas which can provide both timber and wildlife habitat benefits. The USFS and DOF are doing landscape-level assessments on potential and strategies for young-growth harvesting on stands over 55 years old. Data will soon be available to map and assess the stands.

The Farr plots that are now 30-35 years old have been remeasured, most recently in 2014-16 and used to recalibrate the Tongass growth and yield model.

The Tongass Timber Reform Act (TTRA) riparian buffers are legislated, and are 100-150' wide. Riparian Management Areas are layered on top of those through the Tongass Plan and can be wider than the TTRA buffers, e.g., on alluvial floodplains.

Natural regeneration on the Tongass comes in at 5,000-7,000 trees/acre. There is little planting on the Tongass; it is done occasionally to increase diversity, but isn't needed to meet reforestation requirements. Pre-commercial thinning (PCT) to reduce that number to 220 trees/acre more quickly has habitat and timber benefits. PCT costs about \$475-500/acre; this is a recent increase in cost due to requirements to favor small businesses which has reduced competition and increased costs.

Beck: What is the threshold where PCT becomes uneconomical? Spores: PCT is based primarily on national funding allocations. The Tongass will continue to do thinning as funds allow. The benefits are in healthier stands and better wildlife habitat, but probably aren't supported by net present value of timber alone. The Big Thorne sales generated revenue to thin 4,000 acres.

Stark: Could private owners thin and make money? Nichols: Not at \$475-500/acre given the long time frames for returns. Spores: Sealaska has been able to get matching funds from the Natural Resources Conservation Service (NRCS) for some thinning which makes it economical for them.

Nichols: Alcan has a buyer that wants hemlock peelers for plywood, but Southeast Alaska hemlock isn't round in younger trees. The trees are oval and dimpled -- not fluted -- in both thinned and unthinned stands. At what age does that happen? Spores: We haven't looked at this.

Nichols: If young-growth is harvested, there will be some blowdown, and we shouldn't walk away from the blowdown, e.g., on Heceta Island. Spores: We agreed that work is needed on salvage sales. The USFS can do salvage sales fairly easily, but if you want to take down the rest of the stand it is more complicated. Nichols: If the logger can't take the blown-down wood, the USFS is responsible to clean it up since they decided on the silvicultural system. Spores: I haven't seen blowdown on timber sales that exceeds the natural range of blowdown. Nichols: The area of land available for harvest is so limited that the USFS needs to keep all the available acreage productive. Spores: Most of the salvage sale proposals are from small operators, and a lot of those sales don't get sold. We need to make sure sale preparation is worth the USFS time. Nichols: The only silvicultural system that doesn't increase blowdown is clearcutting. If blowdown costs are incorporated, it could shift more of the harvesting to clearcuts. Slenkamp: The GNA sale includes measures to limit blowdown. Spores: We had to limit clearcutting on Kosciusko to keep the project within an EA. The NEPA review drives a lot of the process. Nichols: The industry wants to be part of the advance discussion, and to have blowdown addressed in sale planning.

**Public comment:** There were no public comments.

**DOF Planning, appeals, sales.** Jim Schwarber, DOF: There have been no challenges to state timber sales in the Interior. All recent Southeast timber sales have been appealed. Most appeals were upheld by the DNR Commissioner. On the Baby Brown Timber Sale in the Haines area, the final best interest finding in March 2015 was appealed; the finding was upheld in February 2016. The timber sale was offered and awarded prior to issuing a Forest Land Use Plan; a FLUP for the initial two sale units was issued later that month. The typical DOF process is usually BIF→FLUP→sale. The Commissioner determined that the sale should be cancelled and a FLUP issued for the entire sale area prior to offering new sales under the Baby Brown BIF as described in the BIF and the prior decision on the appeal. DOF will correct the initial error and re-offer timber after the FLUPs are adopted.

Stark: Is there an organization that reviews Haines timber sale documents? Schwarber: Haines sales go through the standard public notice process including other agencies, organizations, and members of the public, but there is no standing State Forest advisory committee. Stark: DOF has never deviated from the standard process in the TVSF. What was the cause of this deviation for this sale? Schwarber: Interest in getting the sale offered exceeded the time to get FLUPs done before the sale. The statutes require a FLUP prior to harvest rather than sale, but planning documents on the Haines State Forest and Baby Brown sale required a FLUP prior to offering a sale. While not prohibited by law, that action was contrary to other planning documents on the Haines State Forest and Baby Brown sale. DOF had a workshop with staff to prevent future problems. DOF will send a copy of the Commissioner's decision to the Board. Vinsel: Did the loss of the Haines forester position contribute to the problem? Was that position maintained in the budget this year? Schwarber: That loss wasn't helpful. Eleazer: The Haines forester position passed the legislature as a one-year increment; we don't know whether there would be another appropriation for that position in FY19.

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

- Pending legislation – The Biomass Thermal Utilization (BTU) Act will be considered again. It would add high-efficiency biomass thermal technologies to renewable energy investment tax credits. The Farm Bill includes funding for grants to cover part of the capital costs of high-efficiency wood heating with preference in communities without gas pipeline access. US Department of the Interior funding includes \$15 million for states to provide technical support for biomass.
- Alaska Wood Energy Development Task Group (AWEDTG):
  - Pre-feasibility studies are underway for schools in the Fairbanks North Star Borough, Kuspuq, and Chatham school districts. Biomass projects are marginal at current fossil fuel costs – the break-even point is about \$3.50/gallon for fuel oil. For the next round of pre-feasibility studies the Task Group is seeking interest from Lemon Creek Prison, Poker Flats, Metlakatla, Sutton, Central Council of Tlingit and Haida, and communities in the Northwest Arctic Borough, Yukon-Kuskokwim Delta, and Interior.
  - An Associated Press article on the AWEDTG Greenhouse handbook was published in over 520 outlets worldwide.
  - Karen Petersen is now working for Southeast Conference.
  - The AEA Biomass Program received a grant from USFS for continued support of the AWEDTG.
- Seven projects are completing design and construction: Anvik, Hollis, Tazlina, Chistochina, Angoon, Fort Yukon, and Huslia. Thirty-eight systems are operational statewide.
- Priorities for 2017-18 include having six more projects in operation, establishing a biomass peer network, developing a Fairbanks Pellet Demonstration Project, conducting a decision-maker tour of biomass facilities; offering biomass operator training, and developing an Alaska State Wood Energy Team Website

Stark: Can you use a common measure for wood volume on the map of biomass facilities. I'm interested in how much land it takes to provide wood for a project. It's hard to explain the impact and to understand whether there is sufficient supply with the variety of measures used. Putman – metrics are variable by species and moisture content. Tanana Chiefs has looked at how volumes apply to acres to determine whether FRPA applies.

Stark: Are Fairbanks area pre-feasibility studies complete? Plentovich: Four studies are in review and should be done by August 17.

Beck: Is there a short summary of climate change tradeoffs for burning wood? Plentovich: Over the lifetime of a tree it's considered climate neutral. Freeman: The calculations also depend on what fuel are replacing by burning wood. Putman: Another factor is how much fossil fuel it takes to provide the biomass.

**Water sampling for environmental DNA (eDNA).** Ora Russ, USFWS population geneticist: The US Fish and Wildlife Service (USFWS) has partnered with ADF&G on Alaska eDNA projects on the Kenai Peninsula and in the Mat-Su. DNA is released into waterbodies from live and dead organisms. Through eDNA sampling, fish presence can be determined from a water sample without seeing the actual fish. We have done aquarium tests to demonstrate that the technique works.

Sampling for eDNA is non-destructive, sensitive, shows presence of multiple species, reduces the need for species-specific training for samplers, reduces permitting requirements, and samples can be stored for later analyses. This method can detect and monitor rare and endangered species. The technique is new for resource management use, but it's not new in forensic science and reconstruction of prehistoric communities. It is more cost-effective than traditional fish surveys where there are low-density populations. Use of the technique is rapidly increasing.

Water samples for eDNA can be filtered on-site with relatively inexpensive, compact equipment, or can be filtered in a lab. Samples can be centrifuged and precipitated, but that is more expensive and cumbersome. There are now portable backpack units for sampling that are usable from shore.

This technique can easily detect one to three species at a time. A multi-species approach similar to genome sequencing is also possible, but it is more expensive and time-consuming.

Considerations:

- What is the source of the eDNA? Is the species alive in the waterbody or did an eagle drop a carcass or did it wash in from animal waste?
- The quality of the eDNA can be affected by enzymes and sunlight.
- The turnover rate of water systems relative to target species' life histories.
- Proximity – the ability to detect an organism is higher closer to the actual organism, or if the organisms are abundant.
- Contamination.

In Alaska, eDNA sampling has been used to study Northern pike on the Kenai Peninsula and determine the success of rotenone treatments. We want to prevent pike from escaping from private lakes to the Kenai River system. Netting and rotenone were successful in eradication. The USFWS can run samples in their Anchorage laboratory; Russ has trained on these techniques.

There are established DNA markers for some salmon species, rainbow trout/steelhead, Dolly Varden/char, grayling, pike, and boreal toads.

Questions:

- Morris: What is time frame between eradication of pike and when eDNA sampling no longer shows pike DNA? Russ: In the Kenai study, fall rotenone treatments were followed by spring sampling to allow time for carcasses to degrade. That was sufficient time to wait. Only one sample showed pike DNA, and that was in a place where carcasses were still in nearby nets. Subsequent netting and sampling didn't show any DNA.
- Morris: How sensitive is the sampling to picking up DNA that came from unclean waders from recent fisherman? Russ: It's a sensitive technique. It could pick up samples in small streams and lakes from fishermen; in large rivers, the flow would probably take care of it. The technique has even found eDNA from upwelling groundwater between lakes.
- Vinsel: Can you detect overwintering fish eggs? Russ: Probably not from water samples, but possibly from sediment samples – eDNA can persist a year or more in sediments.
- Stark: Does it work in saltwater? Russ: Yes. There have been some whale studies.
- Stark: is there a marker for a genus, e.g., *Oncorhynchus*? Russ: I haven't seen them applied in Alaska. Most people want info on the whole community, not a general marker for whether a waterbody is anadromous or not. It could probably be done. Morris: You can pull samples to get species markers, e.g., you can identify salmon and whitefish quickly.
- Stark: Does USFWS do contract work? Russ: Yes. For example, USFWS does work for the Alaska Sport Fish Division under reimbursable services agreements. Cost is decreasing rapidly.
- Stark: Do you get an indication of population strength from the samples? Russ: That's a direction the field is taking. There are measures of relative abundance. Some studies are now trying to relate them back to abundance estimates. There has been some work to correlate run timing with levels of detection in samples.

HB 199 – Fish habitat permitting. Rep. Louise Stutes: HB199 is a review and update of Title 16 to better protect fisheries. It hasn't been modernized since statehood. I undertook it at the request of the Board of Fish. The draft bill is pretty broad. We have worked with ADF&G to alleviate their concerns. We don't want to cripple other resources, just to protect our waterways.

Emily Anderson, Attorney in natural resources law and water Law and Alaska director for the Wild Salmon Center: HB 199 includes a reference to FRPA for conforming amendments because FRPA references Title 16. There is a question about whether HB 199 affects FRPA implementation. FRPA is clear that ADF&G retains responsibility for Title 16, including due deference on fish habitat for forest operations.

HB 199 adds consistency and certainty to the permitting process. The bill

- Retains language on the type of activities that will require a fish habitat permit. If a forest operation did not need a Title 16 permit before, it doesn't need one under the bill.
- Establishes fish habitat protection standards where permits are required, and identifies habitat characteristics that are vital to maintaining fish habitat.
- Expands ADF&G authority to protect riparian areas.
- Establishes an anadromous water presumption for Title 16 permits. It is different than the FRPA presumption.

Nichols: The permit considers more factors than the proposed activity. Under FRPA, we have set requirements for streams. A Title 16 permit is needed for a bridge to cross the stream. Will the permit just consider the bridge, or other activities along the stream, e.g., harvesting? Anderson: The bill sets up

a 2-tier permitting system. Activities under the minor permit system can be processed quickly. HB199 applies just to riparian areas and streams, it only applies to things that will directly affect fish habitat. Nichols: We hear allegations that timber harvest can affect fish habitat, so a bridge permit should be denied. Anderson: There is a public process for major permits; minor permits only require public notice. ADF&G will determine whether a proposed activity will affect fish habitat, using the list of factors. If so, a major permit is required. Nichols: The bill refers to the activity in combination *with other factors*. FRPA treats anadromous and non-anadromous streams differently. How subjective are the assessments under HB 199? Anderson: ADF&G would do a fish habitat impact assessment. The bill creates more certainty in the permitting process and uses language similar to that in FRPA.

Nichols: What is time frame for major permits? Anderson: There is no overall timeline; the bill requires a fish habitat impact assessment, and there is a 30-day public review period.

Nichols: could silvicultural activities be put under a general permit? Anderson: Rep. Stutes could look at that.

Lindsey Bloom, one of original authors of Board of Fish proposal, commercial fisherman: The intent of HB 199 is the same as FRPA's – to create more certainty. The current law is very uncertain, and we want certainty for fish. Nichols: Does ADF&G consider that timber harvesting is detrimental to fish? FRPA has specific timelines. We have assurance on when and whether we can operate. Rep. Stutes: That uncertainty is not the intent. I am confident that we can address this. Nichols: we take streams seriously, and understand their role in the livelihoods of people where we operate.

Beck: Can you clarify how HB 199 would change the classification of streams as anadromous? Anderson: To expand ADF&G jurisdiction without having it limited by the Catalog of Anadromous Waters, the bill creates a rebuttable assumption of anadromy on natural water bodies. The FRPA presumption is different – it is up to blockage. The Catalog is only half complete. The bill expands ADF&G jurisdiction without ADF&G having to sample every stream. A proposer can request ADF&G to come check the stream. Beck: The bill flips the presumption. I am working on a Government Peak project with small streams that come off the Little Susitna River. Which streams are anadromous has a big effect on what trails and recreation facilities are developed. Anderson: Anadromy triggers when a permit is needed, not whether a permit is granted. Nichols: Under this we would have to treat everything as anadromous habitat. Under FRPA, we get the ADF&G determination in a timely and collaborative way. Stark: You must ask ADF&G to go in the field either way. Nichols – under FRPA, a blockage determines anadromy. Anderson: The determination of presumption of anadromy can be written various ways, and is still open for discussion. Nichols: The FRPA measures for what is anadromous are very clear, and eliminate most of the questions. If that changes, there is a whole new paradigm in how we operate. Anderson: Non-anadromous waters can have a big contribution to anadromous habitat. Nichols: This bill will trigger Title 16 permits on waters where they weren't required before. Sturgeon: This expands considerably what we have to worry about as salmon habitat, such as waters above a blockage. Vinsel: Water may flow downhill into anadromous streams and affect the anadromous habitat. The habitat is connected.

Vinsel: The Catalog names the species in a stream, and the seasons that salmon are present vary by species. The proposed changes to AS 16.05.871 do away with the Catalog and replace it with a list kept by the Commissioner. While the catalog is incomplete, a list would be incomplete, too.

Vinsel: Is there a fiscal note? Stutes: Not yet. Vinsel: The UFA Board will review this proposal in September – that will be the first time the fishing industry has looked at this.

Beck: There's no disagreement about the need to protect fish. The bill does seem like a substantial modification about how FRPA and timber practices occur in this state. What problems in FRPA is the bill responding to? Stark: The bill is not directed at forestry; forestry is a small player. Beck: But there may be collateral damage to forestry. Stutes: We will be having hearings and welcome input. We don't want to cripple any industry.

Jackie Timothy, ADF&G Habitat Division: Investigate the overlap between the bill and FRPA. Currently, if an operator wants trees in a riparian area, the agencies can do a variation with review of individual trees and whether they provide essential functions. It looks like we'd probably have to issue a permit for variations and we haven't in the past. The same applies to free-standing bridges -- ADF&G doesn't have to issue permits for them, but would have to under the proposed bill. Anderson: FRPA talks about the interaction between the agencies; HB 199 is intended to shore up that relationship. Since FRPA allows variations, that more specific directive would probably trump HB199, but I will check. Nichols: It would be good to add some of the specific FRPA language on blockages into HB 199. Otherwise it shifts control in some areas from FRPA to Title 16.

Sturgeon, Native landowner representative: I am surprised that Kodiak Native corporations were not consulted prior to introducing this bill. The bill does have significant impacts on timber operations. Is this bill on track with the initiative request that has been submitted to the Lt. Governor? Are the same people involved in the two efforts? Stutes: I'm not affiliated with the initiative. Bloom: My name isn't on the request to the Lt. Governor; I'm waiting to see if it's approved. Stutes: There is some concern about whether the Legislature will act on HB 199 no matter how the bill is refined. This is a publicly popular concept, and the public is aware that there may be legislative pushback. I wasn't upset to see the initiative move forward -- it will provide incentive for legislators to work on HB 199 and come up with a workable solution. There was not an intentional movement not to consult with the Native groups about impacts on their lands. I know no one wants to have adverse impacts on fisheries.

Nichols: We work in Southeast and understand the fishing community. We also see a huge part of the land base off limits to timber production. Any additional restrictions can have a very large impact on our business.

Vinsel: When will we see a new version of the bill? Stutes: There is no timeline yet; I will send out notifications when it is available.

Herzog: Doesn't this bill get into DEC jurisdiction when it includes waters that don't have anadromous fish? Anderson: Groundwater and tributaries that feed into fish habitat also contribute to fish habitat, so they are included in the presumption of anadromy. DEC drives some of this authority through the Clean Water Act. Water quality affects fish habitat, too, so there is some overlap with DEC authority.

Sturgeon: This is very troubling. Under FRPA we now have to worry about streams with fish in them. This bill expands jurisdiction to areas above blockages that don't have fish. Bloom: That is correct. The question is whether the existing law is sufficient to protect fish. We don't know how forestry affected salmon runs in other states that lost their salmon. Fish protection might involve sacrifice on all sides. We must decide if we want to do it differently. Sturgeon: The original FRPA approach agreed on principles, including a dollar's worth of protection for fish for a dollar's worth of cost. Are we spending a dollar for a nickel's worth of protection if you go up some of these side streams? Some argue that any impact is too much regardless of the expense. What is the level of harm to salmon? A lot is known. The FRPA buffers were based on science that provided 95% protection to salmon even on private land. Stutes: There is plenty of room to discuss these issues.

Beck: The initial presentation was that this bill is just clarification, but there is potential for substantial modification, and it would be beneficial to be clear about that. Stutes concurred, and thanked the Board for taking time to address this.

Vinsel: The Board heard about eDNA sampling to gauge presence of anadromous fish. It may be relevant because it could go a long way toward filling in the Catalog.

### **Cooperative Forestry programs.**

Forest health program. Jason Moan, DOF: The Forest Health program has been part of DOF since 1990. The program is funded by the USFS to provide effective early detection and response to invasive forest pests, mitigate impacts of damaging pests, and adapt management to changing climate with uncertain and varying scenarios. The program

- Conducts aerial and ground-based forest pest surveys,
- Provides technical assistance and pest assessments,
- Conducts and administer forest pest mitigation projects,
- Monitors the health of Alaska's forests,
- Promotes public education and outreach for forest health threats, and
- Develops new or improved technologies for forest health surveys and management

Current issues include the following.

- About 193,000 acres of spruce bark beetle damage, mostly in the Susitna basin and on the northwestern Kenai Peninsula. There was a jump in beetle activity in 2016. The program is monitoring populations, investigating life cycle timing, conducting outreach efforts, and testing new single-tree protection options.
- Generalist hardwood defoliation in western Alaska and the Susitna valley. A native moth appears to be the primary cause; other insects might be contributing. They are affecting willow, birch, alder, and cottonwood and some non-tree species.
- Invasive spruce aphids – this invasive species, long established in Southeast Alaska, was first seen on the western Kenai Peninsula in 2015. or this invasive species has long been established throughout Southeast Alaska and in the Kodiak archipelago but was not observed on the western Kenai Peninsula until 2015. We don't expect much tree mortality.

The program also monitors for invasive bark beetles and woodborers, bud blight, and other pests. Program partners are exploring improvements to the survey program.

There was an uptick in northern engraver (*Ips*) beetles in 2016; data for 2017 are not out yet. Stark: Are trees downed in the 2012 windstorm susceptible to engravers? Moan: A lot of the blowdown is past susceptibility; there is more activity now in the standing trees.

Forest stewardship program. Trevor Dobell, DOF: The stewardship program serves private forest landowners, including Native corporations, the Mental Health Trust, and individual private owners. The program provides technical forestry assistance to help landowners meet their goals. We develop forest stewardship plans and conduct FireWise assessments.

Since 1990 the program has done stewardship plans for about seven million acres of land. Stewardship plans qualify landowners to apply for NRCS funding for various activities.

FireWise assessments help landowners reduce risks around their house, and provide opportunities for foresters to talk with landowners about sustainable forestry practices. Grants have provided funds for assessments, and provide some cost-sharing funds for risk-reduction. a recently funded Wildland Urban Interface grant in Cooper Landing is providing the Forest Stewardship Program the opportunity to focus our efforts on this community. The Cooper Landing project will include public education about the importance of being ready for wildfires; pass-through grants to landowners who reduce hazardous fuels; and fuel break construction/enhancement on Kenai Peninsula Borough land. DOF is working in partnership with other state and federal agencies on this project.

The program has other partnerships with NRCS, local soil & water conservation districts, the Alaska Wood Energy Development Task Group, and the Palmer Plant Materials Center, and the UAF Experiment Farm in Palmer. On the Farm, we are working toward promulgation of the Project Learning Tree program to connect elementary school students with natural resources education, and we are exploring innovative ways to use the nearly 600 acres of forestland at the Experiment Farm for education and interpretive purposes. With the Plant Materials Center, we maintain a collection of native and non-native tree seeds

This year people have been calling for help in response to spruce beetle mortality in southcentral Alaska. People with beetles are cutting the trees for firewood, one is building a cabin, and one wants to clear all his spruce and replant with larch. Some are interested in commercial timber sales.

In the future, I hope to see more public outreach and increase visibility, including events that aren't just current landowners, and programs for elementary. We will reactivate the Forest Stewardship Committee.

Stark: It would be good to work on riparian management programs; landowners could do better if DOF would tell them how to do that. Putman: The Forest Stewardship Program does great things. Support comes through the Farm Bill. Dobell: The future is somewhat murky, which is true for all federal programs, but it has been a well-established program.

Community forestry. Jim Renkert, DOF: I was hired three months ago from the DNR Division of Mining, Land, and Water. The program's goal is to help communities build strong, self-supporting programs. Anchorage, Palmer, Ketchikan, Metlakatla, Sitka, Soldotna, and Wasilla have programs, although Anchorage doesn't currently have a dedicated forestry position. Want to work with Fairbanks and Juneau, and assist smaller communities, including some with biomass projects.

Two landscape-scale restoration projects are underway. One is the Campbell Creek "Fish Need a Forest" project in Anchorage. This is a large grant connecting multiple state, federal, and local agencies, and the Anchorage School District. The other is a green infrastructure project on the Chena River project.

The program also works with the Tree City, Tree Campus, and UtiliTree programs sponsored by the Arbor Day Foundation. We want help with University of Alaska campuses in Fairbanks (UAF) and Southeast and Alaska Pacific University qualify as Tree Campuses.

Community orchard and food forest small grants have been popular, although the administrative load on these grants is time-consuming. Grantees include Kenai, Anchorage, UAF, MatSu-Copper River 4H, and the Anchorage Federation of Community Councils. We recently got some additional funds from the USFS.

The Alaska Community Forestry Council meets next week at the University experiment farm in Palmer.

## **Wrap-up**

- Next meeting date: **Wednesday, November 29, 2017**
- Agenda items
  - FY18 Budgets and FRPA implementation
  - Legislation and regulations; HB199 and implication
  - Southeast forest management issues
  - Status of state timber program: timber sales and appeals
  - AEA Wood energy projects
  - Yellow-cedar Endangered Species Act review (Drew Crane)
  - Tier 3 stream implications (check with Hale and Herzog)
  - Young's Timber Inc. processing facilities -- Joe Young
  - HB 107 – fisheries rehabilitation permit

## **Board comments**

- Beck: This was an interesting day with diverse topics. I'm interested in the positive actions occurring in Southeast. I am worried about the HB 199 presentation – it was initially presented by the proponents in an indirect way. I'd like to explore how recreation and tourism can fit in and work constructively with forestry on state land.
- Stark: I appreciate the Board's various perspective on change.
- Morris: Thanks to the staff. I learned a lot; presenters very educational. We need to continue to watch HB199. I implemented Title 16 for 20 years; the proposed system in the bill would take a lot of money that the state doesn't have and it's not clear what the need is, especially regarding forest practices under FRPA.
- Herzog: Thanks to staff and the presenters. I'm concerned about HB 199, its costs, and its questionable improvements over the current system.
- Putman: The eDNA presentation was interesting technically; in juxtaposition, the HB 199 presentation which was disturbingly interesting. Welcome to Chris Beck.
- Sturgeon: It was a pleasure to be associated with the Board one more time. I'm disturbed by the HB 199 discussion. I have talked about it with the Alaska Miners Association, Resource Development Council, and Alaska Oil and Gas Association. The presentation extremely underplayed the impacts on industries and on the FRPA. I understand that people working on HB199 are the same ones working on the ballot initiative.
- Vinsel: I appreciated the USFS presentation on second-growth and timing considerations. We're getting less value out of the trees than we could be if we didn't have to accelerate the harvest. Thanks to Stark for bringing up eDNA technology and to Ora Russ for her presentation. I appreciate Sturgeon's long history with the Board, and knowledge of the agreements in FRPA. There is broad diversity among people involved in commercial fishing, and they contact legislators. When there is an official letter from UFA supporting something, then I know the industry has spoken; we don't have that at this time on HB 199.
- Nichols – After 40 years in the timber industry, the same discussions continue. I expect to see the timber base continue to decline. I would like to know that resource bills use the same scientific rigor that we use to review FRPA. The HB 199 presentation continued some old untruths. I invite Chris Beck to see the timber industry in Southeast and discuss what forest infrastructure contributes to tourism. HB 199 will further impact the timber base.

Adjourn: 5:01 p.m.

## Attendees

**D.C.** --Chris Maisch, State Forester/chair

### Fairbanks teleconference site:

Chris Beck, Board (new Recreation member)  
Doug Hanson, DOF  
Denise Herzog, Board  
Bill Morris, Board  
Will Putman, Board  
Jim Schwarber, DOF, speaker  
Jim Smith, DOF  
Chris Stark, Board

### Juneau teleconference site:

Lindsey Bloom, commercial fisher  
Melanie Brown, Wild Alaska Seafood  
Tom Lenhart, AGO, speaker  
Joel Nudelman, DOF  
Gretchen Pikul, DEC, speaker  
Jackie Timothy, ADF&G-Habitat  
Mark Vinsel, Board

### Ketchikan teleconference site

Clarence Clark, AFA consultant, speaker  
Caroline Hamp, Office of Rep. Ortiz  
Chere Klein, Offices of Sen. Murkowski/Sen. Sullivan  
Eric Nichols, Board  
Paul Slenkamp, MHTLO, speaker

## **Handouts**

- Agenda
- Public notice
- Draft minutes from April 14, 2017 Board meeting
- Water Quality Standards – Proposed Amendments (draft antidegradation regulations)
- Antidegradation Regulation – Public Notice Questions (FRPA & antidegradation)
- Antidegradation Implementation Regulations – Fact Sheet, ADEC
- Outstanding National Resource Waters (Tier 3 Waters)
- HB 199
- Overview: HB 199 and the Forest Resources and Practices Act
- Enrolled SB 88 – Mental Health Trust exchange
- Achieving Tongass Advisory Committee Recommendations
- Land owner/manager group meeting, May 31, 2017

Sheila Spores, USFS, speaker  
Greg Staunton, DOF

### Anchorage teleconference site

Earl Crapps, DEC, speaker  
Tim Dabney, DOF  
Lisa Delaney, Aide to Rep. Josephson  
Trevor Dobell-Carlson, DOF, speaker  
Jim Eleazer, DOF, speaker  
Marty Freeman, DOF, speaker  
Amee Howard, USFWS  
Rep. Andy Josephson  
Jerry Kilanowski, UA Facility & Land Mgmt.  
Jason Moan, DOF, speaker  
Devany Plentovich, AEA, speaker  
Jim Renkert, DOF, speaker  
Ora Russ, USFWS, speaker

**Kodiak** (unless the Legislature is still in Juneau.)

Rep. Louise Stutes, speaker  
Pam Murray, office of Rep. Stutes

**Petersburg** --Cynthia Sever, USFS

### Other phone-ins:

Emily Anderson, AK Wild Salmon Center  
David Rogers, ADF&G-Habitat  
Stephen SueWing, DCCED, speaker